Plant protection made easy

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### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
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<tbody>
<tr>
<td>AoA</td>
<td>Agreement on Agriculture</td>
</tr>
<tr>
<td>CBD</td>
<td>Convention on Biological Diversity</td>
</tr>
<tr>
<td>DUS</td>
<td>Distinctiveness, Uniformity and Stability</td>
</tr>
<tr>
<td>EDV</td>
<td>Essentially Derived Variety</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agricultural Organization of the United Nations</td>
</tr>
<tr>
<td>FRs</td>
<td>Farmers’ Rights</td>
</tr>
<tr>
<td>FTAA</td>
<td>Free Trade Area of the Americas</td>
</tr>
<tr>
<td>GATT</td>
<td>General Agreement on Tariffs and Trade</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agricultural Research Centre</td>
</tr>
<tr>
<td>ICAR</td>
<td>Indian Council of Agricultural Research</td>
</tr>
<tr>
<td>IPP</td>
<td>Intellectual Property Protection</td>
</tr>
<tr>
<td>IPRs</td>
<td>Intellectual Property Rights</td>
</tr>
<tr>
<td>ISAAA</td>
<td>International Service for the Acquisition of Agri-biotech</td>
</tr>
<tr>
<td>ITPGR</td>
<td>International Treaty on Plant Genetic Resources</td>
</tr>
<tr>
<td>ITPGRFA</td>
<td>International Treaty on Plant Genetic Resources for Food Management</td>
</tr>
<tr>
<td>IV</td>
<td>Initial Variety</td>
</tr>
<tr>
<td>MNC</td>
<td>Multinational Corporation</td>
</tr>
<tr>
<td>NARS</td>
<td>National Agricultural Research System</td>
</tr>
<tr>
<td>NBA</td>
<td>National Biodiversity Act</td>
</tr>
<tr>
<td>NBPGR</td>
<td>National Bureau of Plant Genetic Resources</td>
</tr>
<tr>
<td>NBSAP</td>
<td>National Biodiversity Strategy and Action Plan</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>PBRs</td>
<td>Plant Breeders’ Rights</td>
</tr>
<tr>
<td>PPV&amp;FRA</td>
<td>Protection of Plant Varieties and Farmers’ Rights Authority</td>
</tr>
<tr>
<td>PVP</td>
<td>Plant Variety Protection</td>
</tr>
<tr>
<td>RPF</td>
<td>Resource Poor Farmer</td>
</tr>
<tr>
<td>SAI</td>
<td>Seed Association of India</td>
</tr>
<tr>
<td>TRIPS</td>
<td>Trade-Related Aspects of Intellectual Property Rights</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
</tr>
<tr>
<td>UPOV</td>
<td>Union for the Protection of New Varieties (Union International Pour La Protection Des Obtentions Vegetables)</td>
</tr>
<tr>
<td>WIPO</td>
<td>World Intellectual Property Organization</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
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</table>
India became signatory to the Trade Related Aspects of the Intellectual Property Rights Agreement (TRIPs) in 1994. As a follow-up, legislation was required to be formulated. Article 27.3 (b) of this agreement required the member countries to provide for protection of plant varieties either by a patent or by an effective *sui generis* system or by any combination thereof. Thus, the member countries had the choice to frame legislations that suit their own system and India exercised this option.

The existing Indian Patent Act, 1970, excluded agriculture and horticultural methods of production from patentability. India has opted for a *sui generis* system of protection of plant varieties and has provided for farmers’ rights, breeders’ rights, researchers’ rights and equity concerns in the same legislation. All these provisions in one Indian legislation on protection of plant varieties is an outcome of intense public debate involving all interested groups and an elaborate exercise by a Joint Convention on Biological Diversity and the FAO Declaration on Farmer’s Rights to which India is a party.

Only a few countries have provided for farmers’ rights. In these legislations, there is a recognition that farmers who want to propagate their own seed should be allowed to do so. Through the payment of royalties from breeders into a National Gene Fund, there is acknowledgment of the debt owed by those who improve plants in the modern age to their predecessors who developed indigenous and farmers' varieties. The legislation recognises that companies that spend money making beneficial improvements to crops need some reward. The Indian Plant Variety Protection and Farmers' Rights Act could be a model solution and one that other developing nations might follow. Striking a balance between breeders’ rights and farmers’ rights and provisions in the draft Seed Bill seeking to regulate seed production and quality control in India is a big challenge.

The Protection of Plant Varieties and Farmers’ Rights Act was passed by the Indian Government in 2001. The Act seeks to establish an independent National Plant Variety and Farmer’s Rights Protection Authority with a Chairman appointed by the Government of India and 15 ex-officio and nominated members as well as a subordinate office of Registrar General of Plant Varieties. The Registry will have its headquarters at New Delhi, with regional offices at Bangalore, Pune, Bhopal, Patna and Guwahati. The act also provides to establish a Plant Variety Tribunal with the status of a district court for settlement of disputes connected with this Act. The main functions of the authority are: 1) registration of plant varieties, 2) characterisation and documentation of registered varieties, 3) documentation, indexing and cataloguing of farmers’ varieties, 4) providing compulsory cataloguing facility for all plant varieties from India and abroad, 5) ensuring seeds of all registered varieties are made available to the farmers, 6) collection of comprehensive statistics on plant varieties, and 7) maintenance of national register of plant varieties legislation. The inclusion of all these areas makes this a unique piece
of legislation, when compared to similar legislations in other countries.

**Elements of the Protection of Plant Varieties and Farmers Rights Act, 2001**

Largely modelled on the 1978 version of the International Convention for the Protection of New Plant Varieties (UPOV), an agreement signed mostly by the industrial nations of the world, the PPV contains the following major provisions:

1. Registration of new varieties of plants, by their breeders, provided they fulfil the criteria of novelty, distinctiveness, uniformity, and stability;
2. Protection for registered varieties for periods ranging from 15 to 18 years (depending on the kind of plant variety); this protection would include the exclusive right to produce, sell, market, distribute, import, or export the variety or its propagating material, and to license other persons to do the same;
3. Deposition of sample seeds or propagating material by the applicant, with the government;
4. Exclusion of plant varieties from being registered if such exclusion is necessary for public purposes, or if the commercial utilisation of such varieties could threaten human, animal, or plant life or the environment in general; such exclusion could extend to entire genera/species;
5. Rights of researchers to use the registered variety for experimentation;
6. Rights of farmers to save, use, exchange, share, or sell the produce of, any registered variety (except selling for the purpose of reproduction under commercial marketing arrangements);
7. Revocation of protection if it is found that the breeder supplied incorrect or inadequate information at the time of application, or did not provide the necessary seeds or propagating material, or if the registration was found not to be in public interest;
8. Compulsory licensing in cases where the breeder is not making the seed publicly available in reasonable price or quantity or regularity;
9. Benefit-sharing arrangements with those, including farmers, claiming to have contributed genetic material to the registered variety;
10. Rights of communities and persons to claim significant contribution to a registered variety, and to receive compensation if such a claim is upheld;
11. A National Gene Fund built up with royalty fees from plant variety right holders, national and international contributions, etc., meant to be used for benefit-sharing and compensation to farming communities, and for conservation and sustainable use of genetic resources.

**Salient features of the Act**

1. Protection of Plant Varieties and Farmers’ Rights Authority:

This authority (Protection of Plant Varieties and Farmers’ Rights Authority) is being established by the central government to carry out the purpose of the Act. The authority is composed of a chairperson and 15 members. The 15 members comprising eight ex-officio representatives from various departments and institutions of the Government of India and seven others represent the farmers associations, tribal organisations, industry, agricultural universities, national level women’s organisations and state governments. The Registrar General will be the member secretary of the authority. The authority will be assisted by committees and officers such as the Registrar, for efficient discharge of its functions.

2. Functions of the authority

A. It shall be the duty of the authority to promote, by such measures as it thinks
fit, the development of new varieties of plants and to protect the rights of farmers and breeders;

B. In particular, and without prejudice to the generality of the foregoing provisions, the measures referred to in sub-section (1) may provide for:
   a. The registration of extant, new plant varieties and essentially derived varieties subject to such terms and conditions and in the manner as may be prescribed;
   b. Developing characterisation and documentation of varieties registered under this Act;
   c. Documentation, indexing and cataloguing of farmers’ varieties;
   d. Compulsory cataloguing facilities for all varieties of plants;
   e. Ensuring that seeds of the various registered under this Act are available to the farmers and providing for compulsory licensing of such varieties if the breeder of such varieties or any other person entitled to produce such variety under this Act does not arrange for production and sale of seeds in the manner as may be prescribed;
   f. Collecting statistics with regarding to plant varieties, including the contribution of any person at any time in the evolution or development of any plant variety, in India or in any other country, for compilation and publication;
   g. Ensuring the maintenance of the Registrar.

3. Power of authority of the Registrar

A. Shall have all the powers of a Civil Court for the purpose of receiving evidence administering oaths, enforcing the attendance of witnesses, compelling the discovery and production of documents and issuing commissions for the examination of witnesses;
B. May order as to cost as it considers responsible and any such order shall be executable as a decree of Civil Court.

4. Registry

A. Establishment of a Registry known as “Plant Varieties Registry”;
B. A National Registry of Plant Varieties shall be kept at the head-office of the Registry and also at branch offices duly entering in it all the particulars of all varieties registered. This register will be maintained under the superintendence and directions of the central government, it shall be kept under the control and management of the authority.

5. Criteria for registration of varieties

Registration of the variety will not be done in case the variety does not fulfil the criteria of novelty, distinctiveness, uniformity and stability.

The PPVFR Act allows the registration of traditional varieties or farmers’ varieties [see Annexure 1, Section 14]. Registration of the variety grants PBR on the variety, which allows exclusive legal right to the PBR-holding farmers to produce and market its seed [See Annexure 2, Section 28]. Farmers are awarded PBR by the Act on their recognition as breeders. Traditional varieties developed or conserved by a community of farmers and new varieties developed by one or more farmers are eligible for registration. In the case of registration of a traditional variety, it is important to involve all communities associated with its conservation, if there is no clear evidence to establish an exclusive role for the origin of the said variety. Similarly, when a variety developed by a farmer is registered, it is important to recognize spousal contribution under joint ownership (see Box 4). Farmers need not have to pay any fee either to register their varieties or to renew these registrations [see Annexure 1, Section 18, 44]. This is a major incentive to the innovative breeders among farmers. On the contrary, professional breeders and public research institutions are required to pay separately Rs.5000 to 10000 as registration and renewal fees. The PPVFR Act is unique in respect of this right, because the plant variety protection laws of many
other countries do allow only protection of new varieties bred by professional breeders. The requirements of a farmers’ variety to qualify for registration are explained under Eligibility criteria for registration.

6. **Persons who may make applications**

An application for registration under Section 14 shall be made by:

a) Any person claiming to be the breeder of the variety; or
b) Any successor of the breeder of the variety; or
c) Any person being the assignee of the breeder of the variety in respect of the right to make such application; or
d) Any farmer or group of farmers or community of farmers claiming to be the breeder of the variety; or
e) Any person authorised in the prescribed manner by the person specified under clauses (a) to (d) to make application on his behalf; or
f) Any university or publicly funded agricultural institution claiming to be the breeder of the variety.

7. **Duration and effect and benefit sharing**

On registration of a variety it will be initially for a period of:

a) Nine years for trees and vines;
b) Six years for other crops.

This could be renewed further for the remaining period of:

a) 18 years in respect of trees and vines;
b) In the case of extant varieties, 15 years from the date of notification of variety under Section (5) of the Seeds Act, 1966;
c) In other cases, 15 years from the date of registration. Depositing the seeds or propagating material by the breeder in the National Seed Bank is mandatory.

Usually one or more farmers’ varieties or their derivatives are used as parents to breed new varieties. These farmers’ varieties could be traced to have been contributed by one or more farming or tribal communities. It is also possible that the new variety that is registered under the Act has become popular among farmers. But because it is registered, its PBR-holder alone is entitled to commercially produce and market its seed. The popularity and exclusive marketing right may lead to huge seed sale and profits to the PBR-holder. The act provides for equitable sharing of the benefit earned from the new variety with farming or tribal communities that had contributed varieties used as parents. Normally, all applicants who seek to register new varieties are required to declare the source of the varieties used as parents for breeding new varieties [see Annexure 1, Section 18(e), (h)]. Farmers are given opportunity to submit claims for benefit share, when their variety is used as parents [see Annexure 2, Section 26 (2)]. Claims for benefit share is made when breeder discloses the use of specific varieties conserved by farmers of a region or on the basis of strong grounds which may substantiate undisclosed use of specific farmers’ variety by the breeder. Claims for benefit share have to be made in Form PV-7 prescribed by the Authority within six months from the date of advertisement inviting such claims by the Authority. On examination of such claims by the Authority applicant eligible for benefit sharing and the quantum of benefit to be shared are decided. The PBR-holder of the variety is required to remit the awarded benefit share in the National Gene Fund [see Annexure 2, Section 26 (6)]. The benefit share may be disbursed from the National Gene fund to the eligible individual, community or institution [see Annexure 2, Section 45(2) (a)].

Therefore for claiming eligible benefit share, the farming communities should have (i) timely information on the varieties being registered under the Act. (ii) timely understanding on the notification on such varieties inviting claims for benefit share, and (iii) capability to understand the disclosed characteristics of the new variety vis-à-vis those of parental varieties. The capability of farmers in accessing this right can be strengthened by vigilant farmers’
associations and panchayats by regularly following the notifications of the PPVFR Authority. Assistance from governmental or non-governmental organizations may also help farmers in this regard.

The primary purpose of registration of a plant variety under this Act is to establish exclusive commercial right on the variety. Commercial demand arises from the capability of the variety for better agronomic performance. Some of the seed companies, however, promote their seed by making exaggerated claims on the agronomic performance of their varieties. Farmers purchasing and cultivating such seeds may eventually realize the deceit. The PPVFR Act has a provision to check such unfair marketing practices by breeders and their seed sellers. The Act requires that the seed be sold with a declaration on its agronomic performance could be higher yield, better pest or disease resistance, better quality, and so on. In the event farmers are not able to achieve the claimed performance on having cultivated under the specified conditions, the PBR holder will be made liable to pay compensation to affected farmers [see Annexure 2, Section 39 (2)].

Such claims for compensation are made to the PPVFR Authority in Form PV-25 (see Annexure 2, Page 76). The authority on confirmation of the compensation claim decides the amount of compensation to be paid by the PBR-holder. For establishing the compensation claim farmers may be required to prove that they had cultivated a specific variety with seed marketed by a specific PBR-holder, that they cultivated variety in accordance with the recommended practices in recommended region and that they suffered an estimated loss due to poor performance of the crop. Compensation claims made by a group of farmers belonging to one region or an association of farmers are likely to be more forceful than claims made by few scattered individual farmers. The PPVFR Rules are not very explicit to be helpful to farmers in this respect. Intensive capacity building to farmers is important for accessing legitimate compensation and minimizing the frivolous.

It was earlier stated that the cause of benefit sharing arises from a declaration made by the breeder that the pedigree of a new variety has certain traditional varieties or traditional knowledge sourced from certain regions/communities. However, there can be situations where the breeder of a new variety may not disclose the correct identity of parental varieties or knowledge. This lapse may arise either from a honest ignorance on the identity and origin of the parental varieties or a dishonest suppression of parental variety identity. Under such circumstances if such parental varieties belonged to one or more rural communities, they may be denied the opportunity for benefit share due from the new variety. The communities concerned also may not have the capability to detect such use of their varieties or traditional knowledge in the breeding of a new variety. Under such situations, any third party who has a reasonable knowledge on the possible identity of the traditional varieties or knowledge used in the breeding of the new variety, is eligible to prefer a claim for compensation on behalf of the concerned local or tribal community [see Annexure 2, Section 41 (1)]. The third party could be an NGO, an individual, a government of private institution. Such compensation claims are to be submitted to the PPVFR Authority by such third party. The authority on verification of the veracity of the claim shall admit the same and decide on the compensation to be awarded. The awarded compensation will be remitted in the National Gene Fund by the PBR-holder. The National Gene Fund shall disburse the compensation to the party who made the claim. A good understanding of plant varieties and professional skill in plant breeding science will help in detecting many of such eligible cases for compensation.

It was mentioned earlier that one of the objectives of the Act is to promote the availability of high quality seed and planting material to farmers for accelerated agricultural development. The act tries to achieve this objective by ensuring adequate availability of seeds of registered varieties to farmers at reasonable cost. Access to seed
by farmers is important for availing the benefits of scientific crop improvement while allowing exclusive right to the PBR-holder on commercial production and marketing of seeds of the variety at reasonable prices. According to the Act, when the PBR-holder does not satisfy this requirement three years after registration of the variety, farmers have the right to take the matter of non-availability of seed, its poor supply, or its high price to the PPVFR-Authority [see Annexure 2, Section 47].

On receiving such complaints and on its verification, the PVP Authority may take remedial actions. One of these actions may be enforcement of compulsory licensing. Compulsory licensing revokes the exclusive right on commercial production and marketing of seed granted to the PBR-holder and transfer this right to third parties determined by the Authority. This revoke of exclusive right is done for a period decided by the Authority. The third parties, who are given right to produce and market the seed, are required to meet the demands and supply seed at reasonable prices.

8. Rights of breeder or his successor

A certificate of registration for a variety shall confer an exclusive right on the breeder or his successor, his agent or license to:

a) Produce;
b) Sell, market, distribute, import or export the variety;
c) A breeder may authorise any person to produce, sell/market, or otherwise deal with the variety registered under the act subject to such limitations and conditions as may be specified in the regulations.

9. Exclusion of certain varieties

No registration will be granted for a variety in cases where prevention of commercial exploitation of such variety is necessary to protect public order or public morality or human, animal and plant life and health or to avoid serious prejudice to the environment.

10. Researcher’s rights

For the purpose of research, any person can use such variety for conducting experiment or research as an initial source of variety for the purpose of creating other varieties. For further repeated use of the variety as a parental line, breeder’s permission is required.

11. Farmer’s rights

A. A farmer who has bred or developed a new variety shall be entitled for registration and other protection in like manner as a breeder of a variety under this Act;
B. The farmers’ variety shall be entitled for registration if the application contains declaration as specified in clause (h) or sub-section (1) of section 18;
C. A farmer who is engaged in the conservation of genetic resources of land races and wild relatives of economic plants and their improvement through selection and preservation shall be entitled in the prescribed manner for recognition and reward from the gene fund; Provided that material so selected and preserved has been used as donors of genes in varieties registerable under this Act;
D. A farmer shall be deemed to be entitled to save, sow, re-sow, exchange, and share or sell his farm produce including seed of a variety protected under this Act in the same manner as he was entitled before the coming into force of this Act. Provided that the farmer shall not be entitled to sell branded seed of a variety protected under this Act.

The farmers’ right on seeds is a traditional right enjoyed by farmers all along the history of agriculture. This right includes the right to save the seed from one’s crop and use the saved seed for sowing, exchanging, sharing or selling to other farmers. It is fundamental to the conservation role performed by farmers. The process of conservation encompasses the total genetic variability in time and space, including traditional and new
varieties; the farmers’ right on seeds encompasses the total genetic variability, including protected varieties. [See Annexure 1, Section 39(1) (iv)]. The Act restricts farmers from selling seeds of a protected variety in packages and containers with labels bearing its registered name. To further safeguard this right on the seeds of registered varieties, the Act prohibits use of technologies like the terminator gene technology, which destroys the germination capability of saved seeds [see Annexure 1, Section 18 (1) (c)].

12. Right to claim compensation and exception from payment of fees

In case the expected performance under given conditions and if the propagating material fails to provide such performance under such given conditions, the farmers or the group of farmers or the organisation of the farmers as the case may be can claim compensation in the prescribed manner before the authority. However, farmers are protected from innocent infringement of the provisions of the Act. The farmers are also exempted to pay any fee in any proceedings before the authority or registrar or tribunal or the High Court under the provisions of the Act and rules.

Considering the poor economic capability of farmers and with a view that this economic weakness shall not be a hurdle for accessing farmers’ rights, the PPVFR Act totally exempts farmers from paying any fees [see Annexure 1, Sections 18, 44]. This exemption is applicable to individual, group or community of farmers. The exemption includes the fees required to be paid to the Registrar of Plant Varieties for registration of farmers’ varieties, for conducting tests on them, for the renewal of registration and the fees prescribed for opposition, benefit claim, etc. This exemption also covers fees on all legal proceedings at the PVPA-Tribunal or the Intellectual Property Appellate Board (IPAB) or any Court of Law. This exemption, however, does not include fee on lawyers privately hired by farmers to represent them at the Tribunal or Appellate Board or Courts. All laws have penal provisions stating what constitutes an infringement and what punishment is to be awarded to different proven infringements. These aspects of the PPVFR Act are dealt under chapter X of the Act [see Annexure 1]. Under legal jurisprudence, violation of a law committed out of ignorance is not held as on admissible innocence. A safeguard to farmers against innocent infringement is provided in the Act [see Annexure 1, Section 42]. According to this, a Court is prevented from prosecution of a farmer on charges of infringement of the Act, if the respondent farmer makes an affirmation that s/he was not aware of the legal provision deemed to have been violated by him or her at the time of such commission. This exceptional provision is provided in the Act in view of the low legal literacy of tradition-bound Indian farmers and to discourage petty legal harassment to farmers from seed companies. This highlights the importance of legal literacy to farmers on this Act, not only to prevent infringement proceedings against them, but also to create capability to access the rights provided to them.

13. Constitution of a gene fund

The central government shall constitute a fund to be called ‘the national gene fund’ which will receive the funds from:

a) The benefit sharing received in the prescribed manner from the breeder of a variety or any essentially derived variety registered under this Act or propagating material of such variety, as the case may be;

b) The annual fee payable to the authority by way of royalty under Sub-section (1) of Section 35;

c) The compensation deposited in the gene fund under Sub-section (4) of Section 41;

d) The contribution from any national and international organisation and other sources.

The gene fund shall in the prescribed manner, to meet following expenses:

a. Any amount to be paid by way of benefit sharing under sub-section 5 of Section 26;
b. The compensation payable under subsection (3) of Section 41;
c. The expenditure for supporting the conservation and sustainable use of genetic resources including in situ and ex situ collections and for strengthening the capability of the Panchayat in carrying out such conservation and sustainable use;
d. The expenditure of schemes relating to benefit sharing framed under Sec. 46.

In recognition of the important role farmers have been playing for the conservation of varietal wealth of crop plants, the PPVFR Act has a provision to reward and recognize individual farmers or farming and tribal communities for such contribution [see Annexure 1, Sections 39 (1) (iii)]. According to the Act, a National Gene Fund is to be created to facilitate reward and recognition to eligible individual farmers and communities. This is provided as an incentive to encourage conservation undertaken by farming and tribal communities. Farmers conserving traditional varieties and wild species of crop plants are deemed eligible to receive reward and recognition.

**14. Compulsory license**

The Breeder having got the compulsory license from the authority may license to an individual or a company for the production, distribution and sharing activity of the seed, other propagated and essentially derived variety.

**15. Plant Variety Protection – Appellate Tribunal**

The Central Government will constitute an appellate tribunal to hear the grievances, arising out of the decisions of the authority or registrar regarding registration of a variety, orders relating to claim, benefits, regarding revocation or modification of compulsory license or others regarding payment of compensation.
In this chapter and in the next chapter the section and point wise detailed notes are provided to help all aiming to seek protection for their crop varieties and hybrids, which will guide for clearer understanding of the provisions to facilitate filing of application with PPV & FR Authority. In addition three examples in the form of filled in forms for the crops: sorghum, rice, maize, Pigeonpea are cotton are given as ready to use reference applications to fill the forms.

In order to get protection for the plant varieties the farmer or breeder or research organization or a seed company has to submit the duly filled in application along with all the required relevant documents as listed below:

| (a)  | Complete application                                      |
| (b)  | Endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable) |
| (c)  | Document of authorization in Form PV-1 (if applicable)     |
| (d)  | Document of assignment in Form PV-2 (if applicable)        |
| (e)  | Documents in support of (b) and (d) as given above. (If applicable) |
| (f)  | Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved |
| (g)  | Copy of document on filing date (vide column 8A, if applicable) |
| (h)  | Copy of letter of agreement (vide column 10A, if applicable) |
| (i)  | Technical Questionnaire for the Candidate variety (attached) |
| (j)  | If the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub – section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001 |
| (k)  | In case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure |
| (l)  | In case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof |
| (m)  | In case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals and |
| (n)  | Fees as applicable                                       |
How to file application for protection of Plant varieties with PPV&FRA

**Duration of protection (Years)**
As per section 24(6) of the act, following is the period (years) of protection for all plant varieties registered under PPV and FR Act, 2001.

<table>
<thead>
<tr>
<th>Category</th>
<th>Initial Protection</th>
<th>Renewal</th>
<th>Total #</th>
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<tr>
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<td>6</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Trees and Vines</td>
<td>9</td>
<td>9</td>
<td>15</td>
</tr>
</tbody>
</table>

# The date of gazette notification in case of Extant Variety and sale permission in case of varieties of common knowledge, the seed which is marketed as truthfully labeled if it is two years prior to notification of the species, the period of protection will be as decided below.

15 - 2 = 13 Years (Crop plants)
18 - 2 = 16 Years (Trees and Vines)

**Registration process**

1. Development of DUS Guideline
2. Gazette Notification
3. Application by Breeder/ Farmers’ (Sec 14, 23)
4. Application Accepted/Rejected
5. DUS Test for accepted entry
6. Analysis of DUS data
7. Acceptance/Rejection for claim for Novelty & DUS
8. Registration Grant (Sec 24) + entry National Plant Variety Register
9. Payment of Registration + DUS Fee, if any
10. Internal Scrutiny (Sec 20) PV 1, TQ, NORV, IINDUS
11. Seed Deposit (National Gene Bank)
12. New var- 2 season + 2 location VCK & FV- 1 Season + 2 location
13. Published in the PVJ for pre grant opposition
14. Test for Special characters (if DUS test fails)
15. Published in the PVJ for Benefit sharing
16. Annual/Renewal fee Protection period (15 or 18 yrs)
17. Compulsory Licensing/ Benefit sharing /denomination alter
18. Surrender/ Revocation of Registration

Marketing of Registered variety
Fee for application registration

The fee for registration has been notified by the Central Government in official gazette of India. The fees notified for different category of varieties is as under in the box:

<table>
<thead>
<tr>
<th>Type of variety</th>
<th>Fees for Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essentially Derived Varieties</td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>Rs. 5000/-</td>
</tr>
<tr>
<td>Educational</td>
<td>Rs. 7000/-</td>
</tr>
<tr>
<td>Commercial</td>
<td>Rs. 10000/-</td>
</tr>
<tr>
<td>Extant variety notified under section 5 of Seeds Act, 1966</td>
<td>Rs. 1000/-</td>
</tr>
<tr>
<td>New Variety</td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>Rs. 5000/-</td>
</tr>
<tr>
<td>Educational</td>
<td>Rs. 7000/-</td>
</tr>
<tr>
<td>Commercial</td>
<td>Rs. 10000/-</td>
</tr>
<tr>
<td>Extant variety about which there is common knowledge</td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>Rs. 2000/-</td>
</tr>
<tr>
<td>Educational</td>
<td>Rs. 3000/-</td>
</tr>
<tr>
<td>Commercial</td>
<td>Rs. 5000/-</td>
</tr>
<tr>
<td>Farmers’ Variety</td>
<td>No fee</td>
</tr>
</tbody>
</table>

DUS Test Fee

The applicant has to submit the DUS test fee for conduct of the DUS test of the candidate variety. The DUS test fee has been decided by the Authority for different crops and notified in the PVJI. The DUS test fee notified for different crops is as under:

<table>
<thead>
<tr>
<th>Crop species</th>
<th>DUS test fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat , rice, maize, sorghum, pearl millet, pigeon pea, chickpea, lentil, mungbean, urd bean, field pea, kidney bean</td>
<td>Rs. 20,000/-</td>
</tr>
<tr>
<td>Cotton, jute, sugarcane</td>
<td>Rs. 35,000/-</td>
</tr>
<tr>
<td>Oilseed crop species</td>
<td>Rs. 20,000/-</td>
</tr>
<tr>
<td>Black pepper, small cardamom, ginger, turmeric</td>
<td>Rs. 45,000/-</td>
</tr>
<tr>
<td>Tomato, brinjal, okra, cabbage, cauliflower, onion, garlic</td>
<td>Rs. 40,000/-</td>
</tr>
<tr>
<td>Potato</td>
<td>Rs. 48,000/-</td>
</tr>
<tr>
<td>Rose, chrysanthemum</td>
<td>Rs. 45,000/-</td>
</tr>
<tr>
<td>Mango</td>
<td>Rs. 30,000/-</td>
</tr>
</tbody>
</table>

Annual Fee

For maintenance of registration the applicant has to pay annual fee which is specified as under:

<table>
<thead>
<tr>
<th>Type of variety</th>
<th>Annual Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Variety</td>
<td>Rs. 2000/- plus 0.2 per cent of the sales value of the seeds of the registered variety during the previous year plus 1 percent of royalty, if any, received during the previous year from the sale proceed of seeds of a registered variety.</td>
</tr>
<tr>
<td>Extant variety notified under Section 5 of the Seeds Act, 1966 (54 of 1966)</td>
<td>Rs. 2000/- only.</td>
</tr>
<tr>
<td>Extant variety other than the category specified above</td>
<td>Rs. 2000/- plus 0.1 per cent of the sales value of the seeds of the registered variety during the previous year plus 0.5 percent of royalty, if any, received during the previous year from the sale proceed of seeds of a registered variety.</td>
</tr>
</tbody>
</table>

Annual fee shall be determined on the basis of declaration given by the registered breeder or agent or licensee regarding the sales value of the seeds of the variety registered under the Act during the previous year and royalty, if any, received during the previous year from the sale proceed of seeds of the registered variety and verified by the Authority.
List of 79 Crop species notified for registration

<table>
<thead>
<tr>
<th>Group</th>
<th>No.</th>
<th>Crop Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>9</td>
<td>Bread wheat, Rice, Pearl millet, Sorghum, Maize, Durum wheat, Dicoccum wheat, Other Triticum species, Barley</td>
</tr>
<tr>
<td>Legumes</td>
<td>7</td>
<td>Chickpea, Mungbean, Urdbean, Field pea, Rajmash, Lentil, Pigeon pea</td>
</tr>
<tr>
<td>Fibre Crops</td>
<td>6</td>
<td>Diploid cotton (two species), Tetraploid cotton (two species) and Jute (two species)</td>
</tr>
<tr>
<td>Oilseeds</td>
<td>11</td>
<td>Indian mustard, Karan rai, Rapeseed, Gobhi sarson, Groundnut, Soybean, Sunflower, Safflower, Castor, Sesame and Linseed</td>
</tr>
<tr>
<td>Sugar Crops</td>
<td>1</td>
<td>Sugarcane</td>
</tr>
<tr>
<td>Vegetables</td>
<td>14</td>
<td>Tomato, Brinjal, Okra, Cauliflower, Cabbage, Potato, Onion, Garlic, Ginger, Turmeric, Bottle gourd, Bitter gourd, Pumpkin, Cucumber</td>
</tr>
<tr>
<td>Flowers</td>
<td>7</td>
<td>Rose, Chrysanthemum, Bamboo Leaf Orchid, Spray Orchid, Vanda or Blue Orchid, Orchids (Cattleya, Phalaenopsis)</td>
</tr>
<tr>
<td>Spices</td>
<td>4</td>
<td>Black pepper, Small cardamom, Coriander, Fenugreek</td>
</tr>
<tr>
<td>Fruits</td>
<td>10</td>
<td>Mango, Almond, Walnut, Cherry, Apricot, Apple, Pear, Pomegranate, Grape, Ber</td>
</tr>
<tr>
<td>Medicinal and Aromatic plants</td>
<td>5</td>
<td>Isabgol, Menthol mint, Damask Rose, Periwinkle, Brahmi</td>
</tr>
<tr>
<td>Plantation crop</td>
<td>3</td>
<td>Coconut, Eucalyptus, Casuarina</td>
</tr>
</tbody>
</table>
### Crop species open for registration

<table>
<thead>
<tr>
<th>Sr.no.</th>
<th>Crop</th>
<th>Botanical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rice</td>
<td>Oryza sativa L.</td>
</tr>
<tr>
<td>2.</td>
<td>Bread wheat</td>
<td>Triticum aestivum L.</td>
</tr>
<tr>
<td>3.</td>
<td>Maize</td>
<td>Zea mays L.</td>
</tr>
<tr>
<td>4.</td>
<td>Sorghum</td>
<td>Sorghum bicolor (L.) Moench</td>
</tr>
<tr>
<td>5.</td>
<td>Pearl millet</td>
<td>Pennisetum glaucum (L.) R.Br.</td>
</tr>
<tr>
<td>6.</td>
<td>Chickpea</td>
<td>Cicer arietinum L.</td>
</tr>
<tr>
<td>7.</td>
<td>Mungbean</td>
<td>Vigna radiata (L.) Wilczek</td>
</tr>
<tr>
<td>8.</td>
<td>Urdbean</td>
<td>Vigna mungo (L.) Hepper</td>
</tr>
<tr>
<td>9.</td>
<td>Fieldpea</td>
<td>Pisum sativum L.</td>
</tr>
<tr>
<td>10.</td>
<td>kidney bean</td>
<td>Phaseolus vulgaris L.</td>
</tr>
<tr>
<td>11.</td>
<td>Lentil</td>
<td>Lens culinaris Medik</td>
</tr>
<tr>
<td>13.</td>
<td>Indian mustard</td>
<td>Brassica juncea L. Czern &amp; Coss</td>
</tr>
<tr>
<td>14.</td>
<td>Karan rai</td>
<td>Bracissa carinata A Braun</td>
</tr>
<tr>
<td>15.</td>
<td>Rapeseed (toria)</td>
<td>Brassica rapa L.</td>
</tr>
<tr>
<td>16.</td>
<td>Gobhi sarson</td>
<td>Brassica napus L.</td>
</tr>
<tr>
<td>17.</td>
<td>Groundnut</td>
<td>Arachis hypogaea L.</td>
</tr>
<tr>
<td>18.</td>
<td>Soybean</td>
<td>Glycinum max (L.) Merrill</td>
</tr>
<tr>
<td>19.</td>
<td>Sunflower</td>
<td>Helianthus annuus L.</td>
</tr>
<tr>
<td>20.</td>
<td>Safflower</td>
<td>Carthamus tinctorius L.</td>
</tr>
<tr>
<td>21.</td>
<td>Castor</td>
<td>Ricinus communis L.</td>
</tr>
<tr>
<td>22.</td>
<td>Sesame</td>
<td>Sesamum indicum L.</td>
</tr>
<tr>
<td>23.</td>
<td>Linseed</td>
<td>Linum usitatissimum L.</td>
</tr>
<tr>
<td>24.</td>
<td>Diploid cotton</td>
<td>Gossypium arboreum L.</td>
</tr>
<tr>
<td>25.</td>
<td>Diploid cotton</td>
<td>Gossypium herbaceum L.</td>
</tr>
<tr>
<td>26.</td>
<td>Tetraploid cotton</td>
<td>Gossypium hirsutum L.</td>
</tr>
<tr>
<td>27.</td>
<td>Tetraploid cotton</td>
<td>Gossypium barbadense L.</td>
</tr>
<tr>
<td>28.</td>
<td>Jute</td>
<td>Corchorus olitorius L.</td>
</tr>
<tr>
<td>29.</td>
<td>Jute</td>
<td>Corchorus capsularis L.</td>
</tr>
<tr>
<td>30.</td>
<td>Sugarcane</td>
<td>Saccharum L.</td>
</tr>
<tr>
<td>31.</td>
<td>Black pepper</td>
<td>Piper nigrum L.</td>
</tr>
<tr>
<td>32.</td>
<td>Small cardamom</td>
<td>Elettaria cardamomom Maton</td>
</tr>
<tr>
<td>33.</td>
<td>Turmeric</td>
<td>Curumma longa L.</td>
</tr>
<tr>
<td>34.</td>
<td>Ginger</td>
<td>Zingiber officinale Rosc.</td>
</tr>
<tr>
<td>36.</td>
<td>Brinjal</td>
<td>Solanum melongena L.</td>
</tr>
<tr>
<td>37.</td>
<td>Okra</td>
<td>Abelmoschus esculentus (L.) Moench.</td>
</tr>
<tr>
<td>38.</td>
<td>Cauliflower</td>
<td>Brassica oleracea L. var. botrytis</td>
</tr>
<tr>
<td>39.</td>
<td>Cabbage</td>
<td>Brassica oleracea L. var. capitata</td>
</tr>
<tr>
<td>40.</td>
<td>Potato</td>
<td>Solanum tuberosum L.</td>
</tr>
<tr>
<td>41.</td>
<td>Onion</td>
<td>Allium cepa L.</td>
</tr>
<tr>
<td>42.</td>
<td>Garlic</td>
<td>Allium sativum L.</td>
</tr>
<tr>
<td>43.</td>
<td>Rose</td>
<td>Rosa spp. (other than R. damascena)</td>
</tr>
<tr>
<td>44.</td>
<td>Chrysanthemum</td>
<td>Chrysanthemum spp.</td>
</tr>
<tr>
<td>45.</td>
<td>Mango</td>
<td>Mangifera indica L.</td>
</tr>
<tr>
<td>46.</td>
<td>Duram wheat</td>
<td>Triticum durum Desf.</td>
</tr>
<tr>
<td>47.</td>
<td>Dicoccum wheat</td>
<td>Triticum dicoccum L.</td>
</tr>
<tr>
<td>48.</td>
<td>Other Triticum species</td>
<td></td>
</tr>
<tr>
<td>49.</td>
<td>Isabgol</td>
<td>Plantago ovata Forsk</td>
</tr>
</tbody>
</table>
### Seed/Planting material requirement

<table>
<thead>
<tr>
<th>S. No</th>
<th>Crop</th>
<th>Seed Requirement</th>
<th>Germination %</th>
<th>Moisture %</th>
<th>Physical Purity %</th>
<th>Tentative Season – Months for seed submission for DUS testing</th>
<th>Prescribed size of seed packets (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rice</td>
<td>3000</td>
<td>80</td>
<td>11-12</td>
<td>98</td>
<td>Kharif –March-Apr</td>
<td>230x300</td>
</tr>
<tr>
<td>2</td>
<td>Bread Wheat</td>
<td>3000</td>
<td>1500</td>
<td>95</td>
<td>8-9</td>
<td>98</td>
<td>Rabi-Aug/Sep</td>
</tr>
<tr>
<td>3</td>
<td>Durum Wheat</td>
<td>3000</td>
<td>1500</td>
<td>95</td>
<td>8-9</td>
<td>98</td>
<td>Rabi-Aug/Sep</td>
</tr>
<tr>
<td>4</td>
<td>Dicoccum Wheat</td>
<td>3000</td>
<td>1500</td>
<td>95</td>
<td>8-9</td>
<td>98</td>
<td>Rabi-Aug/Sep</td>
</tr>
<tr>
<td>5</td>
<td>Other Triticum sp</td>
<td>3000</td>
<td>1500</td>
<td>95</td>
<td>8-9</td>
<td>98</td>
<td>Rabi-Aug/Sep</td>
</tr>
<tr>
<td>6</td>
<td>Maize</td>
<td>3000</td>
<td>1500</td>
<td>80(inbred/SCH)</td>
<td>90(var/DCH)</td>
<td>8-10</td>
<td>98</td>
</tr>
<tr>
<td>7</td>
<td>Sorghum</td>
<td>3000</td>
<td>1500</td>
<td>80(inbred/ SCH)</td>
<td>90(var/DCH)</td>
<td>10-12</td>
<td>98</td>
</tr>
<tr>
<td>8</td>
<td>Pearl Millet</td>
<td>1000</td>
<td>500</td>
<td>80(inbred/ SCH)</td>
<td>90(var/DCH)</td>
<td>10-12</td>
<td>98</td>
</tr>
<tr>
<td>9</td>
<td>Green Gram</td>
<td>1000</td>
<td>N.A.</td>
<td>80</td>
<td>8-9</td>
<td>98</td>
<td>Kharif-March</td>
</tr>
<tr>
<td>10</td>
<td>Kidney Bean</td>
<td>3000</td>
<td>N.A.</td>
<td>80</td>
<td>8-9</td>
<td>98</td>
<td>June-July</td>
</tr>
<tr>
<td>11</td>
<td>Chickpea</td>
<td>2000(des)</td>
<td>3000(kabuli)</td>
<td>N.A.</td>
<td>8-9</td>
<td>98</td>
<td>Rabi-Aug</td>
</tr>
</tbody>
</table>
### How to file application for protection of Plant varieties with PPV&FRA

<table>
<thead>
<tr>
<th>S. No</th>
<th>Crop</th>
<th>Seed Requirement Candidate / Hybrid (each in gm)</th>
<th>Germination %</th>
<th>Moisture %</th>
<th>Physical Purity %</th>
<th>Tentative Season – Months for seed submission for DUS testing</th>
<th>Prescribed size of seed packets (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Pigeonpea</td>
<td>2000</td>
<td>1500</td>
<td>80</td>
<td>8.9</td>
<td>Kharif-Mar</td>
<td>230x300</td>
</tr>
<tr>
<td>13</td>
<td>Lentil</td>
<td>1000</td>
<td>N.A.</td>
<td>80</td>
<td>8.9</td>
<td>Rabl-Aug</td>
<td>230x300</td>
</tr>
<tr>
<td>14</td>
<td>Field Pea</td>
<td>2000</td>
<td>N.A.</td>
<td>80</td>
<td>8.9</td>
<td>Rabl-Aug</td>
<td>230x300</td>
</tr>
<tr>
<td>15</td>
<td>Black Gram</td>
<td>1000</td>
<td>N.A.</td>
<td>80</td>
<td>8.9</td>
<td>Kharif-March</td>
<td>165x220</td>
</tr>
<tr>
<td>16</td>
<td>Jute (oleraceus sp)</td>
<td>1000</td>
<td>500</td>
<td>85</td>
<td>9</td>
<td>Pre-Kharif-early Jan</td>
<td>165x220</td>
</tr>
<tr>
<td>17</td>
<td>Jute (capsularis sp)</td>
<td>1000</td>
<td>500</td>
<td>85</td>
<td>9</td>
<td>Pre-Kharif-early Jan</td>
<td>165x220</td>
</tr>
<tr>
<td>18</td>
<td>Cotton (hirsutum sp)</td>
<td>2000</td>
<td>1000</td>
<td>75</td>
<td>10</td>
<td>Kharif- North- Feb Peninsular-May South-June</td>
<td>230x300</td>
</tr>
<tr>
<td>19</td>
<td>Cotton (barbadense sp)</td>
<td>2000</td>
<td>1000</td>
<td>75</td>
<td>10</td>
<td>Kharif- North- Feb Peninsular-May South-June</td>
<td>230x300</td>
</tr>
<tr>
<td>20</td>
<td>Cotton (arboeum sp)</td>
<td>2000</td>
<td>1000</td>
<td>75</td>
<td>10</td>
<td>Kharif- North- Feb Peninsular-May South-June</td>
<td>230x300</td>
</tr>
<tr>
<td>21</td>
<td>Cotton (herbeaeum sp)</td>
<td>2000</td>
<td>1000</td>
<td>75</td>
<td>10</td>
<td>Kharif- North- Feb Peninsular-May South-June</td>
<td>230x300</td>
</tr>
<tr>
<td>22</td>
<td>Tomato</td>
<td>15(open field) 8 (Greenhouse) same</td>
<td>85</td>
<td>8</td>
<td>98</td>
<td>April-May</td>
<td>165x100</td>
</tr>
<tr>
<td>23</td>
<td>Cabbage</td>
<td>15</td>
<td>15</td>
<td>*</td>
<td>*</td>
<td>April-May</td>
<td>165x100</td>
</tr>
<tr>
<td>24</td>
<td>Cauliflower</td>
<td>15</td>
<td>15</td>
<td>*</td>
<td>*</td>
<td>April-May</td>
<td>165x100</td>
</tr>
<tr>
<td>25</td>
<td>Brinjal</td>
<td>15(open)</td>
<td>15(open)</td>
<td>85</td>
<td>8</td>
<td>April-May</td>
<td>165x100</td>
</tr>
<tr>
<td>26</td>
<td>Okra</td>
<td>200 gm</td>
<td>200 gm</td>
<td>As per certified seed standards</td>
<td>Kharif- North- Feb Peninsular-May South-June</td>
<td>230x300</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Potato</td>
<td>300 fully matured tuber(3.5-5 cm dia) within 15 days after harvesting</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Rabl(Sept)</td>
<td>-</td>
</tr>
<tr>
<td>28</td>
<td>Sugarcane</td>
<td>400 single bud sett from 8-10 month old plants preferably from top portions</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Rabl: North India</td>
<td>-</td>
</tr>
<tr>
<td>29</td>
<td>Gobhi Sarsoon</td>
<td>500</td>
<td>250</td>
<td>85</td>
<td>8</td>
<td>Aug-Sept</td>
<td>165x100</td>
</tr>
<tr>
<td>30</td>
<td>Indian Mustard</td>
<td>500</td>
<td>250</td>
<td>85</td>
<td>8</td>
<td>Aug-Sept</td>
<td>165x100</td>
</tr>
<tr>
<td>31</td>
<td>Karan Kai</td>
<td>500</td>
<td>250</td>
<td>85</td>
<td>8</td>
<td>Aug-Sept</td>
<td>165x100</td>
</tr>
<tr>
<td>32</td>
<td>Rapeseed</td>
<td>500</td>
<td>250</td>
<td>85</td>
<td>8</td>
<td>Aug-Sept</td>
<td>165x100</td>
</tr>
<tr>
<td>33</td>
<td>Soybean</td>
<td>3000</td>
<td>--</td>
<td>70</td>
<td>9</td>
<td>Apr-May</td>
<td>230x300</td>
</tr>
<tr>
<td>34</td>
<td>Sunflower</td>
<td>3000</td>
<td>2000</td>
<td>70</td>
<td>9</td>
<td>July-Aug</td>
<td>230x300</td>
</tr>
<tr>
<td>35</td>
<td>Safflower</td>
<td>3000</td>
<td>1500</td>
<td>80</td>
<td>9</td>
<td>June-July</td>
<td>230x300</td>
</tr>
<tr>
<td>36</td>
<td>Groundnut</td>
<td>3000(Spanish &amp; Valencia) 8000(kernel) for Virginia bunch and runner type</td>
<td>1500</td>
<td>80</td>
<td>9</td>
<td>Kharif; May-June Rabl:Aug Sep</td>
<td>300x450</td>
</tr>
<tr>
<td>37</td>
<td>Linseed</td>
<td>500</td>
<td>250</td>
<td>85</td>
<td>9</td>
<td>Jul-Aug</td>
<td>165x100</td>
</tr>
<tr>
<td>38</td>
<td>Castor</td>
<td>6000</td>
<td>2500</td>
<td>70</td>
<td>10</td>
<td>April-May</td>
<td>300x450</td>
</tr>
<tr>
<td>39</td>
<td>Sesame</td>
<td>500</td>
<td>250</td>
<td>80</td>
<td>9</td>
<td>April- May</td>
<td>165x100</td>
</tr>
<tr>
<td>40</td>
<td>Onion</td>
<td>100 gm (multiplier) 500 bulbts(MS lines)</td>
<td>50</td>
<td>70</td>
<td>*</td>
<td>As per respective sowing seasons</td>
<td>-</td>
</tr>
<tr>
<td>41</td>
<td>Garlic</td>
<td>2000 viable clove each year</td>
<td>--</td>
<td>*</td>
<td>*</td>
<td>Aug-Sep</td>
<td>-</td>
</tr>
<tr>
<td>42</td>
<td>Ginger</td>
<td>5 kg(25-30gm each of 150 pieces)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>**</td>
<td>-</td>
</tr>
<tr>
<td>43</td>
<td>Mango</td>
<td>14 grafts</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>**</td>
<td>-</td>
</tr>
<tr>
<td>44</td>
<td>Black Pepper</td>
<td>40 rooted cutting</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>**</td>
<td>-</td>
</tr>
<tr>
<td>45</td>
<td>Small Cardamom</td>
<td>50 suckers</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>**</td>
<td>-</td>
</tr>
<tr>
<td>46</td>
<td>Isabgul</td>
<td>250 gm &amp; 100 spikes</td>
<td>-</td>
<td>95</td>
<td>8.9</td>
<td>**</td>
<td>-</td>
</tr>
<tr>
<td>47</td>
<td>Menthol Mint</td>
<td>5 kg sucker</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>**</td>
<td>-</td>
</tr>
</tbody>
</table>
### How to file application for protection of Plant varieties with PPV&FRA

#### S. No | Crop | Seed Requirement | Candidate / Hybrid | Parental line (each) in gm | Germination % | Moisture % | Physical Purity % | Tentative Season – Months for seed submission for DUS testing | Prescribed size of seed packets (mm)
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
48 | Damask Rose | 100 cutting | - | - | - | - | - | ** | -
49 | Petriwkie | 10 gm | - | - | - | - | - | ** | -
50 | Brahmi | 500 cutting | - | - | - | - | - | ** | -
51 | Coconut | 30 no seedlings (1 year old) | - | - | - | - | - | - | -
52 | Rose | Cut flower: 9 plant Pot Plant: 9 plants in 30 cm pot | - | - | - | - | - | ** | -
53 | Chrysanthemum | 100 cutting each with 2 node having 8-12 weeks age | - | - | - | - | - | ** | -
54 | Vanda | 2-3 year old 20 plants that have not been flowered | - | - | - | - | - | - | -
55 | Dendrobium | 2-3 year old 20 plants each with 2 shoots | - | - | - | - | - | ** | -
56 | Cymbidium | 3-4 year old 20 plants+2 pseudo bulb+1 back bulb | - | - | - | - | - | ** | -
57 | Turmeric | 6 kg rhizome with 30-40% moisture | - | - | - | - | - | ** | -

*as per certified seed standards; **Season for seed/planting material submission will be as per DUS center’s requirement.

### Applications received for registration of different categories of varieties

#### Application received year-wise/variety-wise

<table>
<thead>
<tr>
<th>Year</th>
<th>New</th>
<th>Extant</th>
<th>Farmer</th>
<th>EDV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>72</td>
<td>358</td>
<td>2</td>
<td>0</td>
<td>432</td>
</tr>
<tr>
<td>2008</td>
<td>139</td>
<td>399</td>
<td>5</td>
<td>4</td>
<td>547</td>
</tr>
<tr>
<td>2009</td>
<td>167</td>
<td>392</td>
<td>127</td>
<td>2</td>
<td>688</td>
</tr>
<tr>
<td>2010</td>
<td>427</td>
<td>97</td>
<td>4</td>
<td>12</td>
<td>540</td>
</tr>
<tr>
<td>2011</td>
<td>153</td>
<td>267</td>
<td>939</td>
<td>2</td>
<td>1361</td>
</tr>
<tr>
<td>2012</td>
<td>144</td>
<td>253</td>
<td>302</td>
<td>0</td>
<td>699</td>
</tr>
<tr>
<td>2013</td>
<td>351</td>
<td>255</td>
<td>1001</td>
<td>70</td>
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<tr>
<td>2014</td>
<td>64</td>
<td>52</td>
<td>771</td>
<td>22</td>
<td>913</td>
</tr>
<tr>
<td>Total</td>
<td>1517</td>
<td>2073</td>
<td>3151</td>
<td>112</td>
<td>6853</td>
</tr>
</tbody>
</table>

#### Application received year-wise/applicant-wise

<table>
<thead>
<tr>
<th>Year</th>
<th>Public</th>
<th>Private</th>
<th>Farmer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>287</td>
<td>143</td>
<td>2</td>
<td>432</td>
</tr>
<tr>
<td>2008</td>
<td>322</td>
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<td>547</td>
</tr>
<tr>
<td>2009</td>
<td>193</td>
<td>368</td>
<td>127</td>
<td>688</td>
</tr>
<tr>
<td>2010</td>
<td>31</td>
<td>505</td>
<td>4</td>
<td>540</td>
</tr>
<tr>
<td>2011</td>
<td>125</td>
<td>295</td>
<td>941</td>
<td>1361</td>
</tr>
<tr>
<td>2012</td>
<td>129</td>
<td>266</td>
<td>304</td>
<td>699</td>
</tr>
<tr>
<td>2013</td>
<td>141</td>
<td>534</td>
<td>1002</td>
<td>1677</td>
</tr>
<tr>
<td>2014</td>
<td>35</td>
<td>266</td>
<td>772</td>
<td>913</td>
</tr>
<tr>
<td>Total</td>
<td>1263</td>
<td>2433</td>
<td>3157</td>
<td>6853</td>
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</table>

### Certificates of registration issued

#### Registration Certificate Issued year-wise/variety-wise

<table>
<thead>
<tr>
<th>Year</th>
<th>New</th>
<th>Extant</th>
<th>Farmer</th>
<th>EDV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2008</td>
<td>2</td>
<td>163</td>
<td>3</td>
<td>-</td>
<td>168</td>
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<tr>
<td>2009</td>
<td>15</td>
<td>49</td>
<td>-</td>
<td>-</td>
<td>168</td>
</tr>
<tr>
<td>2010</td>
<td>15</td>
<td>49</td>
<td>-</td>
<td>-</td>
<td>168</td>
</tr>
<tr>
<td>2011</td>
<td>26</td>
<td>49</td>
<td>-</td>
<td>-</td>
<td>168</td>
</tr>
<tr>
<td>2012</td>
<td>53</td>
<td>49</td>
<td>-</td>
<td>-</td>
<td>168</td>
</tr>
<tr>
<td>2013</td>
<td>53</td>
<td>49</td>
<td>-</td>
<td>-</td>
<td>168</td>
</tr>
<tr>
<td>2014</td>
<td>20</td>
<td>49</td>
<td>-</td>
<td>-</td>
<td>168</td>
</tr>
<tr>
<td>Total</td>
<td>116</td>
<td>731</td>
<td>82</td>
<td>1</td>
<td>930</td>
</tr>
</tbody>
</table>

#### Registration Certificate Issued year-wise/applicant-wise

<table>
<thead>
<tr>
<th>Year</th>
<th>Public</th>
<th>Private</th>
<th>Farmer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2008</td>
<td>149</td>
<td>16</td>
<td>-</td>
<td>165</td>
</tr>
<tr>
<td>2009</td>
<td>49</td>
<td>-</td>
<td>21</td>
<td>70</td>
</tr>
<tr>
<td>2010</td>
<td>95</td>
<td>-</td>
<td>55</td>
<td>150</td>
</tr>
<tr>
<td>2011</td>
<td>154</td>
<td>-</td>
<td>104</td>
<td>258</td>
</tr>
<tr>
<td>2012</td>
<td>154</td>
<td>-</td>
<td>35</td>
<td>189</td>
</tr>
<tr>
<td>2013</td>
<td>16</td>
<td>-</td>
<td>35</td>
<td>51</td>
</tr>
<tr>
<td>2014</td>
<td>617</td>
<td>231</td>
<td>82</td>
<td>930</td>
</tr>
<tr>
<td>Total</td>
<td>617</td>
<td>231</td>
<td>82</td>
<td>930</td>
</tr>
</tbody>
</table>
Details of crop varieties notified and IPR issued: Crops notified in the Seeds Act, 1966: 164

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Crop Species</th>
<th>No. of varieties notified</th>
<th>1966-till date</th>
<th>1998-till date</th>
<th>No. of notified varieties registered (IPR) by PPV&amp;FRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Agriculture crops (Cereals, Pulses &amp; Millets, Oilseeds, Fibres, Forage, Sugar crops)</td>
<td>4575</td>
<td>1742</td>
<td>644</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Horticulture crops (Vegetables, Cash crop, Flower &amp; Fruits, Medicinal &amp; Aromatic plants)</td>
<td>350</td>
<td>152</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4925</td>
<td>1894</td>
<td>648</td>
<td></td>
</tr>
</tbody>
</table>

Status of Registration of Extant varieties (both public and private sector): Out of 45, 38 crop varieties have been notified u/s 5 of The Seeds Act, 1966

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cereals (02)</td>
<td>1380</td>
<td>725</td>
<td>574</td>
<td>194</td>
</tr>
<tr>
<td>2.</td>
<td>Pulses and Millets (10)</td>
<td>1792</td>
<td>829</td>
<td>637</td>
<td>281</td>
</tr>
<tr>
<td>3.</td>
<td>Oilseeds (10)</td>
<td>945</td>
<td>423</td>
<td>340</td>
<td>59</td>
</tr>
<tr>
<td>4.</td>
<td>Fibers (02)</td>
<td>393</td>
<td>190</td>
<td>133</td>
<td>75</td>
</tr>
<tr>
<td>5.</td>
<td>Vegetables (10)</td>
<td>343</td>
<td>157</td>
<td>145</td>
<td>03</td>
</tr>
<tr>
<td>6.</td>
<td>Sugar crop (01)</td>
<td>65</td>
<td>58</td>
<td>58</td>
<td>35</td>
</tr>
<tr>
<td>7.</td>
<td>Cash crop (01)</td>
<td>2</td>
<td>02</td>
<td>02</td>
<td>01</td>
</tr>
<tr>
<td>8.</td>
<td>Flower (01) &amp; Fruit (01)</td>
<td>5</td>
<td>05</td>
<td>05</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4925</td>
<td>2389</td>
<td>1894</td>
<td>648</td>
</tr>
</tbody>
</table>

Note: Black pepper, Chrysanthemum, Periwinkle, Indian pennywort, Blond psyllium, Minthol Mint and Orchids were not notified in the Seeds Act, 1.

Status of registration of farmers' varieties

<table>
<thead>
<tr>
<th>Year</th>
<th>Application of Farmers Varieties received</th>
<th>Certificate issued</th>
<th>Returned</th>
<th>Under GOT</th>
<th>GOT results received (Analysis of data is being done)</th>
<th>Pre grant Opposition</th>
<th>Other issues (same denomination, similar character)</th>
<th>Under examination</th>
<th>Request/Reminder for seed issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2008</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2009</td>
<td>127</td>
<td>3</td>
<td>83</td>
<td>21</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>2011</td>
<td>939</td>
<td>-</td>
<td>258</td>
<td>110</td>
<td>363</td>
<td>17</td>
<td>75</td>
<td>223</td>
<td>837</td>
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<tr>
<td>2012</td>
<td>302</td>
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<td>79</td>
<td>-</td>
<td>139</td>
<td>837</td>
<td>225</td>
<td>546</td>
</tr>
<tr>
<td>2013</td>
<td>1001</td>
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<td>25</td>
<td>-</td>
<td>225</td>
<td>837</td>
<td>546</td>
<td>-</td>
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<tr>
<td>2014</td>
<td>771</td>
<td>78</td>
<td>-</td>
<td>385</td>
<td>110</td>
<td>365</td>
<td>18</td>
<td>364</td>
<td>1696</td>
</tr>
<tr>
<td>Total</td>
<td>3151</td>
<td>130</td>
<td>83</td>
<td>385</td>
<td>110</td>
<td>365</td>
<td>18</td>
<td>364</td>
<td>1696</td>
</tr>
</tbody>
</table>
Year wise application trend (Variety wise)

Year wise application trend (Applicant)

Year wise application trend in crops (farmers' varieties) : Number of crops against which applications received
## Status of New, Extant and EDV applications

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Applications</th>
<th>Non Registrable (377)</th>
<th>Registrable</th>
<th>Certificate issued</th>
<th>Pre-grant opposition invited</th>
<th>Under DUS + Recommended for DUS</th>
<th>Recommended for forthcoming EVRC</th>
<th>EVRC Approved, seed awaited</th>
<th>0-3</th>
<th>Pending (Seed, Fee and Queries)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Closed</td>
<td>Withdrawn</td>
<td>Legal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>430</td>
<td>53</td>
<td>41</td>
<td>13</td>
<td>323</td>
<td>1</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2008</td>
<td>542</td>
<td>80</td>
<td>15</td>
<td>24</td>
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<td>148</td>
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<td>4</td>
<td>5</td>
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<tr>
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<td>561</td>
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<td>6</td>
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<td>0</td>
<td>0</td>
<td>138</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3697</strong></td>
<td><strong>215</strong></td>
<td><strong>103</strong></td>
<td><strong>59</strong></td>
<td><strong>3320</strong></td>
<td><strong>848</strong></td>
<td><strong>160</strong></td>
<td><strong>1357</strong></td>
<td><strong>22</strong></td>
<td><strong>29</strong></td>
</tr>
</tbody>
</table>

*Source: PPV&FRA, New Delhi*
Chapter III: The instructions to fill the form

Vilas A Tonapi\(^1\), M Elangovan\(^1\), Gururaj G Kulkarni\(^2\), Raghunath Kulkarni\(^1\), N Seetharama\(^1\)& JV Patil\(^1\)

1 - Directorate of Sorghum Research, Rajendranagar, Hyderabad-500030 (AP)
2 - Syngenta India Limited (Seeds Divn), Revenue Colony, Shivajinagar, Pune-411 005, Maharashtra

**FORM 1**

[See regulation 10]

APPLICATION FOR REGISTRATION OF NEW VARIETY, EXTANT VARIETY AND FARMER’S VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001.

[See section 18, other than essentially derived variety.]

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)

<table>
<thead>
<tr>
<th>1. Identity of the Applicant(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ INDIVIDUAL BREEDER</td>
</tr>
<tr>
<td>☐ SUCCESSOR OF BREEDER</td>
</tr>
<tr>
<td>☐ INSTITUTIONAL APPLICANT FARMER(^3)</td>
</tr>
<tr>
<td>☐ COMMUNITY OF FARMERS(^1)</td>
</tr>
<tr>
<td>☐ GROUP OF FARMERS(^1)</td>
</tr>
<tr>
<td>☐ ASSIGNEE OF ANY OF ABOVE(^2)</td>
</tr>
<tr>
<td>☐ CONVENTION COUNTRY(^3)</td>
</tr>
<tr>
<td>☐ ANY OTHER(^4)</td>
</tr>
</tbody>
</table>

Notes: In this section √ the category under which the application is submitted such as individual breeder who has bred the variety independently without any affiliation to any organization or may be by his successor or any independent private institution working on its own or by a farmer who has bred his variety or a hybrid independently or community of farmers engaged in collective endeavor in developing a new hybrid or a variety or group of farmers or assignee of all above categories, or a convention country where India enjoys such mutual privileges (see rule 31 of the Act) of plant variety protection accompanied by enclosures or the attachments(where ever applicable) as given below:

a) Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

b) An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

c) The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act)

d) For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder

2. Name(s) and Nationality of Applicant(s)

(a.) (If natural person): [Insert additional rows, if required]

1. Serial Number.
2. Name\(^3\)
3. Complete Address
4. Nationality

Notes: In jurisprudence, a natural person is a human being perceptible through the senses and subject to physical laws, as opposed to an artificial person, i.e., an organization that the law treats for some purposes as if it were a person distinct from its members or owner. Hence he doesn’t own the material for which he is making the application for plant variety protection, but he is only a representative of the farmers or the community of the farmers. Therefore, as required here, the applicant thus authorized has to abide by following stipulation:

3 If the applicant is the authorized representative of a group of farmers/community of farmers an authorization in Form PV-1 signed by all members of the group, or by the Head/office bearer of the community witnessed by the two people, if the identity of the applicant is “Community of farmers’ shall be attached.

(b.) (If a legal person; for example a firm or company or institution)

Name:
Address of its seat or establishment:
Year of Incorporation:
State whether the applicant legal person has non-Indian participation in capital or management:

☐ Yes  ☐ No

If yes, identify the nationality

Notes: A legal person is an artificial entity through which the law allows a group of natural persons to act as if it were a single composite individual for certain purposes. This legal fiction does not mean these entities are human beings, but rather means that the law recognizes them and allows them to act as natural persons for some purposes—most commonly lawsuits, property ownership, and contracts. The concept goes by many names, including corporate personhood. Although the concept of a legal person is more central to Western law, particularly common law and civil law countries, it is also found in virtually every legal system.

In the case of ICAR or State Agricultural Universities, firm or a company a central nodal person designated as a legal person be named and his name and address be filled under (b). Mention the year of incorporation and also whether the legal person (company/firm/organization) has any non-Indian share/capital or participation in the management is there. Tick the appropriate boxes as yes or no. If there is no non-Indian participation, tick the box as “No”. If there is non-Indian participation, mention the nationality of non-Indian entity which has a capital share or non-Indian participation.

For example, In case of seed company “Emergent genetics”: non-Indian participation is “Monsanto” or in case of Syngenta India Ltd., it is “Syngenta AG Switzerland”.

(c) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):

Name: _______________________
Designation: ___________________
Address: _______________________
Pin: _______________________
Telephone: _____________________
Fax: _______________________
E-mail: _______________________ 

Notes: Write here the name, designation, address and telephone/fax details of the natural person who in fact is an employee of the organization that has submitted the application (legal person). For example: If “Monsanto” is the legal person its PVP and patent manager will be the natural person. In case of ICAR, if ICAR is the legal person, designate/nominated director of the institute will be the natural person. In case of state Agricultural University, University is the legal person and Director of Research or any other nominated employee will be the natural person.

3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorization in Form-PV-1, if required)

Name
Address
Pin
Telephone:
Fax:
E-mail

Notes: In this section provide the name address of the person to whom the correspondence from the authority should be addressed with regard to the issues about the application. The person may be designated or nominated Director of the concerned crop institute in case of ICAR or any nominated person in case of SAU’s. In case of private seed companies, the natural person can also act as the person handling all the correspondence or the company may appoint a lawyer who will handle all the related correspondence. In all the cases the authorization in Form-PV-1 (to be issued by the legal person—ICAR, SAU or a seed company or farmer or community) is required if some one else as indicated is authorized to handle the correspondence on behalf of the legal person.

4. General Information of the Candidate Variety:

Common name of the Crop:
Botanical name:
Family:
Denomination (in block letters):

Notes: Botanical names mean the scientific name approved by the International Code for Nomenclature of Cultivated Plants, 2004.
5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)

- NEW VARIETY
- EXISTANT VARIETY
- FARMERS’ VARIETY

Notes: In this section tick here the appropriate box the protection sought for a hybrid or a variety is a new variety (varieties newly developed either by scientist, breeders or others including farmers), extant variety (A plant variety, which is currently under cultivation, and includes improved variety released by the public or private research institutions, farmers’ varieties and any other varieties in public domain) or farmers’ variety (A plant variety, which is either developed by a farmer or community of farmers or conserved by them for long period) as per the definitions given in chapter III of the PPV and FR authority, 2003.

6.(a.) Classification of the Candidate Variety:

- TYPICAL VARIETY
- HYBRID VARIETY
- TRANSGENIC
- OTHER (SPECIFY)

5. Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagated saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).

* The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions.

Notes: In this section tick here the appropriate box the protection sought for a hybrid or a variety is a Typical variety (variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagules saved from previous crop production cycles Example: pure lines including parental lines/composite varieties or vegetative propagated varieties), Hybrid variety (Refers to immediate offspring of cross between two parental varieties. In some cases hybrids perform superior than the best parental variety, but it is not a transgenic) or Transgenic (A hybrid evolved by introducing a new gene system in a plant variety or marker assisted) or other variety (Folk variety, Essential derived variety etc).

(b) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

Notes: In this section provide the salient preferred group characteristics (For example: As in case of Maize Ear character: anthocyanin colouration of silks and the dark purple colouration of silks or As in case of Rice Decorticated grain shape (Long slender shape etc.) specific to the hybrid or a variety), Distinctness Uniformity Stability features and Grouping characters. Also attach ‘Technical Questionnaire sheet giving detailed aspects of DUS.

(c) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests.

Notes: If protection is sought for new variety which is a transgenic you need to attach clearance on Bio-safety from Ministry of Environment and Forests. If it is not a transgenic, then write here as “Not applicable”.

7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety:

Name:
Address:
Telephone:
Fax:
E-mail:
Nationality:

Notes: Please mention here the name, address, telephone, fax, e-mail and nationality details of all the breeders involved in breeding the candidate variety for which the protection is sought, if the variety or a hybrid belongs to ICAR or SAU’s or any public institution. If the variety for which protection is sought belongs to farmers or community, the application should accompany endorsed Annexure I duly signed by the endorsing official. If it is a proprietary hybrid of a seed company, then name of the breeder will be the name of the company which has bred the variety, the telephone, fax and e-mail ID of natural person (who is the legal employee of that company and is authorized to represent the legal person) be written.
8. (a.) Details of all other earlier applications made on the candidate variety in convention countries or other countries (if applicable):

Variety denomination:
Nature of right applied for: □ Plant Breeder's Rights □ Patent Filing Date
(Attach evidence):
Name of Country:
Name of Authority:
Application Number:
Status of Application: □ Under process □ Approved □ Rejected
(If required, repeat the above for each applicable country and attach separate sheet)

Notes: Here you need to provide the details if an application has been already submitted in a convention country for plant variety protection, where India enjoys such mutual privileges (see rule 31 of the Act) of plant variety protection. The details regarding the denomination of a variety, nature of right applied for, date of filing the application, name of the convention country, name of the authority to which the application has been submitted in a convention country, the application number and the status (whether under process, approved or rejected) should be mentioned. If the application for protection for the same denomination has been submitted in several of the convention countries, then one needs to provide similar details in respect of each of the applications made as explained above. If no application is made write as “Not applicable”

(b.) Priority is now claimed in respect of the earliest application for a candidate variety of said denomination (if applicable):

In (country):
On (date of application):

Notes: Here you need to provide the details if you are claiming priority for an earliest application submitted for a candidate variety, then provide information (name of the country) on the application already submitted in a convention country for plant variety protection, where India enjoys such mutual privileges (see rule 31 of the Act) of plant variety protection, and the date of filing the application. If no priority is claimed, write as “Not applicable”

9. Has the candidate variety been commercialized or otherwise exploited?

□ Yes □ No

If yes, please indicate the following:
Date of the first sale of the variety: (dd/mm/yyyy)
Country (ies) where Protection is made:
Denomination used
Trademark used, if any:
Variation in important trait with Respect to first filing:

Notes: Here you need to provide information on whether the candidate variety for which protection is sought is already commercialized or sold? Or otherwise it is exploited? If being exploited, mention what for? The explanation could be the candidate variety has been exploited for hybrid production. If yes, then provide information on the date of first sale of variety if already sold in market, countries where the protection is sought, denomination of the candidate variety, trademark used and variation in important traits with respect to first filing of the application. If it is not sold, write that it is not sold. If no protection is sought for the candidate variety, then write: “not applicable, If there is no trademark (brand name of variety) under which it is sold” write as “not applicable”

10. (a.) If the candidate variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s):

□ Yes □ No

If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:

Parental line (S): Denomination:
Source:
Authorization letter obtained: □ Attached □ Not attached

Notes: Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.
Notes: Here you need to provide information on whether the candidate variety which is a hybrid for which protection is sought is bred through your exclusively developed proprietary parental lines? Then provide their names or denominations of both male and female lines. If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them. Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public domain is used as parental line for the repeated propagation of the hybrid:

☐ Yes  ☐ No

If yes, give following details:
- Denomination:
- Geographical Source:
- Details of Attribution (origin):
- Details of owner farmer/village community/Institution/Organisation:

Notes: Here you need to state whether you have used any farmer’s variety or variety of common knowledge or variety in the public domain as the parental lines. If yes, then provide information on their denomination, geographical source, Details of Attribution (origin), Details of owner farmer/village community/Institution/Organisation. If your answer is no, write as “not applicable”

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?

Notes: Benefit sharing means sharing of whatever accruing from utilization of biological resources, community knowledge, technologies, innovations or practices. Benefit Sharing is applicable to the biological resource and traditional knowledge conserved by communities. Whenever a party outside the community accesses these resources and commercializes them with or without value addition or innovation, an equitable part of the benefit gained by the party is to be shared with the community. Like communities, it is applicable to individuals too. The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case, if you have used any farmer’s variety or variety of common knowledge or variety in the public domain as the parental lines for hybrid development, then you have to clearly indicate as to what sort of farmer/community recognition the Applicant is planned.

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details:

Notes: In case any your parental line, varieties or the hybrids has anything from the exotic origin, then please declare the source of material, from which organization, country or an individual it has been obtained, including the fact whether it is a part of biodiversity regulations as per CBD in other countries. This is required mainly to trace about matrrial involved in breeding and also the stake holders who may be part of benefit sharing aspects in view of utilization of exotic material belonging to biological resources, community knowledge, technologies, innovations or practices. Benefit Sharing is also applicable to the biological resource and traditional knowledge conserved by communities. Whenever a party outside the community accesses these resources and commercializes them with or without value addition or innovation, an equitable part of the benefit gained by the party is to be shared with the community. Like communities, it is applicable to individuals too. The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case, if you have used any farmer’s variety or variety of common knowledge or variety in the public domain as the parental lines for hybrid development, then you have to clearly indicate as to what sort of farmer/community recognition the Applicant is planned.

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee:

(To be decided)

Stability testing fee:
- Amount of fee: Rupees 200/- (Rupees...Two hundred only.)
- Demand Draft Number and date:
- Name of Bank and branch in which the Demand Draft is drawn: ___________________________

*Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

(Signature of the Applicant)
DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers’ Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate variety.

I/We hereby declare that the candidate variety complies with the sub-section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I/We hereby attach an affidavit in compliance with clause (C) of sub-section (1) of section 18 of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

I/We hereby declare that the information given in this application for the registration of the above said candidate variety, including annexure and all supporting documents are complete, true and correct to the best of my/our knowledge, information and belief and no information has been willfully concealed.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

Place: __________________________ Date: __________________________
Signature of Applicants: __________________________
Seal: __________________________

Wherever the applicants are more than one person each applicant has to sign. In the case of authorized application or application by assignees, such person(s) authorized or assigned shall sign.

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

(a) complete application;
(b) endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable);
(c) document of authorization in Form PV-1 (if applicable);
(d) document of assignment in Form PV-2 (if applicable);
(e) documents in support of (b) and (d) as given above. (If applicable);
(f) Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved;
(g) copy of document on filing date (vide column 8A, if applicable);
(h) copy of letter of agreement (vide column 10A, if applicable);
(i) technical Questionnaire for the Candidate variety (attached);
(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub-section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001;
(k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure;
(l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof;
(m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals; and
(n) Fees as applicable;

If felt necessary attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.
ANNEXURE 1
Endorsement of application for registration of farmers' variety under Protection of Plant Varieties and Farmers’ Rights Act, 2001

1. Name(s) of applicant farmer/ Group of farmers/Community of farmers

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name with surname/Name of Group/Name of Community</th>
<th>Permanent Address</th>
</tr>
</thead>
</table>

2. Denomination of the candidate variety: ___________________________________

3a. (Applicable to individual farmer applicant) I hereby declare that I have been a permanent cultivator since last many years in the ....................... village falling under the .................... local body/Panchayat(s) in the .................... District of .................... State and that I and my family are the initial and exclusive developers and conservers of the candidate variety denominated as ....................... under the kind................................. (Common name of crop) to the botanical species ........................................

3b. (Applicable to group/community of farmers applicant) We hereby declare that we have been the permanent cultivators since last many years in the ....................... village(s) falling under the .................... local body/Panchayat(s) in the .................... District(s) of .................... State(s) and that we are the initial and exclusive developers and continuous conservers of the candidate variety denominated as ................................. under the kind. ....................... (Common name of crop) belonging to the botanical species ................................. We on behalf of our group/community hereby authorize....................... s/o....................... (Name), who is a member of our group/community and permanent resident of ....................... (Complete postal address) to do the needful and be the signatory on our behalf for the limited purpose of securing registration of the candidate variety in our favour under Protection of Plant Varieties & Farmers’ Rights Act, 2001.

Dated....................
Place....................

Signature and Name of the Farmer or
Authorized person of Group/Community
(To be signed before the endorsing official)

It is hereby certified that the above said candidate variety is bred / developed and continuously conserved and cultivated only by the applicant farmer / group of farmers / community of farmers who is / are permanent residents of above said village(s) and I am fully conversant with the applicant farmer / group or community of farmers and that the candidate variety is due to their efforts (strike out unwanted words given as options).

Date
Place

(Chairperson / Secretary of the Concerned Panchayat Biodiversity Management Committee OR Concerned District Agricultural Officer OR Director of Research Concerned State Agricultural Universities OR Concerned District Tribal Development Office.
(With Official Rubber Stamp)
Technical Questionnaire

1. Name of the Applicant/breeder/company: -
2. Year of Establishment: -
3. If registered company under Company’s Act 1956 (Give details): -
4. Location of corporate office and address: -
5. Tel/fax/e-mail: -
6. Name of candidate variety:-
   (a) Has it been released in any Convention Country earlier
      □ Yes □ No
      If yes give complete details in column number 13
   (b) Pedigree/genealogy: -
      (Include schematic diagram giving details of varieties, lines, or clones used in the breeding of candidate variety).
   (c) Breeding of Candidate Variety
      (i) Origination (Tick the correct one) Controlled pollination / open pollination / induced mutation / spontaneous mutation / introduction / selection/ seedling selection / any other (specify)
      (ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the candidate variety). If the variety was developed by selection, then the number of selection cycles completed before fixing it.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Male line</th>
<th>Female line</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iii) Breeding technique/procedure used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Selection criteria used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii) Stage of selection and multiplication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii) Location where breeding was conducted</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Particulars of comparative trial conducted by the applicant, if any.

Information on the location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may, furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of candidate variety.

8. Characteristics of the candidate variety

Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a)(i) Give group characters
(a)(ii) Distinguishing characteristics (descriptive or elaborate)
(b) Table of characteristics between candidate denomination and reference variety

Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.

NOTE: Two or more reference varieties should be compared with the candidate variety in the characteristics table, including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.
9. Characteristics of the reference varieties
(a) Most similar variety
   (i) Denomination
   (ii) Basis of choice of this variety for comparison
   (iii) Distinguishable Characteristics

(b) Other reference variety
   (i) Denomination
   (ii) Basis of choice of this variety for comparison
   (iii) Distinguishable Characteristics

10. Statement of distinctness of candidate variety
Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include, (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Candidate variety</th>
<th>Reference variety</th>
</tr>
</thead>
</table>

11. Statement on uniformity and stability of candidate variety
Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants, or mutations. In your opinion what should be the frequency of off types or any other describable variation beyond which the candidate variety shall be deemed to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.

12. Methods for maintaining the candidate variety
Please provide a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder’s right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

NOTE: The holder of a plant breeder’s right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.

13. Information on variety registered in Convention Countries.
a. What were the grouping characters in that application for this candidate variety?
b. What was the Distinctness Uniformity and Stability parameter on which it was registered?
c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?
d. Has the Variety been withdrawn in the first filed country from cultivation or banned or from any of the subsequently released country?

e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date

Signature

Signature of Witness and Address ______________________

Designation of the Breeder/Company with seal

The breeder/company should sign with date each page of the Technical Questionnaire.

[No. ______________________ ] ______________________
Chapter IV: How to protect extant varieties?

Vilas A Tonapi, M Elangovan, Gururaj G Kulkarni, Raghunath Kulkarni, N Seetharama & JV Patil
1 - Directorate of Sorghum Research, Rajendranagar, Hyderabad-500030 (AP)
2 - Syngenta India Limited (Seeds Divn), Revenue Colony, Shivajinagar, Pune-411 005, Maharashtra

Please note that the section 2(j) of protection of Plant Varieties and Farmers Rights Act defines the extant varieties as those:

- Varieties notified under section (5) of the Seeds Act, 1966 or
- It may be a Farmers’ variety : or
- A variety about which there is common knowledge : or
- Any variety which is there in public domain.
- The varieties released and notified before and within three years form the date of notification of a particular crop species, for the purpose of registration, are treated as “Extant varieties”. The extant varieties should be registered within three years after notification of species for the purpose of registration (Rule 24, 2003).
- DUS testing is not needed for the registration and protection of Extant Varieties
- After the submission of seed and the fees @ Rs.1000/variety, within two months after Requisition by the office of Registrar, the certificate of protection for the extant variety is issued by the Authority

Essential documents and attachments to be appended along with application for the protection of extant varieties

I) File the application -1 with Technical Questionnaire duly filled in, to the Registrar of PPV and FR Authority.

II) The application must have following attachments and fulfill the following requirements

- Release proposal in respect of the candidate variety submitted to CVRC
- Gazette notification for release of the variety
- Denomination matching the same in the notification.
- Colored photographs of distinct characters to establish distinctiveness

III) Attachments

- PV-1(Authorization) PV-2(Assignment of rights)-as applicable.
- Document(s) in support of assignment in PV-1.
- Affidavit (No terminator. No GURT) ON Non Judicial stamp paper of Rs. 100/- in the format as per
- Distinguishing DUS characteristics.
- If the application is found in order after initial scrutiny by the office of registrar of the authority , the EVRC review it recommends for registration ,if found complete in all respect
- Passport data are published in PVJ for filling the objection(s).if any, within three months after its publication in PVJ.
FORM 1

APPLICATION FOR REGISTRATION OF EXTANT VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001.

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written typed response in other queries.)

1. Identity of the Applicant(s):

   □ INDIVIDUAL BREEDER
   □ SUCCESSOR OF BREEDER
   □ INSTITUTIONAL APPLICANT
   □ FARMER1
   □ COMMUNITY OF FARMERS1
   □ GROUP OF FARMERS1
   □ ASSIGNEE OF ANY OF ABOVE2
   □ CONVENTION COUNTRY 3
   □ ANY OTHER 4

   1. Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

   2. An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

   3. The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act)

   4. For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder.

2. Name(s) and Nationality of Applicant(s)

   (a.) (If natural person): [Insert additional rows, if required] Not applicable

   1. Serial Number.
   2. Name3 Dr Raghavender
   3. Complete Address 12, Bhavani colony, Hyderabad, 500 030.
   4. Nationality Indian

   If the applicant is the authorised representative of a group of farmers/ community of farmers an authorisation in Form PV-1 signed by all members of the group, or by the Head/office bearer of the community witnessed by the two people, if the identity of the applicant is “Community of farmers” shall be attached.

   (b.) (If a legal person; for example a firm or company or institution)

   Name: Indira seeds
   Address of its seat or establishment: 12, Bhavani colony, Hyderabad-30
   Year of Incorporation: 1999

   State whether the applicant legal person has non-Indian participation in capital or management:

   □ Yes □ No

   If yes, identify the nationality

   (c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):

   Name : Santosh
   Designation : Managing Director
   Address: Indira seeds,12, Bhavani colony, Hyderabad-30
   Telephone: +91-40-27561769; Fax: +91-40-27561770
   E-mail: mdindiraseeds@yahoo.com

3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorisation in Form-PV-1, if required)

   Name The Director (Research)
   Address Indira seeds,12, Bhavani colony, Hyderabad - 30.
4. General Information of the Candidate Variety:

- Common name of the Crop: Sorghum
- Botanical name: Sorghum bicolor (L.) Moench
- Family: Poaceae
- Denomination (in block letters): INJAR 20

*Botanical names mean the scientific name approved by the International Code for Nomenclature of Cultivated Plants, 2004.*

5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)

- [ ] NEW VARIETY
- [ ] EXTANT VARIETY
- [ ] FARMERS’ VARIETY

6.(a.) Classification of the Candidate Variety:

- [ ] TYPICAL VARIETY
- [ ] HYBRID VARIETY*
- [ ] TRANSGENIC
- [ ] OTHER (SPECIFY)

5. Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagated saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).

* The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions

(b) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

- Technical Questionnaire attached

(c) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests.

- Not Applicable

7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety6:

- **i)** Name: Dr. Sanath,
- Address: Sorghum breeder, Indira seeds, 12, Bhavani colony, Hyderabad - 500 030
- Telephone: 91-40-27561769
- Fax: 91-40-27561770
- E-mail: sanathindiraseeds@yahoo.com
- Nationality: Indian

*In case of more than one breeder mention all names as (ii), (iii) and so on in the above format. If required insert extra page. In the case the variety is evolved and conserved ‘by group or community of farmers’, it shall be endorsed in Annexure I.*

8.(a.) Details of all other earlier applications made on the candidate variety in convention countries or other countries (if applicable):

- Not applicable
Name of Authority: ____________________________
Application Number: ____________________________
Status of Application: □ Under process □ Approved □ Rejected
(If required, repeat the above for each applicable country and attach separate sheet)

(b.) Priority is now claimed in respect of the earliest application for a candidate variety of said denomination (if applicable):
   Not applicable
In (country): ______________________________________
On (date of application): ____________________________

9. Has the candidate variety been commercialised or otherwise exploited?
   □ Yes □ No
   If yes, please indicate the following:
   Date of the first sale of the variety: 5th January 2000
   Country (ies) where Protection is made: India
   Denomination used: INJAR 20
   Trademark used, if any: Not applicable
   Variation in important trait with Respect to first filing: (attach sheet):

10.(a.) If the candidate variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s):
   Not applicable □ Yes □ No
   If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:
   Parental line (S):
   Denomination:
   Source:
   Authorisation letter obtained: □ Attached □ Not attached

7 Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public domain is used as parental line for the repeated propagation of the hybrid:
   □ Yes □ No
   If yes, give following details:
   Denomination:
   Geographical Source:
   Details of Attribution (origin):
   Details of owner farmer/village community/Institution/Organisation:

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?
   Not applicable

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details:
   Not applicable

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee:
   Not applicable
Amount of fee: Rupees 200/- (Rupees Two hundred only) Demand Draft Number and date: DD No XXXX dated 21st May 2009 Name of Bank and branch in which the Demand Draft is drawn: State Bank of Hyderabad, Budvel Branch, Rajendranagar, Hyderabad - 500030

*Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

(Signature of the Applicant)
Managing Director

DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers’ Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate variety.

I/We hereby declare that the candidate variety complies with the sub- section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I/We hereby attach an affidavit in compliance with clause (C) of sub- section (1) of section 18 of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

I/We hereby declare that the information given in this application for the registration of the above said candidate variety, including annexure and all supporting documents are complete, true and correct to the best of my/our knowledge, information and belief and no information has been wilfully concealed.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

Place: Hyderabad Signature of Applicants
Date: 21st July 2009 Managing Director & Seal

1Wherever the applicants are more than one person each applicant has to sign. In the case of authorised application or application by assignees, such person(s) authorised or assigned shall sign

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

√ (a) complete application - Yes
(b) endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable) – Not Applicable
√ (c) document of authorisation in Form PV-1 (if applicable) - Yes
√ (d) document of assignment in Form PV-2 (if applicable) - Yes
(e) documents in support of (b) and (d) as given above. (If applicable): Not Applicable
√ (f) Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved; Yes
(g) copy of document on filing date (vide column 8A, if applicable); Not Applicable
(h) copy of letter of agreement (vide column 10A, if applicable); Not Applicable
√ (i) technical Questionnaire for the Candidate variety (attached); Yes
(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub –section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001; Not Applicable
(k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure; Not Applicable
(l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof: Not Applicable
(m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals; Not Applicable and
√ (n) Fees as applicable; Yes

If felt necessary attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.
ANNEXURE 1  Not Applicable

Endorsement of application for registration of farmers’ variety under Protection of Plant Varieties and Farmers’ Rights Act, 2001

1. Name(s) of applicant farmer/ Group of farmers/Community of farmers

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name with surname/Name of Group/Name of Community</th>
<th>Permanent Address</th>
</tr>
</thead>
</table>

2. Denomination of the candidate variety: ______________________________

3a. (Applicable to individual farmer applicant)
I hereby declare that I have been a permanent cultivator since last many years in the ……………………. village falling under the ………………… local body/Panchayat(s) in the ………………… District of …………………… State and that I and my family are the initial and exclusive developers and conservers of the candidate variety denominated as ……………………, under the kind …………………… (Common name of crop) to the botanical species ……………………..

3b. (Applicable to group/community of farmers applicant) We hereby declare that we have been the permanent cultivators since last many years in the ……………………. village(s) falling under the ………………… local body/ Panchayat(s) in the …………………..District(s) of …………………….State(s) and that we are the initial and exclusive developers and continuous conservers of the candidate variety denominated as …………………….under the kind ……………………. (Common name of crop) belonging to the botanical species …………………….. We on behalf of our group/community hereby authorise …………………….. s/o …………………….. (Name), who is a member of our group/community and permanent resident of ……………………. (Complete postal address) to do the needful and be the signatory on our behalf for the limited purpose of securing registration of the candidate variety in our favour under Protection of Plant Varieties & Farmers’ Rights Act, 2001.

Dated: ……………………
Place: ……………………

Signature and Name of the Farmer or Authorised person of Group/Community
(To be signed before the endorsing official)

It is hereby certified that the above said candidate variety is bred / developed and continuously conserved and cultivated only by the applicant farmer / group of farmers / community of farmers who is / are permanent residents of above said village(s) and I am fully conversant with the applicant farmer / group or community of farmers and that the candidate variety is due to their efforts (strike out unwanted words given as options).

Date: ……………………
Place: ……………………

Signature
Name
(Chairperson / Secretary of the Concerned Panchayat Biodiversity Management Committee OR Concerned District Agricultural Officer OR Director of Research Concerned State Agricultural Universities OR Concerned District Tribal Development Office.
(With Official Rubber Stamp)
Technical Questionnaire

1. Name of the Applicant/breeder/company: - Indira seeds, hyderabad
2. Year of Establishment: - 1999 (Nineteen hundred ninety nine)
3. If registered company under Company’s Act 1956 (Give details): - XYZ
4. Location of corporate office and address: - 12, Bhavani colony, RAdendranagar, Hyderabad-30
5. Tel/fax/e-mail: - 91-40-27561769 91-40-27561770
6. Name of candidate variety:- INJAR 20

(a) Has it been released in any Convention Country earlier
☐ Yes ☐ No

If yes give complete details in column number 13

(b) Pedigree/genealogy: - In10 x In 30

Schematic diagram of varietal development

Hybridization of elite lines

↓

F1 was raised to harvest F2 seeds

↓

F2 population (2000 plants) raised

↓

Superior plants with desired traits selected

↓

F3 population raised and Superior plants selected

↓

F4 population raised and Superior plants selected

↓

F5 population raised and Superior plants selected

↓

F6 population raised and promising line identified

↓

Small scale multiplication of the selected line

↓

Microplot seed production undertaken to

↓

Produce seeds for replicated trials

↓

Replicated trials conducted in multiple locations

↓

Seed production scheme standardized

(Include schematic diagram giving details of varieties, lines, or clones used in the breeding of candidate variety)

(c) Breeding of Candidate Variety

(i) Origination (Tick the correct one)

Controlled pollination / open pollination / induced mutation / spontaneous mutation / introduction / √selection/ seedling selection / any other (specify)
(ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the candidate variety). If the variety was developed by selection, then the number of selection cycles completed before fixing it: Not available

(iii) Breeding technique/procedure used - Pedigree method

(iv) Selection criteria used - Development of a abcd disease resistant variety for kharif

(v) Stage of selection and multiplication - Fx - Fz generation

(vi) Location where breeding was conducted - Seed farm, Indira seeds, Rajendar nagar, Hyderabad.

7. Particulars of comparative trial conducted by the applicant, if any.

Information on the location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may, furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of candidate variety.

Grain yield (kg/ha) of proposed variety SPV 0000 check at National level in coordinated trails

<table>
<thead>
<tr>
<th>Year Trial</th>
<th>SPV 0000</th>
<th>Rank</th>
<th>CCC</th>
<th>BBB</th>
<th>DDD</th>
<th>CD</th>
<th>CV %</th>
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<tbody>
<tr>
<td>Karnataka 00 locations</td>
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</table>

Fodder yield (kg/ha) of proposed variety check at National level in coordinated trails

<table>
<thead>
<tr>
<th>Year Trial</th>
<th>SPV 0000</th>
<th>Rank</th>
<th>CCC</th>
<th>BBB</th>
<th>DDD</th>
<th>CD</th>
<th>CV %</th>
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<tr>
<td>Karnataka 00 locations</td>
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</table>

Evaluation of proposed variety SPV 0000 for abcd disease resistance tolerance against check at six locations in coordinated trails (2000-2003)

score under artificial screening by mist formation sprinkler (1-5 scale)

<table>
<thead>
<tr>
<th>Entry</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPV 000</td>
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<td>CCC</td>
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<td>BBB</td>
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</table>

8. Characteristics of the candidate variety

Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.
(a) (i) Give group characters.

Adaptation of season : xxxx
Plant: time of panicle emergence : xxxx (Medium)
Plant: Total height (at physiological maturity) : 0000 cm (Medium)
Panicle shape (at physiological maturity) : xxxxx
Caryopsis: (Colour after threshing) : xxxxx

(a) (ii) Distinguishing characteristics (descriptive or elaborate)

Plant height: (xxxx cm), xxx pigmentation, flag leaf coloration (xxxx), leaf blade length (xxx) width (xxxx), glume colour (xxxxx) panicle shape xxxxx and density xxxxx, caryopsis colour xxxx and lustrous.

(b) Table of characteristics between candidate denomination and reference variety Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.

NOTE: Two or more reference varieties should be compared with the candidate variety in the characteristics table, including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety</th>
<th>Remarks Measured value etc.</th>
<th>Characteristics value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seedling: anthocyanin colouration of coleoptile</td>
<td>1</td>
<td>Yellow-green</td>
<td>Yellow-green</td>
</tr>
<tr>
<td>Leaf Sheath; anthocyanin Colouration</td>
<td>1</td>
<td>Yellow-green</td>
<td>Yellow-green</td>
</tr>
<tr>
<td>Leaf: midrib colour (5th fully developed leaf)</td>
<td>2</td>
<td>Yellow-green</td>
<td>Yellow-green</td>
</tr>
<tr>
<td>Plant: Time of panicle emergence (50% of the plants with 50% anthesis)</td>
<td>5</td>
<td>(73) Medium</td>
<td>(67) Medium</td>
</tr>
<tr>
<td>Plant: natural height of plant up to base of flag leaf</td>
<td>5</td>
<td>(191.4) Medium</td>
<td>(233.3) Tall</td>
</tr>
<tr>
<td>Flag leaf: Yellowcolour of midrib</td>
<td>1</td>
<td>Absent (1)</td>
<td>Absent (1)</td>
</tr>
<tr>
<td>Lemma: arista formation</td>
<td>1</td>
<td>Absent (1)</td>
<td>Absent (1)</td>
</tr>
<tr>
<td>Stigma: anthocyanin colouration</td>
<td>5</td>
<td>Present (5)</td>
<td>Present (5)</td>
</tr>
<tr>
<td>Stigma: Yellow colouration</td>
<td>5</td>
<td>Present (5)</td>
<td>Present (5)</td>
</tr>
<tr>
<td>Stigma: length</td>
<td>5</td>
<td>(1.2) Medium</td>
<td>(0.9) Short</td>
</tr>
<tr>
<td>Flower with pedicel: length of flower</td>
<td>9</td>
<td>Very long</td>
<td>Long</td>
</tr>
<tr>
<td>Anther: Length</td>
<td>5</td>
<td>(3.1) Medium</td>
<td>(2.9) Short</td>
</tr>
<tr>
<td>Anther: colour of dry anther</td>
<td>4</td>
<td>Greyed-orange</td>
<td>Greyed-orange</td>
</tr>
<tr>
<td>Glume: colour</td>
<td>4</td>
<td>Greyed-orange</td>
<td>Greyed-orange</td>
</tr>
<tr>
<td>Plant: total height</td>
<td>5</td>
<td>(208.0) Medium</td>
<td>(267.8) Tall</td>
</tr>
<tr>
<td>Stem: diameter (at lower one third height of plant)</td>
<td>5</td>
<td>(2.2) Medium</td>
<td>(1.9) Small</td>
</tr>
<tr>
<td>Leaf: length of blade (third leaf from top including flag leaf)</td>
<td>7</td>
<td>(7.7) Long</td>
<td>(6.9) Long</td>
</tr>
<tr>
<td>Leaf: width of blade (the third leaf from top including flag leaf)</td>
<td>9</td>
<td>(8.3) Very broad</td>
<td>(8.2) Very broad</td>
</tr>
<tr>
<td>Panicle: length without peduncle</td>
<td>5</td>
<td>(27.5) Medium</td>
<td>(26.8) Medium</td>
</tr>
<tr>
<td>Panicle: length of branches (middle third of panicle)</td>
<td>5</td>
<td>(8.0) Medium</td>
<td>(8.3) Medium</td>
</tr>
<tr>
<td>Panicle: density at maturity (ear head compactness)</td>
<td>7</td>
<td>Semi-compact</td>
<td>Semi-loose</td>
</tr>
<tr>
<td>Panicle: shape</td>
<td>2</td>
<td>Panicle broader in upper part</td>
<td>Symmetric</td>
</tr>
<tr>
<td>Neck of panicle: visible length above sheath</td>
<td>1</td>
<td>(0.0) Absent or very short</td>
<td>(7.2) Short</td>
</tr>
<tr>
<td>Glume: length</td>
<td>1</td>
<td>Very short</td>
<td>Short</td>
</tr>
<tr>
<td>Threshability</td>
<td>1</td>
<td>Freely threshable</td>
<td>Freely threshable</td>
</tr>
<tr>
<td>Caryopsis: color after threshing</td>
<td>3</td>
<td>Yellow-white</td>
<td>Yellow-white</td>
</tr>
<tr>
<td>Grain: weight of 1000 grains</td>
<td>5</td>
<td>(28.8) Medium</td>
<td>(30.3) Medium</td>
</tr>
<tr>
<td>Grain: shape (in dorsal view)</td>
<td>2</td>
<td>Elliptic</td>
<td>Circular</td>
</tr>
<tr>
<td>Grain: shape in profile view</td>
<td>2</td>
<td>Elliptic</td>
<td>Elliptic</td>
</tr>
<tr>
<td>Grain: size of mark of germ</td>
<td>5</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Grain: texture of endosperm (in longitudinal section)</td>
<td>3</td>
<td>3/4 vitreous</td>
<td>Half vitreous</td>
</tr>
<tr>
<td>Grain: colour of vitreous albumen</td>
<td>1</td>
<td>Greyed-yellow</td>
<td>Greyed-yellow</td>
</tr>
<tr>
<td>Grain: lustre</td>
<td>5</td>
<td>Non-lustrous</td>
<td>Lustrous</td>
</tr>
</tbody>
</table>
9. Characteristics of the reference varieties
   (a) Most similar variety
      (i) Denomination: CCC
          Pedigree: xyz x abc
          xyz = def x ijk
          abc = mno x stz

      (ii) Basis of choice of this variety for comparison:

As CCC is suitable dual purpose variety and use in the trials as check.

(iii) Distinguishable Characteristics:
Possess good dual purpose attributes i.e. grain yield, dry fodder yield with good plant height, semi-compact panicle with creamy grain color ant tan plant type.

(b) Other reference variety: Not Applicable
   (i) Denomination
   (ii) Basis of choice of this variety for comparison
   (iii) Distinguishable Characteristics

10. Statement of distinctness of candidate variety:
Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include, (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Characteristics</th>
<th>Candidate variety</th>
<th>Reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Plant total height</td>
<td>(XXX) Medium (X)</td>
<td>(XXX) Tall (X)</td>
</tr>
<tr>
<td>2</td>
<td>Plant natural height (cm)</td>
<td>(XXX) Medium (X)</td>
<td>(XXX) Tall (X)</td>
</tr>
<tr>
<td>3</td>
<td>Stigma length</td>
<td>(XXX) Medium (X)</td>
<td>(XXX) Short (X)</td>
</tr>
<tr>
<td></td>
<td>Anther length</td>
<td>(XXX) Medium (X)</td>
<td>(XXX) Short (X)</td>
</tr>
<tr>
<td>4</td>
<td>Flower with pedicel: length of flower</td>
<td>Very long (X)</td>
<td>Long (X)</td>
</tr>
<tr>
<td>5</td>
<td>Stem diameter</td>
<td>(XX) Medium (X)</td>
<td>(XX) Small (X)</td>
</tr>
<tr>
<td>6</td>
<td>Panicle shape</td>
<td>XXX (X)</td>
<td>XXX (X)</td>
</tr>
<tr>
<td>7</td>
<td>Panicle density</td>
<td>XXX (X)</td>
<td>XXX (X)</td>
</tr>
<tr>
<td>8</td>
<td>Neck of panicle</td>
<td>(XX) Absent or very short (X)</td>
<td>(XX) Short (X)</td>
</tr>
<tr>
<td></td>
<td>Seed lustrous</td>
<td>XXX (X)</td>
<td>XXXX (X)</td>
</tr>
</tbody>
</table>

11. Statement on uniformity and stability of candidate variety
Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off types or any other describable variation beyond which the candidate variety shall be deem to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.

Average performance of the variety over the years i.e. xxxx-xxx was quite convincing across the zones with respect to dual purpose attribute as the variety provided more dry fodder yield with comparable grain yield and better bio mass than check CCC. And resistant to disease.

12. Methods for maintaining the candidate variety
Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder’s right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.
The candidate variety will be maintained through standard nucleus and breeder seed production procedure followed by progeny row selection and bulk multiplication in isolations to multiply the variety. The nucleus, breeder seed of variety will be maintained at Instructional Farm, Indira Seeds, Hyderabad-30.

NOTE: The holder of a plant breeder's right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.

13. Information on variety registered in Convention Countries.
   a. What were the grouping characters in that application for this candidate variety?
      Not Applicable
   b. What was the Distinctness Uniformity and Stability parameter on which it was registered?
      Not Applicable
   c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?
      Not Applicable
   d. Has the Variety been withdrawn in the first filed country from cultivation or banned or from any of the subsequently released country?
      Not Applicable
   e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date: 02nd July 200x  Signature

Signature of Witness and Address _________________

Designation of the Breeder/Company with seal

The breeder/company should sign with date each page of the Technical Questionnaire.

[No. ______________________ ]

(_____________________________ )
Chapter V: How to protect new varieties?

Vilas A Tonapi, M Elangovan, Gururaj G Kulkarni, Raghunath Kulkarni, N Seetharama & JV Patil
1 - Directorate of Sorghum Research, Rajendranagar, Hyderabad-500030 (AP)
2 - Syngenta India Limited (Seeds Divn), Revenue Colony, Shivajinagar, Pune-411 005, Maharashtra

It is to be noted that section 15(3) of the protection of Plant Varieties and Farmers Rights Act, 2001 defines that the variety becomes new if it is novel and meets the criteria of Distinctness, Uniformity and stability (DUS)

The variety in legal terms becomes novel variety, on the date of filling the application, if the seed or propagating or harvested material of the candidate variety has not been sold or otherwise disposed by or with the consent of its breeder

- In India: more than one year: or
- Out side India:
  - i) Trees or vines: not more than six years
  - ii) Other Annual crops: not more than four years

In order to meet the criteria of Distinctness, Uniformity and stability (DUS), the variety should meet following conditions:

- **Distinctiveness:** The candidate variety for which the application has been submitted, becomes distinct when it is distinguishable by at least one essential characteristic from any other variety in existence

- **Uniformity:** The candidate variety for which the application has been submitted, is deemed as uniform if it is sufficiently uniform in its essential characteristics

- **Stability:** The candidate variety, for which the application has been submitted, is deemed as stable if essential characteristics remain unchanged after repeated propagation across stipulated seasons of years of cultivation.

**Essential documents to be appended with the application for the protection of new varieties**

1. For the candidate variety the Application-1 with T.Q. duly filled in is to be filed to the Registrar of PPV and FR Authority.
2. Attach PV-1,PV-2, as applicable with the application
3. If the Application is acceptable after scrutiny, seed and fees to be deposited to the Authority, within two months after requisition by the Office of Registrar of the Authority.
4. The new candidate variety will be subjected to DUS test for two crop seasons at two locations(Rule-29,Section 19)
5. Passport data and photograph(s),if provided, will be published in PVJ of India,
6. For calling objection(s), if any.
7. If no objection is filed within three months, registration certificate will be issued after confirmation of DUS (Rule36,Section 23).
8. If no objection is filed, the proceedings will be initiated as per rules-31.32 and 33, under section 21 of the PPV and FR Act, 2001.
**APPLICATION FOR REGISTRATION OF NEW VARIETY, EXTANT VARIETY AND FARMER’S VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001**

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)

<table>
<thead>
<tr>
<th align="left">Identity of the Applicant(s):</th>
<th>INDIVIDUAL BREEDER</th>
<th>SUCCESSOR OF BREEDER</th>
<th>INSTITUTIONAL APPLICANT</th>
<th>FARMER¹</th>
<th>COMMUNITY OF FARMERS¹</th>
<th>GROUP OF FARMERS¹</th>
<th>ASSIGNEE OF ANY OF ABOVE²</th>
<th>CONVENTION COUNTRY ³</th>
<th>ANY OTHER ⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td align="left">1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

2. An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

3. The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act)

4. For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder.

2. Name(s) and Nationality of Applicant(s)

(a.) (If natural person): [Insert additional rows, if required]  **Not Applicable**

1. Serial Number.
2. Name²
3. Complete Address
4. Nationality

³ If the applicant is the authorised representative of a group of farmers/community of farmers an authorisation in Form PV-1 signed by all members of the group, or by the Head/office bearer of the community witnessed by the two people, if the identity of the applicant is “community of farmers’ shall be attached.

(b.) (If a legal person; for example a firm or company or institution)

Name: M/S XXX Seeds Ltd,
Address of its seat or establishment: No. 1 Gandhi nagar, Hyderabad 50 0010, AP, India.
Registered office: Imperial building, KK estate, Maruthi nagar, New Delhi – 110 001

Year of Incorporation: **2002**

State whether the applicant legal person has non-Indian participation in capital or management:  

<table>
<thead>
<tr>
<th>If yes, identify the nationality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M/S XXX Seeds Ltd, UK</td>
<td></td>
</tr>
</tbody>
</table>

 plant variety protection made easy
(c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):

Name: Dr. Raghuvansh Raj Prasad  
Designation: Manager – Plant Variety Protection  
Address: M/S XXX Seeds Ltd, No. 1 Gandhi nagar, Hyderabad 50 0010, AP, India.

Telephone: 91-40-6517683  
Fax: 91-40-123456  
E-mail: xyz@rediff.com

3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorisation in Form-PV-1, if required)

Name: Karuna Gurusekhar  
Address: Lajpatnagar, New Delhi  
Pin: 110040  
Telephone: 91-11-123456  
Fax: 91-11-789102  
E-mail: karuna@zapakmail.com

- Authorization in Form-PV-1 attached.

4. General Information of the Candidate Variety:

**Common name of the Crop**  
**Rice (Paddy):**

**Botanical name:** Oryza sativa L.

**Family:** Graminae

**Denomination (in block letters):** AMAZON


5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)

- [ ] NEW VARIETY
- [ ] EXTANT VARIETY
- [ ] FARMERS’ VARIETY

6. (a.) Classification of the Candidate Variety:

- [ ] TYPICAL VARIETY  
- [ ] HYBRID VARIETY*  
- [ ] TRANSGENIC  
- [ ] OTHER (SPECIFY)

* The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions

(b.) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

- [ ] Preferred group characteristics: Decorticated grain shape (Long slender)
- [ ] Distinguishing Characteristics:
Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of Candidate variety</th>
<th>Remarks Measured values etc.</th>
<th>Characteristic value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: length of leaf blade (DUS#16)</td>
<td>7</td>
<td>Long -(7)</td>
<td>Medium-(5)</td>
</tr>
<tr>
<td>Time of heading (50% of panicles with panicles) (DUS#20)</td>
<td>5</td>
<td>Medium-(5)</td>
<td>Medium -(5) Early -(3)</td>
</tr>
<tr>
<td>Stem thickness: (DUS#28)</td>
<td>3</td>
<td>Thin -(3)</td>
<td>Thick-(7) Thin-(7)</td>
</tr>
<tr>
<td>Panicle: length of main axis (DUS#33)</td>
<td>7</td>
<td>Long -(7)</td>
<td>Long -(7) Medium -(5)</td>
</tr>
<tr>
<td>Panicle exsertion (DUS#46)</td>
<td>7</td>
<td>Well exserted (7)</td>
<td>Mostly exserted (5) Well exserted (7)</td>
</tr>
<tr>
<td>Time maturity (DUS#47)</td>
<td>5</td>
<td>Medium -(5)</td>
<td>Medium -(5) Early -(3)</td>
</tr>
<tr>
<td>Decorticated grain: shape (DUS#56)</td>
<td>5</td>
<td>Long slender (5)</td>
<td>Long slender (5) Long bold (4)</td>
</tr>
<tr>
<td>Amylose content (DUS#59)</td>
<td>5</td>
<td>Medium -(5)</td>
<td>Medium -(5) High -(7)</td>
</tr>
</tbody>
</table>

- **Grouping characters:**
  
b) Time of heading: (50% of plants with panicles): Medium (93 days)
   (Characteristic 20)
c) Stem: length (excluding panicle) (Characteristic 29): Very Short (84cm)d) Decorticated grain-length (Characteristic 54): Long grain (6.9mm)
e) Decorticated grain-shape (Characteristic 56): Long slender
f) Decorticated grain-colour (Characteristic 57): White.
g) Endosperm-content of amylase (Characteristic 59): Medium (21.5%)h) Decorticated grain-Aroma (Characteristic 62): Mild aroma.

- **‘Technical Questionnaire’ sheet is attached**

(c.) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests.
Not Applicable

7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety:
Name & Address: M/S XXX Seeds Ltd,
No. 1 Gandhi nagar
Hyderabad 50 0010, AP, India.
Telephone: 91-40-6517683
Fax: 91-40-123456
E-mail: xyz@rediff.com
Nationality: Indian

8. (a.) Details of all other earlier applications made on the candidate variety in countries or other countries (if applicable):
Not Applicable

<table>
<thead>
<tr>
<th>Nature of right applied for:</th>
<th>Plant Breeder’s Rights</th>
<th>Patent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filing Date: (Attach evidence):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name of Country:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name of Authority:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Number:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Status of Application: Under process Approved Rejected
(If required, repeat the above for each applicable country and attach separate sheet)
(b.) Priority is now claimed in respect of the earliest application for a candidate variety of said denomination (if applicable):

Not Applicable

In (country):

On (date of application):

9. Has the candidate variety been commercialized or otherwise exploited?

☑ Yes □ No

If yes, please indicate the following:

Date of the first sale of the variety: 16TH MAY 2006
Country (ies) where Protection is made: Not Applicable
Denomination used: Not Applicable
Trademark used, if any: XYZ 123
Variation in important trait with Respect to first filing: (attach sheet) Not Applicable

10. (a.) If the candidate variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s):

☑ Yes □ No

If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:

Parental line (S):

Denomination 10:

Source:

Authorization letter obtained:

☐ Attached ☐ Not attached

Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public domain is used as parental line for the repeated propagation of the hybrid:

☐ Yes ☑ No

If yes, give following details:

Denomination:
Geographical Source:
Details of Attribution (origin):
Details of owner farmer/village community/ Institution/ Organisation:

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?

Not Applicable

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details:

Not Applicable

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee 11:

Amount of fee: Rupees 200/- (Rupees Two hundred only.)
Demand Draft Number and date: 066789 dated 05.04.2007
Name of Bank and branch in which the Demand Draft is drawn: ANZ Gridlays, Hyderabad

Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

☐ Yes ☑ No

11 Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

__________________________________________

(Signature of the Applicant)
DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers' Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate variety.

I/We hereby declare that the candidate variety complies with the sub-section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I/We hereby declare that the candidate variety complies with the sub-section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we shall abide by all the provisions and guidelines of protection of plant Varieties and Farmers' Rights Act, 2001.

Place: Hyderabad
Date: 20.06.2007

Signature of Applicants

12 Wherever the applicants are more than one person each applicant has to sign. In the case of authorized application or application by assignees, such person(s) authorized or assigned shall sign.

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

(a) complete application- ATTACHED
(b) endorsement in Annexure I in the case of farmers' variety (vide column 1, if applicable); N A
(c) document of authorization in Form PV-1 (if applicable)- ATTACHED
(d) document of assignment in Form PV-2 (if applicable)- ATTACHED
(e) documents in support of (b) and (d) as given above. (If applicable)- ATTACHED AS IN (d)
(f) affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved- ATTACHED
(g) copy of document on filing date (vide column 8A, if applicable) NOT APPLICABLE
(h) copy of letter of agreement (vide column 10A, if applicable)- NOT APPLICABLE
(i) technical Questionnaire for the Candidate variety (attached)- ATTACHED
(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub –section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001- ATTACHED AS IN (e)
(k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure- NOT APPLICABLE
(l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of with or outside the convention Country with details thereof- N A
(m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals- NOT APPLICABLE
(n) Fees as applicable- ATTACHED

If felt necessary, attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.

RICE

Technical Questionnaire

2. Year of Establishment: - 1964
3. If registered company under the Company’s Act 1956 (Give Details) -
   Incorporation No: 6-1876 dated 1-1-2002 of the Memorandum and Articles of Association.
5. Tel/fax/e-mail: Telephone: 91-40-6517683, Fax: 91-40-123456, E-mail: xyz@rediff.com
6. Name of candidate variety: - Amazon
(a) Has it been released in any Convention Country earlier
   □ Yes   ☑ No

   If yes give complete details in Column No. 13.
(b) Pedigree/genealogy: - LK66A/ MN 97R
### How to protect new varieties?

**Schematic representation**

<table>
<thead>
<tr>
<th>Year</th>
<th>Season</th>
<th>Female line development</th>
<th>Male line development</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1</td>
<td>Crossing of large number of germplasm from the source nursery with a stable male sterile line (LK 68A) as a donor of male sterility.</td>
<td>Hybridization of elite restorers</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Identification of stable maintainer line (LK 66B), Initiation of backcross (BC1)</td>
<td>F1 was raised to harvest F2 seeds.</td>
</tr>
<tr>
<td>2001</td>
<td>3</td>
<td>BC2 completed</td>
<td>F2 population (2000 plants) raised. Superior plants with high tiller and dense panicles were selected.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>BC3 completed</td>
<td>F3 population raised and Superior plants selected.</td>
</tr>
<tr>
<td>2002</td>
<td>5</td>
<td>BC4 completed</td>
<td>F4 population raised and Superior plants selected.</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>BC5 completed</td>
<td>F5 population raised and Superior plants selected.</td>
</tr>
<tr>
<td>2003</td>
<td>7</td>
<td>Test cross hybrids were developed by crossing the selected BC6 lines to the promising F6 selections of the restorer pedigree nursery.</td>
<td>F6 population raised and Superior plants selected. MN 97R was identified as a promising restorer</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>The hybrid AMAZON was identified as promising from the test cross evaluation.</td>
<td>Small scale multiplication of the selected R line</td>
</tr>
<tr>
<td>2004</td>
<td>9</td>
<td>Male line development</td>
<td>Hybridization of elite restorers</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>F1 was raised to harvest F2 seeds</td>
<td>F1 was raised to harvest F2 seeds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F2 population (2000 plants) raised. Superior plants with high tiller and dense panicles were selected.</td>
<td>F2 population (2000 plants) raised. Superior plants with high tiller and dense panicles were selected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F3 population raised and Superior plants selected.</td>
<td>F3 population raised and Superior plants selected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F4 population raised and Superior plants selected.</td>
<td>F4 population raised and Superior plants selected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F5 population raised and Superior plants selected.</td>
<td>F5 population raised and Superior plants selected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F6 population raised and Superior plants selected.</td>
<td>F6 population raised and Superior plants selected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MN 97R was identified as a promising restorer</td>
<td>MN 97R was identified as a promising restorer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Small scale multiplication of the selected R line</td>
<td>Small scale multiplication of the selected R line</td>
</tr>
<tr>
<td>2005</td>
<td>11</td>
<td>Barrier seed production to produce hybrid seeds</td>
<td>Replicated trials conducted in 20 locations</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Replicated trial conducted in 20 locations</td>
<td>Replicated trials conducted in 20 locations</td>
</tr>
<tr>
<td>2006</td>
<td>13</td>
<td>Large scale seed production for on-farm trials.</td>
<td>Large scale seed production for on-farm trials.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>On-farm demonstration conducted in over 100 farmer’s field to establish its yield superiority.</td>
<td>On-farm demonstration conducted in over 100 farmer’s field to establish its yield superiority.</td>
</tr>
</tbody>
</table>

(c) Breeding of Candidate Variety:-

(i) Origination (Tick the correct one)

- **Controlled pollination** ✓ / open pollination / induced mutation / spontaneous mutation / introduction/ selection / seedling selection / any other (specify)

(ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the candidate variety). If the variety was developed by selection, then number of selection cycles completed before fixing it.
(a) Name of the parental material:
   Female Parent : LK66A (A Line)
   Maintainer Parent: LK66 B (B Line)
   Male Parent : MN 97R (R Line)

(b) Characteristics of the parental material:
   Female Parent: (A Line)
   • It is a male sterile line with incomplete panicle exsertion
   • Long narrow flag leaf, semi-erect plant type
   • Stem thickness is less (around 0.3 to 0.4 cm)
   • Long slender grains
   • High tillering

   Maintainer Line: (B Line)
   • It is a maintainer line with complete panicle exsertion
   • Long narrow flag leaf, semi-erect plant type
   • Stem thickness is less (around 0.3 to 0.4 cm)
   • Long slender grains
   • High tillering

   Male Parent: (R Line)
   • High tillering
   • Medium slender grains
   • Brown wash in grains during seed filling stage.

(c) Distinguishing characteristic from the candidate variety:
   Female Parent: (A Line)
   • It is a male sterile line with incomplete panicle exsertion
   • Long narrow flag leaf, semi-erect plant type

   Maintainer Line: (B Line)
   • It is a maintainer line with complete panicle exsertion

   Male Parent: (R Line)
   • Medium slender grains
   • Brown wash in grains during seed filling stage.

(d) Number of selection cycles: Six (6) cycles

(iii) Breeding technique/ procedure used:
   Heterosis breeding

(iv) Selection criteria used
   The hybrid was selected on the basis of high yield, stability and consistency over the years and locations.

(v) Stage of selection and multiplication
   Initially several test crosses were made with many CMS lines and restorers. The hybrid was selected based on apparent heterosis and spikelet fertility. Also the parents involved in this hybrid were found to have very good combining ability. The parents were kept in isolation, and through controlled pollination the hybrid seeds were produced for various stages of evaluation. This hybrid was found to be consistently superior for yield and other parameters in various stages of evaluation and multilocation trials.
How to protect new varieties?

7. Particulars of comparative trial conducted by applicant, if any.

Information on location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may, furnish data, tables, copy(ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of candidate variety.

The rice hybrid SYN-RI-5251 was evaluated in initial hybrid rice trial 2006 (Mid-early) in the name of NK5251 and ranked second as overall position. The ICAR trial data is given below.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Hybrid IET No.</th>
<th>DFF</th>
<th>Grain Type</th>
<th>Mean</th>
<th>North</th>
<th>East</th>
<th>West</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ABCH</td>
<td>95</td>
<td>LB</td>
<td>6323 (19)</td>
<td>7623 (15)</td>
<td>5384 (13)</td>
<td>4838</td>
<td>7690 (34)</td>
</tr>
<tr>
<td>2.</td>
<td>XYZH</td>
<td>98</td>
<td>LS</td>
<td>6241 (17)</td>
<td>6607 (13)</td>
<td>5366 (13)</td>
<td>5666 (11)</td>
<td>7462 (30)</td>
</tr>
<tr>
<td>3.</td>
<td>DRH-775 (19741)</td>
<td>97</td>
<td>LS</td>
<td>6209 (15)</td>
<td>6478 (15)</td>
<td>5474 (13)</td>
<td>5927 (16)</td>
<td>7157 (24)</td>
</tr>
<tr>
<td>4.</td>
<td>Varietal check</td>
<td>96</td>
<td>LC</td>
<td>6335 (5)</td>
<td>6613 (5)</td>
<td>4797 (5)</td>
<td>5110 (5)</td>
<td>5749 (5)</td>
</tr>
<tr>
<td>5.</td>
<td>Hybrid check</td>
<td>95</td>
<td>MS</td>
<td>5904</td>
<td>6199</td>
<td>5198</td>
<td>5346</td>
<td>6932</td>
</tr>
</tbody>
</table>

(-) = Percentage advantage over varietal check; [-] = Percentage advantage over the hybrid check. The three hybrids ABCH, XYZH and DRH-775 are recommended for promotion to AVT-1 (Medium early).
8. Characteristics of the candidate variety

Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a) (i) Give group characters

a) Basal leaf sheath colour (Characteristic 2): green.
b) Time of heading: (50% of plants with panicles): Medium (93 days) (Characteristic 20)
c) Stem: length (excluding panicle): Very Short (84cm) (Characteristic 29)
d) Decorticated grain-length: Long grain (6.9mm) (Characteristic 54)
e) Decorticated grain-shape (Characteristic 56): Long slender
f) Decorticated grain-colour (Characteristic 57): White.
g) Endosperm-content of amylose (Characteristic 59): Medium (21.5%)
h) Decorticated grain-Aroma (Characteristic 62): Mild aroma.

(a) Distinguishing characteristics (descriptive or elaborate)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of Candidate variety</th>
<th>Remarks Measured values etc.</th>
<th>Characteristic value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf blade length</td>
<td>Long (54cm)</td>
<td></td>
<td>AMAZON PHB71 IR64</td>
</tr>
<tr>
<td>Stem thickness</td>
<td>Thin (0.3cm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panicle</td>
<td>Well exerted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panicle length</td>
<td>Long</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days to heading</td>
<td>Medium (93 days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decorticated grain shape</td>
<td>Long slender</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Table of characteristics between candidate denomination and reference variety

Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.

NOTE: Two or more reference varieties should be compared with the candidate variety in characteristics table including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.

- Distinguishing characteristics:

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of Candidate variety</th>
<th>Remarks Measured values etc.</th>
<th>Characteristic value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: length of leaf blade (DUS#16)</td>
<td>7</td>
<td>Long (7)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Time of heading (50% of plants with panicles) (DUS#20)</td>
<td>5</td>
<td>Medium (5)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Stem thickness: (DUS#28)</td>
<td>3</td>
<td>Thin (3)</td>
<td>Thick (7)</td>
</tr>
<tr>
<td>Panicle: length of main axis (DUS#33)</td>
<td>7</td>
<td>Long (7)</td>
<td>Long (7)</td>
</tr>
<tr>
<td>Panicle exsertion (DUS#46)</td>
<td>7</td>
<td>Well exerted (7)</td>
<td>Mostly exerted (5)</td>
</tr>
<tr>
<td>Time maturity (days) (DUS#47)</td>
<td>5</td>
<td>Medium (5)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Decorticated grain: shape (DUS#56)</td>
<td>5</td>
<td>Long slender (5)</td>
<td>Long slender (5)</td>
</tr>
<tr>
<td>Amylose content (DUS#59)</td>
<td>5</td>
<td>Medium (5)</td>
<td>Medium (5)</td>
</tr>
</tbody>
</table>
## Important characteristics

<table>
<thead>
<tr>
<th>Important characteristics</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>AMAZON</th>
<th>PHB71</th>
<th>IR64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal leaf: Sheath colour (DUS#2)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Green (1)</td>
<td>Green (1)</td>
<td>Green (1)</td>
</tr>
<tr>
<td>Leaf: pubescence of blade surface (DUS 8)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Weak (3)</td>
<td>Weak (3)</td>
<td>Weak (3)</td>
</tr>
<tr>
<td>Leaf: auricles (DUS# 9)</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Present (9)</td>
<td>Present (9)</td>
<td>Present (9)</td>
</tr>
<tr>
<td>Leaf: anthocyanin colouration of auricles (DUS#10)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Colourless (1)</td>
<td>Colourless (1)</td>
<td>Colourless (1)</td>
</tr>
<tr>
<td>Leaf: shape of ligule (DUS#14)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Split (3)</td>
<td>Split (3)</td>
<td>Split (3)</td>
</tr>
<tr>
<td>Leaf: colour of ligule (DUS#15)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>White (1)</td>
<td>White (1)</td>
<td>White (1)</td>
</tr>
<tr>
<td>Time of heading (50% of plants with panicles) (DUS#20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>Medium (5)</td>
<td>Medium (5)</td>
<td>Early (3)</td>
</tr>
<tr>
<td>Flag leaf: attitude of blade (early observation) (DUS#21)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semi-erect (3)</td>
<td>Semi-erect (3)</td>
<td>Semi-erect (3)</td>
</tr>
<tr>
<td>Spikelet: density of pubescence of lemma (DUS#22)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Weak (3)</td>
<td>Weak (3)</td>
<td>Weak (3)</td>
</tr>
<tr>
<td>Lemma: anthocyanin colouration of apex (DUS#26)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Absent (1)</td>
<td>Absent (1)</td>
<td>Absent (1)</td>
</tr>
<tr>
<td>Spikelet: colour of stigma (DUS#27)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>White (1)</td>
<td>White (1)</td>
<td>White (1)</td>
</tr>
<tr>
<td>Stem: length (excluding panicle) (DUS#29)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very short (1)</td>
<td>Very short (1)</td>
<td>Very short (1)</td>
</tr>
<tr>
<td>Stem: anthocyanin colouration of nodes (DUS#30)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Absent (1)</td>
<td>Absent (1)</td>
<td>Absent (1)</td>
</tr>
<tr>
<td>Panicle: length of main axis (DUS#33)</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Long (7)</td>
<td>Long (7)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Flag leaf: attitude of blade (late observation) (DUS#34)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semi-erect (3)</td>
<td>Semi-erect (3)</td>
<td>Semi-erect (3)</td>
</tr>
<tr>
<td>Panicle: curvature of main axis (DUS#35)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semi-straight (3)</td>
<td>Semi-straight (3)</td>
<td>Semi-straight (3)</td>
</tr>
<tr>
<td>Spikelet: Colour of tip of lemma (DUS#379)</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yellowish (2)</td>
<td>Yellowish (2)</td>
<td>Yellowish (2)</td>
</tr>
<tr>
<td>Panicle: awns (DUS#39)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Absent (1)</td>
<td>Absent (1)</td>
<td>Absent (1)</td>
</tr>
<tr>
<td>Panicle: colour of awns (DUS#40)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Awns absent</td>
<td>Awns absent</td>
<td>Awns absent</td>
</tr>
<tr>
<td>Panicle: distribution of awns (DUS#42)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Awns absent</td>
<td>Awns absent</td>
<td>Awns absent</td>
</tr>
<tr>
<td>Panicle: attitude of branches (DUS#45)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Erect- Semierecct (3)</td>
<td>Erect- Semierecct (3)</td>
<td>Erect- Semierecct (3)</td>
</tr>
<tr>
<td>Panicle: exertion (DUS#46)</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Well exerted (7)</td>
<td>Mostly exerted (5)</td>
<td>Well exerted (7)</td>
</tr>
<tr>
<td>Sterile lemma: colour (DUS#49)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Straw (1)</td>
<td>Straw (1)</td>
<td>Straw (1)</td>
</tr>
<tr>
<td>Decorticated grain: length (DUS#54)</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Long (4)</td>
<td>Long (4)</td>
<td>Long (4)</td>
</tr>
<tr>
<td>Decorticated grain: width (DUS#55)</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medium (5)</td>
<td>Medium (5)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Decorticated grain: shape (in lateral view) (DUS#56)</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Long slender (5)</td>
<td>Long slender (5)</td>
<td>Long bold - (4)</td>
</tr>
<tr>
<td>Decorticated grain: colour (DUS#57)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>White (1)</td>
<td>White (1)</td>
<td>White (1)</td>
</tr>
<tr>
<td>Endosperm: content of amylose (DUS#59)</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medium (5)</td>
<td>Medium (5)</td>
<td>High (7)</td>
</tr>
<tr>
<td>Decorticated grain: aroma (DUS#62)</td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Present (9)</td>
<td>Present (9)</td>
<td>Present (9)</td>
</tr>
</tbody>
</table>

### 9. Characteristics of reference varieties

(a) Most similar variety:-

(i) Denomination:- PHB 71
(ii) Basis of choice of this variety for comparison: -
Based on Basal leaf sheath colour, time of heading, stem length and decorticated grain shape, the most similar variety, PHB 71 is chosen for comparison. The two varieties were found to be similar for the above said characteristics.

(ii) Distinguishable characteristics:
The reference variety has the following distinguishable characteristics from the candidate variety. The length of leaf blade is medium (43cm), whereas in candidate variety it is long (54cm). The stem is thick in the reference variety (0.6cm) but in candidate variety, it is thin (0.3cm). The panicle is mostly exserted in reference variety whereas in candidate variety, it is well exserted.

(b) Other reference variety
(i) Denomination:- IR 64
(ii) Basis of choice of this variety for comparison
   The reference variety IR 64 is found to be similar to the candidate variety for basal leaf sheath colour and decorticated grain length.

(iii) Distinguishable characteristics:
The second reference variety is distinguishable from the candidate variety in the following aspects. The reference variety has medium leaf blade length (34cm) and takes 90 days (early) for heading. The candidate variety has long leaf blade length (54cm) and takes 93 days (medium) for heading. The stem thickness of the reference variety is 0.6cm (thick), whereas the candidate variety has thin stem (0.3cm). The reference variety has a medium length panicle (22cm) whereas the candidate variety has 26.6cm long panicle. The decorticated grain shape is long bold for reference variety and long slender for candidate variety.

(iv) Statement of distinctness of candidate variety:-
Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).

Distinctness of AMAZON from PHB 71:
The leaf blade length of candidate variety is long (54cm) but for reference variety it is medium (43cm). The stem thickness of the candidate variety is thin (0.3cm) and it has a well exserted panicle. The reference variety has a thick stem (0.6cm) and mostly exserted panicle.

Distinctness of AMAZON from IR64:
The candidate variety is distinct from the second reference variety for the following characters. The leaf blade length of candidate variety is long (54cm) but for reference variety it is only 34cm (medium). The candidate variety falls under medium category for days to heading (93days) but the reference falls under early category (90 days). The stem thickness of the candidate variety is thin (0.3cm) and for the reference variety, it is thick (0.6cm). The candidate variety has a long panicle (26.6cm) and the reference variety has a medium panicle (22cm). The candidate variety matures in 123 days and the reference variety matures in 120 days. The candidate variety has a long slender grain (3.3) and the reference variety has a long bold grain (2.9).

(v) Statement on uniformity and stability of candidate variety
Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off-types or any other describable variation beyond which the candidate variety shall be deemed to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.

Uniformity: The candidate variety was tested in two locations viz., Hyderabad and Bhimavaram in replicated trials in the year 2005. It was tested in a plot size of 15m² and it was found to be uniform for all the morphological characters across the two locations. The candidate variety has a purity level of above 98% and the off types are less than 2%.

Stability: The candidate variety was tested in two seasons -Kharif 2005 and summer 2006 in many locations in a replicated trial of plot size 15m² and was found to be stable for all the morphological characters.
(vi) **Methods for maintaining the candidate variety:-**

Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder’s right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

**NOTE:** The holder of a plant breeder’s right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.

Female Parent: LK66A: The A line is produced by crossing with its B line in isolation
Maintainer Parent: LK66 B: Multiplied through selfing in isolation.
Male Parent: MN 97R: Multiplied through selfing in isolation.

Candidate variety: After ensuring the purity of the parental lines, the two lines viz., A and R line were grown in a plot together in 6:2 row ratios under isolated conditions. Under controlled pollination, the seeds of the candidate variety are produced.

The rice hybrid AMAZON is maintained by M/S XXX Seeds Ltd., Hyderabad

(vii) **Information on variety registered in Convention Countries. Not Applicable**

- a. What were the grouping characters in that application for this candidate variety?
- b. What was the Distinctness Uniformity and Stability parameter on which it was registered?
- c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?
- d. Has the Variety been withdrawn in the first field country from cultivation or banned or from any of the subsequently released country?
- e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date: 20.06.2007

Signature of Witness and address:

Mr. Mdan Gopal Mittal, President, M/S XXX Seeds Ltd, Hyderabad, AP, India

Designation of the Breeder / Company with Seal

The breeder/company should sign with date each page of the Technical Questionnaire.
How to protect new varieties?

**MAIZE**

**New Variety : Dummy model**

**(Assignee)**

**FORM 1**

[See regulation 10]

APPLICATION FOR REGISTRATION OF NEW VARIETY, EXTANT VARIETY AND FARMER’S VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001

[See section 18, other than essentially derived variety.]

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)

<table>
<thead>
<tr>
<th>1. Identity of the Applicant(s):</th>
<th></th>
<th>INDIVIDUAL BREEDER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SUCCESSOR OF BREEDER</td>
</tr>
<tr>
<td></td>
<td></td>
<td>INSTITUTIONAL APPLICANT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FARMER</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COMMUNITY OF FARMERS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GROUP OF FARMERS</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>ASSIGNEE OF ANY OF ABOVE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CONVENTION COUNTRY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ANY OTHER</td>
</tr>
</tbody>
</table>

1. Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

2. An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

3. The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act).

4. For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder.

2. Name(s) and Nationality of Applicant(s)

(a.) (If natural person): [Insert additional rows, if required]

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b.) (If a legal person; for example a firm or company or institution)

<table>
<thead>
<tr>
<th>Name:</th>
<th>Raghuvansh Seeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of its seat or establishment:</td>
<td>LIC Building, Mount Road, Chennai 600002</td>
</tr>
<tr>
<td>Registered office:</td>
<td></td>
</tr>
<tr>
<td>Year of Incorporation:</td>
<td>2000</td>
</tr>
<tr>
<td>State whether the applicant legal person has non-Indian participation in capital or management:</td>
<td>☑ Yes</td>
</tr>
</tbody>
</table>

If yes, identify the nationality | ZAPAK MS- NETHERLANDS |

---

Plant variety protection made easy
(c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):

Name: Dr. Sanath K Gawali
Designation: Manager – Product Registration
Address: Raghuvansh Seeds
LIC building, Mount Road
Chennai- 600002
Telephone: 91-44-123456
Fax: 91-44-123457
E-mail: sanathgawali@sify.com

3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorisation in Form-PV-1, if required)

Name: Jayamala Raviraj
Address: Chepauk, Chennai
Pin 600004
Telephone: 91-44-999998
Fax: 91-44-999999
E-mail: Jaya@yahoo.com

Authorisation in Form-PV-1 attached.

4. General Information of the Candidate Variety:

Common name of the Crop: Maize
Botanical name: Zea mays L.
Family: Gramineae
Denomination (in block letters): GOLDEN GLOW


5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)

- NEW VARIETY
- EXTANT VARIETY
- FARMERS’ VARIETY

6. (a.) Classification of the Candidate Variety:

- TYPICAL VARIETY
- HYBRID VARIETY
- TRANSGENIC
- OTHER (SPECIFY)

Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagules saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).

(b.) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

- Preferred group characteristics: Ear: anthocyanin colouration of silks. The silks are dark purple in colour.
- Distinctness Uniformity Stability features:
### How to protect new varieties?

**Plant variety protection made easy**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate Variety</th>
<th>Remarks Measured values etc.</th>
<th>Characteristics value of reference Variety</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GOLDEN GLOW</td>
<td></td>
<td>AXN 66</td>
</tr>
<tr>
<td>G. GLOW</td>
<td></td>
<td></td>
<td>STAR 10</td>
</tr>
<tr>
<td>Tassel: time of anthesis (on middle third of main axis, 50% of plants) (DUS#4)</td>
<td>7</td>
<td>Late (7)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Tassel: anthocyanin coloration of anthers (in middle third of main axis on fresh anthers) (DUS#7)</td>
<td>9</td>
<td>Present (9)</td>
<td>Present (9)</td>
</tr>
<tr>
<td>Tassel: angle between main axis and lateral branches (in lower third of tassel) (DUS#9)</td>
<td>7</td>
<td>Wide (7)</td>
<td>Wide (7)</td>
</tr>
<tr>
<td>Tassel: attitude of lateral branches (in lower third of tassel) (DUS#10)</td>
<td>5</td>
<td>Curved (5)</td>
<td>Straight (1)</td>
</tr>
<tr>
<td>Ear: time of silk emergence (50% plants) (DUS#11)</td>
<td>7</td>
<td>Late (7)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Ear: anthocyanin colouration of silks (DUS#12)</td>
<td>9</td>
<td>Present (9)</td>
<td>Present (9)</td>
</tr>
<tr>
<td>Ear: type of grain (in middle third of ear) (DUS#22)</td>
<td>2</td>
<td>Semi flint/Semi dent (2)</td>
<td>Dent (3)</td>
</tr>
<tr>
<td>Ear: colour of top of grain (DUS#23)</td>
<td>4</td>
<td>Yellow with cap (4)</td>
<td>White with cap 2</td>
</tr>
<tr>
<td>Ear: anthocyanin colouration of glumes of cob (DUS#24)</td>
<td>1</td>
<td>White (1)</td>
<td>Light Purple (2)</td>
</tr>
</tbody>
</table>

- **Grouping characters:**
  
  a) **Tassel:** time of anthesis (Characteristic 4) – Late (7)
  
  b) **Ear:** time of silk emergence (Characteristic 11) – Late (7)
  
  c) **Ear:** anthocyanin colouration of silks (Characteristic 12) – Present (9)
  
  d) **Plant:** length (Characteristic 15.2) – Long (7)
  
  e) **Ear:** type of grain (Characteristic 22) – Semi flint/Semi dent (2)

- **‘Technical Questionnaire’ sheet is attached**

  (c.) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests.

  **NOT APPLICABLE**

7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety:
   
   **Name:** Dr. Sanath K Gawali
   
   **Designation:** Manager – Product Registration
   
   **Address:** Raghuvansh Seeds
   
   LIC building, Mount Road
   
   Chennai- 600002
   
   **Telephone:** 91-44-123456
   
   **Fax:** 91-44-123457
   
   **E-mail:** sanathgawali@sify.com
   
   **Nationality:** Indian

   In case of more than one breeder mention all names as (ii), (iii) and so on in the above format. In the case the variety is evolved and conserved “by group or community of farmers”, it shall be endorsed in Annexure I.
8. (a.) Details of all other earlier applications made on the candidate variety in
countries or other countries (if applicable):

**NOT APPLICABLE**

Variety denomination:  
Nature of right applied for:  
Plant Breeder’s Rights  Patent

Filing Date
(Attach evidence):  
Name of Country:  
Name of Authority:  
Application Number:  

Status of Application:  
Under process  Approved  Rejected

(If required, repeat the above for each applicable country and attach separate sheet)

(b.) Priority is now claimed in respect of the earliest application for a candidate variety of
said denomination (if applicable):

**NOT APPLICABLE**

In (country):  
On (date of application):

9. Has the candidate variety been commercialized or otherwise exploited?

☑ Yes  ☐ No

The candidate variety has been commercialized.

If yes, please indicate the following:

Date of the first sale of the variety:  
Country (ies) where Protection is made:  
Denomination used:  
Trademark used, if any:  
Variation in important trait with Respect to first filing:  

**NOT APPLICABLE**

10. (a.) If the candidate variety is a hybrid, state whether all the parental lines required for
the repeated propagation of the hybrid are bred exclusively by the applicant(s):

☑ Yes  ☐ No

If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced
protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also
provide following information on each of them:

**Parental line (S):**

Denomination:

Source:

Authorisation letter obtained:  
Attached  Not attached

Denomination should not be altered from what was used at the source. Information on source may include name of breeder or
institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional
applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public
domain is used as parental line for the repeated propagation of the hybrid:

☐ Yes  ☑ No
If yes, give following details:
  Denomination:
  Geographical Source:
  Details of Attribution (origin):
  Details of owner farmer /village community/ Institution/ Organisation:

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?

NOT APPLICABLE

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details:

NOT APPLICABLE

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee:

Amount of fee: Rupees 200/- (Rupees Two hundred only)
Demand Draft Number and date: DD No. 123456 dated 9.05.2007
Name of Bank and branch in which the Demand Draft is drawn: Citi Bank, Chennai

Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

_________________________________
(Signature of the Applicant)
DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers’ Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate variety.

I/We hereby declare that the candidate variety complies with the sub- section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I/We hereby attach an affidavit in compliance with clause (C) of sub- section (1) of section 18 of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

I/We hereby declare that the information given in this application for the registration of the above said candidate variety, including annexure and all supporting documents are complete, true and correct to the best of my/our knowledge, information and belief and no information has been willfully concealed.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of protection of plant Varieties and Farmers’ Rights Act, 2001.

Place: Chennai
Date: 22.06.2007
Signature of Applicants  

Seal

12 Wherever the applicants are more than one person each applicant has to sign. In the case of authorised application or application by assignees, such person(s) authorised or assigned shall sign

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

(a) complete application- ATTACHED

(b) endorsement in Annexure I in the case of farmers’ variety (vide column 1, if applicable); NOT APPLICABLE

(c) document of authorisation in Form PV-1 (if applicable)- ATTACHED

(d) document of assignment in Form PV-2 (if applicable)- ATTACHED

(e) documents in support of (b) and (d) as given above. (If applicable)- ATTACHED AS IN (d)

(f) affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved- ATTACHED

(g) copy of document on filing date (vide column 8A, if applicable)- NOT APPLICABLE

(h) copy of letter of agreement (vide column 10A, if applicable)- NOT APPLICABLE

(i) technical Questionnaire for the Candidate variety (attached)- ATTACHED

(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub –section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001- ATTACHED AS IN (e)

(k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure- NOT APPLICABLE

(l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof- NOT APPLICABLE

(m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals- NOT APPLICABLE

(n) Fees as applicable- ATTACHED

If felt necessary, attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.
MAIZE

Technical Questionnaire

1. Name of the Applicant/breeder/company: -
   Raghuvansh Seeds Ltd., LIC Building building, Mount Road, Chennai-600 002

2. Year of Establishment: -
   1985

3. If registered company under the Company’s Act 1956 (Give Details) -

4. Location of corporate office & address: -
   Raghuvansh seeds
   Chepauk, Chennai, 600004

5. Tel/fax/e-mail: -
   Telephone: 91-44-123456
   Fax: 91-44-123457
   E-mail: raghuraj@sify.com

6. Name of candidate variety: -
   GOLDEN GLOW
   (d) Has it been released in any Convention Country earlier
      □ Yes  ☑ No
      If yes give complete details in Column No. 13.
   (e) Pedigree/genealogy:-
   The maize hybrid GOLDEN GLOW was developed by crossing RV 201 and RV 505. The maize hybrid GOLDEN GLOW was developed at farms of Raghuvansh Seeds Ltd. in India during 2002 Rabi season.
   (Include schematic diagram giving details of varieties, lines, or clones used in breeding of candidate variety).
   Schematic diagram – RV 201 x RV 505
      Female x Male
      (Detasseled)
      \[ F_1 \]
      1\textsuperscript{st} Year: 2002 Rabi : Crossing: RV 201 x RV 505
      \[ \downarrow \]
      2\textsuperscript{nd} Year: 2003 Kharif : F1: Average yield 12.36 t/ha in Research farms.
      \[ \downarrow \]
      3\textsuperscript{rd} Year: 2004 Kharif : F1: Average yield 10.89 t/ha in farmers’ fields in South India
      \[ \downarrow \]
      3\textsuperscript{rd} Year: 2004 Rabi : Nucleus seed production
      \[ \downarrow \]
      4\textsuperscript{th} Year: 2005 Kharif : Breeder seed production
      \[ \downarrow \]
4th Year: 2005 Kharif : F1: Multilocation trials - Grain yield, DM reaction
4th Year: 2005 Kharif : Foundation seed production
4th Year: 2004 Kharif : F1: Tested at IET
5th Year: 2005 Kharif : F1: Tested at AET I
6th Year: 2006 Kharif : F1: Tested at AET II and test marketing

(f) Breeding of Candidate Variety:-
(vi) Origination (Tick the correct one)
   Controlled pollination √ / open pollination / induced mutation / spontaneous mutation / introduction/ selection / seedling selection / any other (specify)
(vii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the candidate variety). If the variety was developed by selection, then number of selection cycles completed before fixing it.

- **Name of the parental material:**
  - **Female Parent:** RV 201
  - **Male Parent:** RV 505

- **Characteristics of the parental material:**
  - NP 5038 was developed from Raghuvansh Seeds proprietary germplasm; it has good long ears with orange flint kernels.
  - NP 5088 was developed from Raghuvansh Seeds proprietary germplasm; it has very good combining ability, purple pigmentation on stem, compact tassel and good amount of pollen.

- **Distinguishing characteristic from the candidate variety:**
  - **Female parent RV 201:**
    1. The candidate variety is having anthocyanin colouration in silks, where as it is absent in the female parent RV 201.
    2. The candidate variety is having many number of kernel rows, where as it is medium in the female parent RV 201.
    3. The candidate variety is having large size of kernels, where as it is medium in the female parent RV 201.
  - **Male parent RV 505:**
    1. The candidate variety is late in time of anthesis, where as the male parent RV 505 is medium.
    2. The candidate variety is having wide angle between main axis and lateral branches of tassel, where as the male parent RV 505 is having narrow angle.
    3. The candidate variety is having many number of kernel rows, where as it is medium in the male parent RV 505.

- **Number of selection cycles:** NOT APPLICABLE

(viii) Breeding technique/ procedure used - Heterosis breeding
(ix) Selection criteria used: The hybrid was selected on the basis of high yield, stability and consistency over years and locations.
(x) Stage of selection and multiplication: This hybrid was tested for three years at various locations as given below.
Kharif 2004:

<table>
<thead>
<tr>
<th>HYBRID</th>
<th>ABD</th>
<th>SLD</th>
<th>HYD</th>
<th>NZM</th>
<th>WRN</th>
<th>KRM</th>
<th>BNG</th>
<th>BLR1</th>
<th>BLR2</th>
<th>DVG1</th>
<th>DVG2</th>
<th>HVR</th>
<th>CMB</th>
<th>MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOLDEN GLOW</td>
<td>9.4</td>
<td>8.8</td>
<td>9.1</td>
<td>8.2</td>
<td>8.5</td>
<td>8.7</td>
<td>11.8</td>
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<td>8.2</td>
<td>10.3</td>
<td>9.4</td>
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<td>9.3</td>
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<tr>
<td>AXN 66</td>
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<td>8.3</td>
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<td>9.7</td>
<td>9.9</td>
<td>6.9</td>
<td>7.5</td>
<td>8.9</td>
<td>7.3</td>
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<td>8.1</td>
</tr>
<tr>
<td>STAR 10</td>
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<td>8.3</td>
<td>8.6</td>
<td>7.8</td>
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<td>9.1</td>
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<td>7.2</td>
<td>10.1</td>
<td>9.3</td>
<td>8.4</td>
<td>8.8</td>
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</tbody>
</table>

ABD: Salem  
SLD: Sillod  
HYD: Hyderabad  
NZM: Nizamabad  
WRN: Warangal  
KRM: Karimnagar  
BNG: Bangalore  
BLR1: Bellary1  
BLR2: Bellary2  
DVG1: Davangere1  
DVG2: Davangere2  
CMB: Coimbatore

Kharif 2005:

<table>
<thead>
<tr>
<th>HYBRID</th>
<th>ABD</th>
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<td>8.5</td>
<td>7.2</td>
<td>8.9</td>
<td>8.2</td>
<td>9.0</td>
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</tbody>
</table>

ABD: Salem  
SLD: Sillod  
HYD: Hyderabad  
NZM: Nizamabad  
WRN: Warangal  
KRM: Karimnagar  
BNG: Bangalore  
BLR1: Bellary1  
BLR2: Bellary2  
DVG1: Davangere1  
DVG2: Davangere2  
CMB: Coimbatore

Kharif 2006:

<table>
<thead>
<tr>
<th>HYBRID</th>
<th>SLD</th>
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<th>BLR1</th>
<th>BLR2</th>
<th>DVG1</th>
<th>DVG2</th>
<th>HVR</th>
<th>CMB</th>
<th>MEAN</th>
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<tbody>
<tr>
<td>GOLDEN GLOW</td>
<td>8.5</td>
<td>9.7</td>
<td>7.8</td>
<td>9.0</td>
<td>8.8</td>
<td>12.6</td>
<td>12.3</td>
<td>8.3</td>
<td>9.1</td>
<td>8.4</td>
<td>9.8</td>
<td>8.9</td>
<td>9.4</td>
</tr>
<tr>
<td>AXN 66</td>
<td>7.6</td>
<td>8.1</td>
<td>6.8</td>
<td>8.9</td>
<td>6.9</td>
<td>10.8</td>
<td>11.0</td>
<td>6.9</td>
<td>8.0</td>
<td>6.1</td>
<td>8.4</td>
<td>8.8</td>
<td>8.2</td>
</tr>
<tr>
<td>STAR 10</td>
<td>7.6</td>
<td>7.9</td>
<td>4.8</td>
<td>8.2</td>
<td>8.8</td>
<td>11.0</td>
<td>11.2</td>
<td>9.5</td>
<td>8.9</td>
<td>6.8</td>
<td>9.5</td>
<td>8.7</td>
<td>8.6</td>
</tr>
</tbody>
</table>

SLD: Sillod  
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BLR1: Bellary1  
BLR2: Bellary2  
DVG1: Davangere1  
DVG2: Davangere2  
HVR: Haveri  
CMB: Coimbatore

(xi) Location where breeding was conducted

The breeding of maize hybrid **GOLDEN GLOW** conducted at Research Farms of Raghuvansh Seeds Ltd., Coimbatore, India.
7. Particulars of comparative trial conducted by applicant, if any.
Information on location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may, furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of candidate variety

The candidate variety was tested at All India Coordinated Maize Improvement Trial under the name of MPH 2020 from 2004 to 2006 and has been identified by All India Corn Variety Release Committee at National Corn Workshop held at Hyderabad during April 2007 for release at Zone II and IV. (Report attached)

8. Characteristics of the candidate variety
Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a) (i) Give group characters
   a) Tassel: time of anthesis (Characteristic 4) – Late (7)
   b) Ear: time of silk emergence (Characteristic 11) – Late (7)
   c) Ear: anthocyanin colouration of silks (Characteristic 12) – Present (9)
   d) Plant: length (Characteristic 15.1 and 15.2) – Long (7)
   e) Ear: type of grain (Characteristic 22) – Semi flint/Semi dent (2)

(c) (ii) Distinguishing characteristics (descriptive or elaborate)
The candidate variety is distinct in tassel colour (purple colour due to anthocyanin) and grain colour (yellow with cap).

1. Tassel: anthocyanin colouration at base of glume (in middle third of main axis) Absent (1)
2. Tassel: anthocyanin colouration of glumes excluding base (in middle third of main axis) Present (9)
3. Tassel: anthocyanin colouration of anthers (in middle third of main axis on fresh anthers) Present (9)
4. Tassel: angle between main axis and lateral branches (in lower third of tassel) Wide (7)
5. Tassel: attitude of lateral branches (in lower third of tassel) Curved (5)
6. Ear: anthocyanin colouration of silks Present (9)
7. Ear: shape Cylindrical (3)
8. Ear: type of grain (in middle third of ear) Semi flint/semi dent (2)
9. Ear: colour of top of grain Yellow with cap (4)
10. Ear: anthocyanin colouration of glumes of cob White (1)
11. Kernel: 1000 kernel weight Large (7)

(d) Table of characteristics between candidate denomination and reference variety
Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the reference varieties

NOTE: Two or more reference varieties should be compared with the candidate variety in characteristics table including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.
### Distinguishing Characteristics:

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety</th>
<th>Remarks measured values etc.</th>
<th>Characteristics value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tassel: time of anthesis (on middle third of main axis, 50% of plants) (DUS#4)</td>
<td>7</td>
<td>Late (7)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Tassel: anthocyanin colouration of anthers (in middle third of main axis on fresh anthers) (DUS#7)</td>
<td>9</td>
<td>Present (9)</td>
<td>Present (9)</td>
</tr>
<tr>
<td>Tassel: angle between main axis and lateral branches (in lower third of tassel) (DUS#9)</td>
<td>7</td>
<td>Wide (7)</td>
<td>Wide (7)</td>
</tr>
<tr>
<td>Tassel: attitude of lateral branches (in lower third of tassel) (DUS#10)</td>
<td>5</td>
<td>Curved (5)</td>
<td>Straight (1)</td>
</tr>
<tr>
<td>Ear: time of silk emergence (50% plants) (DUS#11)</td>
<td>7</td>
<td>Late (7)</td>
<td>Medium (5)</td>
</tr>
<tr>
<td>Ear: anthocyanin colouration of silks (DUS#12)</td>
<td>9</td>
<td>Present (9)</td>
<td>Present (9)</td>
</tr>
<tr>
<td>Ear: type of grain (in middle third of ear) (DUS#22)</td>
<td>2</td>
<td>Semi flint/ Semi dent (2)</td>
<td>Dent (3)</td>
</tr>
<tr>
<td>Ear: colour of top of grain (DUS#23)</td>
<td>4</td>
<td>Yellow with cap (4)</td>
<td>White with cap (2)</td>
</tr>
<tr>
<td>Ear: anthocyanin colouration of glumes of cob (DUS#24)</td>
<td>1</td>
<td>White (1)</td>
<td>Light Purple (2)</td>
</tr>
</tbody>
</table>

### Other Important characteristics:

<table>
<thead>
<tr>
<th>Essential characters</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>GOLDEN GLOW</th>
<th>AXN 66</th>
<th>STAR 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tassel: time of anthesis (on middle third of main axis, 50% of plants) (DUS#4)</td>
<td>7</td>
<td>Late (7)</td>
<td>Medium (5)</td>
<td>Late (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tassel: angle between main axis and lateral branches (in lower third of tassel) (DUS#9)</td>
<td>7</td>
<td>Wide (7)</td>
<td>Wide (7)</td>
<td>Narrow (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tassel: attitude of lateral branches (in lower third of tassel) (DUS#10)</td>
<td>5</td>
<td>Curved (5)</td>
<td>Straight (1)</td>
<td>Strongly curved (9)</td>
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</tr>
<tr>
<td>Ear: anthocyanin colouration of silks (DUS#12)</td>
<td>9</td>
<td>Present (9)</td>
<td>Present (9)</td>
<td>Absent (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant: length (up to flag leaf) (DUS#15. 2)</td>
<td>7</td>
<td>Long (7)</td>
<td>Long (7)</td>
<td>Long (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ear: length without husk (DUS#18)</td>
<td>7</td>
<td>Long (7)</td>
<td>Long (7)</td>
<td>Long (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ear: type of grain (in middle third of ear) (DUS#22)</td>
<td>2</td>
<td>Semi flint/ Semi dent (2)</td>
<td>Dent (3)</td>
<td>Semi flint/ Semi dent (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ear: colour of top of grain (DUS#23)</td>
<td>4</td>
<td>Yellow with cap (4)</td>
<td>White with cap (2)</td>
<td>Yellow with cap (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ear: anthocyanin colouration of glumes of cob (DUS#24)</td>
<td>1</td>
<td>White (1)</td>
<td>Light Purple (2)</td>
<td>White (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 10. Characteristics of reference varieties

**Denomination:** AXN 10

**Basis of choice of this variety for comparison:** This variety is having same plant height, silk colour and ear shape as compared to the candidate variety.

**Distinguishable characteristics:** This variety is having dent kernels and light purple coloured cobs.

---

**Plant variety protection made easy**

Page 67 of 215
(b) Other reference variety

(i) Denomination: STAR 1

(ii) Basis of choice of this variety for comparison: This variety is of same maturity group, is having same plant height, ear shape and cob colour as compared to the candidate variety.

(iii) Distinguishable characteristics: This variety is having narrow angle between main axis and lateral branches of tassel and no anthocyanin colouration in anthers and silks.

10. Statement of distinctness of candidate variety:

Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).

The candidate variety was compared with two reference varieties AXN 10 and STAR 1.

AXN 10

1. The candidate variety is having yellow kernels with cap; whereas BIO 9681 is having white kernels with cap.

2. The candidate variety is having semi flint/semi dent kernels; whereas BIO 9681 is having dent kernels.

3. The candidate variety is having white coloured cobs; whereas BIO 9681 is having light purple coloured cobs.

STAR 1

1. This candidate variety is having wide angle between main axis and lateral branches of tassel, whereas Seedtech 2324 is having narrow angle.

2. The candidate variety is having anthocyanin colouration in anthers and silks, whereas anthocyanin colouration is absent in Seedtech 2324.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety</th>
<th>Remarks measured values etc.</th>
<th>Characteristics value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential characters</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Tassel: time of anthesis (on middle third of main axis, 50% of plants) (DUS#4)</td>
<td></td>
<td>7</td>
<td>Late (7)</td>
</tr>
<tr>
<td>Ear: anthocyanin colouration of silks (DUS#12)</td>
<td></td>
<td>9</td>
<td>Present (9)</td>
</tr>
<tr>
<td>Plant: length (up to flag leaf) (DUS#15. 2)</td>
<td></td>
<td>7</td>
<td>Long (7)</td>
</tr>
<tr>
<td>Ear: Shape (DUS#20)</td>
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<td>3</td>
<td>Cylindrical (3)</td>
</tr>
<tr>
<td>Ear: type of grain (in middle third of ear) (DUS#22)</td>
<td></td>
<td>2</td>
<td>Semi flint/ Semi dent (2)</td>
</tr>
<tr>
<td>Ear: anthocyanin colouration of glumes of cob (DUS#24)</td>
<td></td>
<td>1</td>
<td>White (1)</td>
</tr>
</tbody>
</table>

11. Statement on uniformity and stability of candidate variety

Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off-types or any other describable variation beyond which the candidate variety shall be deemed to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.
How to protect new varieties?

Uniformity - The candidate variety was tested at different locations such as Salem and Bangalore, India from 2003 to 2006 Kharif season. The candidate variety has a purity level of above 98% and the off types are less than 2%.

Stability - The candidate variety was tested at different locations Salem and Bangalore, India from 2003 to 2006 Kharif season. The characters were found to be 98% stable at all locations over years.

12. Methods for maintaining the candidate variety:
Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder's right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

NOTE: The holder of a plant breeder’s right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.

The two parents were grown in isolation of approx. 1 Km distance. The inbred lines are kept in cold storage with 10% moisture level at 10 degree C temperature and ±50% RH. The hybrid is produced by crossing between female and male in isolation after de-tasseling the female. The hybrid GOLDEN GLOW is maintained by Raghuvansh Seeds Ltd., Chepauk, Chennai, TN, India

13. Information on variety registered in Convention Countries.  
   a. What were the grouping characters in that application for this candidate variety?
   b. What was the Distinctness Uniformity and Stability parameter on which it was registered?
   c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?
   d. Has the Variety been withdrawn in the first field country from cultivation or banned or from any of the subsequently released country?
   e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date: 25.06.2007

Signature

Signature of Witness and address:

Mr. Alocius Ramalingam, Vice President and Crop Manager, Maize and Sorghum, Raghuvansh Seeds Ltd., Chepauk, Chennai, TN, India

Designation of the Breeder / Company with Seal

The breeder / company should sign with date each page of the Technical Questionnaire.

[No.___________________________]
**SORGHUM**

**FORM 1**

[See regulation 10]

APPLICATION FOR REGISTRATION OF NEW VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001.

[See section 18, other than essentially derived variety.]

*(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)*

<table>
<thead>
<tr>
<th>1. Identity of the Applicant(s):</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>□ INDIVIDUAL BREEDER</td>
<td></td>
</tr>
<tr>
<td>□ SUCCESSOR OF BREEDER</td>
<td></td>
</tr>
<tr>
<td>□ INSTITUTIONAL APPLICANT</td>
<td></td>
</tr>
<tr>
<td>□ FARMER1</td>
<td></td>
</tr>
<tr>
<td>□ COMMUNITY OF FARMERS1</td>
<td></td>
</tr>
<tr>
<td>□ GROUP OF FARMERS1</td>
<td></td>
</tr>
<tr>
<td>□ ASSIGNEE OF ANY OF ABOVE2</td>
<td></td>
</tr>
<tr>
<td>□ CONVENTION COUNTRY 3</td>
<td></td>
</tr>
<tr>
<td>□ ANY OTHER 4</td>
<td></td>
</tr>
</tbody>
</table>

1. Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

2. An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

3. The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act)

4. For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder.

2. Name(s) and Nationality of Applicant(s)

**(a.) (If natural person):** [Insert additional rows, if required] **Not applicable**

| 1. | Serial Number. |
| 2. | Name3          |
| 3. | Complete Address |
| 4. | Nationality |

3. **Indian**

3 If the applicant is the authorised representative of a group of farmers/community of farmers an authorisation in Form PV-1 signed by all members of the group, or by the Head/office bearer of the community witnessed by the two people, if the identity of the applicant is “Community of farmers’ shall be attached.

**(b.) (If a legal person; for example a firm or company or institution)**

**Name:** Indira seeds

**Address of its seat or establishment:** 12, Bhavani colony, Hyderabad-30

**(Registered office):**

**Year of Incorporation:** 1999

State whether the applicant legal person has non-Indian participation in capital or management:

- Yes
- No

If yes, identify the nationality
(c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):

Name: Santosh  
Designation: Managing Director  
Address: Indira seeds, 12, Bhavani colony, Hyderabad-30  
Telephone: +91-40-27561769  
Fax: +91-40-27561770  
E-mail: mdindiraseeds@yahoo.com

3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorisation in Form-PV-1, if required)

Name: The Director (Research)  
Address: Indira seeds, 12, Bhavani colony, Hyderabad - Pin 500030  
Telephone: 91-40-27561769  
Fax: 91-40-27561770  
E-mail: drindiraseeds@yahoo.com

4. General Information of the Candidate Variety:
   - Common name of the Crop: Sorghum
   - Botanical name: *Sorghum bicolor* (L.) Moench
   - Family: Poaceae
   - Denomination (in block letters): INJAR 20


5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)
   - [ ] NEW VARIETY  
   - [ ] EXTANT VARIETY  
   - [ ] FARMERS’ VARIETY

6.(a.) Classification of the Candidate Variety:
   - [ ] TYPICAL VARIETY
   - [ ] HYBRID VARIETY*
   - [ ] TRANSGENIC  
   - [ ] OTHER (SPECIFY)

5. Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagated saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).
   * The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions

(b) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

Technical Questionnaire attached

(c) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests.

Not Applicable
7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety:

Name: Dr. Sanath
Address: Sorghum Breeder, Indira Seeds, 12, Bhavani colony, Hyderabad - 500 030
Telephone: 91-40-27561769
Fax: 91-40-27561770
E-mail: sanathindiraseeds@yahoo.com
Nationality: Indian

In case of more than one breeder mention all names as (ii), (iii) and so on in the above format. If required insert extra page. In the case the variety is evolved and conserved ‘by group or community of farmers’, it shall be endorsed in Annexure I.

8.(a.) Details of all other earlier applications made on the candidate variety in convention countries or other countries (if applicable):

Not applicable

Variety denomination: ____________________________________________________________________________
Nature of right applied for: □ Plant Breeder’s Rights □ Patent
Filing Date (Attach evidence): ____________________________________________________________________________
Name of Country: _________________________________________________________________________________
Name of Authority: _________________________________________________________________________________
Application Number: _________________________________________________________________________________
Status of Application: □ Under process □ Approved □ Rejected
(If required, repeat the above for each applicable country and attach separate sheet)

(b.) Priority is now claimed in respect of the earliest application for a candidate variety of said denomination (if applicable):

Not applicable

In (country): _________________________________________________________________________________
On (date of application): _______________________________________________________________________________

9. Has the candidate variety been commercialised or otherwise exploited?

□ Yes  □ No

If yes, please indicate the following: ____________________________________________________________________________
Date of the first sale of the variety: ____________________________________________________________________________
Country (ies) where Protection is made: ____________________________________________________________________________
Denomination used: _________________________________________________________________________________
Trademark used, if any: _________________________________________________________________________________
Variation in important trait with Respect to first filing: (attach sheet): ____________________________________________________________________________
Not applicable
10.(a.) If the candidate variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s):

Not applicable  □ Yes  □ No

If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:

Parental line (S):
Denomination:
Source:
Authorisation letter obtained:  □ Attached  □ Not attached

Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public domain is used as parental line for the repeated propagation of the hybrid:

If yes, give following details:
Denomination:
Geographical Source:
Details of Attribution (origin):
Details of owner farmer/village community/Institution/Organisation:

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?

Not applicable

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details:

Not applicable

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee:

Not applicable

Amount of fee: Rupees 200/- (Rupees Two hundred only) Demand Draft Number and date: DD No. 395302 dated 21st May 2009 Name of Bank and branch in which the Demand Draft is drawn: State Bank of Hyderabad, Budvel Branch, Rajendranagar, Hyderabad - 500030

Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

(Signature of the Applicant)
Managing Director
DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers’ Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate variety.

I/We hereby declare that the candidate variety complies with the sub- section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I/We hereby attach an affidavit in compliance with clause (C) of sub- section (1) of section 18 of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

I/We hereby declare that the information given in this application for the registration of the above said candidate variety, including annexure and all supporting documents are complete, true and correct to the best of my/our knowledge, information and belief and no information has been wilfully concealed.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

Place: Hyderabad Date: 21st July 2009

Signature of applicant

Managing Director & Seal

(Wherever the applicants are more than one person each applicant has to sign. In the case of authorised application or application by assignees, such person(s) authorised or assigned shall sign)

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

√ (a) complete application - Yes

(b) endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable) – Not Applicable

√ (c) document of authorisation in Form PV-1 (if applicable) - Yes

(d) document of assignment in Form PV-2 (if applicable) - Yes

(e) documents in support of (b) and (d) as given above. (If applicable); Not Applicable

√ (f) Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved; Yes

(g) copy of document on filing date (vide column 8A, if applicable); Not Applicable

(h) copy of letter of agreement (vide column 10A, if applicable); Not Applicable

√ (i) technical Questionnaire for the Candidate variety (attached); Yes

(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub –section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001; Not Applicable

(k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure; Not Applicable

(l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof; Not Applicable

(m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals; Not Applicable and

√ (n) Fees as applicable; Yes

If felt necessary attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.
ANNEXURE 1 Not Applicable

Endorsement of application for registration of farmers’ variety under Protection of Plant Varieties and Farmers’ Rights Act, 2001

1. Name(s) of applicant farmer/ Group of farmers/Community of farmers

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name with surname/Name of Group/Name of Community</th>
<th>Permanent Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Denomination of the candidate variety: ________________________________

3a. (Applicable to individual farmer applicant)

I hereby declare that I have been a permanent cultivator since last many years in the ………………………. village falling under the ………………………. local body/Panchayat(s) in the ………………………. District of ………………………. State and that I and my family are the initial and exclusive developers and conservers of the candidate variety denominated as. ………………………….., under the kind………………………………… (Common name of crop) to the botanical species ……………………………………

3b. (Applicable to group/community of farmers applicant) We hereby declare that we have been the permanent cultivators since last many years in the ……………………… village(s) falling under the …………………… local body/ Panchayat(s) in the ……………………District(s) of. …………………….State(s) and that we are the initial and exclusive developers and continuous conservers of the candidate variety denominated as ………………… under the kind. …………………………. (Common name of crop) belonging to the botanical species…………………………………. We on behalf of our group/community hereby authorise………………………. s/o…………………. (Name), who is a member of our group/community and permanent resident of ……………………………………… (Complete postal address) to do the needful and be the signatory on our behalf for the limited purpose of securing registration of the candidate variety in our favour under Protection of Plant Varieties & Farmers’ Rights Act, 2001.

Dated………………
Place………………

Signature and Name of the Farmer or Authorised person of Group/Community

(To be signed before the endorsing official)

It is hereby certified that the above said candidate variety is bred / developed and continuously conserved and cultivated only by the applicant farmer / group of farmers / community of farmers who is / are permanent residents of above said village(s) and I am fully conversant with the applicant farmer / group or community of farmers and that the candidate variety is due to their efforts (strike out unwanted words given as options).

Date: 
Place:

(Chairperson / Secretary of the Concerned Panchayat Biodiversity Management Committee OR Concerned District Agricultural Officer OR Director of Research Concerned State Agricultural Universities OR Concerned District Tribal Development Office.

(With Official Rubber Stamp)
Technical Questionnaire

1. Name of the Applicant/breeder/company: -
   Indira seeds, hyderabad

2. Year of Establishment: -
   1999 (Nineteen hundred ninety nine)

3. If registered company under Company’s Act 1956 (Give details): -
   XYZ

4. Location of corporate office and address: -
   12, Bhavani colony, RAjendranagar, Hyderabad-30

5. Tel/fax/e-mail: -
   91-40-27561769
   91-40-27561770

6. Name of candidate variety:-
   INJAR 20

   (a) Has it been released in any Convention Country earlier
   ☐ Yes ☐ No

   If yes give complete details in column number 13

   (b) Pedigree/genealogy: -

   Acsv X bhzy
   Acsv = arg x grg
   Bhzy = grg x stu

   Schematic diagram of varietal development

   Hybridization of elite lines
     ↓
   F1 was raised to harvest F2 seeds
     ↓
   F2 population (2000 plants) raised
   Superior plants with desired traits selected
     ↓
   F3 population raised and Superior plants selected
     ↓
   F4 population raised and Superior plants selected
F5 population raised and Superior plants selected

F6 population raised and promising line identified

Small scale multiplication of the selected line

Microplot seed production undertaken to

Produce seeds for replicated trials

Replicated trials conducted in multiple locations

Seed production scheme standardized

(Include schematic diagram giving details of varieties, lines, or clones used in the breeding of candidate variety)

(c) Breeding of Candidate Variety

(i) Origination (Tick the correct one)

Controlled pollination / open pollination / induced mutation / spontaneous mutation / introduction / selection / seedling selection / any other (specify)

(ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the candidate variety). If the variety was developed by selection, then the number of selection cycles completed before fixing it.

Not available

(iii) Breeding technique/procedure used

Pedigree method

(iv) Selection criteria used

Development of a abcd disease resistant variety for kharif

(v) Stage of selection and multiplication

Fx - Fz generation

(vi) Location where breeding was conducted

seed farm, Indira seeds, Rajendar nagar, Hyderabad.
7. Particulars of comparative trial conducted by the applicant, if any.

Information on the location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may, furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of candidate variety.

**Grain yield (kg/ha) of proposed variety SPV 0000 check at National level in coordinated trails**

<table>
<thead>
<tr>
<th>Year Trial</th>
<th>SPV 0000</th>
<th>Rank</th>
<th>CCC</th>
<th>BBB</th>
<th>DDD</th>
<th>CD</th>
<th>CV %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karnataka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>00 locations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>Average</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>2 locations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>Average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>Average</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>Average</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fodder yield (kg/ha) of proposed variety check at National level in coordinated trails**

<table>
<thead>
<tr>
<th>Year Trial</th>
<th>SPV 0000</th>
<th>Rank</th>
<th>CCC</th>
<th>BBB</th>
<th>DDD</th>
<th>CD</th>
<th>CV %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karnataka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>00 locations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>Average</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>2 locations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>Average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>Average</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>Average</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evaluation of proposed variety SPV 0000 for abcd disease resistance tolerance against check at six locations in coordinated trails (2000-2003)

Score under artificial screening by mist formation sprinkler (1-5 scale)

<table>
<thead>
<tr>
<th>Entry</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPV 000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BBB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Characteristics of the candidate variety

Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a) (i) Give group characters.

- Adaptation of season: xxxx
- Plant time of panicle emergence: xxxx (Medium)
- Plant Total height (at physiological maturity): 0000 cm (Medium)
- Panicle shape (at physiological maturity): xxxx
- Caryopsis: Colour after threshing: xxxxx

(a) (ii) Distinguishing characteristics (descriptive or elaborate)

- Plant height: (xxxx cm), xxx pigmentation, flag leaf coloration (xxxx), leaf blade length (xxx) width (xxxx), glume colour (xxxxx) panicle shape xxxxx and density xxxxx, caryopsis colour xxxx and lustrous.

(b) Table of characteristics between candidate denomination and reference variety Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.

NOTE: Two or more reference varieties should be compared with the candidate variety in the characteristics table, including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.
## How to protect new varieties?

### Plant variety protection made easy

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety</th>
<th>Remarks Measure value etc.</th>
<th>Characteristics value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seedling: anthocyanin colouration of Coleoptile</td>
<td>1</td>
<td>Yellow-green</td>
<td>Yellow-green</td>
</tr>
<tr>
<td>Leaf Sheath: anthocyanin Colouration</td>
<td>1</td>
<td>Yellow-green</td>
<td>Yellow-green</td>
</tr>
<tr>
<td>Leaf: midrib colour (5th fully developed leaf)</td>
<td>2</td>
<td>Yellow-green</td>
<td>Yellow-green</td>
</tr>
<tr>
<td>Plant: Time of panicle emergence (50% of the plants with 50% anthesis)</td>
<td>5</td>
<td>(73) Medium</td>
<td>(67) Medium</td>
</tr>
<tr>
<td>Plant: natural height of plant up to base of flag leaf</td>
<td>5</td>
<td>(191.4) Medium</td>
<td>(233.3) Tall</td>
</tr>
<tr>
<td>Flag leaf: Yellow colouration of midrib</td>
<td>1</td>
<td>Absent (1)</td>
<td>Absent (1)</td>
</tr>
<tr>
<td>Lemma: arista formation</td>
<td>1</td>
<td>Absent (1)</td>
<td>Absent (1)</td>
</tr>
<tr>
<td>Stigma: anthocyanin colouration</td>
<td>5</td>
<td>Present (5)</td>
<td>Present (5)</td>
</tr>
<tr>
<td>Stigma: Yellow colouration</td>
<td>5</td>
<td>Present (5)</td>
<td>Present (5)</td>
</tr>
<tr>
<td>Stigma: length</td>
<td>5</td>
<td>(1.2) Medium</td>
<td>(0.9) Short</td>
</tr>
<tr>
<td>Flower with pedicel : length of flower</td>
<td>9</td>
<td>Very long</td>
<td>Long</td>
</tr>
<tr>
<td>Anther: Length</td>
<td>5</td>
<td>(3.1) Medium</td>
<td>(2.9) Short</td>
</tr>
<tr>
<td>Anther: colour of dry anther</td>
<td>4</td>
<td>Greyed-orange</td>
<td>Greyed-orange</td>
</tr>
<tr>
<td>Glume : colour</td>
<td>4</td>
<td>Greyed-orange</td>
<td>Greyed-orange</td>
</tr>
<tr>
<td>Plant: total height</td>
<td>5</td>
<td>(208.0) Medium</td>
<td>(267.8) Tall</td>
</tr>
<tr>
<td>Stem : diameter (at lower one third height of plant)</td>
<td>5</td>
<td>(2.2) Medium</td>
<td>(1.9) Small</td>
</tr>
<tr>
<td>Leaf: length of blade (the third leaf from top including flag leaf)</td>
<td>7</td>
<td>(77.4) Long</td>
<td>(69.8) Long</td>
</tr>
<tr>
<td>Leaf: width of blade (the third leaf from top including flag leaf)</td>
<td>9</td>
<td>(8.3) Very broad</td>
<td>(8.2) Very broad</td>
</tr>
<tr>
<td>Panicle : length without peduncle</td>
<td>5</td>
<td>(27.5) Medium</td>
<td>(26.8) Medium</td>
</tr>
<tr>
<td>Panicle : length of branches (middle third of panicle)</td>
<td>5</td>
<td>(8.0) Medium</td>
<td>(8.3) Medium</td>
</tr>
<tr>
<td>Panicle : density at maturity (ear head compactness)</td>
<td>7</td>
<td>Semi-compact</td>
<td>Semi-loose</td>
</tr>
<tr>
<td>Panicle : shape</td>
<td>2</td>
<td>Panicle broader in upper part</td>
<td>Symmetric</td>
</tr>
<tr>
<td>Neck of panicle : visible length above sheath</td>
<td>1</td>
<td>(0.0) Absent or very short</td>
<td>(7.2) Short</td>
</tr>
<tr>
<td>Glume : length</td>
<td>1</td>
<td>Very short</td>
<td>Short</td>
</tr>
<tr>
<td>Threshability</td>
<td>1</td>
<td>Freely threshable</td>
<td>Freely threshable</td>
</tr>
<tr>
<td>Caryopsis : color after threshing</td>
<td>3</td>
<td>Yellow-</td>
<td>Yellow-</td>
</tr>
</tbody>
</table>
9. Characteristics of the reference varieties

(a) Most similar variety

(i) Denomination: CCC

Pedigree: \( xyz \times abc \)

\( xyz = \text{def} \times ijk \)

\( abc = \text{mno} \times stz \)

(ii) Basis of choice of this variety for comparison:

As CCC is suitable dual purpose variety and use in the trials as check.

(iii) Distinguishable Characteristics:

Possess good dual purpose attributes i.e. grain yield, dry fodder yield with good plant height, semi-compact panicle with creamy grain color and tan plant type.

(b) Other reference variety: Not Applicable

(i) Denomination

(ii) Basis of choice of this variety for comparison

(iii) Distinguishable Characteristics

10. Statement of distinctness of candidate variety:

Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include, (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).
11. Statement on uniformity and stability of candidate variety

Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off types or any other describable variation beyond which the candidate variety shall be deem to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.

Average performance of the variety over the years i.e. xxxx-xxx was quite convincing across the zones with respect to dual purpose attribute as the variety provided more dry fodder yield with comparable grain yield and better bio mass than check CCC. And resistant to disease.

12. Methods for maintaining the candidate variety

Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder’s right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

The candidate variety will be maintained through standard nucleus and breeder seed production procedure followed by progeny row selection and bulk multiplication in isolations to multiply the variety. The nucleus, breeder seed of variety will be maintained at Instructional Farm, Indira Seeds, Hyderabad-30.

NOTE: The holder of a plant breeder’s right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.
13. Information on variety registered in Convention Countries.

a. What were the grouping characters in that application for this candidate variety?
   (i) Not Applicable

b. What was the Distinctness Uniformity and Stability parameter on which it was registered?
   (i) Not Applicable

c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?
   (i) Not Applicable

d. Has the Variety been withdrawn in the first filed country from cultivation or banned or from any of the subsequently released country?
   (i) Not Applicable

e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date: 02nd July 200x Signature

Signature of Witness and Address ______________________

Designation of the Breeder/Company with seal

The breeder/company should sign with date each page of the Technical Questionnaire.

[No. ______________________ ]
(___________________________)
PIGEON PEA

FORM 1

[See regulation 10]

APPLICATION FOR REGISTRATION OF NEW VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001.

[See section 18, other than essentially derived variety.]

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)

<table>
<thead>
<tr>
<th>1. Identity of the Applicant(s):</th>
<th>INDIVIDUAL BREEDER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SUCCESSOR OF BREEDER</td>
</tr>
<tr>
<td></td>
<td>INSTITUTIONAL APPLICANT</td>
</tr>
<tr>
<td></td>
<td>FARMER1</td>
</tr>
<tr>
<td></td>
<td>COMMUNITY OF FARMERS1</td>
</tr>
<tr>
<td></td>
<td>GROUP OF FARMERS1</td>
</tr>
<tr>
<td></td>
<td>ASSIGNEE OF ANY OF ABOVE2</td>
</tr>
<tr>
<td></td>
<td>CONVENTION COUNTRY 3</td>
</tr>
<tr>
<td></td>
<td>ANY OTHER 4</td>
</tr>
</tbody>
</table>

1. Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

2. An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

3. The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act)

4. For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder.

2. Name(s) and Nationality of Applicant(s)

(a.) (If natural person): [Insert additional rows, if required]

<table>
<thead>
<tr>
<th>Serial Number.</th>
<th>Name3</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Dr Harsh</td>
</tr>
</tbody>
</table>

3. Complete Address

1-2-442, Rajendranagar, Hyderabad.

4. Nationality  

Indian

If the applicant is the authorised representative of a group of farmers/community of farmers an authorisation in Form PV-1 signed by all members of the group, or by the Head/office bearer of the community witnessed by the two people, if the identity of the applicant is “Community of farmers’ shall be attached.

(b.) (If a legal person; for example a firm or company or institution)

Not Applicable

Name:
Address of its seat or establishment (Registered office):
Year of Incorporation:
State whether the applicant legal person has non-Indian participation in capital or management:

[ ] Yes  [ ] No

If yes, identify the nationality

(c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):
How to protect new varieties?

Name: Dr Harsh
Designation: Breeder
Address: 1-2-442, Rajendranagar, Hyderabad
Telephone: +91-40-27561729
Fax: +91-40-27561730
E-mail: harsh@gmail.com

3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorisation in Form-PV-1, if required)

Name: Dr Harsh
Address: 1-2-442, Rajendranagar, Hyderabad 30.
Telephone: 91-40-27561729
Fax: 91-40-27561730
E-mail: Harsh@gmail.com

4. General Information of the Candidate Variety:

<table>
<thead>
<tr>
<th>Common name of the Crop</th>
<th>Pigeon pea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botanical name 4:</td>
<td>Cajanus cajan (L.)</td>
</tr>
<tr>
<td>Family</td>
<td>Leguminaceae</td>
</tr>
<tr>
<td>Denomination (in block letters)</td>
<td>Pratap</td>
</tr>
</tbody>
</table>


5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers' Rights Authority, 2003)

- NEW VARIETY
- EXTANT VARIETY
- FARMERS' VARIETY

6.(a) Classification of the Candidate Variety:

- TYPICAL VARIETY
- HYBRID VARIETY
- TRANSGENIC
- OTHER (SPECIFY)

5. Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagated saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).

* The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions.

(b) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach 'Technical Questionnaire' sheet with all needed details duly signed with seal.

Flower colour: Yellow (1)
Pod colour: Green with out streaks (1)
Grain colour: Dark Brown (3)

Uniformity: this variety is very uniform in respect of above characters and also other qualitative and quantitative characters.

Stability: This variety is very stable in its performance and has wider adaptability, for different agro climatic zones of the country.
(c) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests.

**Not Applicable**

7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety:
   i) Name: Dr. Harsh.
   Address: 1-2-442, Rajendranagar, Hyderabad-30
   Telephone: 91-40-27561729
   Fax: 91-40-27561730
   E-mail: Harsh@gmail.com
   Nationality: Indian

In case of more than one breeder mention all names as (ii), (iii) and so on in the above format. If required insert extra page. In the case the variety is evolved and conserved "by group or community of farmers", it shall be endorsed in Annexure I.

8.(a.) Details of all other earlier applications made on the candidate variety in convention countries or other countries (if applicable):

**Not applicable**

Variety denomination: ____________________________________________
Nature of right applied for: ☐ Plant Breeder’s Rights ☐ Patent
Filing Date (Attach evidence): _______________________________________
Name of Country: ________________________________________________
Name of Authority: _______________________________________________
Application Number: _____________________________________________
Status of Application: ☐ Under process ☐ Approved ☐ Rejected
(If required, repeat the above for each applicable country and attach separate sheet)

(b.) Priority is now claimed in respect of the earliest application for a candidate variety of said denomination (if applicable):

**Not applicable**

In (country): ____________________________________________________
On (date of application): _________________________________________

9. Has the candidate variety been commercialised or otherwise exploited?

☐ Yes ☐ No

If yes, please indicate the following
Date of the first sale of the variety: 20th July 2009
Country (ies) where Protection is made: India
Denomination used: Pratap
Trademark used, if any: No

Variation in important trait with Respect to first filing: *(attach sheet): Not applicable*
10.(a.) If the candidate variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s): Not applicable  

☐ Yes  ☐ No

7 If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:

Parental line (S):
Denomination:
Source:
Authorisation letter obtained:  ☐ Attached  ☐ Not attached

Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public domain is used as parental line for the repeated propagation of the hybrid:  

☐ Yes  ☐ No

If yes, give following details:
Denomination:
Geographical Source:
Details of Attribution (origin):
Details of owner farmer/village community/ Institution/ Organisation:

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?

Not applicable

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details:

Not applicable

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee:

Not applicable

Amount of fee: Rupees 200/- (Rupees Two hundred only) Demand Draft Number and date: DD No. 395302  dated 29th July 2009 Name of Bank and branch in which the Demand Draft is drawn: State Bank of Hyderabad, Hyderguda Branch, Hyderabad - 500029

9 Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

(Signature of the Applicant)
Managing Director
DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers' Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate variety.

I/We hereby declare that the candidate variety complies with the sub- section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I/We hereby attach an affidavit in compliance with clause (C) of sub- section (1) of section 18 of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

I/We hereby declare that the information given in this application for the registration of the above said candidate variety, including annexure and all supporting documents are complete, true and correct to the best of my/our knowledge, information and belief and no information has been willfully concealed.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

Place: Hyderabad
Date: 21st July 2009

Signature of Applicants
Seal

“Wherever the applicants are more than one person each applicant has to sign. In the case of authorised application or application by assignees, such person(s) authorised or assigned shall sign.

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

√ (a) complete application - Yes
(b) endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable) – Not Applicable
√ (c) document of authorisation in Form PV-1 (if applicable) - Yes
√ (d) document of assignment in Form PV-2 (if applicable) - Yes
√ (e) documents in support of (b) and (d) as given above. (If applicable); Not Applicable
√ (f) Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved; Yes
(g) copy of document on filing date (vide column 8A, if applicable); Not Applicable
(h) copy of letter of agreement (vide column 10A, if applicable); Not Applicable
√ (i) technical Questionnaire for the Candidate variety (attached); Yes
(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub –section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001; Not Applicable
(k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure; Not Applicable
(l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof; Not Applicable
(m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals; Not Applicable and
√ (n) Fees as applicable; Yes

If felt necessary attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.
ANNEXURE 1  Not Applicable

Endorsement of application for registration of farmers’ variety under Protection of Plant Varieties and Farmers’ Rights Act, 2001

1. Name(s) of applicant farmer/ Group of farmers/Community of farmers

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name with surname/Name of Group/Name of Community</th>
<th>Permanent Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Denomination of the candidate variety: _______________________________

3a. (Applicable to individual farmer applicant)

I hereby declare that I have been a permanent cultivator since last many years in the …………………… village falling under the …………………… local body/Panchayat(s) in the …………………… District of …………………… State and that I and my family are the initial and exclusive developers and conservers of the candidate variety denominated as. ……………………, under the kind………………………………… (Common name of crop) to the botanical species ……………………

3b. (Applicable to group/community of farmers applicant) We hereby declare that we have been the permanent cultivators since last many years in the …………………… village(s) falling under the …………………… local body/ Panchayat(s) in the …………………… District(s) of …………………… State(s) and that we are the initial and exclusive developers and continuous conservers of the candidate variety denominated as …………………… under the kind. …………………… (Common name of crop) belonging to the botanical species………………………………… We on behalf of our group/community hereby authorise………………………. s/o…………………. (Name), who is a member of our group/community and permanent resident of ……………………. (Complete postal address) to do the needful and be the signatory on our behalf for the limited purpose of securing registration of the candidate variety in our favour under Protection of Plant Varieties & Farmers’ Rights Act, 2001.

Dated…………………
Signature and Name of the Farmer or
Place…………………
Authorised person of Group/Community
(To be signed before the endorsing official)

It is hereby certified that the above said candidate variety is bred / developed and continuously conserved and cultivated only by the applicant farmer / group of farmers / community of farmers who is / are permanent residents of above said village(s) and I am fully conversant with the applicant farmer / group or community of farmers and that the candidate variety is due to their efforts (strike out unwanted words given as options).

Date: 
Place: 
Signature
Name
(Chairperson / Secretary of the Concerned Panchayat Biodiversity Management Committee OR Concerned District Agricultural Officer OR Director of Research Concerned State Agricultural Universities OR Concerned District Tribal Development Office.
(With Official Rubber Stamp)
Technical Questionnaire

1. Name of the Applicant/breeder/company:    Dr Harsh
2. Year of Establishment:    Not Applicable
3. If registered company under Company’s Act 1956 (Give details):    Not Applicable
4. Location of corporate office and address:    Not Applicable
5. Tel/fax/e-mail:    91-40-27561729; 91-40-27561730; harsh@gmail.com
6. Name of candidate variety: - Pratap

(a) Has it been released in any Convention Country earlier
   □ Yes   □ No
   If yes give complete details in column number 13

(b) Pedigree/genealogy: - HRP- 9 x HRP -12
   Schematic diagram of varietal development
   
   Hybridization of HRP- 9 x HRP -12
   ┷
   F1 was selfed to harvest F2 seeds
   ┷
   F2 population (2000 plants) raised Superior plants with desired traits selected
   ┷
   F3 population raised and Superior plants selected
   ┷
   F4 population raised and Superior plants selected
   ┷
   F5 population raised and Superior plants selected
   ┷
   F6 population raised and promising line identified
   ┷
   Small scale multiplication of the selected line
   ┷
   Microplot seed production undertaken to
   ┷
   Produce seeds for replicated trials of multiple locations
   ┷
   Seed multiplication and marketing

(Include schematic diagram giving details of varieties, lines, or clones used in the breeding of candidate variety)
(c) Breeding of Candidate Variety

(i) Origination (Tick the correct one)

Controlled pollination / open pollination / induced mutation / spontaneous mutation / introduction / selection/ seedling selection / any other (specify)

(ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the candidate variety). If the variety was developed by selection, then the number of selection cycles completed before fixing it.

A typical variety, selected in F6 from a cross, HRP 9 X HRP 12 with six cycles of selections.

(iii) Breeding technique/procedure used

Pedigree method with selection for transgressive segregants.

(iv) Selection criteria used

Transgressive segregants selected & advanced with pedigree method.

(v) Stage of selection and multiplication

F6 with self seed sufficiently multiplied

(vi) Location where breeding was conducted

Seed farm, Rajendranagar, Hyderabad.

7. Particulars of comparative trial conducted by the applicant, if any.

Information on the location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may, furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of candidate variety.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Variety</th>
<th>Duration Days</th>
<th>Mean Yield (q/ha)</th>
<th>% Increase Over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>IPCL 87</td>
<td>BSMR 853</td>
</tr>
<tr>
<td>1</td>
<td>Pratap</td>
<td>120-130</td>
<td>17.3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>IPCL 87*</td>
<td>110-120</td>
<td>13.0</td>
<td>33</td>
</tr>
<tr>
<td>3</td>
<td>BSMR 853*</td>
<td>170-180</td>
<td>17.6</td>
<td>32</td>
</tr>
</tbody>
</table>

* Check

8. Characteristics of the candidate variety

Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a) (i) Give group characters.

Time of flowering : Early (3)    Plant growth habit : Determinate (1)
Stem colour : Green (1)          Pod waxiness : Absent (1)
Seed colour : Brown (2)
How to protect new varieties?

(a) (ii) **Distinguishing characteristics (descriptive or elaborate)**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety Pratap</th>
<th>Remarks</th>
<th>Characteristics value of reference variety IPCL 87</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flower colour</td>
<td>Yellow (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pod colour</td>
<td>Green with out streaks (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain colour</td>
<td>Dark Brown (3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) **Table of characteristics between candidate denomination and reference variety**

Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.

NOTE: Two or more reference varieties should be compared with the candidate variety in the characteristics table, including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety Pratap</th>
<th>Remarks</th>
<th>Characteristics value of reference variety IPCL 87</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of flowering</td>
<td>3</td>
<td>75-80 days after sowing</td>
<td>3</td>
</tr>
<tr>
<td>Plant growth habit</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Stem colour</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Pod waxiness</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Seed colour</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Flower colour</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Pod colour</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Grain colour</td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

9. Characteristics of the reference varieties

(a) **Most similar variety**

(i) **Denomination: IPCL 87**

Pedigree: xyz x abc  
abc = mno x stz  
xyz = def x ijk  
Flower colour: Yellow  
Pod colour: Green with streaks  
Grain colour: Purple

(ii) **Basis of choice of this variety for comparison:**

Released & notified for central zone where the hybrid proposed for protection has been intensively tested.

(iii) **Distinguishable Characteristics:**

Pod colour: Green with out streaks  
Stem : with green colour

(b) **Other reference variety:** Not Applicable

(i) **Denomination**

(ii) **Basis of choice of this variety for comparison**

(iii) **Distinguishable Characteristics**

10. Statement of distinctness of candidate variety:

Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include, (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).

The proposed candidate variety is very distinct in terms of Ipod colour (green without streaks) & stem colour compared to reference variety IPCL 87. it is also distinct in terms to wilt & sterility mosaic, compared to IPCL 87, the reference variety.

11. Statement on uniformity and stability of candidate variety

Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially
acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off types or any other describable variation beyond which the candidate variety shall be deem to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.

The variety is very uniform in respect of essential and other morphological traits. As a result it is very stable in its performance and has wider adaptability particular to Central and west zones.

12. Methods for maintaining the candidate variety

Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder’s right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

The candidate variety is being maintained with individual plants to progeny rows, representing the essential & other characteristics. Those progenies which meet the genetic purity in respect of the qualitative traits, and also match for many quantitative traits, are bulked to form the breeder seed which is being used for further multiplication. The same process is repeated every season to maintain the genetic purity of the candidate variety, Pratap. The candidate variety will be maintained at Seed Farm, Rajendranagar, Hyderabad.

NOTE: The holder of a plant breeder’s right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.

13. Information on variety registered in Convention Countries.

a. What were the grouping characters in that application for this candidate variety?
   Not Applicable

b. What was the Distinctness Uniformity and Stability parameter on which it was registered?
   Not Applicable

c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?
   Not Applicable

d. Has the Variety been withdrawn in the first filed country from cultivation or banned or from any of the subsequently released country?
   Not Applicable

e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date: 02nd July 200x

Signature

Signature of Witness and Address _______________

Designation of the Breeder/Company with seal

The breeder/company should sign with date each page of the Technical Questionnaire.

[No. ______________________ ]

(______________________)
How to protect new varieties?

COTTON

FORM 1

[See regulation 10]

APPLICATION FOR REGISTRATION OF NEW VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001.

[See section 18, other than essentially derived variety.]

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)

1. Identity of the Applicant(s):

   - INDIVIDUAL BREEDER
   - SUCCESSOR OF BREEDER
   - INSTITUTIONAL APPLICANT FARMER1
   - COMMUNITY OF FARMERS1
   - GROUP OF FARMERS1
   - ASSIGNEE OF ANY OF ABOVE2
   - CONVENTION COUNTRY 3
   - ANY OTHER 4

   Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

2. Name(s) and Nationality of Applicant(s)

   (a.) (If natural person): [Insert additional rows, if required] Not applicable

   1. Serial Number.
   2. Name3
   3. Complete Address
   4. Nationality

   If the applicant is the authorised representative of a group of farmers/community of farmers an authorisation in Form PV-1 signed by all members of the group, or by the Head/office bearer of the community witnessed by the two people, if the identity of the applicant is “Community of farmers” shall be attached.

   (b.) (If a legal person; for example a firm or company or institution)

   Name: Green Seeds Ltd
   Address of its seat or establishment: Hyderguda, Hyderabad-29
   Year of Incorporation: 2000
   State whether the applicant legal person has non-Indian participation in capital or management: □ Yes □ No

   If yes, identify the nationality: ____________________________

   (c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):

   Name: Sawant
   Designation: Managing Director
   Address: Green Seeds Ltd, Hyderguda, Hyderabad-30
   Telephone: +91-40-66686207
   Fax: +91-40-66686208
   E-mail: greenseeds@yahoo.com
3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorisation in Form-PV-1, if required)

Name: The Director (Research)
Address: Green seeds, Hyderguda, Hyderabad-29.
Telephone: 91-40-66686207
Fax: 91-40-66686208
E-mail: greenseeds@yahoo.com

4. General Information of the Candidate Variety:

Common name of the Crop: Cotton
Botanical name: Gossypium hirsutum
Family: Malvaceae
Denomination (in block letters): GC 10

5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)

[ ] NEW VARIETY
[ ] EXTANT VARIETY
[ ] FARMERS’ VARIETY

6.(a.) Classification of the Candidate Variety:

[ ] TYPICAL VARIETY
[ ] HYBRID VARIETY
[ ] TRANSGENIC
[ ] OTHER (SPECIFY)

5. Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagated saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).

* The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions.

(b) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

Petal colour: Cream (1)  
Pollen colour: White (1)  
Petal spot: Absent (1)  
Steam hairiness: Medium (5)  
Leaf colour: Light green (1)  
Leaf shape: Palmate, normal (1)  
Boll Shape: Round (3)  
Boll Weight: Medium (5)

Uniformity: this hybrid is very uniform in respect of above characters and also other morphological traits and yield components.

Stability: This hybrid is very stable in its performance and has wider adaptability, for different agro climatic zones, particularly to west and central zones.

(c) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests.

Not Applicable

7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety:

Not Applicable
Name: Dr. Sanath,
Address: Cotton breeder, Green Seeds, Hyderguda, Hyd-29.
Telephone: 91-40-66686207
Fax: 91-40-66686208
E-mail: sanathrasiseeds@yahoo.com
Nationality: Indian

In case of more than one breeder mention all names as (ii), (iii) and so on in the above format. If required insert extra page. In the case the variety is evolved and conserved "by group or community of farmers", it shall be endorsed in Annexure I.

8.(a.) Details of all other earlier applications made on the candidate variety in convention countries or other countries (if applicable):

Not applicable

Variety denomination: _____________________________________
Nature of right applied for:     [ ] Plant Breeder's Rights  [ ] Patent
Filing Date
(Attach evidence): ________________________________
Name of Country: ___________________________________
Name of Authority: __________________________________
Application Number: __________________________________
Status of Application:  [ ] Under process  [ ] Approved  [ ] Rejected

(If required, repeat the above for each applicable country and attach separate sheet)

(b.) Priority is now claimed in respect of the earliest application for a candidate variety of said denomination (if applicable):

Not applicable

In (country): ________________________________
On (date of application): ________________________________

9. Has the candidate variety been commercialised or otherwise exploited?

[ ] Yes  [ ] No

If yes, please indicate the following:
Date of the first sale of the variety: 20th July 2009
Country (ies) where Protection is made: India
Denomination used: GC 10
Trademark used, if any: ______

Variation in important trait with Respect to first filing: (attach sheet):

Not applicable

10.(a.) If the candidate variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s):

[ ] Yes  [ ] No

If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:
Parental line (S):
Denomination: GrCa 9 and GrCr12 A and R line respectively
Source: Own
Authorisation letter obtained: □ Attached ■ Not attached

Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public domain is used as parental line for the repeated propagation of the hybrid:

If yes, give following details:
Denomination:
Geographical Source:
Details of Attribution (origin):
Details of owner farmer/village community/Institution/Organisation:

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?

Not applicable

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details:

Not applicable

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee:

Not applicable

Amount of fee: Rupees 200/- (Rupees Two hundred only) Demand Draft Number and date: DD No. 395302 dated 29th July 2009 Name of Bank and branch in which the Demand Draft is drawn: State Bank of Hyderabad, Hyderguda Branch, Hyderabad - 500029

Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

(Signature of the Applicant)
Managing Director
DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers’ Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate variety.

I/We hereby declare that the candidate variety complies with the sub- section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I/We hereby attach an affidavit in compliance with clause (C) of sub- section (1) of section 18 of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

I/We hereby declare that the information given in this application for the registration of the above said candidate variety, including annexure and all supporting documents are complete, true and correct to the best of my/our knowledge, information and belief and no information has been wilfully concealed.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

Place: Hyderabad
Date: 21st July 2009

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

- (a) complete application - Yes
- (b) endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable) – Not Applicable
- (c) document of authorisation in Form PV-1 (if applicable) - Yes
- (d) document of assignment in Form PV-2 (if applicable) - Yes
- (e) documents in support of (b) and (d) as given above. (If applicable): Not Applicable
- (f) Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved; Yes
- (g) copy of document on filing date (vide column 8A, if applicable); Not Applicable
- (h) copy of letter of agreement (vide column 10A, if applicable); Not Applicable
- (i) technical Questionnaire for the Candidate variety (attached); Yes
- (j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub –section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001; Not Applicable
- (k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure; Not Applicable
- (l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof; Not Applicable
- (m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals; Not Applicable and
- (n) Fees as applicable; Yes

If felt necessary attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.
ANNEXURE 1  Not Applicable

Endorsement of application for registration of farmers' variety under Protection of Plant Varieties and Farmers' Rights Act, 2001

1. Name(s) of applicant farmer/ Group of farmers/Community of farmers

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name with surname/Name of Group/Name of Community</th>
<th>Permanent Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Denomination of the candidate variety: ____________________________________________

3a. (Applicable to individual farmer applicant)

I hereby declare that I have been a permanent cultivator since last many years in the ___________________ village falling under the ________________ local body/Panchayat(s) in the ________________ District of ________________ State and that I and my family are the initial and exclusive developers and conservers of the candidate variety denominated as __________________, under the kind __________________ (Common name of crop) to the botanical species ____________________________.

3b. (Applicable to group/community of farmers applicant) We hereby declare that we have been the permanent cultivators since last many years in the ___________________ village(s) falling under the ________________ local body/ Panchayat(s) in the ________________ District(s) of ________________ State(s) and that we are the initial and exclusive developers and continuous conservers of the candidate variety denominated as __________________ under the kind __________________ (Common name of crop) belonging to the botanical species _____________________________. We on behalf of our group/community hereby authorise __________________ s/o __________________ (Name), who is a member of our group/community and permanent resident of __________________________ (Complete postal address) to do the needful and be the signatory on our behalf for the limited purpose of securing registration of the candidate variety in our favour under Protection of Plant Varieties & Farmers' Rights Act, 2001.

Dated______________                      Signature and Name of the Farmer or
Place______________                        Authorised person of Group/Community

(To be signed before the endorsing official)

It is hereby certified that the above said candidate variety is bred / developed and continuously conserved and cultivated only by the applicant farmer / group of farmers / community of farmers who is / are permanent residents of above said village(s) and I am fully conversant with the applicant farmer / group or community of farmers and that the candidate variety is due to their efforts (strike out unwanted words given as options).

Date
Place:                                Signature

(Chairperson / Secretary of the Concerned Panchayat Biodiversity Management Committee OR Concerned District Agricultural Officer OR Director of Research Concerned State Agricultural Universities OR Concerned District Tribal Development Office.

(With Official Rubber Stamp)
Technical Questionnaire

1. Name of the Applicant/breeder/company: - Green seeds, Hyderguda
2. Year of establishment: - 2000 (Two thousand)
3. If registered under Company’s Act 1956 (Give details): - 25-23456 of 2000
4. Location of corporate office and address: - Green Seeds, Hyderguda, Hyderabad-29
5. Tel/fax/e-mail: - 91-40-66686207; 91-40-66686208
6. Name of candidate variety: - GC 10

(a) Has it been released in any Convention Country earlier

☐ Yes ☐ No

If yes give complete details in column number 13

(b) Pedigree/genealogy: - GrCa 9 x GrCr 12

Schematic diagram of varietal development
Hybridization of GrCa 9 x GrCr 12 lines

F1 GC 10

ICAR Trials 2006-2008

Release by zonal university and State 2008

CVRC Release and Notification, 2006

(Include schematic diagram giving details of varieties, lines, or clones used in the breeding of candidate variety)

(c) Breeding of Candidate Variety

(i) Origination (Tick the correct one)

√Controlled pollination / open pollination / induced mutation / spontaneous mutation / introduction/ selection/ seedling selection / any other (specify)

(ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the candidate variety). If the variety was developed by selection, then the number of selection cycles completed before fixing it.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Characters</th>
<th>GC 10</th>
<th>GcCa 9</th>
<th>GcCr 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Height (cm)</td>
<td>121-150</td>
<td>121-150</td>
<td>100-120</td>
</tr>
<tr>
<td>2</td>
<td>Habit</td>
<td>Semi spreading</td>
<td>Open canopy</td>
<td>Sympodial, dwarf&amp; compact</td>
</tr>
<tr>
<td>3</td>
<td>Monopodia</td>
<td>3 - 4</td>
<td>2 -3</td>
<td>3 - 4</td>
</tr>
<tr>
<td>4</td>
<td>Sympodia</td>
<td>14 - 18</td>
<td>16 -18</td>
<td>16 -18</td>
</tr>
<tr>
<td>5</td>
<td>Leaf Nectaries</td>
<td>present</td>
<td>present</td>
<td>present</td>
</tr>
</tbody>
</table>

Distinguishable morphological characters

<table>
<thead>
<tr>
<th>S.No</th>
<th>Characters</th>
<th>GC 10</th>
<th>GcCa 9</th>
<th>GcCr 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Petal colour</td>
<td>Cream</td>
<td>Yellow</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Pollen colour</td>
<td>White</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>3</td>
<td>Stem hairiness</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>4</td>
<td>Leaf colour</td>
<td>Light green</td>
<td>Light green</td>
<td>Green</td>
</tr>
<tr>
<td>5</td>
<td>Leaf shape</td>
<td>Palmate (Normal)</td>
<td>Palmate (Normal)</td>
<td>Palmate (Normal)</td>
</tr>
<tr>
<td>6</td>
<td>Boll shape</td>
<td>Round</td>
<td>Slightly elongated</td>
<td>Round</td>
</tr>
<tr>
<td>7</td>
<td>Boll size (weight)</td>
<td>Medium</td>
<td>Medium</td>
<td>Small</td>
</tr>
<tr>
<td>8</td>
<td>Days to 50% flowering</td>
<td>55-60</td>
<td>55-60</td>
<td>60-65</td>
</tr>
<tr>
<td>9</td>
<td>Duration</td>
<td>165-170</td>
<td>165-170</td>
<td>175-180</td>
</tr>
</tbody>
</table>
(iii) Breeding technique/procedure used
   Heterosis breeding Conventional hybrid involving two lines

(iv) Selection criteria used
   Parental lines are selected on the basis of substantial genetic diversity among them, so as to get hybrid vigour.

(v) Stage of selection and multiplication
   Seeds of both the parents and hybrid, is sufficiently multiplied

(vi) Location where breeding was conducted
   Seed farm, Green seeds, Hyderabad.

7. Particulars of comparative trial conducted by the applicant, if any.

Information on the location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may, furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of candidate variety.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Name of Trial &amp; year</th>
<th>Location</th>
<th>Seed Cotton Yield (Kg/ha)</th>
<th>CD (5%)</th>
<th>CV (%)</th>
<th>% increase in yield over NHC66</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>GC 10</td>
<td>NHC 66 (Check)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2005-06</td>
<td>Jalgon</td>
<td>2242</td>
<td>2014</td>
<td>716.00</td>
<td>15.0</td>
</tr>
<tr>
<td>2</td>
<td>2006-07</td>
<td>Dhule</td>
<td>1847</td>
<td>1420</td>
<td>100.00</td>
<td>5.3</td>
</tr>
<tr>
<td>3</td>
<td>2007-08</td>
<td>Aurangabad</td>
<td>1906</td>
<td>1688</td>
<td>394.00</td>
<td>17.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>1998</td>
<td>1707</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>2005-06</td>
<td>Jalgon</td>
<td>1650</td>
<td>1235</td>
<td>250.00</td>
<td>9.1</td>
</tr>
<tr>
<td>5</td>
<td>2006-07</td>
<td>Dhule</td>
<td>2059</td>
<td>1872</td>
<td>174.00</td>
<td>9.5</td>
</tr>
<tr>
<td>6</td>
<td>2007-08</td>
<td>Aurangabad</td>
<td>1926</td>
<td>1556</td>
<td>168.00</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>1878</td>
<td>1554</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

8. Characteristics of the candidate variety

Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a) (i) Give group characters.
   Leaf shape: Palmate Normal (1)  Flower petal colour: Cream (1)
   Flower pollen colour: White (1)  Boll Shape: Round (3)
   Fiber length: Medium long (25-27mm)/(5)

(ii) Distinguishing characteristics (descriptive or elaborate)
   Petal colour: Cream (1)  Pollen colour: White (1)
   Petal spot: Absent (1)  Steam hairiness: Medium (5)
   Leaf colour: Light green (1)  Leaf shape: Palmate, normal (1)
   Boll Shape: Round (3)  Boll Weight: Medium (5)

(b) Table of characteristics between candidate denomination and reference variety Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.
How to protect new varieties?

NOTE: Two or more reference varieties should be compared with the candidate variety in the characteristics table, including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety HC 10</th>
<th>Remarks</th>
<th>Characteristics value of reference variety NHC 66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>7</td>
<td>120-150cm</td>
<td>6</td>
</tr>
<tr>
<td>Plant habit</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Leaf nactaries</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Leaf shape</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Leaf colour</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Leaf hairiness</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Stem tip hairiness</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Petal colour</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Anther colour</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Peatl spot</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Boll shape</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Boll size(weight)</td>
<td>5</td>
<td>4.5-5g</td>
<td></td>
</tr>
</tbody>
</table>

9. Characteristics of the reference varieties

(a) Most similar variety

(i) Denomination: NHC 66  
Pedigree: xyz x abc;  
xyz = def x ijk;  
abc = mno x stz  
Plant height : 120-130 cm  
No. Of symodia 16-18  
Boll size small to medium

(ii) Basis of choice of this variety for comparison: Released & notified for central zone where the hybrid proposed for protection has been intensively tested.

(iii) Distinguishable Characteristics:  
Leaf size: competitively smaller the reference variety  
High tolerance: to leaf disease, hence no much reddening  
Boll opening: very good compared to reference variety

(b) Other reference variety:  
Not Applicable

10. Statement of distinctness of candidate variety:

Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include, (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).

The proposed hybrid is very distinct in terms of leaf hairiness in terms of leaf hairiness. The leaves are also medium in size there by reducing transpiration compared to reference hybrid, NHC 66. It is also distinct in terms of greeniness & tolerance to sucking pests & brought, compared NHC 66, the reference varieties.

11. Statement on uniformity and stability of candidate variety

Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off types or any other describable variation beyond which the candidate variety shall be deem to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.

The hybrid is very uniform in respect of essential and other morphological traits. As a result it is very stable in its performance and has wider adaptability particular to Central and west zones.
12. Methods for maintaining the candidate variety

Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder’s right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

The parental lines, both female & male, are being maintained with individual plants to progeny rows, representing the essential & other characteristics of the respective parental lines. Those progenies which meet the genetic purity in respect of the qualitative traits, and also match for many quantitative traits, are bulked to form the breeder seed which is being used for further multiplication. The same process is repeated every season to maintain the genetic purity of the parental lines, in turn the candidate hybrid HC 10, the hybrid seed is produced by hand emasculation & pollination using the parental lines maintained as above with the highest genetic purity. Hence the resultant hybrid is the most uniform & stable, which is being confirmed with Grow Out Test for each lot of the seed produced. The parental lines of the candidate hybrid iare being maintained at Research Farm, Green Seeds Ltd, Hyderguda, Hyderabad.

NOTE: The holder of a plant breeder’s right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.

13. Information on variety registered in Convention Countries.

a. What were the grouping characters in that application for this candidate variety?

Not Applicable

b. What was the Distinctness Uniformity and Stability parameter on which it was registered?

Not Applicable

c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?

Not Applicable

d. Has the Variety been withdrawn in the first filed country from cultivation or banned or from any of the subsequently released country?

Not Applicable

e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date: 02nd July 200x

Signature
Managing Director

Signature of Witness and Address _________________

Designation of the Breeder/Company with seal

The breeder/company should sign with date each page of the Technical Questionnaire.

[No. ________________________ ]

_______________________________
Chapter VI: Farmers’ rights as envisaged in PPV&FR Act, 2001

Vilas A Tonapi1, M Elangovan1, Gururaj G Kulkarni2, Raghunath Kulkarni1, N Seetharama1 & JV Patil1
1 - Directorate of Sorghum Research, Rajendranagar, Hyderabad-500030 (AP)
2 - Syngenta India Limited (Seeds Divn), Revenue Colony, Shivajinagar, Pune-411 005, Maharashtra

“Farmers’ Rights” are rights arising from the past, present and future contributions of farmers in conserving, improving and making available plant genetic resources, particularly those in the centres of origin/diversity. These rights are vested in the international community as trustee for future generations of farmers, for the purpose of ensuring full benefits to farmers, and supporting the continuation of their contributions (FAO 1989). In fact Article 9.1 of International treaty on plant genetic resources for Agriculture (ITPGRA) recognizes the enormous contribution of the local and indigenous communities and farmers of all regions of the world, particularly those in the centers of origin and crop diversity, that they have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world.

The overall purposes of the International Undertaking is to ensure that the need for conservation is globally recognized, assist farmers and communities in the protection and conservation of genetic resources, and allow farmers to participate fully in the benefits derived from the improved use.

Under the Indian Protection of plant varieties and farmers rights act, 2001, Indian farmer has been empowered with various rights under various sections. These rights are the offshoots from the very important traditional role the farmer has played in conserving the innate biodiversity, protecting and conserving the landraces and his direct or indirect contribution in developing the new varieties and hybrids at the community level. The farmers’ rights that are etched in the Protection on plant Varieties and Farmers rights Act 2001 belong to following sections (Balaravi, 2004):

- Section 18(e), (h), Section 22, Section 26 (6), Section 45(2) (a): Right for benefit sharing
- Section 39 (2) : Right for Compensation from Losses due to Registered variety
- Section 41 (1): Right to receive Compensation for Undisclosed use of Traditional Varieties
- Section 47: Right on usage of seeds of registered varieties
- Sections 18, 44: Right to receive free services
- Section 42: Farmers’ Right for Protection against Innocent Infringement

Right on seed
According PPV & FR Act 2001, the farmer has the right over traditional varieties, new varieties and the total genetic diversity. He can save, barter and exchange the seeds; but can not sell seeds of protected variety in packages and containers with the label bearing its registered name. According to the section 18 (1) (c) of PPV and FR Act 2001, the terminator gene technology that destroys the germination capability of saved seeds is totally prohibited. Thus the farmer is protected from buying the seeds every time and can therefore save his seed.

Right to register traditional varieties
According to Section 14 of PPV & FR Act 2001, the farmer can register traditional varieties and thus he gets the PBR on the variety, by giving him the exclusive legal right to produce and market his seed [Section 28]. Thus he is placed on equal footing as that of a breeder. For registering their varieties, the farmers exempted from paying fees while registering their varieties.

Right for reward and recognition
The Section 39 (1) (iii) of PPV &FR Act aims to reward and recognize the farming communities for their contribution in nurturing the traditional varieties and the genetic conservation initiatives [through the fund accrued in the National Gene
Fund by providing incentives to encourage conservation measures practiced since time immemorial by the farming community.

**Right for benefit sharing**

When the breeders use the traditional varieties nurtured by the farming community to breed new varieties, the farming community gets equitable sharing of the benefit earned from the new variety. According to the section 18(e), (h) of PPV & FR Act 2001, the breeder while claiming protection for his new variety that has used the farmers variety as one of its parents, has to declare that he has used one of the parents as the farmers traditional variety, including the origin, source and geographic location register new varieties. In addition, according to section 26 (2) farmers can submit claims in the Form PV-7 for benefit sharing, when their variety is used as one of the parents. Then the PPV & FR authority decides on quantum of benefit sharing. Consequently, breeder or a company claiming protection for that variety has to give the awarded benefit amount to the national gene fund (Section 26 (6) of PPV & FR Act 2001). The share of benefit thus deposited is then to the concerned farming community or individual farmer according to section 45(2) (a) of PPV and FR Act 2001.

**Right to get compensation for the loss suffered from the registered variety**

In order to prevent the seed companies from making exaggerated claims on performance or yield potential of their variety, on which they have the exclusive commercial right obtained through plant variety protection, the PPV & FR Act 2001 in Section 39 (2) aims to prevent such unfair marketing practices. If the claim on variety is not real and the farmers are put to loss by the variety's non-performance, then the PPV & FR Rules 2003 aims to protect the farming community from the economic losses.

**Right to receive compensation for undisclosed use of traditional varieties**

The purposeful suppression of the fact of using traditional variety as one of the parents by the companies while claiming protection attracts compensation to farmer according to section 41 (1) of PPV & FR Act 2001.

**Right for the seeds of registered varieties**

The farming community has to get good quality seed at reasonable price and in time. As per section 27 of PPV and FR Act 2001, the company or a breeder who has the PBR fails ensure the availability of seed even after three years after registration of the variety, in that case farmers have the right to complain to PPV & FR Authority about the non-availability of seed or its exorbitant price. Then the authority, on confirming the realness of complaint may enforce compulsory licensing, which revokes the exclusive right on commercial production and marketing of seed, granted to the PBR-holder and transfer this right to third parties to ensure availability of seeds at reasonable prices.

**Right for receiving free services**

The sections 18 and 44 of the PPV & FR Act 2001 totally exempts farmers from paying any fees, including the fees to be paid to the Registrar of PPV & FR Authority at the time of registration of farmers’ varieties, or fees for conducting DUS tests, or the renewal fees for registration, or the fees prescribed for opposition, benefit claim, etc. The exemption is also applicable to the fees on all legal proceedings at the Tribunal of PPV & FR authority and also the Intellectual Property Appellate Board (IPAB) or any Court of Law. But this exemption will not include fees for lawyers hired by farmers to represent them at the courts/Tribunal/ Appellate Board.

**Right for protection against innocent infringement**

According to chapter section 42 of PPV & FR Act, 2001, farmers are safeguarded against innocent infringement, if it is indicated by him that he was not aware of legal provisions that have been deemed to be violated, accordingly a Court can not prosecute a farmer on charges of infringement of the Act. This provision has been made to help the illiterate farmer from harassment.
Chapter VII: How to protect farmer’s varieties?

Vilas A Tonapi¹, M Elangovan¹, Gururaj G Kulkarni², Raghunath Kulkarni¹, N Seetharama & JV Patil¹
1 - Directorate of Sorghum Research, Rajendranagar, Hyderabad-500030 (AP)
2 - Syngenta India Limited (Seeds Divn), Revenue Colony, Shivajinagar, Pune-411 005, Maharashtra

The protection of plant varieties and Farmer’s Rights Act, 2001 defines the farmer’s variety (section 2(1)) as the one which has been traditionally cultivated and evolved by the farmers in their fields or it is a wild relative or land race of the variety about which the farmers possess the common knowledge.

In fact the farmer’s variety is nothing but an extant variety (section 2.j) and has to be registered within three years from the date of Gazette notification of the species and genera eligible for registration under the Act. Already the Gazette Notification has been issued informing the constitution of the Extant Variety Recommendation Committee (EVRC). This committee examines the applications of farmer’s varieties also along with extant varieties and recommend to the Authority the suitability of the material for registration.

The protection of plant varieties and Farmer’s Rights Act, 2001, as per section 39, enables a farmer or group of farmers developing a variety to register it and enjoy the benefits of protection, like a breeder, institute or a company owning of a variety. It should be noted that the registration procedure for registration of both farmers and extant released and notified under the Seeds Act, 1966 is same. But only difference is that Farmers varieties will be registered without DUS test (similar to extant varieties) and without fees.

(1) The Registrar shall register every farmers’ variety which is an variety within five years from the date of its notification under the Act with respect to the genera and specie eligible for registration subject to conformity to the criteria of distinctiveness, uniformity and stability as laid down under the regulations.

(2) The Registrar shall register other extant variety within three years from the date of it notification under the Act with respect to the genera and species eligible for registration subject to conformity to the criteria of distinctiveness, uniformity and stability as laid down under the regulations: Provided that the Registrar may, for reasons to be recorded in writing register a Farmers’ variety and other extant variety after the expiry of the said period of five years or three years as the case may be.”

Following are essential requirements for protection of farmers’ varieties:

- Application-1, along with T.Q. is to be filed to the Registrar with the declaration to the effect that “ the genetic material or parental material acquired for breeding , evolving or developing the variety, is lawfully acquired”(Section 18.1h).
- Endorsement with official seal, by chairperson / Secretary of the concerned Panchayat, Biodiversity Management Committee or concerned DAO or DOR of SAU, or concerned District Tribal Development Officer on Annexure-I of the Application-1.
**Table. 1: Acceptable level off types in New Variety and Farmer’s Variety**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Crop</th>
<th>No. of Plants/replication</th>
<th>Natural Out-crossing Percentage</th>
<th>Permitted off-type/ population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>New Variety/ Hybrid</td>
</tr>
<tr>
<td>1</td>
<td>Bread wheat <em>Triticum aestivum L.</em></td>
<td>360</td>
<td>0.5 to 1%</td>
<td>2/100</td>
</tr>
<tr>
<td>2</td>
<td>Rice <em>Oryza sativa L.</em></td>
<td>900</td>
<td>6.8%</td>
<td>4/1500 (lowland) 4/1500 (upland)</td>
</tr>
<tr>
<td>3</td>
<td>Maize <em>Zea mays L.</em> Inbreds and single cross hybrids</td>
<td>120</td>
<td>95%</td>
<td>3/100</td>
</tr>
<tr>
<td></td>
<td>Variety/other Hybrids</td>
<td>240</td>
<td>95%</td>
<td>6/100</td>
</tr>
<tr>
<td>4</td>
<td>Sorghum <em>Sorghum bicolor (L.) Moench</em></td>
<td>240</td>
<td>90 to 95 %</td>
<td>6/100</td>
</tr>
<tr>
<td>5</td>
<td>Pearl millet *Pennisetum glaucum (L.) R. Br. Inbreds and single cross hybrids</td>
<td>240</td>
<td>95%</td>
<td>3/100</td>
</tr>
<tr>
<td></td>
<td>Variety/other Hybrids</td>
<td>240</td>
<td>95%</td>
<td>6/100</td>
</tr>
<tr>
<td>6</td>
<td>Pigeon pea <em>Cajanus cajan (L.) Millsp.</em></td>
<td>150</td>
<td>5-40%</td>
<td>4/300</td>
</tr>
<tr>
<td>7</td>
<td>Green gram *Vigna radiata (L.) Wilczek</td>
<td>~140</td>
<td>0-1%</td>
<td>4/250</td>
</tr>
<tr>
<td>8</td>
<td>Blackgram *Vigna mungo (L.) Hepper</td>
<td>140</td>
<td>0-1%</td>
<td>4/250</td>
</tr>
<tr>
<td>9</td>
<td>Lentil <em>Lens culinaris Medik</em></td>
<td>200</td>
<td>0-1%</td>
<td>3/250</td>
</tr>
<tr>
<td>10</td>
<td>Kidney bean <em>Phaseolus vulgaris L.</em></td>
<td>140</td>
<td>0-1%</td>
<td>3/300</td>
</tr>
<tr>
<td>11</td>
<td>Chickpea <em>Cicer arietinum L.</em></td>
<td>200</td>
<td>0-0.5%</td>
<td>3/100</td>
</tr>
<tr>
<td>12</td>
<td>Field pea <em>Pisum sativum L.</em></td>
<td>125</td>
<td>0-0.6%</td>
<td>4/300</td>
</tr>
</tbody>
</table>

# How to protect farmers’ varieties?

**SORGHUM: Maldandi**

**FORM 1**

[See regulation 10]

**APPLICATION FOR REGISTRATION OF FARMER’S VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001.**

[See section 18, other than essentially derived variety.]

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)

<table>
<thead>
<tr>
<th>1. Identity of the Applicant(s):</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] INDIVIDUAL BREEDER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ ] SUCCESSOR OF BREEDER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ ] INSTITUTIONAL APPLICANT FARMER1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ ] COMMUNITY OF FARMERS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ ] GROUP OF FARMERS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ ] ASSIGNEE OF ANY OF ABOVE2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ ] CONVENTION COUNTRY 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ ] ANY OTHER 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

2. An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

3. The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act)

4. For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder.

2. Name(s) and Nationality of Applicant(s)

   (a.) (If natural person): [Insert additional rows, if required] **Not applicable**

   1. Serial Number.
   2. Name3 President
   3. Complete Address Maldandi Growers Assoc., 3-6-442/A, Ashram road, Bijapur - 586101
   4. Nationality Indian

   (b.) (If a legal person; for example a firm or company or institution)

   Name: Maldandi Growers Association
   Address of its seat or establishment: 3-6-442/A, Bijapur - 586101
   Year of Incorporation: 1990
   State whether the applicant legal person has non-Indian participation in capital or management:
   - [ ] Yes
   - [x] No

   If yes, identify the nationality

   (c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):

   Name: Hanmathu
   Designation: President
   Address: Maldandi Growers Association, 3-6-442/A, Bijapur-586101
   Telephone: 91-54464 -281293
   E-mail: maldandi@gmail.com
3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorisation in Form-PV-1, if required)

Name: President
Address: Maldandi Growers Assoc. 3-6-442/A, Ashram Road, Bijapur-586101
Telephone: +91-54464-281293
E-mail: maldandi@gmail.com

4. General Information of the Candidate Variety:

Common name of the Crop: Sorghum
Botanical name: Sorghum bicolor (L.) Moench
Family: Poaceae
Denomination (in block letters): Maldandi


5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)

- NEW VARIETY
- EXTANT VARIETY
- FARMERS’ VARIETY

6.(a.) Classification of the Candidate Variety:

- TYPICAL VARIETY
- HYBRID VARIETY
- TRANSGENIC
- OTHER (SPECIFY)

5. Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagated saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).

* The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions

(b) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

Technical Questionnaire attached

(c) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests. Not Applicable

7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety:

Name: Maldandi Growers Assoc., 3-6-442/A, Ashram Road, Bijapur-586 101
Telephone: +91-54464-281293
E-mail: maldandi@gmail.com
Nationality: Indian

6 In case of more than one breeder mention all names as (ii), (iii) and so on in the above format. If required insert extra page. In the case the variety is evolved and conserved “by group or community of farmers”, it shall be endorsed in Annexure I.

8. (a.) Details of all other earlier applications made on the candidate variety in convention countries or other countries (if applicable):

Not applicable

Variety denomination:
Nature of right applied for:
- Plant Breeder’s Rights
- Patent
Filing Date (Attach evidence):
Name of Country:
Name of Authority:
Application Number:
Status of Application:
- Under process
- Approved
- Rejected
(If required, repeat the above for each applicable country and attach separate sheet)
(b.) Priority is now claimed in respect of the earliest application for a Candidate variety of said denomination (if applicable):

- Not applicable

In (country): __________________________
On (date of application): __________________________

9. Has the candidate variety been commercialised or otherwise exploited?

☐ Yes ☐ No

If yes, please indicate the following:
- Date of the first sale of the variety: 1956
- Country (ies) where Protection is made: India
- Denomination used: Mal Dandi (M35-1)
- Trademark used, if any: __________________________
- Variation in important trait with Respect to first filing: (attach sheet): Not applicable

10. (a.) If the candidate variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s):

☐ Yes ☐ No

If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:

- Parental line (S): __________________________
- Denomination: __________________________
- Source: __________________________
- Authorisation letter obtained: ☐ Attached ☐ Not attached

*Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public domain is used as parental line for the repeated propagation of the hybrid:

☐ Yes ☐ No

If yes, give following details:
- Denomination: __________________________
- Geographical source: __________________________
- Details of attribution (origin): __________________________
- Details of owner farmer/village community/ Institution/ Organisation: __________________________

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?

Not applicable

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details:

Not applicable

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee:

Not applicable

Amount of fee: Rupees 200/- (Rupees Two hundred only)
Demand Draft Number and date: DD No. 395302 dated 29th July 2009 Name of Bank and branch in which the Demand Draft is drawn: State Bank of Mysore, Bijapur Branch.

Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

(Signature of the Applicant)
President (Maldnadi Growers Association)
DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said
denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers’
Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this
application has been involved in the breeding, or discovery or development of the candidate
variety.

I/We hereby declare that the candidate variety complies with the sub- section (3) of section 29

I/We hereby declare that I/we have not applied for or received a trademark for the said
denomination of the variety.

I/We hereby attach an affidavit in compliance with clause (C) of sub- section (1) of section 18 of

I/We hereby declare that the information given in this application for the registration of the
above said candidate variety, including annexure and all supporting documents are complete,
true and correct to the best of my/our knowledge, information and belief and no information has
been wilfully concealed.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of

Place: Hyderabad
Date: 29th July 2009

Signature of Applicants 10
President (Maldnadi Growers Assoc.)

Seal

Wherever the applicants are more than one person each applicant has to sign. In the case of authorised
application or application by assignees, such person(s) authorised or assigned shall sign

Following are the attachments (duly signed/seal) submitted along with of the
application (note that wherever signature is affixed in the application or
attachments, all such signatures shall be in the original):

√ (a) complete application - Yes
(b) endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable) – Not Applicable
√ (c) document of authorisation in Form PV-1 (if applicable) - Yes
√ (d) document of assignment in Form PV-2 (if applicable) - Yes
(e) documents in support of (b) and (d) as given above. (If applicable); Not Applicable
√ (f) Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved; Yes
(g) copy of document on filing date (vide column 8A, if applicable); Not Applicable
(h) copy of letter of agreement (vide column 10A, if applicable); Not Applicable
√ (i) technical Questionnaire for the Candidate variety (attached); Yes
(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof
to show the right to application as stipulated in sub –section (3) of section 18 of the Protection of Plant
Varieties and Farmers’ Rights Authority, 2001; Not Applicable
(k) in case of Convention Country applicant attach complete details on the variation in the important trait
with respect to first filing as enclosure; Not Applicable
(l) in case of Convention Country applicant provide information whether the variety has been sold or
otherwise disposed of within or outside the convention Country with details thereof; Not Applicable
(m) In case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals; Not
Applicable and
√ (n) Fees as applicable; Yes

If felt necessary attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the
application and other document on the left margin.
ANNEXURE 1
Endorsement of application for registration of farmers’ variety under Protection of Plant Varieties and Farmers’ Rights Act, 2001

1. Name(s) of applicant farmer/Group of farmers/Community of farmers

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name with surname/Name of Group/Name of Community</th>
<th>Permanent Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maldandi Growers Association</td>
<td>3-6-442/A, Ashram Road, Bijapur- 586101</td>
</tr>
</tbody>
</table>

2. Denomination of the candidate variety: Mal Dandi (M35-1)

3a. (Applicable to individual farmer applicant): Not applicable

I hereby declare that I have been a permanent cultivator since last many years in the ……………………. village falling under the …………………. local body/Panchayat(s) in the …………………. District of ………………….. State and that I and my family are the initial and exclusive developers and conservers of the candidate variety denominated as …………………….., under the kind………………………………… (Common name of crop) to the botanical species …………………………………….

3b. (Applicable to group/community of farmers applicant) We hereby declare that we have been the permanent cultivators since last many years in the ……………………. Bijapur village(s) falling under the ……………………. Bijapur local body/ Panchayat(s) in the ……………………. Bijapur District(s) of ………………….. Kranataka State(s) and that we are the initial and exclusive developers and continuous conservers of the candidate variety denominated as Mal Dandi (M35-1) under the kind ……………………. (Common name of crop) belonging to the botanical Species bicolor.

We on behalf of our group/community hereby Mal dandi Growers Association Authorize Hanmathu s/o Suresh (Name), who is a member of our group/community and permanent resident of 3-6-442/A, Ashram Road, Bijapur (Complete postal address) to do the needful and be the signatory on our behalf for the limited purpose of securing registration of the candidate variety in our favour under Protection of Plant Varieties & Farmers’ Rights Act, 2001.

Dated: 29th July 2009
Place: Bijapur

Signature and Name of the Farmer or Authorised person of Group/Community

(To be signed before the endorsing official)

It is hereby certified that the above said candidate variety is bred / developed and continuously conserved and cultivated only by the applicant farmer / group of farmers / community of farmers who is / are permanent residents of above said village(s) and I am fully conversant with the applicant farmer / group or community of farmers and that the candidate variety is due to their efforts (strike out unwanted words given as options).

Date : 29th July 2009
Place: Bijapur

Signature
Name
(Chairperson / Secretary of the Concerned Panchayat Biodiversity Management Committee OR Concerned District Agricultural Officer OR Director of Research Concerned State Agricultural Universities OR Concerned District Tribal Development Office.
(With Official Rubber Stamp)
How to protect farmers’ varieties?

**Technical Questionnaire**

1. Name of the Applicant/breeder/company: -
   Maldandi Growers Association

2. Year of Establishment: -
   1999 (Nineteen hundred ninety nine)

3. If registered company under Company’s Act 1956 (Give details): -
   Not Applicable

4. Location of corporate office and address:
   Mal dandi Growers Association, 3-6-442/A, Ashram Road, Bijapur-586101

5. Tel/fax/e-mail:
   +91-54464-281293

6. Name of candidate variety: -
   Maldandi (M35-1)

(a) Has it been released in any Convention Country earlier
   ☐ Yes   ☐ No
   If yes give complete details in column number 13

(b) Pedigree/genealogy: -
   Schematic diagram of varietal development

```
Selection from local
    ↓
Selected plants grown and further selection made
    ↓
Selected plants grown and further selection made
    ↓
Selected plants grown and further selection made
    ↓
Selected plants grown and further selection made
    ↓
Small scale multiplication of the selected line
    ↓
Microplot seed production undertaken to
    ↓
Produce seeds for replicated trials
    ↓
```
Replicated trials conducted in other farmers field

Seed production scheme standardized

(Include schematic diagram giving details of varieties, lines, or clones used in the breeding of candidate variety)

(c) Breeding of Candidate Variety
(i) Origination (Tick the correct one)
   Controlled pollination / open pollination / induced mutation / spontaneous mutation / introduction / \textit{selection} / seedling selection / any other (specify)

(ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the candidate variety). If the variety was developed by selection, then the number of selection cycles completed before fixing it.
   Not available

(iii) Breeding technique/procedure used
   Pure line selection

(iv) Selection criteria used
   Development of a grain bold and lustrous seed

(v) Stage of selection and multiplication
   S1 - S6 generation

(vi) Location where breeding was conducted
   Fields of Maldandi Growers Association, Bijapur.

7. Particulars of comparative trial conducted by the applicant, if any.
Information on the location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may, furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of candidate variety.

Grain yield and Fodder yield (kg/ha) of proposed variety Table (At least one Year data)

8. Characteristics of the candidate variety
Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a) (i) Give group characters.
   Adaptation of season : Rabi
   Plant: time of panicle emergence : 78 days late
   Plant: Total height (at physiological maturity) : 180 cm Medium
   Panicle shape (at physiological maturity) : Panicle broader in lower part
Caryopsis: (Colour after threshing) : Yellow white

(a) (ii) Distinguishing characteristics (descriptive or elaborate)
    Plant height: (180cm), panicle broader in lower part and semi compact, seed yellow white and lustrous with grayed purple glumes.

(b) Table of characteristics between candidate denomination and reference variety
    Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.

NOTE: Two or more reference varieties should be compared with the candidate variety in the characteristics table, including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety</th>
<th>Remarks</th>
<th>Characteristics value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Seedling anthocyanin colouration of coleoptile</td>
<td>2</td>
<td>Greyed-purple</td>
<td>Greyed-purple</td>
</tr>
<tr>
<td>Leaf Sheath: anthocyanin Colouration</td>
<td>2</td>
<td>Greyed-purple</td>
<td>Greyed-purple</td>
</tr>
<tr>
<td>Leaf: midrib colour(5th fully developed leaf)</td>
<td>2</td>
<td>Yellow-green</td>
<td>White</td>
</tr>
<tr>
<td>Plant: Time of panicle emergence (50% of the plants with 50% anthesis)</td>
<td>7</td>
<td>(78)Late</td>
<td>(79)Late</td>
</tr>
<tr>
<td>Plant: natural height of plant up to base of flag leaf</td>
<td>5</td>
<td>(158.0)Medium</td>
<td>(175.0)Medium</td>
</tr>
<tr>
<td>Flag leaf: Yellow colouration of midrib</td>
<td>1</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>Lemma: arista formation</td>
<td>9</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Sg1ma: anthocyanin colouration</td>
<td>9</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Sg1ma: Yellow colouration</td>
<td>1</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>Sg1ma: length</td>
<td>5</td>
<td>(1.9)Medium</td>
<td>(2.2)Long</td>
</tr>
<tr>
<td>Flower with pedicel: length of flower</td>
<td>7</td>
<td>Long</td>
<td>Medium</td>
</tr>
<tr>
<td>Anther: Length</td>
<td>5</td>
<td>(3.9)Medium</td>
<td>(3.7)Medium</td>
</tr>
<tr>
<td>Anther: colour of dry anther</td>
<td>4</td>
<td>Greyed-orange</td>
<td>Greyed-orange</td>
</tr>
<tr>
<td>Glume: colour</td>
<td>6</td>
<td>Greyed-purple</td>
<td>Greyed-orange</td>
</tr>
<tr>
<td>Plant: total height</td>
<td>5</td>
<td>(180.0)Medium</td>
<td>(202.0)Medium</td>
</tr>
<tr>
<td>Stem: diameter (at lower one third part of plant)</td>
<td>3</td>
<td>(1.1)Small</td>
<td>(1.2)Small</td>
</tr>
<tr>
<td>Leaf: length of blade (third leaf from top incl. flag leaf)</td>
<td>5</td>
<td>(55.0)Medium</td>
<td>(63.0)Long</td>
</tr>
<tr>
<td>Leaf: width of blade (third leaf from top incl. flag leaf)</td>
<td>7</td>
<td>(6.8)Broad</td>
<td>(7.2)Broad</td>
</tr>
<tr>
<td>Panicle: length without peduncle</td>
<td>3</td>
<td>(16.0)Short</td>
<td>(18.0)Short</td>
</tr>
<tr>
<td>Panicle: length of branches (middle third of panicle)</td>
<td>5</td>
<td>(6.7)Medium</td>
<td>(8.2)Medium</td>
</tr>
<tr>
<td>Panicle: density at maturity (ear head compactness)</td>
<td>7</td>
<td>Semi compact</td>
<td>Semi compact</td>
</tr>
<tr>
<td>Panicle: shape</td>
<td>4</td>
<td>Panicle broader in lower part</td>
<td>Panicle broader in lower part</td>
</tr>
<tr>
<td>Neck of panicle: visible length above sheath</td>
<td>3</td>
<td>(9.2)Short</td>
<td>(8.3)Short</td>
</tr>
<tr>
<td>Glume: length</td>
<td>5</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Threshability</td>
<td>5</td>
<td>Partly threshable</td>
<td>Freely threshable</td>
</tr>
<tr>
<td>Caryopsis: color after threshing</td>
<td>3</td>
<td>Yellow-white</td>
<td>Yellow-orange</td>
</tr>
<tr>
<td>Grain: weight of 1000 grains</td>
<td>9</td>
<td>(47.0)Very high</td>
<td>(37.0)High</td>
</tr>
<tr>
<td>Grain: shape (in dorsal view)</td>
<td>3</td>
<td>Circular</td>
<td>Circular</td>
</tr>
<tr>
<td>Grain: shape in profile view</td>
<td>3</td>
<td>Circular</td>
<td>Circular</td>
</tr>
<tr>
<td>Grain: size of mark of germ</td>
<td>7</td>
<td>Large</td>
<td>Large</td>
</tr>
<tr>
<td>Grain: texture of endosperm (in longitudinal section)</td>
<td>7</td>
<td>3/4 Farinaceous</td>
<td>3/4 Farinaceous</td>
</tr>
<tr>
<td>Grain: colour of vitreous albumen</td>
<td>1</td>
<td>Greyed-yellow</td>
<td>Greyed-yellow</td>
</tr>
<tr>
<td>Grain: lustre</td>
<td>5</td>
<td>Lustrous</td>
<td>Lustrous</td>
</tr>
</tbody>
</table>

9. Characteristics of the reference varieties

(a) Most similar variety

(i) Denomination: AKSV 13R Pedigree: SPV 475 x SPV 462

SPV 475 = (IS 12622 x 5515) x (IS 3612 C x 2219 B) x E 35-1) 5-2
SPV 462 = (2947 x 232) x Co 22-27-1-1-1
(ii) Basis of choice of this variety for comparison:
As AKSV 13R is suitable dual purpose variety and use in the trials as check.

(iii) Distinguishable Characteristics:
Possess good dual purpose attributes i.e. grain yield, dry fodder yield with good plant height, semi-compact panicle with creamy grain color and tan plant type.

(b) Other reference variety: Not Applicable

10. Statement of distinctness of candidate variety:
Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include, (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Characteristics</th>
<th>Candidate variety</th>
<th>Reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Leaf: midrib colour (5th fully developed leaf)</td>
<td>Yellow green</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Stigma length</td>
<td>Medium</td>
<td>Long</td>
</tr>
<tr>
<td>3</td>
<td>Flower with pedicel: length of flower</td>
<td>Long</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Glum color</td>
<td>Greyed purple</td>
<td>Greyed Orange</td>
</tr>
<tr>
<td>4</td>
<td>Leaf: length of blade (the third leaf from top including flag leaf)</td>
<td>Medium</td>
<td>long</td>
</tr>
<tr>
<td>5</td>
<td>Caryopsis: color after threshing</td>
<td>Yellow white</td>
<td>Yellow orange</td>
</tr>
<tr>
<td>6</td>
<td>Grain: weight of 1000 grains</td>
<td>Very high</td>
<td>High</td>
</tr>
</tbody>
</table>

11. Statement on uniformity and stability of candidate variety
Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off types or any other describable variation beyond which the candidate variety shall be deem to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.

12. Methods for maintaining the candidate variety
Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder’s right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

The candidate variety will be maintained through standard nucleus and breeder seed production procedure followed by progeny row selection and bulk multiplication in isolations to multiply the variety. The nucleus, breeder seed of variety will be maintained at Maldandi Growers Society farm, Bijapur, Karnataka.

NOTE: The holder of a plant breeder’s right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.
13. Information on variety registered in Convention Countries.
   
a. What were the grouping characters in that application for this candidate variety?
   
   Not Applicable

b. What was the Distinctness Uniformity and Stability parameter on which it was registered?

   Not Applicable

c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?

   Not Applicable

d. Has the Variety been withdrawn in the first filed country from cultivation or banned or from any of the subsequently released country?

   Not Applicable

e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date: 29th July 2009

Signature
Project Coordinator (AICSIP-Sorghum)

Signature of Witness and Address _________________

Designation of the Breeder/Company with seal

The breeder/company should sign with date each page of the Technical Questionnaire.

[No. ________________________ ]   (_______________________________)
Chapter VIII: How to protect varieties of common knowledge and in public domain?

Vilas A Tonapi¹, M Elangovan¹, Gururaj G Kulkarni², Raghunath Kulkarni¹, N Seetharama¹ & JV Patil¹
¹ - Directorate of Sorghum Research, Rajendranagar, Hyderabad-500030 (AP)
² - Syngenta India Limited (Seeds Divn), Revenue Colony, Shivajinagar, Pune-411 005, Maharashtra

As per section 2(j) of PPV&FR Act 2001, in the real sense, the Variety of common Knowledge is nothing but it is an Extant Variety about which there is common knowledge. In fact there is no definition of Variety of common Knowledge (VCK) in the PPV & FR Act 2001 or PPV & FR Rules 2003. However, efforts have been made by PPV and FR Authority, to define it and elucidate the scope of protection of common knowledge variety. It is proposed that the Variety of common knowledge in India may cover those varieties, whose seed is being marketed for cultivation, as truthfully labeled, which will mainly cover the varieties in trade of public and private sector, sharing the major portion of existing seed requirement of the country.

The main suggested criteria to decide the basics for Varieties of Common Knowledge:

1) Sale permission forms State Department of Agriculture.
2) Published documents giving the proof of existence of the variety in common knowledge.
3) ICAR and SAU recorded / testing data/characters.
4) Registration with NBPGR, if any.
5) Published article(s) on the vertices, giving packaging of practices for the benefits of farmers.

The rules for registration of Variety of common knowledge are yet to be finalized and notified. However, Variety of common knowledge being the Extant Variety, the

Application-1 for registration along with Technical Questionnaire and other attachment, can be filed as per the variety released and notified, except the gazette notification and Central Varietal Release (CVRC) proposal. It is suggested that Variety of common knowledge can be registered with DUS test. It is to be noted that, like extant variety, application of Variety of common knowledge has to be submitted within three years of species notification for the purpose of registration, to establish the priority.

The Variety in Public Domain is also an Extant Variety.

(1) The Registrar shall register every farmers’ variety which is an variety within five years from the date of its notification under the Act with respect to the genera and specie eligible for registration subject to conformity to the criteria of distinctiveness, uniformity and stability as laid down under the regulations.

(2) The Registrar shall register other extant variety within three years from the date of it notification under the Act with respect to the genera and species eligible for registration subject to conformity to the criteria of distinctiveness, uniformity and stability as laid down under the regulations: Provided that the Registrar may, for reasons to be recorded in writing register a Farmers’ variety and other extant variety after the expiry of the said period of five years or three years as the case may be.”
FORM 1

[See regulation 10]

APPLICATION FOR REGISTRATION OF NEW VARIETY, EXTANT VARIETY AND FARMER’S VARIETY UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001.

[See section 18, other than essentially derived variety.]

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)

---

1. Identity of the Applicant(s):
   - INDIVIDUAL BREEDER
   - SUCCESOR OF BREEDER
   - INSTITUTIONAL APPLICANT BREEDER
   - COMMUNITY OF FARMERS
   - GROUP OF FARMERS
   - ASSIGNEE OF ANY OF ABOVE
   - CONVENTION COUNTRY
   - ANY OTHER

---

1. Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

2. An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

3. The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act)

4. For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder.

---

2. Name(s) and Nationality of Applicant(s)
   (a.) (If natural person): [Insert additional rows, if required]

   1. Serial Number.
   2. Name
   3. Complete Address
   4. Nationality

   » If the applicant is the authorised representative of a group of farmers/community of farmers an authorisation in Form PV-1 signed by all members of the group, or by the Head/office bearer of the community witnessed by the two people, if the identity of the applicant is “Community of farmers’ shall be attached.

   (b.) (If a legal person; for example a firm or company or institution)

   Name: Indian Council of Agricultural Research (ICAR)
   Address of its seat or establishment: Krishi Bhawan, Dr. Rajendra Prasad Road, New Delhi-1
   Year of Incorporation: 1929

   State whether the applicant legal person has non-Indian participation in capital or management:
   - ☐ Yes
   - ☐ No

   If yes, identify the nationality ______________________________

   (c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm): Not Applicable

   Name: ___________________________
   Designation: ______________________
   Address: __________________________
   Pin: _______________________________
   Telephone: ________________________
   Fax: ______________________________
   E-mail: ___________________________
3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorisation in Form-PV-1, if required)

Name: The Director & Project Coordinator
Address: National Research Centre for Sorghum (NRCS)
Pin: 500030
Telephone: +91-40-24015225
Fax: +91-40-24016378
E-mail: nrcshyd@ap.nic.in

4. General Information of the Candidate Variety:

Common name of the Crop: Sorghum
Botanical name: Sorghum bicolor (L.) Moench
Family: Poaceae
Denomination (in block letters): IS 84


5. Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)

[ ] NEW VARIETY
[ ] EXTANT VARIETY
[ ] FARMERS’ VARIETY
[ ] TYPICAL VARIETY
[ ] HYBRID VARIETY
[ ] TRANSGENIC
[ ] OTHER (Variety of Common Knowledge)

6. (a.) Classification of the Candidate Variety:

[ ] TYPICAL VARIETY
[ ] HYBRID VARIETY
[ ] TRANSGENIC
[ ] OTHER (Variety of Common Knowledge)

5. Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagated saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).

* The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions

(b) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (See specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

Technical Questionnaire attached

(c) If new variety is a transgenic attach clearance on Bio-safety from Ministry of Environment and Forests.

Not Applicable

7. Names and Addresses of Breeder(s) who has/have bred the Candidate Variety:

(i) Name: N Ganga Prasad Rao
Address: Retd. Principal Scientist (Plant Breeding),
National Research Center for Sorghum, Rajenderanagar,
Hyderabad -500 030, AP
Telephone: +91-40-24015349, 24018651
Fax: +91-40-24016378
E-mail: nrcshyd@ap.nic.in
Nationality: Indian

6 In case of more than one breeder mention all names as (ii), (iii) and so on in the above format. If required insert extra page. In the case the variety is evolved and conserved ‘by group or community of farmers’, it shall be endorsed in Annexure I.

8. (a.) Details of all other earlier applications made on the candidate variety in convention countries or other countries (if applicable): Not Applicable

 Variety denomination:
Nature of right applied for: [ ] Plant Breeder’s Rights [ ] Patent
Filing Date (Attach evidence): 
Name of Country: 
Name of Authority: 
Application Number: 
Status of Application: [ ] Under process [ ] Approved [ ] Rejected

(If required, repeat the above for each applicable country and attach separate sheet)
How to protect varieties of common knowledge and public domain?

(b.) Priority is now claimed in respect of the earliest application for a candidate variety of said denomination (if applicable): Not Applicable

In (country):
On (date of application):_____________

9. Has the candidate variety been commercialised or otherwise exploited?

☐ Yes ☐ No

If yes, please indicate the following:

Date of the first sale of the variety: 1964
Country (ies) where Protection is made: INDIA
Denomination used: IS 84
Trademark used, if any: NO
Variation in important trait with Respect to first filing: (attach sheet) Not Applicable

10.(a.) If the candidate variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s): Not Applicable

☐ Yes ☐ No

7. If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:

Parental line (S): Denomination:
Source:
Authorization letter obtained: ☐ Attached ☐ Not attached

*Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) State if any Farmers’ Variety or Variety of Common Knowledge or variety in public domain is used as parental line for the repeated propagation of the hybrid: Not Applicable

☐ Yes ☐ No

If yes, give following details:
Denomination:
Geographical Source:
Details of Attribution (origin):
Details of owner farmer/village community/ Institution/ Organization:
The Director & Project Coordinator,
National Research Centre for Sorghum (NRCS) Rajendranagar, Hyderabad, 500030.

(c.) The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned? Not Applicable

11. In case exotic germplasm was used in the derivation of the variety or hybrid, give details: Not Applicable

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee9: (To be decided)

Amount of fee: Rupees 200/- (Rupees Two hundred only)
Demand Draft Number and date: DD No. 395205 dated 22nd April 2009
Name of Bank and branch in which the Demand Draft is drawn: State Bank of Hyderabad, Budvel Branch, Rajendranagar, Hyderabad - 500030.

*Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

(Signature of the Applicant)
Project Coordinator (AICSIP)
DECLARATIONS

I/We hereby apply for the grant of registration of the candidate variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers’ Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate variety.

I/We hereby declare that the candidate variety complies with the sub-section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I/We hereby attach an affidavit in compliance with clause (C) of sub-section (1) of section 18 of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

I/We hereby declare that the information given in this application for the registration of the above said candidate variety, including annexure and all supporting documents are complete, true and correct to the best of my/our knowledge, information and belief and no information has been wilfully concealed.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

Place: Hyderabad
Date: 25th April 2009

Project Coordinator (AICSIP)

10Wherever the applicants are more than one person each applicant has to sign. In the case of authorised application or application by assignees, such person(s) authorised or assigned shall sign

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

√ (a) complete application - Yes
(b) endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable) – Not Applicable
√ (c) document of authorisation in Form PV-1 (if applicable) - Yes
√ (d) document of assignment in Form PV-2 (if applicable) - Yes
(e) documents in support of (b) and (d) as given above. (If applicable); Not Applicable
√ (f) Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved; Yes
(g) copy of document on filing date (vide column 8A, if applicable); Not Applicable
(h) copy of letter of agreement (vide column 10A, if applicable); Not Applicable
√ (i) technical Questionnaire for the Candidate variety (attached); Yes
(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub-section
(3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001; Not Applicable
(k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure; Not Applicable
(l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof; Not Applicable
(m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals; Not Applicable and
√ (n) Fees as applicable; Yes

If felt necessary attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.
ANNEXURE 1

Endorsement of application for registration of farmers’ variety under Protection of Plant Varieties and Farmers’ Rights Act, 2001

1. Name(s) of applicant farmer/ Group of farmers/Community of farmers

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name with surname/Name of Group/Name of Community</th>
<th>Permanent Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Denomination of the candidate variety: ______________________

3a. (Applicable to individual farmer applicant)

I hereby declare that I have been a permanent cultivator since last many years in the …………………. village falling under the ……………….. local body/Panchayat(s) in the ………………. District of ……………………. State and that I and my family are the initial and exclusive developers and conservers of the candidate variety denominated as …………………., under the kind………………………………… (Common name of crop) to the botanical species …………………………………. (The official botanical name)

3b. (Applicable to group/community of farmers applicant)

We hereby declare that we have been the permanent cultivators since last many years in the …………………. village(s) falling under the ……………….. local body/Panchayat(s) in the ………………. District(s) of ……………………. State(s) and that we are the initial and exclusive developers and continuous conservers of the candidate variety denominated as …………………., under the kind………………………………… (Common name of crop) belonging to the botanical species ……………………………………. We on behalf of our group/community hereby authorize …………………. (Name), who is a member of our group/community and permanent resident of …………………. (Complete postal address) to do the needful and be the signatory on our behalf for the limited purpose of securing registration of the candidate variety in our favour under Protection of Plant Varieties & Farmers’ Rights Act, 2001.

Dated………………
Place………………

Signature and Name of the Farmer or
Authorised person of Group/Community
(To be signed before the endorsing official)

It is hereby certified that the above said candidate variety is bred / developed and continuously conserved and cultivated only by the applicant farmer / group of farmers / community of farmers who is / are permanent residents of above said village(s) and I am fully conversant with the applicant farmer / group or community of farmers and that the candidate variety is due to their efforts (strike out unwanted words given as options).

Date
Place

(Chairperson / Secretary of the Concerned Panchayat
Biodiversity Management Committee OR Concerned
District Agricultural Officer OR Director of Research
Concerned State Agricultural Universities OR Concerned
District Tribal Development Office.

(With Official Rubber Stamp)
Technical Questionnaire

1. Name of the Applicant/breeder/company: Indian Council of Agricultural Research (ICAR), New Delhi

2. Year of Establishment: 1929 (Nineteen hundred twenty nine)

3. If registered under Company’s Act 1956 (Give details): Not Applicable

4. Location of corporate office and address:
   Indian Council of Agricultural Research (ICAR)
   Krishi Bhawan, Dr. Rajendra Prasad Road, New Delhi-110001

5. Tel/fax/e-mail: +91-11-23384773; +91-11-23389919-9, 2388958-60

6. Name of candidate variety: IS 84

(a) Has it been released in any Convention Country earlier
   √ Yes  ■ No
   If yes give complete details in column number 13

(b) Pedigree/genealogy:
   IS 84 = Selection SA 7529-55-1-1-1-1 from Durra caudatum race
   (Include schematic diagram giving details of varieties, lines, or clones used in the breeding of candidate variety).

   Schematic diagram of varietal development pure line selection

   Year I  200 -1000 plants selected from Durra cardatum race
   ↓
   Year II Progeny rows of each plant in an individual row were grown. Superior progenies harvested and seed from plants with in a roe pooled
   ↓
   Year III Pooled strains grown in replicated observation plots.
   ↓
   Year IV to Year VII Pooled strains grown in replicated observation plots and also in yield trials
   ↓
   Year VIII The best strain chosen for distribution and nucleus seed increase
   ↓
   Year VIII onwards: Seed production scheme standardized and large scale production of breeder, foundation and certified seed.

(c) Breeding of Candidate Variety
   (i) Origination (Tick the correct one)
   Controlled pollination / open pollination / induced mutation / spontaneous mutation / introduction /
   selection/ seedling selection / any other (specify)
(ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable
from the candidate variety). If the variety was developed by selection, then the number of selection cycles
completed before fixing it.

   Six generations

(iii) Breeding technique/procedure used

   Pure line selection

(iv) Selection criteria used

   High yielding with good combining ability

(v) Stage of selection and multiplication

   S1 – S6 generation

(vi) Location where breeding was conducted

   ‘Accelerated Hybrid Sorghum Project’,
   National Research Centre for Sorghum (NRCS),
   Rajendranagar, Hyderabad, 500030.

7. Particulars of comparative trial conducted by the applicant, if any.

   Information on the location, place, period and year/month of comparative trial conducted method of cultivation such
   as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the
   reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and
   other details.

   NOTE: Applicant may, furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative
   trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information
   provided under this item will not be published by the Authority but will be used to facilitate examination of candidate
   variety.

   **Parental Line Trial: 1994: All India Average of AICSIP Centres**

<table>
<thead>
<tr>
<th>S No</th>
<th>Parental line</th>
<th>Days to 50% flowering</th>
<th>Dry fodder yield (kg/ha)</th>
<th>Grain yield (Kg/ha)</th>
<th>Plant height (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CK60A</td>
<td>66</td>
<td>6369</td>
<td>1722</td>
<td>120</td>
</tr>
<tr>
<td>2</td>
<td>CK60B</td>
<td>66</td>
<td>6313</td>
<td>2125</td>
<td>127</td>
</tr>
<tr>
<td>3</td>
<td>IS 84</td>
<td>69</td>
<td>6906</td>
<td>2292</td>
<td>129</td>
</tr>
<tr>
<td>4</td>
<td>2077A</td>
<td>78</td>
<td>6766</td>
<td>2064</td>
<td>129</td>
</tr>
<tr>
<td>5</td>
<td>2077B</td>
<td>75</td>
<td>7571</td>
<td>2619</td>
<td>131</td>
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<td>6</td>
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<td>75</td>
<td>10608</td>
<td>3789</td>
<td>131</td>
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<tr>
<td>7</td>
<td>2219A</td>
<td>66</td>
<td>6851</td>
<td>1685</td>
<td>112</td>
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<td>8</td>
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<td>296A</td>
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<td>8024</td>
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<td>10</td>
<td>296B</td>
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<td>3317</td>
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<td>3052</td>
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<td>78</td>
<td>13550</td>
<td>5504</td>
<td>189</td>
</tr>
<tr>
<td>15</td>
<td>AKMS14A</td>
<td>68</td>
<td>7723</td>
<td>2071</td>
<td>128</td>
</tr>
<tr>
<td>16</td>
<td>AKMS14B</td>
<td>67</td>
<td>7770</td>
<td>3132</td>
<td>131</td>
</tr>
<tr>
<td>17</td>
<td>AKR 150</td>
<td>72</td>
<td>8389</td>
<td>3468</td>
<td>135</td>
</tr>
<tr>
<td>18</td>
<td>SRT 168</td>
<td>76</td>
<td>13224</td>
<td>4161</td>
<td>176</td>
</tr>
<tr>
<td>19</td>
<td>SRT 26B</td>
<td>73</td>
<td>9384</td>
<td>3862</td>
<td>158</td>
</tr>
<tr>
<td>20</td>
<td>NSV 13</td>
<td>77</td>
<td>11835</td>
<td>4794</td>
<td>176</td>
</tr>
<tr>
<td>21</td>
<td>SR 424</td>
<td>77</td>
<td>10175</td>
<td>4391</td>
<td>146</td>
</tr>
<tr>
<td>22</td>
<td>SPV 1182</td>
<td>78</td>
<td>13498</td>
<td>4901</td>
<td>164</td>
</tr>
<tr>
<td>23</td>
<td>LOC. MEAN</td>
<td>73</td>
<td>9469</td>
<td>3286</td>
<td>148</td>
</tr>
<tr>
<td>24</td>
<td>C.D. (5%)</td>
<td>3</td>
<td>2803</td>
<td>803</td>
<td>15</td>
</tr>
<tr>
<td>25</td>
<td>C.D. (1%)</td>
<td>4</td>
<td>3707</td>
<td>1062</td>
<td>20</td>
</tr>
<tr>
<td>26</td>
<td>C.V. (%)</td>
<td>4.24</td>
<td>35.29</td>
<td>28.8</td>
<td>11.22</td>
</tr>
</tbody>
</table>
8. Characteristics of the candidate variety

Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a)(i) Give group characters

Adaptation of season : Kharif
Plant: time of panicle emergence (50% of the plants with 50% anthesis) : Early (63 days)
Plant: total height (at physiological maturity) : Short (135 cm)
Panicle: shape (at physiological maturity) : Panicle broader at lower part (conical)
Caryopsis: colour after threshing : Yellow orange

(a)(ii) Distinguishing characteristics (descriptive or elaborate)

IS 84 is the restore male line of the first Indian commercial hybrid CSH 1 which was released for Sorghum cultivation in all kharif sorghum regions of the country during 1964. It has Non-tan plant color, and has early (56-65 days) panicle emergence. The stem is medium thick and short (135 cm). Leaves have dull green midrib colour. The panicle is well exerted conical shaped with straw colored glumes, Yellow orange caryopsis, and circular shaped grain having yellow endosperm color.

(b) Table of characteristics between candidate denomination and reference variety

Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.

NOTE: Two or more reference varieties should be compared with the candidate variety in the characteristics table, including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the candidate variety.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Characteristics value of candidate variety</th>
<th>Remarks Measured value etc.</th>
<th>Characteristics value of reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seedling: anthocyanin colouration of Coleoptile</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>IS 84</td>
<td>AKR 354</td>
</tr>
<tr>
<td>Leaf Sheath: anthocyanin Colouration</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Leaf: midrib colour (5th fully developed leaf)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant: Time of panicle emergence (50% of the plants with 50% anthesis)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant: natural height of plant up to base of flag leaf</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flag leaf: Yellow colouration of midrib</td>
<td>3 (110 cm)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Lemma: arista formation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stigma: anthocyanin colouration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stigma: Yellow colouration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stigma: length</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flower with pedicel : length of flower</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anther: Length</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anther: colour of dry anther</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glume : colour</td>
<td>3</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Plant: total height</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stem : diameter ( at lower one third height of plant )</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Leaf: length of blade (third leaf from top including flag leaf)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leaf: width of blade (third leaf from top including flag leaf)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panicle : length without peduncle</td>
<td>5</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Panicle : length of branches (middle third of panicle)</td>
<td>5</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Panicle : density at maturity (ear head compactness)</td>
<td>4</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Panicle : shape</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Neck of panicle : visible length above sheath</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glume : length</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threshability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caryopsis : color after threshing</td>
<td>4</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Grain : weight of 1000 grains</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain: shape (in dorsal view)</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Grain: shape in profile view</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Grain: size of mark of germ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain: texture of endosperm (in longitudinal section)</td>
<td>3</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Grain: colour of vitreous albumen</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Grain : lustre</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
9. Characteristics of the reference varieties

(a) Most similar variety

(i) Denomination

AKR 354 = [(SPV 504(20KR) x SPV 504 x R 263)] x R 67-4

SPV 504 = SPV 86 x M 35-1-13

SPV 86 = R 24 x R16

(ii) Basis of choice of this variety for comparison

Variety AKR 354 is the pollinator of the very popular hybrid CSH 19R

(iii) Distinguishable Characteristics

Late maturing plant, symmetric panicle, Yellow white colored and elliptic shaped seed with greyed red glumes.

(b) Other reference variety

Not Applicable

(i) Denomination

(ii) Basis of choice of this variety for comparison

(iii) Distinguishable Characteristics

10. Statement of distinctness of candidate variety

Please give a distinctness statement covering a brief summary of the characteristics that distinguish the candidate variety from all varieties of common knowledge. The distinctness statement should include, (i) names of reference variety (ies) that have been observed most similar to the candidate variety, and (ii) salient comparison for major distinguishing characteristics between the candidate variety and the similar/reference variety (ies).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Candidate variety</th>
<th>Reference variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of panicle emergence (50%)</td>
<td>Early</td>
<td>Late</td>
</tr>
<tr>
<td>Panicle shape</td>
<td>Panicle Broader in Lower part</td>
<td>symmetric</td>
</tr>
<tr>
<td>Caryopsis color</td>
<td>Yellow orange</td>
<td>Yellow white</td>
</tr>
<tr>
<td>Grain shape</td>
<td>circular</td>
<td>Elliptic</td>
</tr>
<tr>
<td>Glume colour</td>
<td>Greyled yellow</td>
<td>Greyed red</td>
</tr>
</tbody>
</table>

11. Statement on uniformity and stability of candidate variety

Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off types or any other describable variation beyond which the candidate variety shall be deem to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of candidate variety.

Uniformity: The candidate variety was tested in AICSIP in replicated trials in the year 1994. It was tested in a plot size of 15m² and it was found to be uniform for all the morphological characters across the two locations. The candidate variety has a purity level of above 99.99% and the off types are less than 0.01%. In DUS testing, the uniformity in the candidate variety IS 84 is assigned as uniform when the numbers of aberrant plants do not exceed 6 per cent (6 plants in 100) on the plot as a whole or in ear to row planting.

Stability: The following traits can be referred as indicators to determine the stability of candidate variety IS 84. The candidate variety was tested in kharif 1994 in many locations in replicated trials of plot size 15m² and was found to be stable for all the morphological characters such as:

i. Plant: Time of panicle emergence (50% of the plants with 50% anthesis)
ii. Glume : colour
iii. Plant: total height
iv. Panicle : length without peduncle
v. Panicle : density at maturity (ear head compactness)
vi. Panicle : shape
vii. Neck of panicle : visible length above sheath
viii. Caryopsis : color after threshing
ix. Grain: texture of endosperm (in longitudinal section)
x. Grain : lustre
12. Methods for maintaining the candidate variety

Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder’s right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

NOTE: The holder of a plant breeder’s right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.

The candidate variety IS 84 will be maintained through standard nucleus & breeders seed production procedures following progeny row selections and bulk multiplication in isolations. The nucleus & breeders seeds will be maintained at National Research Centre for Sorghum (NRCS), Rajendranagar, Hyderabad – 500030, Andhra Pradesh in the medium-term storage.

13. Information on variety registered in Convention Countries.

a. What were the grouping characters in that application for this candidate variety?
   Not Applicable

b. What was the Distinctness Uniformity and Stability parameter on which it was registered?
   Not Applicable

c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?
   Not Applicable

d. Has the Variety been withdrawn in the first filed country from cultivation or banned or from any of the subsequently released country?
   Not Applicable

e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date: 25th March 2009

Signature
Project Coordinator (AICSIP-Sorghum)

Signature of Witness and Address ____________________________

Designation of the Breeder/Company with seal

The breeder/company should sign with date each page of the Technical Questionnaire.

[No. ________________________ ]

(_____________________________ )
Chapter IX: Concept of EDVs under PPV&FR Act, 2001 - Issues & implications

BM Prasanna
Former ICAR National Fellow & Principal Scientist, Divn. of Genetics, IARI, New Delhi – 110012

Definition of an EDV
The convention act of the International Union for the Protection of New Varieties of Plants (UPOV, 1978) allowed the use of protected germplasm for generating new, improved varieties, without authorization from the breeder who developed the initial variety. The goal of the so-called “breeder’s exemption” is to secure future breeding progress and to prevent genetic erosion in elite breeding germplasm. Apart from the protection against misuse, breeders exemption entails that a protected variety is freely available to all breeders as a germplasm resource to secure sustainable breeding progress and to use protected varieties for the purpose of producing new varieties. Accordingly, any protected variety may be freely used as a source of initial variation in breeding programs to develop further varieties and any such variety may itself be protected and exploited without any obligation on the part of its breeder. However, there are possibilities for misuse of the “breeder’s exemption” in its original intention through ‘copycat breeding’ or ‘cosmetic breeding’. To fight against such tendency, the concept of ‘essential derivation’ was included in the revised UPOV convention Act (UPOV, 1991).

By virtue of article 14(5) (b) UPOV “a variety shall be deemed to be essentially derived from another variety (‘the initial variety’) when:

- It is predominantly derived from the initial variety, or from a variety that is itself predominantly derived from the initial variety, while retaining the expression of the essential characteristics that result from the genotype or combination of genotypes of the initial variety;
- It is clearly distinguishable from the initial variety; and
- Except for the differences which result from the act of derivation, it conforms to the initial variety in the expression of the essential characteristics that result from the genotype or combination of genotypes of the initial variety.”

An EDV may be, therefore, defined as a variety, which is distinct and predominantly derived from an initial variety, while retaining all the essential characteristics of that initial variety except the trait that is act of derivation. Paragraph (i) above means that an EDV can only have a juridical relevant dependency from one variety, “the initial variety”, which is protected. It need not be directly derived from the initial variety. The EDV may also be bred by using one or more other variety or varieties predominantly derived from the initial variety. Paragraph (ii) implies that the derived variety must be an independent variety, distinguishable from the initial variety. The phrase ‘the expression of the characteristics that results from a particular genotype or combination of genotypes' means that the distinction must be able to be established on the basis of phenotypic characteristics. A distinction at this level may have a very limited genetic basis. Paragraph (iii) provides that the derived variety may only differ from the original variety in differences resulting from the act of derivation. There is an ongoing debate over the meaning of this paragraph.

Let us consider here an example. ‘Pusa Basmati 1’, the first semi-dwarf, high yielding Basmati rice variety, developed at IARI, New Delhi, is one of the most popular varieties grown by the Basmati rice farmers in north-west India, and constitutes almost 60% of the total Basmati rice export from the country. It took nearly 25 years of breeding efforts to combine the Basmati quality traits in high yielding background in the form of Pusa Basmati 1. However, this variety is highly susceptible to bacterial leaf blight, a deadly rice disease. In addition to many others, a gene Xa21 effective against major isolates of bacterial blight is available in some non-Basmati background. If another breeder transfers through backcrossing, the gene Xa21 in Pusa Basmati1, the new variety thus developed embodies all essential characters of and is predominantly derived from Pusa Basmati 1. Therefore, the improved version of Pusa Basmati 1 with resistance to bacterial blight becomes an EDV of Pusa Basmati1. The breeder of new variety therefore, will exploit the full commercial benefits of essential features of Pusa Basmati 1 such as
quality and yield. This warrants due recognition and benefit sharing by the breeder of new variety with the breeder of Pusa Basmati 1, provided Pusa Basmati 1 is a protected variety under the PPV&FR Act.

The question of how far an EDV and the original variety have to resemble each other phenotypically is a difficult one to answer, since the definition offers scope for various interpretations. It is important to distinguish what are ‘cosmetic’ changes from what are those ‘significant’ changes that affect performance, value or place in the market of a variety. For example, purple anthers in crops like wheat or maize, which do not affect performance or value of the crop, shall fall into the category of a cosmetic feature. The second most important aspect of EDV is the scientific (genetic) evidence related to the parentage. Several Institutions / Organizations worldwide are now engaged in developing procedures and protocols for determining EDVs in different crop plants.

**Derivation of EDVs**

There are various methods through which EDVs can be derived, including: (i) mutation, either natural or induced; (ii) somaclonal variation; (iii) conventional backcross breeding; (iv) molecular marker-assisted selection (MAS) during backcrossing; and (v) genetic transformation (transgenic tech.).

**Mutations:** The occurrence and utilization of mutants (both spontaneous and induced) is common among many plant species, especially the ornamental crops. An important aspect for essential derivation in case of mutation is the level of genetic relatedness between the initial and the derived mutant variety. Analysis of the genetic relationships between the original and mutant varieties in roses revealed very high genetic similarity, as a mutant is usually result of a few changes in the genetic makeup of the variety (Debener et al., 2000). Similarly, genetic similarity between the hybrid tea rose (Rosa x Hybrida) with its mutant, analyzed using AFLP markers (Vosman et al., 2004) showed that most of the mutants show a very high genetic similarity with the initial variety.

**Somaclonal variation:** Somaclonal variation is the genetic variability present among the plants derived from cultured cells. Some of the prominent examples of somaclonal variants utilized in India, are ‘Pusa Jaikisan’ which is a somaclonal variant of *Brassica juncea* variety Varuna, and ‘Ratan’, a somaclone of *Lathyrus sativus* (Khesar) with a low neurotoxin (BOAA). Both these varieties have been released for commercial cultivation.

**Conventional backcrossing:** The backcross method has been very efficiently used in plant breeding programmes worldwide to improve specific characters of a well-adopted variety for which it is deficient. Backcrossing is said to be the most conservative breeding method as it improves current cultivars only at few genes at a time. This method has been mostly used for transfer of simply inherited characters such as disease resistance, which may be governed by oligogenes, or characters which are monogenic with high heritability. However, there are also instances when backcrossing has been employed to improve quantitative traits. Backcrossing can lead to ‘essential derivation’ as the derived variety is usually highly similar to the recurrent parent, except for specific trait(s).

**Molecular marker-aided backcrossing:** Marker-assisted selection (MAS) utilizes molecular markers for selection of plants carrying genomic regions which are involved in the trait of interest. This method can be successfully utilized for both quantitative and qualitative traits. Molecular markers can be effectively used for selection in backcrossing in three ways: (i) If phenotype of the target gene is difficult to observe or highly influenced by environmental effects; (ii) Selection of rare progeny with minimum amount of donor parent germplasm or maximum recovery of recurrent parent genome; and (iii) Identification of genetic similarity between the progeny with the recurrent parent.

Molecular markers are available which can be efficiently used for the tracing out the target gene (foreground selection) and also the recurrent parent genome (background selection). Conventional backcrossing, particularly for the transfer of a recessive gene, requires repeated selfing after every backcross, which is time-consuming and tedious. Foreground selection by using molecular markers can be effectively used for ascertaining the allele status of each backcross progeny plant, thereby significantly shortening the breeding program. Similarly, background selection aids in recovery of recurrent parent genome and with the target...
gene(s) from the donor within even two backcross generations.

**Transgenic technology:** Genetic transformation employs transferring of specific gene(s) from one organism to another organism using recombinant DNA technology. The gene used for transformation is called as a ‘transgene’ that confers a particular characteristic, such as insect-pest resistance, disease resistance, herbicide resistance, quality improvement etc. The most important example of transgenic crop released for commercial cultivation in the Indian context is the ‘Bt cotton’ which is derived by transferring the Cry gene (insecticidal crystal protein-coding genes from the bacterium *Bacillus thuringiensis*), that confers resistance to bollworm, a major pest of cotton. In this case, the transgenic variety remains almost similar to the initial variety (genotype with good agronomic performance) with additional characteristics, such as insect pest resistance. Genetic and molecular analyses of the transformed and initial variety could lead to the establishment of an EDV.

**Criteria for determining EDVs**
The most important aspect in determination of EDV is the genetic conformity between IV and putative EDV (ASSINSEL, 1999). For this, the first step is to determine the Distinctness, Uniformity and Stability (DUS) of the EDV. The phrase ‘expression of characteristics that result from the genotypes or combination of genotypes’ makes it clear that in this respect only expressed, genetically heritable, characteristics, should be taken into account. The genotypic information and genetic distance (GD) are the two important parameters used to distinguish between essentially derived and independent variety.

**Genetic distance:** It is important to recognize the fact that the concept of essential derivation is based on genotype, rather than solely on phenotype; hence, the genetic distance (GD) is required to be estimated. The most important and crucial aspect in determination of EDV is the accuracy and reproducibility of genetic distance. ‘Genetic distance’ can be defined as that difference between two entities (i.e., plant varieties) that can be described by allelic variation (Nei, 1973).

**Pedigree information and varietal performance:** The International Association of Plant Breeders (ASSINSEL) considers distinctness and essential derivation as two distinct concepts (ASSINSEL, 1999). It suggests that: (1) the assessment of distinctness is based on difference, by the expression of at least one characteristic; (2) the assessment of essential derivation is based on conformity, based on almost all the genome and on most of the essential characteristics resulting from that genome; and (3) the question of distinctness is a question of granting the right of protection, whereas the question of essential derivation is a question of the scope of protection. ASSINSEL (1999) states that, “it is necessary as far as possible to use different tools for defining distinctness and essential derivation, that distinctness should be assessed with the help of morphological and physiological characteristics,” and that, “essential derivation is particularly a question of genotype, and a useful tool to assess it is DNA analysis...”.

Breeding records and pedigree information are prerequisites for determining EDV status in a dispute situation. This information is necessary to allow pedigrees to be verified and to allow measurement of predominant derivation. If a defendant is unable to provide detailed and accurate pedigree records that are subsequently verified, then this omission could disqualify claim to a variety.

Heterosis data obtained from crossing inbred lines can also provide a reliable basis for estimating genetic conformity since yield and heterosis are conditioned by numerous genes spread throughout much of the genome. Agronomic performance in hybrid can also be used for identification of inbreds for distinctness or for dependency (Troyer et al., 2002). However, due to a fairly high degree of Genotype x Environment (G x E) interaction, and since the genetic basis for most morphological traits is unknown, morphological comparisons are unreliable indicators of genetic conformity or dependency. Heterosis data is also time consuming to obtain, requiring the products of several cross-, self-, and sib-pollinations to be tested in replicated environments across at least two years. Furthermore, in most self-pollinated crops, heterosis is not significantly evident and, therefore, cannot be used as a valid basis for determining genetic
conformity. Morphological and heterosis data might still be considered useful to help support determination of EDV status.

**Molecular markers for EDV determination:** Molecular markers are regarded as suitable tools to distinguish an EDV from an initial variety as these markers allow tracing of chromosomal segments from the parent to their progeny and empirical evaluation of genetic relatedness. Molecular markers proved to be important tools for identification of EDVs in crops like maize (Heckenberger et al., 2002, 2003).

To be effectively utilized for EDV determination, a molecular marker technology must (i) be sufficiently discriminative; (ii) provide allelic data that can be obtained, scored and recorded reliably and repeatedly; and (iii) survey the genome with sufficient thoroughness to provide distance measures that are reflective of germplasm and pedigree similarities. AFLPs, SSRs and RFLPs (Powell et al., 1996) and more recently, SNPs (Single Nucleotide Polymorphisms) have been successfully used for identification of EDVs in various crops. Owing to limitations in the automation and standardization of RFLPs, they represent no longer a competitive alternative to SSRs or SNPs or AFLPs for EDV analyses. In crop species where the genetically codominant SSR or SNP markers have not been determined in sufficient numbers, it would be preferable to use AFLP markers; such an application of AFLP markers in roses led to clear determination of EDVs (Vosman et al., 2004).

Molecular assessment of genetic similarity or distance is quantitative, and its interpretation is unaffected by environment when the observed polymorphisms have a genetic basis and experimental conditions are rigorously controlled. Nevertheless, quantification of genetic difference based on any molecular descriptor is subject to sampling or technical error. Sampling error can be minimized by scoring a large number of individuals and by replication.

Protocols for determination of EDV could vary significantly from crop to crop. How many markers and which markers should be used for the determination of an EDV are important questions that have to be answered on a crop-by-crop basis. In a project initiated recently under the PPV&FRA (Govt. of India), the Division of Genetics at the Indian Agricultural Research Institute (IARI), New Delhi, is presently developing procedures and protocols for determining the EDVs in rice, wheat, maize and pearl millet.

There are various statistical parameters required to be taken in to consideration for the estimation of genetic distance (Heckenberger et al., 2005). An important statistical parameter in determining an EDV is the probability of making Type I (varieties are the same when in fact they are not) or Type II (varieties are different when in fact they are the same) errors. Moreover, statistical estimates of error must satisfy the type of precision that the judicial system may demand (i.e., beyond a reasonable doubt). Of particular importance among the statistical tools in relation to genetic diversity analysis are the confidence probability tests. Resampling techniques such as ‘bootstrap’ and ‘jackknife’ are important, particularly in relation to application of molecular marker data for analysis of genetic distance, and for finding the smallest set of markers that can provide an accurate assessment of genetic relationships among a set of genotypes (Mohammadi and Prasanna, 2003).

**Identification of EDVs – Some case studies**

The ISF has conducted during 2001 to 2006 several studies in different crops to evaluate the possibility to use molecular markers to assess genetic distances and for determination of genetic distance thresholds for EDVs. I shall highlight here only two case studies to indicate the potential application of molecular markers in EDV determination.

**Maize:** There have been several studies conducted on maize, particularly in France, Germany and the USA (reviewed by Heckenberger et al., 2002, 2005), to determine if genetic markers systems can be used as a tool to determine the possibility that one variety may have been derived from an initial variety. The conclusion of these studies is that molecular marker systems can be used to differentiate between inbred lines of maize. At present, both SSRs and SNPs are the most commonly used marker systems for EDV determination in maize.

The studies suggest that, using a SSR marker set (with a low error rate), one could determine a putative EDV if the genetic similarity (based on the Rogers distance) is 82% or higher. In order to help arbitration in a
case of dispute, the ISF Maize and Sorghum Section recommends considering a second threshold of 90% using all the markers as a strong indication of predominant derivation. A code of conduct has been adopted by the French maize seed industry members as follows: “Above the threshold of 90% the variety should be considered as an EDV without further discussion; between 82 and 90% there is possible essential derivation and the parties have to negotiate; below 82% there is no essential derivation.

**Lettuce:** The ISF Vegetable and Ornamental section conducted in 2001-2002 a study to evaluate the inter-variety genetic diversity based on the use of AFLP (Amplified Fragment Length Polymorphism) markers. Three groups of varieties were used: 35 Butter Head Greenhouse heated (short-day butterhead varieties for heated glasshouse production), 21 Butter Head Field Summer (long day butterhead varieties for outdoor production) and 27 Iceberg varieties of the Salinas-type. Based on the results of the study, the ISF working group decided to propose a threshold of 0.96 Jaccard similarity for the three cultigroups, taking into account the present diversity available on the market and the need to protect effectively future breeding work.

If the Jaccard coefficient is higher than 0.96, the breeders will try to reach an amicable settlement. If this settlement cannot be reached, the breeder of the IV may ask for the arbitration, according to the ISF rules for disputes settlement and the mediators / conciliators or arbitrators may ask for the reversal of the burden of proof. The breeders of the putative EDV will have to provide the information that is relevant to determining the status of his variety. They may be asked to open their breeding records to an independent neutral expert.

Up to now, ISF has mainly worked on thresholds based on distances measured by molecular markers. Geneticists and statisticians consider that technically it is equally possible to measure distance coefficients using morphological markers but that these distances are not always reflective of genetic distances or of pedigree relationships. Additionally, use of morphological characteristics would probably be more difficult due to environmental factors, and much more expensive.

More recently, based on the general opinion of its members, ISF moved to the definition of only one threshold that would divide the scale of conformity into two parts: below the threshold there would be no presumption of essential derivation, above the threshold there would be presumption of essential derivation and the burden of proof of non predominant derivation would fall on the breeder of the putative essentially derived variety. The threshold will certainly vary from species to species, depending on the existing genetic variability within the species and the established breeding procedures.

**Registration of an EDV:** The Indian Perspective

The Protection of Plant Varieties and Farmers’ Rights Act (2001) of India is unique and different from UPOV Act (1991) in several respects to make it an effective sui generis system. With respect to EDV, the Act clearly mentions the following:

- On receipt of an application, the Authority shall get examined such EDV to determine as to whether the EDV is a variety derived from the initial variety by conducting such tests and following such procedures as many as prescribed.
- The rights of breeder of an initial variety shall apply to the breeder of EDV.
- The authorization by the breeder of the initial variety to the breeder of the EDV is a must, for entertaining an application for registration of an EDV.

In case of a dispute, it is the holder of the initial variety who must demonstrate that another variety is derived from his variety. If the breeder of an EDV does not deny that status for the variety, he will need the consent of the holder of the initial variety in order to be able to commercially exploit the variety. If the holder of the alleged EDV denies that his variety is an EDV, the holder may ask the Authority or even a national court for an acknowledgment of the identification of the varieties concerned as initial and essentially derived. However, the Australian PVP Act as well as the PPV&FRA (Government of India) prescribe an important role for the Registrar, PVP Authority to decide the EDV status.

**EDVs: Some contentious issues**

**Cascade of derivation and Principle of dependence:** As per UPOV, in case of EDVs, the principle of dependence only exists in favour of a protected variety. This means that: (i) the initial variety must be a protected...
one; (ii) dependence can only exist from one protected variety alone; and (iii) an EDV can be directly derived from the initial variety or from a variety that is itself predominantly derived from the initial variety. It is thus possible to have a "cascade" of derivation. However, each EDV shall only be dependent on one, the protected initial variety; a cascade of dependence shall not exist. This principle of dependence has been introduced to better protect the breeder of the initial variety and not those having made derivations.

**Burden of proof:** According to the general rule of burden of proof, it is to the owner of the initial variety to prove essential derivation and then claim dependency. However, if the owner of the IV can give reasonable evidence of essential derivation (prima facie proof), ISF is in favour of the reversal of the burden of proof. For prima facie proof, the following elements should be sufficient: strong phenotypic similarity; only small differences in some simply inherited characteristics; strong genetic similarity. If the owner of the IV has fulfilled one of the above requirements, then the second breeder would have to prove that there is no predominant derivation, or that he had not used the IV, or a variety essentially derived from that IV. As per the PPV & FR Act of India, the burden of proof lies with the developer of the IV. Also, the Act states that the breeder of the IV and the breeder of an EDV will have the same rights, which is a debatable statement.

**Implications for breeding programmes**
The concepts of derivation and dependence do not, fortunately, abolish the "breeder's exemption". However, "cosmetic" improvement or plagiarism, which could sometimes have allowed the creation of distinct varieties in the sense of the UPOV Convention, will no longer allow the creation of independent varieties. The EDV clause has several implications to the breeders in both the public and private sector institutions; salient among these are discussed in brief below.

**Protection of extant varieties:** The public sector breeding programme have made tremendous contribution to the development of agronomically superior, high yielding, widely adapted and value added varieties in different crops. These varieties have been released and notified under the appropriate law (In India section 5 of seed Act 1966).

Many of such varieties are yet to complete 15 years period from the date of notification. Such varieties are likely to be used for development of EDV by both public and private sector breeders. If these varieties are not protected, there will not be any dependency of the EDV developed from them on the initial variety, as the dependency does not exist on non-protected variety. Therefore, it would be in the interest of the breeders of such extant varieties to get them protected in order to have the mechanism of benefit sharing enabled.

**Choice of parents in breeding programmes:** Breeders should be certain of their legal access and freedom to use all parent materials employed in their breeding programs. They would have to pay more attention to the results of their breeding work when working with protected varieties within the "breeder's exemption".

**Breeding methods:** Any conventional breeding method could, in theory, provide an EDV. However, certain methods appear to give a higher risk of developing EDVs. These methods include: (a) natural or induced mutations; (b) repeated backcrosses (however, the selection pressure exerted after the backcrosses can have an important effect on the final result); (c) selection in an existing variety; and (iv) genetic engineering, which have been discussed in detail above.

**Development of technical information:** The conformity thresholds for essential derivation will come to exist in the years ahead. To know their freedom to operate in relation to such conformity thresholds, breeders will need: (a) a good knowledge of the range of phenotypic, molecular and physiological variability of varieties present in the market; and (b) to know the phenotypic, molecular and physiological profiles of their genetic material and their experimental varieties, as well as their breeding histories and documentation of legal access. Breeders will need to employ the tools necessary for assessing such profiles in their research programs. Such tools would not only be useful for protection of intellectual property, but also in improving breeding efficiency.

**Diligence in maintaining pedigree/breeding records:** Whenever a putative EDV falls in the zone of uncertainty based on conformity thresholds, it will not be easy to take a decision on derivation and dependence. In such cases, information on parental material
and breeding methods may be sought by the Authority. Therefore, the breeders will have to maintain clear and accurate pedigree / breeding records.

Conclusions
The recognition and protection of EDVs provides an opportunity for promotion of novelty in plant breeding and prevention of plagiarism or ‘cosmetic breeding’. It is not against incremental breeding and the innovation that springs from that endeavour. When a relatively minor change between two varieties occurs, the plant breeders’ right recognizes the rights of the initial breeder through the possibility of a ‘declaration of essential derivation’.

A PVP application can be strengthened when molecular markers are used in conjunction with stable, well-documented phenotypic descriptors that describe the distinctiveness of a variety. In cases of alleged infringement, DNA fingerprinting can provide estimates of genetic distance for determining varietal distinctness or essential derivation. Analysis of varietal relatedness will also likely require a case-by-case appraisal of historical evidence, pedigree analysis, and an assessment of statistical probabilities of allelic frequency. The thresholds for declaring an EDV could vary for different species; these thresholds could be influenced by various factors, such as overall genetic diversity available in the germplasm of a particular crop, genetic diversity among the varieties, breeding practice in that crop, propagation method etc. It is important that the breeders should be proactive in relation to protection of the varieties as well as in adopting proper procedures for developing and commercializing improved varieties.

Suggested reading


Principles of a code of conduct in essentially derived varieties of perennial Ryegrass

(Adopted by the FIS Herbage Seed and ASSINSEL Forage Plants Sections in Chicago, May 2002 and remains a position of the ISF Forage and Turf Section)

1. The 1991 Act of the UPOV Convention entered into force in 1998 and introduced the concepts of essential derivation and dependency from an initial variety (i.v.).

2. The Forage Plants Section of ASSINSEL conducted in 1997 and 1998 a model study to evaluate tools and to determine possible thresholds for assessing putative essential derivation.

3. Based on the results of the study, the Section proposed during its meeting in Melle in January 1999 to adopt a provisional threshold, 7 for the squared Euclidean distance between pairs, using 60 plants per variety and a 5 primer combination. (The testing protocol, as annexed to this present code of conduct, should be followed precisely for assessing the distance). That proposal was confirmed by the section during its meeting in Melle in March 2002 and the following principles for a Code of Conduct were agreed upon.

4. In case of doubt a new variety is essentially derived from an i.v., doubt based on the fact that the new variety presents the essential characteristics of that i.v., the breeder of the i.v. will have, very likely, the squared Euclidean distance between the two varieties measured. If the distance is 7 or lower, the breeder of the i.v. may ask for ISF arbitration and the arbitrator may ask for the reversal of the burden of proof. The breeder of the putative essential derived variety (e.d.v.) will have to show that he has not practiced essential derivation from the i.v.. The arbitrators also have the right to ensure that the putative i.v. is not itself an e.d.v. from a preexisting variety.

5. The Code of Conduct would only apply to varieties commercialized or registered for the first time after its entry into force.

6. In order to encourage companies to adopt the code of conduct so that it could be possible to refine the threshold based on new molecular data, a transitional period of 5 years will be established after the entry into force of the code of conduct. During the transitional period the companies adhering to the code shall commit themselves:

- Not to claim any dependency rights for essentially derived varieties commercialized or registered for the first time during the first two years after adoption of the code of conduct.

- To agree on compulsory licensing of the e.d.v. by the owner of the i.v. at a level of 50% of royalties obtained in normal commercial practices for essentially derived varieties commercialized or registered for the first time during the following 3 years.

7. After the period of 5 years the threshold will be reviewed and, if necessary revised. Then the code will continue to apply and the owner of the i.v. will have the freedom to exercise his full rights as provided for in the applicable laws.

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Chapter X: Registration of EDVs under PPV&FR Act, 2001

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The Protection of Plant Varieties and Farmers’ Rights Act, 2001 (PPV & FRA) has been developed in response to article 27.3(b) of Trade-Related Intellectual Property Rights (TRIPS) agreement under general agreement of Tariffs and Trade (GATT), and its successor, the world trade organization (WTO, 1994). It integrates the rights of breeders’, farmers’ and communities, and takes care of the concerns for equitable sharing of benefits. The PPV & FRA seeks to provide protection for all plant varieties, including the “essentially derived varieties” (EDVs). As per the definition given in chapter I of the Act- an “EDV in respect of a variety [the initial variety (IV)], shall be said essentially derived from such IV when it-

- Is predominantly derived from such IV, or from a variety that itself is predominantly derived from such IV, whereas, retaining the expression of the essential characteristics that result from the genotype or combination of genotypes of such IV;
- Is clearly distinguishable from such IV; and
- Conforms (except for the differences which result from the act of derivation) to such IV in expression of the essential characteristics that result from genotype or combination of genotypes of such IV.”

The concept of EDV

The concept of essential derivation was introduced by UPOV in 1921 to refine the scope of breeders’ rights. The interaction of the concept was to confer breeders protection against fraudulent practices in which ‘new’ varieties are produced from currently protected varieties, sometimes even without a genuine breeding effort. A variety that has passed the standard UPOV tests for DUS is therefore, eligible for receiving breeder’s rights. Therefore, EDV refers to the situation where the breeder of one variety (the first variety or initial variety) claims that another breeder has developed a new variety (the second or third derived variety) that is distinct for specific feature(s), but predominantly similar and directly related to the first variety (IV) in all important respects.

There is no agreed text, which clearly states what constitute an EDV and how a conclusion can be made on the status of the proposed variety. As per Hunter EDV means, “a new variety” derived from a protected variety, in view of its characteristics, methods and development, it would be considered by a plant breeder a variety to have incorporated essentially the entire genotype of the protected variety plus some new feature(s). Factors to be considered in evaluation are the source of germplasm used and the breeding method employed, including the reasonably expected results of those methods. Under this concept the dependency exists in favour of the protected variety, the IV. The aim of the provision is to foster the breeding of new and increasingly productive varieties using an IV as a base, and innovative breeding methodologies, including biotechnology. However, most protection systems do not talk about these details and sharing of benefits therefore, further development of the concept is needed, which is important because of such varieties. The protection systems should provide protection, give exemption to the breeders, and have provision of benefit sharing with the developer of IV.
There were a lot of debates at the global level, regarding the definition of EDV and how the protection to this group of variety will be different from a new independently derived variety. The demonstration of essential derivation is the responsibility of the holder of the right of the presumed IV. But, the question is, do the criteria used during the determination of the distinctiveness for the protection of independently derived variety differ from those used for determination of essential derivation? Generally, assessment of independently derived variety is based on distinctiveness, whereas, for assessment of an EDV is base on the essential derivation, conforming that most genome and the essential characteristics belong to IV, except for the new distinctive characteristic(s) intogressed.

It is believed that different tools may be required for defining essential derivation in relation to trait(s) which is an act of derivation. The genetic similarity to IV can be assessed using both morphological / physiological characteristics and DNA profile, whereas, distinctiveness can be ascertained in addition to phenotypic differences, using trait linked molecular markers. But it may not be of help always, because polyploidy, substitution or addition of chromosome or chromosome segment, which create such distinctiveness.

Therefore, the definition adopted by PPV & FRA is the most commonly agreed one. However, there is a necessity for clearly defining the starting point of dependence of derivation (from where it deviates), in function, genetic distance and technical input. As per the rules and regulations, the PPV & FRA envisages registering an EDV distinguishable by at least one characteristic from IV as per DUS criteria, but expressing most essential characteristics of IV(in conformity to IV). In addition, there must be an authorization for commercialization of an EDV from the breeder of the IV or the consent of the farmers or group of farmers or community of farmers who have made contribution in the preservation or development of IV (Farmers’ variety) to the breeder of the EDV (Article 43), complete passport data of the IV from which EDV or propagating material has been developed and a declaration that the genetic material used has been lawfully acquired as per sub-section 2 of section 28, on mutually agreed terms and conditions. The Act has provision, to invite claims from any person or group of persons or non-governmental organization on benefit sharing, that after verification the authority would decide appropriately (Article 26). The principle of equitable benefit sharing has been adopted in conformity of International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).

Registration of new independently derived variety representing any variation within a species that satisfies the definition of a variety and fulfil the criteria of distinctiveness, uniformity and stability is easy and straight, but there would be complication in case of EDV, which relates to the scope of the legislation to account for the genetic derivation based on maintenance of most genome and essential characteristics of the IV, used as parent and the method used for incorporation of distinctive feature(s). Therefore, this would need development of appropriate method for assessment of genetic similarity and distinctiveness.

**Possibility of misuse of the breeders’ exemption**

Under Researchers’ Rights, a protected variety can be used for research and creation of other varieties. Under these situations, the breeder of a new variety makes full use of the essential features of the IV, without acknowledging and sharing benefits with the breeder of IV. Therefore, to create a balance between protection of rights of initial breeders and freedom for progressive / incremental plant breeding, the concept of EDV has to be understood critically.

**Incremental breeding and essential derivation**

Incremental breeding leads to development of an unlimited series of new varieties with each subsequent variety being bred relying heavily on the characteristics of the previous variety. As a general rule, easier the access,
the more incremental breeding is promoted. Strengthening of first breeders’ right by extending EDV status to all incrementally bred varieties would promote the fundamentals of the PBR system, with profound benefits for the community of breeders and progress in plant breeding. Breeders’ exemption for free access to protected plant varieties for breeding purposes encourages breeders to develop and market new variants (varieties), which favours biodiversity.

Essentially derived varieties derivation

Generally the concept of EDV has been envisaged to account for development of varieties using new technological approaches. The test of essential derivation from the first variety rests on following criteria:

A. **Technical**: for a variety to be considered essentially derived, it must fulfil the requirement in relation to the IV in retaining the expression of the essential characteristic that is:
   - Conformity to the initial variety in the expression of essential characteristics that result from the genotypes (a hybrid between EDV with gene of interest and the other parents of the initial variety)
   - It is predominantly derived from the first variety.
   - It does not exhibit difference in any basic features from the first variety except for the trait having clear distinctiveness, and value in cultivation and use, which is an act of derivation.

If any of the requirements is not fulfilled, there is no essential derivation.

B. **Legal aspects**: the claim of the breeder of the IV from the breeder of EDV for benefit sharing will hold ground only when:
   - The IV protected (because it would be based on registration certificate issued under sub section (8) of section 23, or subsection (2) of section 24).
   - The IV itself is not an EDV (as practiced by UPOV, due to predominant derivation of essential characteristics from IV, though PPV & FR by definition says that an EDV may be derived from another EDV with incorporation of additional feature, but relating the essential features of parent IV).
   - Therefore, dependency exists only in case of protected initial (essential) variety (IV) and does not exist on a parent EDV.

Therefore, in practice the concept of dependency is being used mainly to protect the rights of breeder of protected IV.

**Essential derivation vs. dependency**

Essentially derived and dependency are the two faces of the EDV, introduced by the UPOV convention. Table 1 illustrate the possible situations and there proposed consequences as practiced. But before that let us again clarify the intended meaning of these terms.

**Essentially derived**

A new variety is demanded to be essentially derived, when it contains “virtually” the entire genotype of a variety from which it was developed and there by “retains the expression of the essential characteristics of the IV. Essentially derivation is the result of a breeding process. In table 1, each + represent the gene or genes added in essentially derived varieties that were not present in the IV.

**Dependency**

Dependency refers to for having predominant characters of a protected IV. No dependency exists for an EDV developed from a non protracted variety. Under such situation the clause on benefit sharing under section 26 will not apply. However, if dependency exists, then the developer of the EDV must seek permission from the owner of the IV prior to the commercialization as illustrated in table 1.
Thus breeder of the IV and EDV as illustrated in table 1 would need-

1. The breeder of an EDV need to seek permission for its commercialization from the breeder of an IV from which the EDV was developed only when the dependency of EDV (for predominant characters) existed on the IV.
2. The dependency exists only when the IV from which the EDV is developed is protected.
3. Dependency ceases after the initial variety has completed its protection period.
4. Dependency as per present rule (practice) can not exist on an EDV.
5. The breeder of an IV can make a claim for benefit sharing for the breeder of an EDV, only when IV is protected.
6. If an EDV is developed from a non-protected IV, the breeder of EDV does not need to seek permission from its commercialization from the breeder of IV.

However, ethically, dependency should extend for an EDV developed from any commercially cultivated common knowledge initial variety.

**Measurement of essential derivation for dependency**

The essential derivation can be verified base on DUS result in conformity to the agreed threshold. It is similar to calculating minimum genetic distance based on some simply inherited characters. The predominant derivations from the IV using a breeding method may be based on various criteria or a combination thereof, such as, essential characteristics, combining ability, heterosis and molecular identity.

Use of distant coefficient is suggested for measurement of essential derivation to claim dependency, which can help identification of agreed threshold for the reversal burden of proof. Threshold distance can be calculated based on genetic distance assessed using predominantly morphological or molecular markers. Geneticist and statistician consider that technically it is equally possible to calculate the distance coefficient morphological markers, but these distances or not always reflective of genetic distance or pedigree relationships. International See Federation (ISF) as adopted to thresholds: first threshold below which a variety should be considered as independently derived variety from an IV and a second threshold above which a variety should be considered as essentially derived, except if, the breeder can prove otherwise and that he has started with an independent germplasm.

Between the two thresholds the derivation could be disputable and the breeder of the putative EDV should have to give information on origin of a new variety and produce breeding records. Now ISF has agreed for one threshold above there would be presumption of derivation and burden for proof would fall on the breeder of EDV. The threshold will certainly vary from species, depending on existing genetic variability within a species and the established breeding procedures.

**Possible mode of measurement for discrimination of EDV**

Genetic similarity based on molecular markers has been proposed as a tool for differentiation of EDVs and independently derived varieties with genetic similarity estimates based on molecular are scanty and their implementation as routine into practical breeding is yet to take place. Moreover, UPOV and Indian PPV& FRA include the provisions of distinctness as a matter of phenotypic distinctiveness (DUS characters visible in field with necked eye), though they are an expression of genotype, therefore, molecular markers can only be one basis. However, molecular markers may be used as a supportive tool for establishing similarity and distinctness between IV and EDV. One may agree that substantial portion of DNA does not code for any protein (expression), therefore, it may not be reasonable to hold DNA based evidences to be more vigorous and reliable then applied to morphological evidences. Recently, the genetic distance based on molecular markers, have been found more suitable for genetic conformity between the putative EDVs and their IVs.
then morphological traits and heterosis, although they are a subject to technical or sampling error. Nevertheless, use of molecular markers as additional tool, besides DUS characters would be preferable course, to establish distinctness and not the genetic similarity (GS). In an attempt to establish scientifically reliable criteria for discrimination of EDV and independently derived varieties with GS estimates based on molecular markers, Hewckenbreger et al. (2005) opined that standard derivation and overlaps of distribution of GS were smaller with increasing chromosome numbers and length, increasing marker density and uniformity in marker distribution. The degree of polymorphisms between parental inbred or donor and recurrent parents influenced the power only if the number of polymorphic markers was low. The factors like total number of polymorphic markers used, number of markers/chromosomes and distribution of polymorphic markers are critical in deciding power of GS. Availability of markers linked to expressed traits may further enhance the efficiency of marker based procedure.

However, lack of ability of information regarding the total genomic constitution and no of polymorphic markers required to cover the total genome in a number of crops for assessment of the threshold for similarity is a limitation. Therefore, for the time being, it would be more appropriate to make genetic similarity assessment based on morphological features, which are part of the DUS test guidelines as criteria for dependence. For distinctiveness, to conclude about essential derivation, assessment can be made based on phenotypic expression of trait(s) without bothering, weather an essential derivation has been achieved by transfer of specific gene or gene combination to different genetic background in a conversion programme, like placement of cytoplasmic male sterility into different local adopted or superior cultivars. For example, in case of pigeon pea, CMS ICPL 84023A, in which CMS 67A was crossed with ICPL 84023; selfing and backcrossing with recurrent parent ICPL 84023 produced CMS ICPL 84023 in BC5 F1 generation; in cotton, CAK-84635, where *Gossypium aridum* (Rose & Standal) Skovst. Base male sterility has been transferred to AKH 84635 by backcrossing RCMS-3 using JCMSK-2 male sterility source and RGMS-3 converting AC-6 using GMS-1 and in chilli, MS1 and MS3 through backcrossing with Araka Lalit and PMR 64, respectively in rice, backcross introgression from wild relatives through chromosome segmental substitution resulting in incorporation of resistance to certain biotic and abiotic stresses from *Oryza rufipogon*, *O. longistaminata* and *O. glaberrima*, using molecular markers and backcrossing with recurrent parent; a chromosome substitution (trisomics and monosomic or disomic additional line with alien chromosome) in case of wheat and rice; or a variety derived though somaclonal variation, like BIO-YSR (soma-clonal-variant of BEC 286) in case of rape seed-mustered with resistance to white rust and introgression of specific gene construct like Bt through genetic transformation or conventional backcrossing in cotton into the putative essentially derived variety, this would have direct bearing on calculation of genetic distance and would be able to account for all possible type of derivations, achieved through various methods, selection, mutation, translocation, recurrent backcrossing, deletion by substitution, polyploidy, chimera, polyembryony, soma-clonal variation and genetic transformation.

Thus, it would be fair to conclude that for measurement of genetic conformity of EDV to IV, morphological markers approach would be cheaper, as most time, it can be part of DUS testing. A recent study in *Lolium perenne* concluded that the morphological method provided a creditable measure of genetic conformity. Use of molecular marker, AFLP reproduced the same relationships as were evident from examining their morphology and both these results were consistent with the relationships known to exist within the different test groups. Principal components analysis as well as cluster analysis unambiguously associated the IV and the EDV accessions. Nevertheless, the threshold for essential derivation/ inclusion of distinctive features at micro/ molecular level can be further corroborated using molecular markers. Pusa Basmati-1 is a good example,
were EDV status has been established by both morphological and molecular measurement of genetic similarity and distinctness. The introgression of two genes conferring resistance to bacterial blight caused by *Xanthomonas oryzae* pv. *Oryzae* into Pusa Basmati-1, used as recurrent parent through phenotypic selection for diseases resistance, agronomic and basmati quality characteristics, and marker-assisted selection for two genes up to BC$_1$F$_3$ generation established dependency and derivation, which was corroborated by background analysis using 252 polymorphism (AFLP) markers, which discerned 80.4 to 86.7 per cent recurrent parent alleles (similarity), providing conformity to IV, Pusa Basmati-1, and derivation for resistance to bacterial blight. Further, one may argue on minimum number of backcrosses necessary to qualify the product to be called as an EDV. In conventional backcrossing at least two backcrosses would be required to recover the average recurrent parent genome to the level of 87.5 per cent on an average. However, as stated above, combining strong phenotypic selection with molecular marker assisted background selection in favour of recurrent parent genome; it may be possible to hasten the recovery of recurrent parent genome even in one backcrossing (selection of individuals having elimination of donor chromosome segments). Therefore, recovery of recurrent genome rather than number of backcross should be the criteria in EDV deduction.

**Threshold levels**

Thresholds for conformity can be based on the work done in different crops, and respective seed industries have adopted various levels using different types of the molecular markers. For example, types of the work done in maize using RFLP markers based distance, following threshold have been suggested- a) red zone above 90 per cent of similarity; b) orange zone between 90 and 85 per cent similarity and c) green zone below 85 per cent similarity. Recently, a new analysis using microsatellite was completed to agree upon a new threshold accounting for greater variability expressed- a) red zone above 90 per cent of similarity; b) orange zone between 90 and 82 per cent similarity and c) green zone below 82 per cent similarity. In case of hybrid the value for essential derivation can be drawn from the genetic structure deciphered through reverse engineering of parents (construction of parents from hybrid).

Similar threshold levels have been suggested and used in some other crops predominantly using molecular markers. Nevertheless, more scientific work/criteria’s are required for the measurement of essential derivations possibly with an evolution of two thresholds into one with greater statistical validations and genealogical data. Though in developed countries, particularly in Europe, the two codes of conduct have already been adapted and have been functioning amicably. Nevertheless, there are cases which have gone to the court, indicating that standard operating protocols for prompt essential derivation will become increasingly important and complex in future.

Registration of EDVs would encourage breeders for corrective breeding in relation to specific traits in existing varieties, which have adaptability genes for the successful expression of their genetic potential and provide benefits to the breeders’ of IV (provided they are protected). Therefore, presently, development of thresholds levels for genetic similarity (distance) predominantly based on highly heritable morphological markers or characteristic traits that are key for the description of an initial variety/ cultivar would be more appropriate and practical for identification of EDVs. Nevertheless, whatever methodology is followed, a code of conduct on general threshold can be derived as id being followed by the French maize seed industry inferring that above threshold be considered as EDV without further discussion; between 90 and 82 per cent there is a possibility of essential derivations which parties can negotiate, whereas, below 82 per cent it would not be a case of essential derivations.

The concept of derivation and dependence with quantitative definitions will prevent cosmetic breeding changes or plagiarism.
(development of EDV with traits of on commercial value), which sometime could allow creation of distinct varieties in one sense, but beyond the broad concept of breeders, farmers and that of biological diversity will impact the breeders work and claim for essential derivations. Some breeding methods associated with creation of higher degree of essential derivations are-

- Simple selection from existing variety for novelty, for example a pure line selected from a landrace (e.g., type 3 from Dehradun Basmati rice).
- Natural or induced mutation (Sarbatí Sonora wheat from Sonora 64).
- Repeated backcrossing and recurrent selection (improved Pusa Basmati).
- Genetic transformation using gene construct.
- Somaclonal variation (Pusa Jai Kisan from Varuna).

**Burden of proof**

In case of a dispute, the initial burden of proof lies on the owner of IV to prove essential derivations and then claim dependency. This can be relaxed in case the owner gives reasonable evidence on essential derivations as *prima-facie-proof* such as-

- Strong phenotypic similarity with IV.
- Strong genetic similarity.
- Only small differences for some simply inherited character.

If the owner of the IV fulfilled the above requirements then the second breeder would have to prove that there is no predominant derivation. In cases were a variety has a few essential characters different from IV (not providing benefit in terms of total derivation) it should be considered EDV only. For example, if a new apple variety developed from an existing variety differs from existing variety only in cosmetic features, such as leaf colour or shape, but produces fruit that is identical in shape, colour and taste to that of existing variety, it may be considered an essentially derived variety only. In such cases, the breeder of IV should be entitled for an equitable remuneration as per the provision of act, under rules in chapter IV clause 41 c and as per the clause 43 on determination of benefit sharing under section 26. This means distinctiveness originating from the act of non-commercial value should not be taken into account for establishing the status of independent variety to a putative EDV. If this does not happen the very purpose of bring in EDV clause is defeated, as it primarily aims at protecting the rights of IV’s breeder.

**Implications**

As essential derivations and then claim for dependency will be applicable only on protected IVs, therefore, it is required that varieties that have been released and notified under the appropriate law (in India section 54 of seeds act 1966) are yet to complete period of protection from the date of notification (15 years) must be protected, as the dependency does not exist on non-protected variety. It would be in the interest of the breeders/organization of such extant varieties to get them protected in order to have the mechanism of benefit sharing enabled. Same would be applicable to farmers’ varieties selected and maintained over generations with specific traits. Some social organization has to come forward in this regard for obtaining ownership rights to farmers’/communities. These varieties are likely to be used for development of EDV by both public and private sector breeders.

Ethically, principle of essential derivation and provision of benefit sharing need be extended to all common knowledge commercial varieties and a mechanism for protecting the right of breeder of an IV, used to develop an EDV for which no protection has been sought, must be developed. The essential characters have been given greater importance for claiming dependency, deviation in which may help in claiming an EDV to be an independently derived variety; therefore, greater weightage should be given to genetic similarity.
No dependency exists if an EDV is developed from another EDV (as per practice followed by UPON), this provision has serious implications in terms of provision has serious implications in terms protecting the interest of the breeder of an EDV, where the commercial benefit is accrued from the character of EDV used in further improvement/ incremental breeder of A++ exploiting the benefits of a trait, say ‘Bt’ added by the breeder of A+, involved in development of A++ without benefit sharing. Therefore, it is necessary protecting the interest of the breeder of an EDV as per the definition in the PPV&FR Act, can be developed from a variety that itself is EDV (predominantly derived from an initial variety). Therefore, a suitable mechanism/ practice for proportionate benefit sharing need to be developed to protect the interest of the breeder who’s EDV has been used for developing another EDV. Burden of proof should not lie on the breeder of IV only, but should be equally shared by the breeder of EDV for not being dependent on IV with hard data and breeding records.

The breeders would have to pay greater attention to the results of their breeding efforts, when working with a protected variety in the framework of breeders, exemption, if a breeding effort results in a product, which is above the broad definitions generally used to define a new independently derived variety, it is an EDV. An authorization of the breeder of the IV is required for commercialization.

Commercialization should be granted on conformity of threshold of essential derivations, as discussed above or as per the agreement or on case basis. In the entire situation the threshold level has to be defined in advance for a breeder to know its limits in relation to-

- Commercial value of added/distinctive traits (for benefit sharing).
- Maintaining breeding records.

Data keeping of above information will help the breeders to maintain threshold in conformity to the derivation as per the accepted guidelines and seek professional/legal advice for the registration of a variety.

It is required that in important crops a multivariate cluster analysis is performed on reference/notified varieties for scaling of GS and identify a cut – off point, or threshold in order of similarities (say 90%), beyond which variety pairs will classify derived. This may be further supported with some example of GS levels between an IV and EDV in respective crops. The level of genetic variation found in a crop may be a consideration for establishment of standards. Similarly, a threshold for potential derivation is to be set using the same similarity matrix.

Reference


International union for the protection of new varieties of plants [verified 30.NOV.2004], Geneva


aus praktischersicht(in German) Bericht über die 47. Arbeitstagung 1996 der Saatzuchtleiter im Rahmen der “vereinigung österreichischer Pflanzenzuchter” BAL, gumpenstein, 167-172


HECKENBERGER, M., M. BHON, D. KLIEN & A.E MELCHINGER (2005) Identification of essentially derived Varieties obtained from biparental crosses of homozygous lines II. Morphological distances and heterosis in comparison with simple sequence repeat and amplified fragment length polymorphism data in maize. crop. sci., 45:1132-1140


Table 1: Relation between essentially derived and dependency

<table>
<thead>
<tr>
<th>Situation</th>
<th>Detail</th>
<th>Condition</th>
<th>Application of dependency</th>
<th>Permission</th>
</tr>
</thead>
</table>
| I         | A→A″→A‴→A‴‴ | • A protected  
            • A″A‴A‴‴, EDVs of A with additional features | A″A‴A‴‴ dependent on A with conformity of predominance | Development of A″A‴A‴‴ would need |
| II        | B→B″→B‴→B‴‴ | • B is not protected  
            • B″B‴B‴‴, EDVs of B with additional features | B″B‴B‴‴ dependent on B with conformity of predominance | Since B is not protected EDV developer need no permission |
| III       | C→C″→C‴→C‴‴ | • C protected since 2000  
            • C″C‴C‴‴, EDVs of C with additional features | C″C‴C‴‴ dependent on C with conformity of predominance | Since C is protected from 2000, developer of EDV need permission and share benefit for a period of protection of C |
| IV        | D→D″→D‴→D‴‴ | • D protected  
            • D″ is EDV  
            • D″D‴‴ are EDV, do not have predominance trait of D | D″ is dependent on D with conformity of predominance  
            • D‴″ and D‴‴ do not have conformity of predominance to D  
            • D‴″ and D‴‴ have conformity of predominance to D‴″, but cannot be dependent on D‴″ or D‴‴ since both are EDV | D‴″ developer need permission for use of IV D  
            • D‴″ and D‴‴ developer need permission from either D‴″ or D‴‴ as they are EDV′s |
| V         | E→E″→E‴| • E protected  
            • E″ is EDV of E  
            • F through EDV of D‴ but new  
            • F‴ is EDV of F | E″ is dependent on E with conformity of predominance  
            • F now goes beyond EDV, because new  
            • F‴ EDV of F with conformity of predominance | Development of E″ is need permission from E developer  
            • Developer of F do not need permission from E developer as it is new variety  
            • Developer of F‴ need permission from developer of F |
| VI        | G = H (similar to G) | • G is protected  
            • H is similar to G, but do not appear in parentage | H is not dependent on G | H′s owner do not need permission from G |

IV= Initial variety, EDV=essentially derived variety, ″, ′, ″″ different levels of EDV

Chapter XI: How to protect essentially derived variety (EDV)?

Vilas A Tonapi1, M Elangovan1, Gururaj G Kulkarni2, Raghunath Kulkarni1 & N Seetharama1

1 - Directorate of Sorghum Research, Rajendranagar, Hyderabad-500030 (AP)
2 - Syngenta India Limited (Seeds Divn), Revenue Colony, Shivajinagar, Pune-411 005, Maharashtra

In real terms the Essentially Derived Variety is a variety predominantly derived from another variety or initial variety (I.V.), retaining the expression of the essential characteristics of the initial variety except for difference(s) that result from the act of derivation. Thus the Essentially Derived Variety is clearly distinguishable from initial variety at least by one character. The Essentially Derived Varieties are developed from the Initial Variety through transgenic approach, backcross, mutation, chimera, somaclonal variants and alike, can be included in this category.

The process of protecting the EDV

1. Fill in the Application Form-II with Technical Questionnaire and submit to Registrar of PPV&FRA, New Delhi
2. The essential documents to be appended with the application to get protection for EDV (Rule 34) are:
   • Affidavit (No GURT) as per pro forma, on non-judiciary stamp paper of Rs. 100/-nand duly notarized.
   • A statement giving details of the brief description of the characteristics of the variety to substantiate Novelty and DUS.
   • The details of the parental materials used.
3. In case of Transgenic EDV or new variety, following documents need to be appended.
   • GEAC approval for commercial cultivation.
   • If not approved for commercial cultivation, bio-safety clearance/event clearance for bio-safety, from RCGM/GEAC,MoEF
   • PV-1 and PV-2, as applicable.
   • Authorization (if any) from the breeder of I.V.
4. If the initial variety is registered, the essentially derived variety can be protected without DUS test,
5. The essentially derived variety as a New variety, will be registered only after DUS test as per section 15(3a), provided the variety in question meets the criteria of novelty

Documents to be appended:
Generally following attachments will have to be given along with the application of candidate EDV, for protection:

1) Complete application
2) Endorsement on Annexure 1, if the EDV to be protected is Farmers Variety
3) PV-1 to be enclosed, if somebody else, other than right holder (breeder/company/organization), is authorized to file the application.
4) PV-2 to be enclosed, if the breeder has transferred the rights to institute/company
5) Enclose the documents in support (b) and (d) as given above (if applicable)
6) Affidavit that the Terminator Technology and the genetic Use Restriction
7) Copy of the documents on filing date (vide Column 8(a ) of the application), not required if the EDV is not filled for protection earlier in any other country, required if it is filled in any other country.
8) Copy of latter of agreements (vide Column 10A) : Attach, if some line(s) from any other breeder or organization/company are being used in the
repeated propagation of candidate EDV.

9) Technical Questionnaire for the candidate variety (necessarily to be attached).

10) Succession certificate to be attached only if the present breeder, is not the original developer of the candidate EDV and taken over the original breeder, on his appointment as a breeder.

11) Attach the D.D. of the required amount of fee, give its details (Number, Date, amount, bank. On which drawn, etc.)

How Bt cotton can be protected?
Bt cotton is transgenic variety (section 2.i), and it can be protected as EDV or new variety or extant variety or variety of common knowledge or variety in the public domain.

- EDV as per Rule -34 and section 23 of the Act:- or,
- New variety as per section 15(3a):- or,
- Extant variety (with out DUS test as suggested in consultation meeting):- or,
- Truthfully labeled variety under the category of Variety of Common Knowledge

- (As suggested in consultation meetings), if not fulfilling the criteria of novelty.

The procedure and requirements for registration of Bt cotton under either of the above categories, will be the same as described under 2.1, 2.2.1, 2.2.3 and 2.3.

Issues and suggestions:

- Firm policy of protection of BT Cotton hybrid / transgenic variety, is required.
- While protecting the hybrid, there is in built provision for protection to parents, for cases of dispute. If particular transgenic parent per se is to be protected, a separate application needs to be submitted to the Authority as new variety.
- It is suggested that GEAC cleared transgenic variety/hybrids, be registered with out DUS test, but with only Grow Out Test (GOT) and gene protein test, to register as New/Extant variety, treating the GEAC on par with CVRC and GEAC permission, on par with the Gazette Notification.
- Bt cotton hybrid per se whether is to be treated as E.D.V.? The hybrid is not derived directly from the initial variety, but its one / or both parents, may be EDV.
FORM II
[See regulation 10] [See section 28 of the Act.]

APPLICATION FOR REGISTRATION OF ESSENTIALLY DERIVED VARIETY (EDV) UNDER PROTECTION OF PLANT VARIETY AND FARMERS’ RIGHTS ACT, 2001.
[See section 18, other than essentially derived variety.]

(Instruction to applicant: Wherever a box item appears against queries, please tick the relevant box and provide legibly written/typed response in other queries.)

1. Identity of the Applicant(s):

☐ INDIVIDUAL BREEDER
☐ SUCCESSOR OF BREEDER
☐ INSTITUTIONAL APPLICANT
☐ FARMER
☐ OTHERs

1 For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between farmer and plant breeder.

Notes: In this section √ the category under which the application is submitted such as individual breeder who has bred the variety independently without any affiliation to any organization or may be by his successor or any independent private institution working on its own or by a farmer who has bred his variety or a hybrid independently or community of farmers engaged in collective endeavor in developing a new hybrid or a variety or group of farmers or assignee of all above categories, or a convention country where India enjoys such mutual privileges (see rule 31 of the Act) of plant variety protection accompanied by enclosures or the attachments(where ever applicable) as given below:

a) Application on farmers’ variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers’ Rights Act, 2001 shall be submitted only with an endorsement in Annexure 1 either by the concerned Panchayat Biodiversity Management Committee, or District Agricultural Officer, or Director of Research of concerned State Agricultural University or District Tribal Development Officer.

b) An assignee or legal representative applicant shall submit required proof of the right of making the application in accordance with rule 27.

c) The Gazette Notification of Government of India should cover the country of the applicant and that India enjoys such mutual privileges (see rule 31 of the Act)

d) For material developed by participatory plant breeding, attach documents to explicitly show the deal struck between the farmer and the plant breeder.

The application-II, is same as Application 1, except the following points, for which the suggestion to fill in required information are given below: The procedure for submitting the information under common points in both. Application- I & II, remains the same. The applicants can be Individual Breeder * Successor of Breeder * Institutional Applicant * Farmer * other (Only 5 alternatives in this forms, compared to 9 in Application-I). Tick mark on an appropriate either as an Individual Breeder (if breeder himself is applicant), or others (if the application is binge filed on behalf of the Company/ Organization, as the assignee of rights).

2. Name(s) and Nationality of Applicant(s)

(a.) (If natural person): [Insert additional rows, if required]

1. Serial Number.
2. Name
3. Complete Address
4. Nationality

Notes: In jurisprudence, a natural person is a human being perceptible through the senses and subject to physical laws, as opposed to an artificial person, i.e., an organization that the law treats for some purposes as if it were a person distinct from its members or owner. Hence he doesn’t own the material for which he is making the application for plant variety protection, but he is only a representative of the farmers or the community of the farmers. Therefore, as required here, the applicant thus authorized has to abide by following stipulation:

3 If the applicant is the authorized representative of a group of farmers/community of farmers an authorization in Form PV-1 signed by all members of the group, or by the Head/office bearer of the community witnessed by the two people, if the identity of the applicant is ‘Community of farmers’ shall be attached.

(b.) (If a legal person; for example a firm or company or institution)

Name:
Address of its seat or establishment:
Year of Incorporation:

State whether the applicant legal person has non-Indian participation in capital or management:

☐ Yes ☐ No

If yes, identify the nationality
Notes: A legal person is an artificial entity through which the law allows a group of natural persons to act as if it were a single composite individual for certain purposes. This legal fiction does not mean these entities are human beings, but rather means that the law recognizes them and allows them to act as natural persons for some purposes—most commonly lawsuits, property ownership, and contracts. The concept goes by many names, including corporate personhood. Although the concept of a legal person is more central to Western law, particularly common law and civil law countries, it is also found in virtually every legal system.

In the case of ICAR or State Agricultural Universities, firm or a company a central nodal person designated as a legal person be named and his name and address be filled under (b). Mention the year of incorporation and also whether the legal person (company/firm /organization) has any non-Indian share/capital or participation in the management is there. Tick the appropriate boxes as yes or no. If there is no non-indian participation, tick the box as “No”. If there is non-Indian participation, mention the nationality of non-Indian entity which has a capital share or non-Indian participation.

For example, In case of seed company “Emergent genetics”: non-Indian participation is “Monsanto” or in case of Syngenta India Ltd., it is “Syngenta AG Switzerland”.

(c.) Indicate the name and address of the natural person, being an employee of the legal person, who is duly authorized to represent the legal person (example a director of a company or a partner of a firm):

Name: _________________________
Designation: _________________________
Address: _________________________
Pin: _________________________
Telephone: _________________________
Fax: _________________________
E-mail: _________________________

Notes: Write here the name, designation, address and telephone/fax details of the natural person—who in fact is an employee of the organization that has submitted the application (legal person). For example: If “Monsanto” is the legal person its PVP and patent manager will be the natural person. In case of ICAR, if ICAR is the legal person, designate/nominated director of the institute will be the natural person. In case of state Agricultural University, University is the legal person and Director of Research or any other nominated employee will be the natural person.

3. Name and Address of the Person to whom Correspondence related to this application is to be sent: (Attach authorization in Form-PV-1, if required)

Name
Address
Pin
Telephone:
Fax:
E-mail

Notes: In this section provide the name address of the person to whom the correspondence from the authority should be addressed with regard to the issues about the application. The person may be designated or nominated Director of the concerned crop institute in case of ICAR or any nominated person in case of SAU’s. In case of private seed companies, the natural person can also act as the person handling all the correspondence or the company may appoint a lawyer who will handle all the related correspondence. In all the cases the authorization in Form-PV-1 (to be issued by the legal person- ICAR, SAU or a seed company or farmer or community) is required if some one else as indicated is authorized to handle the correspondence on behalf of the legal person.

4. General Information of the Essentially derived variety:

Common name of the Crop:
Botanical name:
Family:
Denomination (in block letters):

5 (a). Type of Variety (see chapter III of the Protection of Plant Varieties and Farmers’ Rights Authority, 2003)

- TRANSGENIC
- MUTANT
- TISSUE CULTURE DERIVED
- BACK CROSS DERIVATIVE
- ANY OTHER (Ploidy Change etc)

Notes: Type of Essentially Derived Variety: Transgenic * Mutant * Tissue Culture Derived * Back Cross Derivative * Any Other (Ploidy change etc). Tick mark on an appropriate alternative either as Transgenic (if EDV is Bt cotton parental line/ variety, which is derived from initial variety, already protected) or Back Cross Derivative, if the resultant variety is developed by backcross.

5. (b). If transgenic attach copy of Genetic Engineering Approval Committee clearance and If the Essentially Derived Variety is a transgenic attach clearance on Bio-safety angle and Environment Department (GEAC) and related seed production permission (Give details)

If transgenic, attach copy of Genetic Engineering Approval Committee Clearance and If the Essentially Derived Variety is a transgenic attach clearance on Bio-safety angle forms Environment Department (GEAC) and related seed production permission (Given detail). GEAC Approval / Bio-safety clearance attached (Attach the permission latter, if the candidate EDV is approved for commercial cultivation by GEAC. If a transgenic line or variety to be protected, is not approved for commercial cultivation, the Bio-safety clearance certificate forms RCGM / GEAC is a must.

6.(a.) Classification of the Essentially derived variety:

- TYPICAL VARIETY
- HYBRID VARIETY*
- TRANSGENIC
- OTHER (SPECIFY)

5. Typical variety means a variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagated saved from previous crop production cycles (Example: pure lines including parental lines/composite varieties or vegetative propagated varieties).

* The hybrid and not a transgenic hybrid. In case of transgenic attach copy of the Genetic Engineering Approval Committee clearances for cultivation and seed productions.

Notes: In this section tick here the appropriate box the protection sought for a hybrid or a variety is a Typical variety (variety, which is not a hybrid or an essentially derived variety and normally propagated by using propagules saved from previous crop production cycles Example: pure lines including parental lines/composite varieties or vegetative propagated varieties), Hybrid variety (Refers to immediate offspring of cross between two parental varieties. In some cases hybrids perform superior than the best parental variety, but it is not a transgenic) or Transgenic (A hybrid evolved by introducing a new gene system in a plant variety or marker assisted) or other variety (Folk variety, Essential derived variety etc).

(b) What is (are) the Distinctness Uniformity Stability feature on the basis of which registration is sought. Explain in detail the group characters (see specific guidelines for details). Attach ‘Technical Questionnaire’ sheet with all needed details duly signed with seal.

Notes: In this section provide the salient preferred group characteristics (For example: As in case of Maize Ear character: anthocyanin coloourtion of silks and the dark purple colouration of silks or As in case of Rice Decorticated grain shape (Long slender shape etc.) specific to the hybrid or a variety), Distinctness Uniformity Stability features and Grouping characters. Also attach ‘Technical Questionnaire sheet giving detailed aspects of DUS.

(c) Whether the authorisation of the breeder of initial variety has been taken

- Yes
- No

(d.) If yes please attach the copy of Authorisation:

Tick mark appropriately as Yes if the candidate EDV is developed from the I. V. which is bred and protected by the applicant breeder himself or company , tick mark as No.
7. Names and Addresses of Breeder(s) who has/have bred the Essentially derived variety6:

Name:
Address:
Telephone:
Fax:
E-mail:
Nationality:

*In case of more than one breeder mention all names as (i), (ii), (iii) and so on in the above format. If required insert extra page. In the case the variety is evolved and conserved by group or community of farmers, it shall be endorsed in Annexure I.

Notes: Please mention here the name, address, telephone, fax, e-mail and nationality details of all the breeders involved in breeding the essentially derived variety for which the protection is sought, if the variety or a hybrid belongs to ICAR or SAU’s or any public institution. If the variety for which protection is sought belongs to farmers or community, the application should accompany endorsed Annexure I duly signed by the endorsing official. If it is a proprietary hybrid of a seed company, then name of the breeder will be the name of the company which has bred the variety, the telephone, fax and e-mail ID of natural person (who is the legal employee of that company and is authorized to represent the legal person) be written.

7. (a.) Details of all other earlier applications made on the candidate Essentially Derived Variety in convention countries or other countries (if applicable):

EDV denomination:
Nature of right applied for: ☐ Plant Breeder’s Rights ☐ Patent Filing Date
(Attach evidence):
Name of Country:
Name of Authority:
Application Number:
Status of Application: ☐ Under process ☐ Approved ☐ Rejected
(If required, repeat the above for each applicable country and attach separate sheet)

Notes: Here you need provide the details if an application has been already submitted in a convention country for plant variety protection, where India enjoys such mutual privileges (see rule 31 of the Act) of plant variety protection. The details regarding denomination of a variety, nature of right applied for, date of filing the application, name of the convention country, name of the authority to which application has been submitted in a convention country, the application number and the status (whether under process, approved or rejected) should be mentioned. If the application for protection for the same denomination has been submitted in several of the convention countries, then one needs to provide similar details in respect of each of the applications made as explained above. If no application is made write as “Not applicable”

(b.) Priority is now claimed in respect of the earliest application for a essentially derived variety of said denomination (if applicable):

In (country) :
On (date of application) :

Notes: Here you need provide the details if you are claiming priority for earliest application submitted for a essentially derived variety, then provide information (name of the country) on the application already submitted for a convention country for plant variety protection, where India enjoys such mutual privileges (see rule 31 of the Act) of plant variety protection, and the date of filing the application. If no priority is claimed, write as “Not applicable”

9. Has the candidate essentially derived variety been commercialized or otherwise exploited?
☐ Yes ☐ No

If yes, please indicate the following:
Date of the first sale of the variety : (dd/mm/yyyy)
Country (ies) where Protection is made :
Denomination used :
Trademark used, if any :
Variation in important trait with Respect to first filing: (attach sheet)
Notes: Here you need to provide information on whether the candidate essentially derived variety for which protection is sought is already commercialized or sold? Or otherwise it is exploited? If being exploited, mention what for? The explanation could be the candidate essentially derived variety has been exploited for hybrid production. If yes, then provide information on date of first sale of variety if already sold in market, countries where the protection is sought, denomination of the essentially derived variety, trademark used and variation in important traits with respect to first filing of the application. If it is not sold, write that it is not sold. If no protection is sought for the essentially derived variety, then write: “not applicable, If there is no trademark (brand name of variety) under which it is sold” write as “not applicable”

10.(a.) If the candidate essentially derived variety is a hybrid, state whether all the parental lines required for the repeated propagation of the hybrid are bred exclusively by the applicant(s):

☐ Yes  ☐ No

If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them:

Parental line (S):
Denomination:
Source:
Authorization letter obtained:
☐ Attached  ☐ Not attached

Notes: Here you need to provide information on whether the candidate essentially derived variety which is a hybrid for which protection is sought is bred through your exclusively developed proprietary parental lines? Then provide their names or denominations of both male and female lines. If no, mention which of the parental line is outsourced, whether letter of agreement is obtained for each of the outsourced protected parental lines in compliance with Section 30 of the Protection of the Plant Varieties and Farmers’ Rights Act and also provide following information on each of them. Denomination should not be altered from what was used at the source. Information on source may include name of breeder or institution or farmer or farming community who had bred and maintained the parental line. Repeat above information for additional applicable parental line.

(b.) If the candidate Essentially Derived Variety is a hybrid, state any Farmers’ variety of common knowledge or in public domain is used as parental line for the repeated propagation of the hybrid:

☐ Yes  ☐ No

If yes, give following details:
Denomination:
Geographical Source:
Details of Attribution (origin):
Details of owner farmer /village community/ Institution/ Organisation:

Notes: Here you need to state whether you have used any farmer’s variety or variety of common knowledge or variety in the public domain as the parental lines. If yes, then provide information on their denomination, geographical source, Details of Attribution (origin), Details of owner farmer/ village community/ Institution/ Organization. If your answer is no, write as “not applicable”

(c) If the candidate is an Essentially Derived Variety, state whether a variety registered under the Protection of Plant Varieties and Farmers’ Rights, Act 2001 and notified in the Plant Variety of Journal of India has been used as the initial variety: If yes, give following details:

Denomination:
Geographical Source:
Details of Attribution (origin):
Details of owner farmer /village community/ Institution/ Organisation:

The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case what sort of farmer/community recognition the Applicant has planned?
Notes: Benefit sharing means sharing of whatever accruing from utilization of biological resources, community knowledge, technologies, innovations or practices. Benefit Sharing is applicable to the biological resource and traditional knowledge conserved by communities. Whenever a party outside the community accesses these resources and commercializes them with or without value addition or innovation, an equitable part of the benefit gained by the party is to be shared with the community. Like communities, it is applicable to individuals too. The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case, if you have used any farmer’s variety or variety of common knowledge or variety in the public domain as the parental lines for hybrid development, then you have to clearly indicate as to what sort of farmer/community recognition the Applicant is planned.

11. In case exotic germplasm was used in the derivation of the candidate Essentially Derived variety or hybrid, give details:

Notes: In case any parental line, varieties or the hybrids has anything from the exotic origin, then please declare the source of material, from which organization, country or an individual it has been obtained, including the fact whether it is a part of biodiversity regulations as per CBD in other countries. This is required mainly to trace about material involved in breeding and also the stake holders who may be part of benefit sharing aspects in view of utilization of exotic material belonging to biological resources, community knowledge, technologies, innovations or practices. Benefit Sharing is also applicable to the biological resource and traditional knowledge conserved by communities. Whenever a party outside the community accesses these resources and commercializes them with or without value addition or innovation, an equitable part of the benefit gained by the party is to be shared with the community. Like communities, it is applicable to individuals too. The Protection of Plant Varieties and Farmers’ Rights Act, 2001 provides access to benefit sharing to farmers who have conserved the genetic resource that has contributed towards variety development. In this particular case, if you have used any farmer’s variety or variety of common knowledge or variety in the public domain as the parental lines for hybrid development, then you have to clearly indicate as to what sort of farmer/community recognition the Applicant is planned.

12. Details on the payment of application fee and Distinctness Uniformity Stability testing fee:

Stability testing fee:
Amount of fee: Rupees 200/- (Rupees...Two hundred only.)
Demand Draft Number and date:
Name of Bank and branch in which the Demand Draft is drawn: -----------------------

9Applications from farmers, group of farmers and community of farmers submitted in accordance with the authentication specified under column 1 of this application are exempted from payment of Distinctness Uniformity Stability testing fee.

(Signature of the Applicant)

DECLARATIONS

I/We hereby apply for the grant of registration of the candidate Essentially Derived variety with the above said denomination and I/we am are conversant with the Protection of Plant Varieties and Farmers’ Rights Act, 2001 and Rules thereof related to this application.

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of the candidate Essentially Derived variety.

I/We hereby declare that the essentially derived variety complies with the sub- section (3) of section 29 of Protection of Plant Varieties and Farmers Rights Act, 2001.

I/We hereby declare that I/we have not applied for or received a trademark for the said denomination of the variety.

I I/We hereby declare that the information given in this application for the registration of the above said candidate Essentially Derived Variety, including annexure and all supporting documents are complete, true and correct to the best of my/our knowledge, information and belief and no information has been wilfully concealed.
I/We hereby declare that terminator technology (TT) or Genetic Usage Restrictive Technologies (GURTS) or such ones are not there in this material submitted for registration. I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

I/We hereby declare that I/We shall abide by all the provisions and guidelines of Protection of Plant Varieties and Farmers’ Rights Act, 2001.

Place:  
Date:  
Signature of Applicants  
Seal

Whenever the applicants are more than one person each applicant has to sign. In the case of authorized application or application by assignees, such person(s) authorized or assigned shall sign.

Following are the attachments (duly signed/seal) submitted along with of the application (note that wherever signature is affixed in the application or attachments, all such signatures shall be in the original):

(a) complete application;
(b) endorsement in Annexure 1 in the case of farmers’ variety (vide column 1, if applicable);
(c) document of authorization in Form PV-1 (if applicable);
(d) document of assignment in Form PV-2 (if applicable);
(e) documents in support of (b) and (d) as given above. (If applicable);
(f) Affidavit that the Terminator Technology and the Genetic Use Restriction Technology is not involved;
(g) copy of document on filing date (vide column 8A, if applicable);
(h) copy of letter of agreement (vide column 10A, if applicable);
(i) technical Questionnaire for the Essentially derived variety (attached);
(j) if the applicants by virtue of succession or an assignment of the right to apply for registration attach a proof to show the right to application as stipulated in sub-section (3) of section 18 of the Protection of Plant Varieties and Farmers’ Rights Authority, 2001;
(k) in case of Convention Country applicant attach complete details on the variation in the important trait with respect to first filing as enclosure;
(l) in case of Convention Country applicant provide information whether the variety has been sold or otherwise disposed of within or outside the convention Country with details thereof;
(m) in case of transgenic relevant Genetic Engineering Approval Committee clearances and approvals; and
(n) Fees as applicable;

If felt necessary attach colour pictures of specific characteristics used for establishing distinctness. Please sign each page of the application and other document on the left margin.
ANNEXURE 1

Endorsement of application for registration of farmer’s Essentially Derived Variety under Protection of Plant Varieties and Farmers’ Rights Act, 2001

1. Name(s) of applicant farmer/ Group of farmers/Community of farmers

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Name with surname/Name of Group/Name of Community</th>
<th>Permanent Address</th>
</tr>
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<tbody>
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</tbody>
</table>

2. Denomination of the essentially derived variety: ___________________________________

3a. (Applicable to individual farmer applicant)
I hereby declare that I have been a permanent cultivator since last many years in the …………………… village falling under the ………………………. local body/Panchayat(s) in the ……………………… District of …………………………… State and that I and my family are the initial and exclusive developers and conservers of the essentially derived variety denominated as …………………………… under the kind …………………………… (Common name of crop) to the botanical species ………………………………………

3b. (Applicable to group/community of farmers applicant)
We hereby declare that we have been the permanent cultivators since last many years in the …………… village(s) falling under the ………………… local body/ Panchayat(s) in the ………………. District(s) of ……………………. State(s) and that we are the initial and exclusive developers and continuous conservers of the essentially derived variety denominated as ……………………… under the kind …………… (Common name of crop) belonging to the botanical species …………………………………. We on behalf of our group/community hereby authorize…………………………. s/o…………………… (Name), who is a member of our group/community and permanent resident of …………………………… (Complete postal address) to do the needful and be the signatory on our behalf for the limited purpose of securing registration of the essentially derived variety in our favour under Protection of Plant Varieties & Farmers’ Rights Act, 2001.

Dated………………
Place………………

Signature and Name of the Farmer or Authorized person of Group/Community
(To be signed before the endorsing official)

It is hereby certified that the above said essentially derived variety is bred / developed and continuously conserved and cultivated only by the applicant farmer / group of farmers / community of farmers who is / are permanent residents of above said village(s) and I am fully conversant with the applicant farmer / group or community of farmers and that the essentially derived variety is due to their efforts (strike out unwanted words given as options).

Date
Place

Signature
Name
(Chairperson / Secretary of the Concerned Panchayat Biodiversity Management Committee OR Concerned District Agricultural Officer OR Director of Research Concerned State Agricultural Universities OR Concerned District Tribal Development Office.
(With Official Rubber Stamp)
Technical Questionnaire

1. Name of the Applicant/breeder/company: -
2. Year of Establishment: -
3. If registered company under Company’s Act 1956 (Give details): -
4. Location of corporate office and address: -
5. Tel/fax/e-mail: -
6. Name of essentially derived variety: -

(a) Has it been released in any Convention Country earlier
   □ Yes □ No
   If yes give complete details in column number 13

(b) Pedigree/genealogy: -
   (Include schematic diagram giving details of varieties, lines, or clones used in the breeding of essentially derived variety).

(c) Breeding of Essentially derived variety
   (i) Origination (Tick the correct one)
      Controlled pollination / open pollination / induced mutation / spontaneous mutation / introduction / selection/ seedling selection / any other (specify)
   (ii) Parental material (name of the parental material, characteristics of the parental material, distinguishable from the essentially derived variety). If the variety was developed by selection, then the number of selection cycles completed before fixing it.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Male line</th>
<th>Female line</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iii) Breeding technique/procedure used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv) Selection criteria used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(v) Stage of selection and multiplication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vi) Location where breeding was conducted</td>
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</tr>
</tbody>
</table>

7. Particulars of comparative trial conducted by the applicant, if any.
Information on the location, place, period and year/month of comparative trial conducted method of cultivation such as open field, facilities, planting, potting etc., scale of cultivation, reference varieties used, criteria for choice of the reference varieties, design of experiment, method of analysis of variance experimental error where applicable, and other details.

NOTE: Applicant may furnish data, tables, copy (ies) of publication(s) related to the details of breeding, comparative trial and comparative data in addition to table of characteristics of candidate and reference varieties. This information provided under this item will not be published by the Authority but will be used to facilitate examination of essentially derived variety.

8. Characteristics of the essentially derived variety
Please describe characteristics of the variety in the subheadings: Plant, Stem, Leaf, Inflorescence, Flower and flower parts, Fruit and fruit parts, Seed etc. Describe characters within subheadings generally in the following order: habit, height, length, width, size, shape, colour (RHS colour chart reference with edition). Refer the specific guideline wherever necessary for clarity of description.

(a)(i) Give group characters
(a)(ii) Distinguishing characteristics (descriptive or elaborate)
(b) Table of characteristics between candidate denomination and reference variety
Please give replicated values for all of its distinguishing and other description for important characteristics along with the corresponding average values of the references varieties.

NOTE: Two or more reference varieties should be compared with the essentially derived variety in the characteristics table, including one deemed to be the most similar variety and other(s) as obvious/similar as possible. If you provide this information it will facilitate the Authority in their DUS test further in examination of the essentially derived variety.

9. Characteristics of the reference varieties
(a) Most similar variety
   (i) Denomination   (ii) Basis of choice of this variety for comparison   (iii) Distinguishable Characteristics
(b) Other reference variety
   (i) Denomination  (ii) Basis of choice of this variety for comparison  (iii) Distinguishable Characteristics

10. Statement of distinctness of essentially derived variety

Please give a distinctness statement covering a brief summary of the characteristics that distinguish the essentially derived variety from all varieties of common knowledge. The distinctness statement should include, (i) names of reference variety (ies) that have been observed most similar to the essentially derived variety, and (ii) salient comparison for major distinguishing characteristics between the essentially derived variety and the similar/reference variety (ies).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Essentially derived variety</th>
<th>Reference variety</th>
</tr>
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<tbody>
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11. Statement on uniformity and stability of essentially derived variety

Please give a brief statement describing any variation in the variety that may be regarded as part of its normal uniform or stable expression, which is predictable, capable of being described in clear terms and commercially acceptable. This should include description and frequency of any off-types, variants or mutations. In your opinion what should be the frequency of off types or any other describable variation beyond which the essentially derived variety shall be deem to be non-uniform. Also please point out which are the traits that may be particularly referred to as indicators to determine an unstable expression of the phenotype of essentially derived variety.

12. Methods for maintaining the essentially derived variety

Please provide in a brief statement as to how the propagating material will be maintained throughout the duration of the plant breeder's right, and complete address where the variety will be maintained. This should include status of varieties that are not propagated by seeds including place and method of maintenance and storage of their vegetative material.

NOTE: The holder of a plant breeder's right is responsible for ensuring that propagating material representative of the variety is maintained for the duration of the right.

13. Information on variety registered in Convention Countries.
   a. What were the grouping characters in that application for this essentially derived variety?
   b. What was the Distinctness Uniformity and Stability parameter on which it was registered?
   c. What is the variation in important trait with respect to first filing and the present one (Attach photograph)?
   d. Has the Variety been withdrawn in the first filed country from cultivation or banned or from any of the subsequently released country?
   e. If so, the reasons (supplement with information)?

I/We hereby declare that no person other than the person or persons mentioned in this application has been involved in the breeding, or discovery or development of this denomination.

Date  
Signature

Signature of Witness and Address ________________

Designation of the Breeder/Company with seal

The breeder/company should sign with date each page of the Technical Questionnaire.

[No. __________________________ ]

(_______________________________)
Annexure I: The Protection of Plant Varieties and Farmer’s Rights Act, 2001

The purpose of this act in India is to provide for the establishment of an effective system for protection of plant varieties (PPV) rights of farmers and plant breeders, to encourage the development of new varieties of plants. Whereas it is considered necessary to recognize and protect the rights of the farmers in respect of their contribution made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties. And whereas for accelerated agricultural development in the country, it is necessary to protect plant breeders’ rights to stimulate investment for research and development, both in the public and private sector, for the development of new plant varieties. And whereas, such protection will facilitate the growth of the seed industry in the country which will ensure the availability of high quality seeds and plant material to the farmers. And whereas to give effect to the aforesaid objectives, it is necessary to undertake measures for the protection of the rights of farmers and plant breeders; And whereas India, having ratified the Agreement on Trade Related Aspects of Intellectual Property Rights should inter-alia make provision for giving effect to sub-paragraph (b) of paragraph 3 of article 27 in Part II of the said Agreement relating to protection of plant varieties; Be it enacted by Parliament in the Fifty-first Year of the Republic of India as follows:

Chapter-I: Preliminary

1. Short title, extent and commencement: (1) This Act may be called the Protection of Plant Varieties and Farmers’ Rights Act, 2000; (2) It extends to the whole of India; (3) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint; and different dates may be appointed for different provisions of this Act and any reference in any such provision to the commencement of this Act shall be construed as a reference to the coming into force of that provision.

2. Definitions: In this Act, unless the context otherwise requires: (a) "Authority" means the Protection of Plant Varieties and Farmers’ Rights Authority established under sub-section (1) of section 3; (b) "benefit sharing" in relation to a variety, means such proportion of the benefit accruing to a breeder of such variety of such proportion of the benefit accruing to the breeder from an.2 agent or a Licensee of such variety, as the case may be, for which a claimant shall be entitled as determined by the Authority under section 26. (c) "breeder" means a person or group of persons or a farmer or group of farmers or any institution which has bred, evolved or developed any variety; (d) "Chairman" means the Chairman of the Tribunal; (e) "Chairperson" means the Chairperson of the Authority appointed under clause (a) of sub-section (5) of section 3; (f) "Convention country" means a country which has acceded to an international convention for the protection of plant varieties to which India has also acceded, or a country which has a law on protection of plant varieties on the basis of which India has entered into an agreement for granting, plant breeders’ right to the citizens of both the countries; (g) "denomination", in relation to a variety or its propagating material or essentially derived variety or its propagating material, means the denomination of such variety or its propagating material or essentially derived variety or its propagating material, as the case may be, expressed by means of letters or a combination of letters and figures written in any language; (h) "essential characteristics" means such heritable traits of a plant variety which are determined by the expression of one or more genes of other heritable determinants that contribute to the principle features, performance or value of the plant variety; (i) "essentially derived variety", in respect of a variety (the initial variety) shall be said to be essentially derived from such initial variety when it— (i) is predominantly derived from such initial variety, or from a variety that is itself predominantly derived from such initial variety, while retaining the expression of the essential characteristics that results from the genotype or combination of genotype of such initial variety; (ii) is clearly distinguishable from such initial variety; and (iii) conforms (except for the differences which result from the act of derivation) to such initial variety in the expression of the essential characteristics that result from the genotype or combination of genotype of such initial variety. (j) "extant variety" means a variety available in India which is— (i) notified under section 5 of the Seeds Act, 1966; or (ii) farmers’ variety; or (iii) a variety about which there is common knowledge; or (iv) any other variety which is in public domain; (k) "farmer" means any person...
who—(i) cultivates crops either by cultivating the land himself; or (ii) cultivates crops by directly supervising the cultivation of land through any other person; or (iii) conserves and preserves, severally or jointly, with any person any wild species or traditional varieties or adds value to such wild species or traditional varieties through selection and identification of their useful properties. (l) "farmers' variety" means a variety which— (i) has been traditionally cultivated and evolved by the farmers in their fields; or (ii) is a wild relative or land race of a variety about which the farmers possess the common knowledge. (m) "Gene Fund" means the National Gene Fund constituted under subsection (1) of section 45; (n) Judicial Member* means a Member of the Tribunal appointed as such under sub-section (1) of section 56 and includes Chairman; (o) "Member" means a Judicial Member or a Technical member of the Tribunal and includes Chairman; 3"member" means a member of the Authority appointed under clause (b) of sub-section (5) of section 3 and includes the Member-Secretary; (q) "prescribed" means prescribed by rules made under this Act; (r) "propagating material" means any plant or its component or part thereof including an intended seed or seed which is capable of or of suitable for regeneration into a plant; (s) "Register" means a national Register of Plant Varieties referred to in section 13; (t) "Registrar" means a Registrar of Plant Varieties appointed under sub-section (4) of section 12 and includes the Registrar-General; (u) "Registrar-General" means the Registrar-General of Plant Varieties appointed under sub-section; (3) of section 12; (v) "Registry" means the Plant Variety Registry referred to in sub-section (1) of section 12; (w) "regulations" means regulations made by the Authority under this Act; (x) "seed" means a type of living embryo or propagule capable of regeneration and giving rise to a plant which is true to such type; (y) "Variety", means a plant grouping except micro-organism within a single botanical taxon of the lowest known rank, which can be— (i) defined by the expression of the characteristics resulting from a given genotype of that plant grouping; (ii) distinguished from any other plant grouping by expression of at least one of the said characteristics; and (iii) considered as a unit with regard to its suitability for being propagated, which remains unchanged after such propagation, and includes propagating material of such variety, extant variety, transgenic variety, farmers' variety and essentially derived variety. (z) "Tribunal" means the Plant Varieties Protection Appellate Tribunal established under section 54; (z-a) "Technical Member" means a Member of the Tribunal who is not a Judicial Member.

Chapter II: A. The plant varieties and farmers' rights protection authority

3. Establishment of Authority: (1) The Central Government shall, by notification in the Official Gazette, establish an authority to be known as the Protection of Plant Varieties and Farmers' Rights Authority for the purposes of this Act; (2) The Authority shall be a body corporate by the name aforesaid, having perpetual succession and a common seal with power to acquire, hold and dispose of properties, both movable and immovable, and to contract, and shall be by the said name sue and be sued; (3) The head office of the Authority shall be at such place as the Central Government may, by notification in the Official Gazette, specify and the Authority may, with the previous approval of the Central Government, establish branch offices at other places in India; (4) The Authority shall consist of a Chairperson and fifteen members; (5) (a) The Chairperson to be appointed by the Central Government, shall be a person of outstanding calibre and eminence, with long practical experience to the satisfaction of that Government especially in the field of plant varietal research or agricultural development. (b) The members of the Authority, to be appointed by the Central Government, shall be as follows, namely: (i) the agriculture Commissioner, Government of India, Department of Agriculture and Cooperation, New Delhi, Member ex-officio; (ii) the Deputy Director General in charge of Crop Sciences, Indian Council of Agricultural Research, New Delhi, ex-officio; (iii) the Joint Secretary in charge of Seeds, Government of India, Department of Agriculture & Cooperation, New Delhi, ex-officio; (iv) the Horticulture Commissioner, Government of India, Department of Agriculture & Cooperation, New Delhi, ex-officio; (v) the Director, National Bureau of Plant Genetic Resources, New Delhi, ex-officio; (vi) one member not below the rank of Joint Secretary to the Government of India, to represent the Department of Biotechnology, Government of India, ex-officio; (vii) one member not below the rank of Joint Secretary to the Government of India to represent the Ministry of Environment and Forests of the Government of India, ex-officio; (viii) one member not below the rank of Joint Secretary to the Government of India to represent the Ministry of Law of the Government of India, ex-officio; (ix) one representative from a National or State level farmers' organisation to be nominated by the Central Government; (x) one
representative from a tribal organization to be nominated by the Central Government; (xi) one representative from the seed industry to be nominated by the Central Government; (xii) one representative from an agricultural university to be nominated by the Central Government; (xiii) one representative from a National or State level women’s organisation associated with agricultural activities to be nominated by the Central Government; (xiv) two representatives of State Governments on rotation basis to be nominated by the Central Government; (c) The Registrar General shall be the ex-officio Member-Secretary of the Authority; (d) The term of office of the Chairperson and the manner of filling the post shall be such as may be prescribed; (7) The Chairperson shall appoint a Standing Committee consisting of five members, one of which shall be a member who is a representative from a farmers organisation to advise the Authority on all issues including farmers rights; (8) The Chairperson shall be entitled to such salary and allowances and shall be subject to such conditions of service in respect of leave, pension, provident fund and other matters as may be prescribed. The allowances for non-official members for attending the meeting of the Authority will be as such as may be prescribed. The allowances for non-official members for attending the meeting as prescribed; (9) The Chairperson may resign his office by giving notice thereof in writing to the Central Government and on such resignation being accepted, he shall be deemed to have vacated his office; (10) On the resignation of the Chairperson or on the vacation of the office of Chairperson for any reason, the Central Government may appoint one of the members to officiate as Chairperson till a regular Chairperson is appointed in accordance with clause (a) of sub-sec. (5).

4. Meeting of Authority: (1) The Authority shall meet at such time and place and shall observe such rules of procedure in regard to the transaction of business at its meetings (including the quorum at its meetings and the transaction or business of its Standing Committee appointed under sub-section 7 of section 3) as may be prescribed; (2) The Chairperson of the Authority shall preside at the meetings of the Authority...5 (3) If for any reason the Chairperson is not able to attend any meeting of the Authority, any member of the Authority chosen by the members present at the meeting shall preside at the meeting; (4) All questions which come before any meeting of the Authority shall be decided by a majority of the votes of the members of the Authority present and voting and in the event of equality of votes, the Chairperson of the Authority or in his absence, the person presiding shall have and exercise a second or casting vote; (5) Every member who is in any way, whether directly, indirectly or personally, concerned or interested in a matter to be decided at the meeting shall disclose the nature of his concern of interest and after such disclosure, the member concerned or interested shall not attend that meeting; (6) No act or proceeding of the Authority shall be invalid merely by reason of— (a) any vacancy in, or any defect in the constitution of the Authority; or (b) any defect in the appointment of a person acting as the Chairperson or a member of the Authority; or (c) any irregularity in the procedure of the Authority not affecting the merits of the case.

5. Committee of Authority: (1) The Authority may appoint such committees as may be necessary for the efficient discharge of its duties and performance of its functions under this Act; (2) The persons appointed as members of the committee under sub-section (1) shall be entitled to receive such allowances or fees for attending the meetings of the committee as may be fixed by the Central Government.

6. Officers and employees of Authority: Subject to such control and restriction as may be prescribed, the Authority may appoint such other officers and employees as may be necessary for the efficient performance of its functions and the method of appointment, the scale of pay and allowances and other conditions of service of such other office and employees of the Authority shall be such as may be prescribed.

7. Chairperson to be Chief Executive: The Chairperson shall be the Chief Executive of the Authority and shall exercise such powers and perform such duties as may be prescribed.

8. General functions of Authority: (1) It shall be the duty of the Authority to promote, by such measures as it thinks fit, the encouragement for the development of new varieties of plants and to protect the rights of the farmers and breeders; (2) In particular, and without prejudice to the generality of the foregoing provisions, the measures referred to in sub-section (1) may provide for— (a) the registration of extant and new plant varieties subject to such terms and conditions and in the manner as may be prescribed; (b) developing characterization and documentation of varieties registered under this Act; (c)
documentation, indexing and cataloguing of farmers’ varieties; (d) compulsory cataloguing facilities for all varieties of plants; (e) ensuring that seeds of the varieties registered under this Act are available to the farmers and providing for compulsory licensing of such varieties if the breeder of such varieties or any other person entitled to produce such variety under this Act does not arrange for production and sale of the seed in the manner as may be prescribed; (f) collecting statistics with regard to plant varieties, including the contribution of any person at any time in the evolution or development of any plant variety, in India or in any other country, for compilation and publication; (g) ensure the maintenance of the National Register of plant variety.

9. Authentication of orders of Authority: All orders and decisions of the Authority shall be authenticated by the signature of the Chairperson or any other member authorized by the Authority in this behalf.

10. Delegation: The Authority may, by general or special order in writing, delegate to the Chairperson, any member or officer of the Authority subject to such conditions or limitations, if any, as may be specified in the order, such of its powers and functions (except the power to make regulations under section 94) under this Act as it may deem necessary.

11. Power of Authority: In all proceedings under this Act before the Authority or the Registrar— (a) the Authority or the Registrar, as the case may be, shall have all the powers of a civil court for the purposes of receiving evidence, administering oaths, enforcing the attendance of witnesses, compelling the discovery and production of documents and issuing commissions for the exam-ination of witnesses; (b) the Authority or the Registrar may, subject to any rules made in this behalf under this Act, make such orders as to cost as it considers reasonable and any such order shall be executable as a decree of a civil court.

B. The registry, registration of varieties and conditions of registration

12. Registry and offices thereof: (1) The Central Government shall establish for the purpose of this Act, a Registry which shall be known as the Plant Varieties Registry; (2) The head office of the Plant Varieties Registry shall be located in the head office of the Authority, and for the purpose of facilitating the registration of plant varieties, there may be established, at such places, as the Authority may think fit, branch offices of the Registry; (3) The Authority shall appoint a Registrar General of Plant Varieties who shall be entitled to such salary and allowances and shall be subject to such conditions of service in respect of leave, pension, provident fund and such other matters as may be prescribed; (4) The Authority may appoint such number of Registrars as it thinks necessary for Registration of plant varieties under the superintendence and direction of the Registrar General under this Act and may make regulations with respect to their duties and jurisdiction; (5) The term of office and the conditions of service of the Registrars shall be such as may be provided by regulations; (6) The Authority may, by notification in the Official Gazette, define the territorial limits within which a branch office of the Registry may exercise its functions; (7) There shall be a seal of the Plant Varieties Registry.

13. National Register of Plant Varieties: (1) For the purposes of this Act, a register called the National Register of Plant Varieties shall be kept at the head office of the Registry, wherein shall be entered the names of all the registered plant varieties with the names and addresses of their respective breeders, the right of such breeders in respect of the registered variety, the particulars of the denomination of each registered variety, its seeds or other propagating material along with specification of salient features thereof and such other matters as may be prescribed; (2) Subject to the superintendence and direction of the Central Government, the register shall be kept under the control and management of the Authority; (3) There shall be kept at each branch office of the Registry a copy of the register and such other documents as the Central Government may, by notification in the Official Gazette, direct.

Chapter III: A. Registration of plant varieties

14. Application for Registration: Any person specified in section 16 may make an application to the Registrar for registration of any variety— (a) of such genera and species as specified under sub-section (2) of section 29; or (b) which is an extant variety; or (c) which is a farmers’ variety.

15. Registerable varieties: (1) A new variety shall be registered under this Act if it conforms to the criteria of novelty, distinctiveness, uniformity and stability; (2) Notwithstanding anything contained in sub-
section (1) an extant variety shall be registered under this Act within a specified period if it conforms to such criteria of distinctiveness, uniformity and stability as shall be specified under regulations made by the Authority; (3) For the purposes of sub-section (1) and sub-section (2) as the case may be a new variety shall be deemed to be: (a) novel, if at the date of filing of the application for registration for protection, the propagating or harvested material of such variety has not been sold or otherwise disposed of by or with the consent of its breeder or his successor for the purposes of exploitation of such variety; (i) in India, earlier than one year, or (ii) Outside India in the case of trees or vines earlier than six years, or in any other case, earlier than four years; before the date of filing such application. Provided that a trial of a new variety which has not been sold or otherwise disposed of shall not affect the right to protection. Provided further that the fact that on the date of filing the application for registration the propagating or harvested material of such variety has become a matter of commonly known other than through the aforesaid manner shall not affect the criteria of novelty for such variety; (b) distinct, if it is clearly distinguishable by at least one essential characteristic from any another variety whose existence is a matter of common knowledge in any country at the time of filing of the application; Explanation—For the removal of doubts, it is hereby declared that the filing of an application for the granting of a breeder's right to a new variety or for entering such variety in the official register of varieties in any convention country shall be deemed to render that variety a matter of common knowledge from the date of the application in case the application leads to the granting of the breeder's right or to the entry of such variety in such official register, as the case may be; (c) uniform if subject to the variation that may be expected from the particular features of its propagation it is sufficiently uniform in its essential characteristics; (d) stable, if its essential characteristics remain unchanged after repeated propagation or, in the case a particular cycle of propagation, at the end of each such cycle; (4) A new variety shall not be registered under this Act if the denomination given to such variety; (i) is not capable of identifying such variety; and (ii) consists solely of figures; and (iii) is liable to mislead or to cause confusion concerning the characteristics, value identity of such variety or the identity of breeder of such variety; or (iv) is not different from every denomination which designates a variety of the same botanical species or of a closely related species registered under this Act; or (v) is likely to deceive the public or cause confusion in the public regarding the identity of such variety; (vi) is likely to hurt the religious sentiments respectively of any class or section of the citizens of India; or (vii) is prohibited for use as a name or emblem for any of the purpose mentioned in section 3 of the Emblems and Names (Protection of Improper Use) Act, 1950; or (viii) is comprised of solely or partly of geographical name: Provided that the Registrar may register a variety. the denomination of which comprises solely or partly of a geographical name, if he considers that tile use of such denomination in respect of such variety is an honest use under the circumstances of the case.

B. Application for registration

16. Persons who may make application: (1) An application for registration under section 14 shall be made by: (a) any person claiming to be the breeder of the variety; and (b) any successor of the breeder of the variety; or (c) any person being the assignee of the breeder of the variety in respect of the right to make such application or (d) any farmer or group of farmers or community of farmers claiming to be the breeder of the variety; (e) any person authorized in the prescribed manner by a person specified under clause (a) to (d) to make application on his behalf; (f) any university or publicly funded agricultural institution claiming to be the breeder of the variety; (2) An application under sub-section (1) may be made by any of the persons referred to therein individually or jointly with any other person;

17. Compulsory Plant Variety denomination: (1) Every application shall assign a single and distinct denomination to a variety with respect to which he is seeking registration under this Act in accordance with the regulations; (2) The Authority shall, having regard to the provisions of any international convention or treaty to which India has become a party, make regulations governing the assignment of denomination to a plant variety; (3) Where the denomination assigned to the variety do not satisfy the requirements specified in the regulations, the Registrar may require the applicant to propose another denomination within such time as may be provided by such regulations; (4) Notwithstanding anything contained in the Trade Mark Act, 1999 a denomination assigned to a variety shall not be registered as a trade mark under that Act.

18. Form of applicant: (1) Every application for registration under section 14 shall: (a) be with respect to a variety; (b) state the
denomination assigned to such variety by the applicant; (c) be accompanied by an affidavit sworn by the applicant that such variety does not contain any gene or gene sequence involving terminator technology; (d) be in such form as may be specified by regulation; (e) contain a complete passport data of the parental lines from which the variety has been derived along with the geographical location in India from where the genetic material has been taken and all such information relating to the contribution, if any, of any farmer, village community, institution or organisation in breeding, evolution or developing the variety; (f) be accompanied by a statement containing a brief description of the variety bringing out its characteristics of novelty, distinctiveness, uniformity and stability as required for registration; (g) be accompanied by such fees as may be prescribed; (h) contain a declaration that the genetic material or parental material acquired for the breeding, evolving or developing the variety has been lawfully acquired; and (i) be accompanied by such other particulars as may be prescribed: Provided that in case where the application is for the registration of farmers' variety, nothing contained in clause (h) to (i) shall apply in respect of the application and the application in such form as may be prescribed; (2) Every application referred to in sub-section (a) shall be filed in the office of the Registrar. (3) Where such application is made by virtue of a succession or an assignment of the right to apply for registration, there shall be furnished at the time of making the application, or within such period after making the application as may be prescribed, a proof of the right to make the application.

19. Test to be conducted: (1) Every applicant shall, along with the application for registration made under this Act, make available to the Registrar such quantities of seeds of a variety for registration of which such application is made, for the purpose of conducting tests to evaluate whether such variety along with parental material conform to the standards as may be specified by regulations: Provided that the Registrar or any person or test centre to whom such seed has been sent for conducting test shall keep such seed during his or its possession in such manner and in such condition that its viability and quality shall remain unaltered. (2) The applicant shall deposit such fee as may be prescribed for conducting tests referred to in sub-section (1). The tests under sub-section (1) shall be conducted in such manner and by such method as may be prescribed.

20. Acceptance of application or amendment thereof: (1) On receipt of an application under section 14, the Registrar may, after making such inquiry as he thinks fit with respect to the particulars contained in such application, accept the application absolutely or subject to such condition or limitations as he deems fit. (2) Where the Registrar is satisfied that the application does not comply with the requirements of this Act or any rules or regulations made there under, he may, either—(a) require the applicant to amend the application to his satisfaction; (b) reject the application; Provided that no application shall be rejected unless the applicant has been given a reasonable opportunity of presenting his case.

21. Advertisement of application: (1) Where an application for registration of a variety has been accepted absolutely or subject to conditions or limitations under sub-section (1) of section 20, the Registrar shall, as soon as after its acceptance, cause such application together with the conditions or limitations, if any, subject to which it has been accepted and the specifications of the variety for registration of which such application is made including its photographs or drawings. To be advertised in the prescribed manner calling objections front the persons interested in the matter; (2) Any person may, within three months from the date of the advertisement of an application for registration on payment of the prescribed fee, give notice, in writing in the prescribed manner, to the Registrar, of his opposition to the registration: (3) Opposition to the registration under sub-section (2) may be made on the following grounds, namely: (a) that the person opposing the application is entitled to the breeder's right as against the applicant; or (b) that the variety is not registrable under this Act; (c) that the grant of certificate of registration may not be in public interest; (d) that the variety may have adverse effect on environment. (4) The Registrar shall serve a copy of the notice of opposition on the applicant for registration and, within two months from the receipt by the applicant of such copy of the notice of opposition, the applicant shall send to the Registrar in the prescribed manner a counter statement of the grounds on which he relies for his application, and if he does not do so, he shall be deemed to have abandoned his application; (5) If the applicant sends such counter statement, the Registrar shall serve a copy thereof on the person giving notice of opposition; (6) Any evidence upon which the opponent and the applicant may rely shall be submitted, in the manner prescribed and within the time prescribed, to the Registrar.
and the Registrar shall give an opportunity to them to be heard, if so desired; (7) The Registrar shall, after hearing the parties, if so required, and considering the evidence, decide whether and subject to what conditions or limitations, if any, the registration is to be permitted and may take into account a ground of objection whether relied upon by the opponent or not. (8) Where a person giving notice of opposition or an applicant sending a counter statement after receipt of a copy of such notice neither resides nor carries on business in India, the Registrar may require him to give security for the cost of proceedings before him and in default of such security being duly given may treat the opposition or application, as the case may be, as abandoned; (9) The Registrar may, on request, permit correction of any error in, or any amendment of, a notice of opposition or a counter statement on such terms as he may think fit.

22. Registrar to consider grounds for opposition:
The Registrar shall consider all the grounds on which the application has been opposed and after giving reasons for his decision, by order, uphold or reject the opposition.

23. Registration of essentially derived variety: (1) An application for the registration of an essentially derived variety of the genera or species specified under sub-section (2) of section 29 by the Central Government shall be made to the Registrar by or on behalf of any person referred to in section 14 and in the manner specified in section 18 as if for the word "variety" the words "essentially derived variety" have been substituted therein and shall be accompanied by such documents and fee as may be prescribed; (2) When the Registrar is satisfied that the requirements of sub-section (1) have been complied with to his satisfaction, he shall forward the application with his report and all the relevant document to the Authority. (3) On receipt of an application under sub-section (2), the Authority shall get examined such essentially derived variety to determine as to whether the essentially derived variety is a variety derived from the initial variety by conducting such tests and following such procedure as may be prescribed; (4) When the Authority is satisfied on the report of the test referred to in sub-section (3) that the essentially derived variety has been derived from the initial variety, it may direct the Registrar to register such essentially derived variety and the Registrar shall comply with the direction of the Authority; (5) Where the Authority is not satisfied on the report of the test referred to in sub-section (3) that the essentially derived variety has been derived from the initial variety it shall refuse the application; (6) The rights of the breeder of a variety contained in section 28 shall apply to the breeder of essentially derived variety:

Provided that the authorization by the breeder of initial variety to the breeder of essentially derived variety under, sub-section (2) of section 28 may be subject to such terms and conditions as both the parties may mutually agree upon; (7) An essentially derived variety shall not be registered under this section unless it satisfies the requirements of section 15 as if for the word "variety", the words "essentially derived variety" have been substituted therein; (8) When an essentially derived variety has been registered by the Registrar in compliance with the direction of the Authority under sub-section (4), the Registrar shall issue to the applicant a certificate of registration in the prescribed form and sealed with seal of the Registry and send a copy thereof to the Authority and to such other authority, as may be prescribed, for information.

Chapter IV: Duration and effect of registration and benefit sharing

24. Issue of certificate of registration: (1) When an application for registration of a variety (other than an essentially derived variety), has been accepted and either: (a) the application has not been opposed and the time of notice of opposition has expired; or (b) the application has been opposed and opposition has been rejected, the Registrar shall register the variety, (2) On the registration of the variety (other than an essentially derived variety), The Registrar shall issue to the applicant a certificate of registration in the prescribed form and sealed with seal of the Registry and send a copy to the Authority for determination of benefit sharing and to such other authority, as may be prescribed, for information. The maximum time required by the Registrar for issuing the certificate of registration from the date of filing of the application for registration of a variety shall such as may be prescribed; (3) Where registration of a variety (other than an essentially derived variety), is not completed within twelve months from the date of the application by reason of default on the part of the applicant, the Registrar may after giving notice to the applicant in the prescribed manner treat the application as abandoned unless it is completed within the time specified in that behalf in the notice; (4) The Registrar may amend the Register or a certificate of registration for the purpose...
of correcting a clerical error or an obvious mistake; (5) The Registrar shall have power to issue such directions to protect the interests of a breeder against any abusive act committed by any third party during the period between filing of application for registration and decision taken by the Authority on such application; (6) The certificate of registration issued under this section or sub-section (8) of section 23 shall be valid for nine years in the case of trees and vines and six years in the case of other crops and may be reviewed and renewed for remaining period on payment of such fees as may be fixed by the rules made in this behalf subject to the condition that the total aggregate period of validity shall not exceed: (i) in the case of trees and vines, eighteen years from the date of registration of the variety; (ii) in the case of extant variety, fifteen years from the date of the notification of that variety by the Central Government under section 5 of the Seeds Act, 1966; and (iii) in the other cases, fifteen years from the date of registration of the variety.

25. Publication of list of varieties: The Authority shall, within such intervals as it thinks appropriate, publish the list of varieties which have been registered during that intervals.

26. Determination of benefit sharing by Authority: (1) On receipt of a copy of the certificate of registration under sub-section (8) of section 23 or sub-section (2) of section 24, the Authority shall publish such contents of the certificate and invite claims of benefit sharing to the variety registered under such certificate in the manner as may be prescribed; (2) On invitation of the claims under sub-section (1), any person or group of persons or non-governmental organisation shall submit its claim of benefit sharing to such variety in the prescribed form within such period, and accompanied with such fee, as may be prescribed; (3) On receiving a claim under subsection (2), the Authority shall send a copy of such claims to breeder of the variety registered under such certificate and the breeder may, on receipt of such copy, submit his opposition to such claim within such period and in such manner as may be prescribed; (4) The Authority shall, after giving an opportunity of being heard to the parties’ dispose of the claim received under sub-section (2) (5) While disposing of the claim under sub-section (4), the Authority shall explicitly indicate in its order the amount of the benefit sharing, if any, for which the claimant shall be entitled and shall take into consideration the following matters, namely: (a) the extent and nature of the use of genetic material of the claimant in the development of the variety relating to which the benefit sharing has been claimed, (b) the commercial utility and demand in the market of the variety relating to which the benefit sharing has been claimed; (6) The amount of benefit sharing to a variety determined under this section shall be deposited by the breeder of such variety in the manner referred to under clause (a) of sub-section (1) of section 45 in the National Gene Fund; (7) The amount of benefit sharing determined under this section shall, on a reference made by the Authority in the prescribed manner, be recoverable as an arrear of land revenue by the District Magistrate within whose local limits of jurisdiction the breeder liable for such benefit sharing resides.

27. Breeder to deposit seeds or propagating material: (1) The breeder shall be required to deposit such quantity of seeds or propagating material including parental line seeds of registered variety in the National Gene Bank as may be specified in the regulations for reproduction purpose at the breeder's expense within such time as may be specified in that order; (2) The seeds or propagating material or parental line seeds to be deposited under sub-section (1) shall be deposited to the National Gene Bank specified by the Authority.

28. Registration to confer right: (1) Subject to the other provisions of this Act, a certificate of registration for a variety issued under this Act shall confer an exclusive right on the breeder or his successor, his agent or licensee, to produce, sell, market, distribute, import or export the variety. Provided that in the case of an extant variety, unless a breeder or his successor, his agent or licensee, to produce, sell, market, distribute, import or export the variety.

29. Authorization of breeder: (2) breeder may authorize any person to produce, sell, market or otherwise deal with a variety registered under this Act subject to such limitations and conditions as may be specified in the regulations; (3) Every authorization under this section shall be in such form as may be specified by regulations; (4) Where an agent or a licensee referred to in sub-section (1) becomes entitled to produce, sell, market, distribute, import or export a variety, he shall apply in the prescribed manner and
with the prescribed fee to the Registrar to register his title and the Registrar shall on receipt of application and on proof of title to his satisfaction, register him as an agent or a licensee, as the case may be, in respect of the variety for which he is entitled for such right, and shall cause particulars of such entitlement and conditions or restrictions, if any, subject to which such entitlement is made, to be entered in the Register: Provided that when the validity of such entitlement is in dispute between the parties, the Registrar may refuse to register the entitlement and refer the matter in the prescribed manner to the Authority and withhold the registration of such entitlement until the right of the parties in dispute referred to has been determined by the Authority. (5) The Registrar shall issue a certificate of registration under sub-section (4) to the application after such registration and shall enter in the certificate the brief conditions of entitlement, if any, in the prescribed manner, and such certificate shall be the conclusive proof of such entitlement and the conditions or restriction thereof, if any.; (6)Subject to any agreement subsisting between the parties, an agent or licensee of a right to a variety registered under sub-section (4) shall be entitled to call upon the breeder or his successor thereof to take proceedings to prevent infringement thereof, and if the breeder or his successor refuses or neglects to do so within three months after being so called upon, such registered agent or licensee may institute proceedings for infringement in his own name as if he were the breeder, making the breeder or his successor a defendant; (7)Notwithstanding anything contained in any other law, a breeder or his successor so added as defendant shall not be liable for any costs unless he enters an appearance and takes part in the proceedings; (8)Nothing in this section shall confer on a registered agent or registered licensee of a variety any right to transfer such a right further thereof; (9) Without prejudice to the registration under sub-section (4), the terms of registration—(a)may be varied by the Registrar as regards the variety in respect of which, or any condition or restrictions subject to which, it has effect on receipt of an application in the prescribed manner of the registered breeder of such variety, or his successors; (b) ay be cancelled by the Registrar on the application in the prescribed manner of the registered breeder of such variety or his successor or of the registered agent or registered licensee of such variety; (c)may be cancelled by the Registrar on the application in the prescribed manner of any person other than the breeder, his successor, the registered agent or the registered licensee on any of the following, grounds, namely:—(i) that the breeder of a variety or his successor or the registered agent or registered licensee of such variety, misrepresented, or failed to disclose, some fact material to the application for registration under sub-section (4) which if accurately represented or disclosed would have justified the refusal of the application for registration of the registered agent or registered licensee; (ii) that the registration ought not to have effected having regard to the right vested in the applicant by virtue of a contract in the performance of which he is interested; (d) may be cancelled by the Registrar on the application in the prescribed manner of the breeder of a registered variety, or his successor on the ground that any stipulation in the agreement between the registered agent or the registered licensee, as the case may be, and such breeder or his successor regarding the variety for which such agent or licensee is registered is not being enforced or is not being complied with; (e)may be cancelled by the Registrar on the application of any person in the prescribed manner on the ground that the variety relating to the registration is no longer existing; (10) The Registrar shall issue notice in the prescribed manner of every application under this section to the registered breeder of a variety or his successor and to each registered agent or registered licensee (not being the applicant) of such variety; (11) The Registrar shall before making any order under sub-section (9) forward the application made in that behalf along with any objection received by any party after notice under subsection (10) for the consideration of the Authority, and the Authority may, after making such enquiry as it thinks fit, issue such directions to the Registrar as it thinks fit and the Registrar shall dispose of the application in accordance with such directions.

29. Exclusion of certain varieties: (1) Notwithstanding anything contained in this Act, no registration of a variety shall be made under this Act in cases where prevention of commercial exploitation of such variety is necessary to protect public order or public morality or human, animal and plant life and health or to avoid serious prejudice to the environment; (2) The Central Government shall, by notification in the Official Gazette, specify the genera or species for the purposes of registration of varieties other than extant varieties and farmers' varieties under this Act; (3) Notwithstanding anything contained under sub-section (2) above and sub-sections (1) and (2) of section 15, no variety of any genera or species which involves any
technology including which is injurious to the life or health of human beings, animals or plants shall be registered under this Act.; Explanation—For the purpose of this sub-section; the expression any "technology" includes genetically use restriction technology and terminator technology; (4) The Central Government shall not delete any genera or species from the list of genera or species specified in a notification issued under sub-section (2) except in public interest; (5) Any variety belonging to the genera or species excluded under subsection (4) shall not be eligible for any protection under this Act.

30. Researcher's Rights: Nothing contained this Act shall prevent: (a) the use of any variety registered under this Act by any person using such variety for conducting experiment or research; and (b) the use of a variety by any person as an initial source of variety for the purpose of creating other varieties: Provided that the authorization of the breeder of a registered variety is required where the repeated use of such variety as a parental line is necessary for commercial production of such other newly developed variety.

31. Special provisions relating to applications for registration from citizens of convention Countries: (1) With a view to the fulfillment of a treaty, convention or arrangement with any country outside India which affords to citizens of India similar privileges as granted to its own citizen, the Central Government may, by notification in the Official Gazette, declare such country to be a convention country for the purposes of this Act; (2) Where a person has made an application for the granting of a breeder's right to a variety or for entering such variety in the official register of varieties in a convention country and that person or any person entitled to make application on his behalf under section 14 or section 23 makes an application for the registration of such variety in India within twelve months after the date on which the application was made in the convention country, such variety shall, if registered under this Act, be registered as of the date on which the application was made in the convention country and that date shall be deemed for the purposes of this Act to be the date of registration; (3) Where applications have been made for granting of a breeder's right to a variety or for entering such variety in the official register of varieties in two or more convention countries, the period of twelve months referred to in the last preceding subsection shall be reckoned from the date on which the earlier or earliest of those applications was made; (4) Nothing in this Act shall entitle the breeder of a registered variety to infringement of rights other than protected under this Act which took place prior to the date of application of registration under this Act.

32. Provisions as to reciprocity: Where any country specified by the Central Government in this behalf by notification in the Official Gazette under sub-section (1) of section 31 does not accord to citizens of India the same rights in respect of the registration and protection of a variety, as it accords to its own nationals, no nationals of such country shall be entitled, either solely or jointly with any other person, to apply for the registration of a variety or be entitled to get a variety registered under this Act.

Chapter V: Surrender and revocation of certificate and rectification and correction of register

33. Surrender of certificate of registration: (1) A breeder of a variety registered under this Act may, at any time by giving notice in the prescribed manner to the Registrar, offer to surrender his certificate of registration; (2) Where such an offer is made, the Registrar shall notify in the prescribed manner every registered agent or registered licensee relating to such certificate; (3) Any of such agent or licensee may within the prescribed period after such notification give notice to the Registrar of his opposition to the surrender and where any such notice is given, the Registrar shall intimate the contents of such notice to the breeder of such variety; (4) If the Registrar is satisfied after hearing the applicant and all the opponents, if desirous of being heard that the certificate of registration may properly be surrendered, he may accept the offer and by order revoke the certificate of registration;

34. Revocation of protection on certain grounds: Subject to the provisions contained in this Act, the protection granted to a breeder in respect of a variety may, on the application in the prescribed manner of any person interested, be revoked by the authority on any of the following grounds, namely:—(a) that the grant of the certificate of registration has been based on incorrect information furnished by the applicant; (b) that the certificate of registration has been granted to a person who is not eligible for protection under this Act; (c) that the breeder did not provide the Registrar with such information, documents of material as required for registration under this Act; (d) that the breeder has failed to provide all alternative denomination of the variety
which is the subject matter of the registration to
the Registrar in case where the earlier
denomination of such variety provided to the
Registrar is not permissible for registration under
this Act; (e) that the breeder did not provide the
necessary seeds or propagating material to the
person to whom compulsory license has been
issued under section 48 regarding the variety in
respect of which registration certificate has been
issued to such breeder; (f) that the breeder has
not complied with the provisions of this Act or
provisions of rules or regulations made there
under; (g) that the breeder has failed to comply
with the directions of the Authority issued under
this Act; (h) that the grant of the certificate of
registration is not in the public interest. Provided
that no such protection shall be revoked unless
the breeder is given a reasonable opportunity to
file objection and of being heard in the matter.

35. Payment of annual fee and forfeiture of
registration in default thereof: (1) The Authority
may, with the prior approval of the Central
Government and after notification in the Official
Gazette, impose a fee to be paid annually, by
every breeder of a variety, agent and licensee
thereof registered under this Act determined on
the basis of benefit or royalty gained by such
breeder, agent or licensee, as the case may be, in
respect of the variety, for the retention of their
registration under this Act; (2) If any breeder,
agent or licensee fails to deposit the fee referred
to in sub-section (1) imposed upon him under
that sub-section in the prescribed manner up to
two consecutive years, the Authority shall issue
notice to such breeder, agent or licensee and on
service of such notice if he fails to comply with
the direction in the notice, the Authority shall
declare all the protection admissible under
registration certificate issued to such breeder or
agent or licensee forfeited; (3) the arrears of fee
imposed under sub-section (1) shall be deemed
to be arrears of land revenue and shall be
recoverable accordingly.

36. Power to cancel or change registration and to
rectify the Register: (1) On an application made
in the prescribed manner to the Registrar by any
person aggrieved, the Registrar may make such
order as he may think fit for cancelling or
changing any certificate of registration issued
under this Act on the ground of any contravention
of the provisions of this Act or failure of observe
a condition subject to which such registration
certificate is issued; (2) Any person aggrieved
by the absence or omission from the register of any
entry, or by any entry in the register without
sufficient cause, or by any entry wrongly
remaining on the register, may apply in the
described manner to the Registrar and the
Registrar may make such order for making,
expunging or varying the entry as he may
think fit; (3) The Registrar may in any
proceeding, under this section decide any
question that may be necessary or expedient to decide in connection with the
rectification of the register; (4) The Registrar,
on his own motion may, after giving notice
in the prescribed manner to the parties
concerned and after giving them an
opportunity of being heard make any order
referred to in sub-section (1) or sub-section
(2).

37. Correction of register: (1) The Registrar
may, on an application in the prescribed
manner by the breeder of a variety
registered under this Act— correct any error
in the register in the name, address or
description of such breeder or any other
entry relating to such variety; (b) enter in the
register any change in the name, address or
description of such breeder; (c) cancel the
entry in the register of the variety in respect
of which such application is made; and
make any consequential amendment or
alteration in the certificate of registration
and for that purpose require the certificate
of registration to be produced to him. (2)
The Registrar may, on application made in
the prescribed register by a registered agent
or a registered licensee of a variety and
after notice to the registered breeder of
such variety, correct any error, or enter any
change, in the name, address or description
of such registered agent or registered
licensee, as the case may be, in the register
or certificate of registration under this Act.

38. Alteration of denomination of a
registered variety: (1) The breeder of a
variety registered under this Act may apply
in the prescribed manner to the Registrar to
delete any part or to add to or alter the
denomination of such variety in any manner
not substantially affecting the identity
thereof, and the Registrar may refuse, leave
or may grant it on such terms and subject to
such limitations as he may think fit to avoid
any conflict with the rights of other breeders
of the varieties registered under this Act; (2)
The Registrar may cause an application
under this section to be advertised in the
prescribed manner in any case where it
appears to him that it is expedient so to do,
and where he does so, if within the
prescribed time from the date of the
advertisement any person gives notice to
the Registrar in the prescribed manner of
opposition to the application, the Registrar
shall, after hearing the parties if so
required, decide the matter; (3) Where
leave is granted under this section, the
denomination of the variety as altered shall be
advertised in the prescribed manner, unless the
application has already been advertised under
sub-section (2).

Chapter VI

39. Farmers rights: (1) Notwithstanding anything
contained in this Act, a farmer (i) who has bred or
developed a new variety shall be entitled for
registration and other protection in like manner
as a breeder of a variety under this Act; (ii) the
farmers' variety shall be entitled for registration
as specified in the Article 18(h); (iii) who is
engaged in the conservation of genetic resources
of land races and wild relatives of economic
plants and their improvement through selection
and preservation shall be entitled in the
prescribed manner for recognition and reward
from the National Gene Fund; Provided that
material so selected and preserved has been
used as donors of genes in varieties remittable
under this Act; (iv) Shall be deemed to be entitled
to save, use, sow, re-sow, exchange, share or sell
his farm produce including seed of a variety
protected under this Act in the same manner as
he was entitled before the coming into force of
this Act; Provided that the farmer shall not be
to sell branded seed of a variety
protected under this Act.

Explanation: For the purpose of clause (iv)
branded seed means any seed put in a package
or any other container and labeled in a manner
indicating that such seed is of a variety protected
under this Act; (2) Where any propagating
material of a variety registered under this Act has
been sold to a farmer or a group of farmers or any
organisation of farmers, the breeder of such
variety shall disclose to the farmer or the group of
farmers or the organisation of farmers, as the
case may be, the expected performance under
given conditions, and if such propagating material
fails to provide such performance under such
given conditions as the farmer or the group of
farmers or the organisation of farmers, as the
case may be, may claim compensation in the
prescribed manner before the Authority and the
Authority shall after giving notice to the breeder of
the variety and after providing him an opportunity
to file opposition in the prescribed manner and
after hearing the parties, it may direct the breeder of
the variety to pay such compensation as it
dees fit, to the farmer or the group of farmers or
the organisation of farmers, as the case may be.

40. Certain information to be given in application
registration: (1) A breeder or other person
making application for registration of any variety
under chapter III shall disclose in the application
the information regarding the use of genetic
material conserved by any tribal or rural families in the breeding or development of
such variety; (2) If the breeder or such other
person fails to disclose any information
under sub-section (1), the Registrar may
after being satisfied that the breeder or
such person has wilfully and knowingly
concealed such information reject the
application for registration.

41. Rights of communities: (1) Any person,
group of persons (whether actively engaged
in farming or not) or any governmental or
non-governmental organisation may on
behalf of any village or local community in
India, file in any centre notified, with the
previous approval of the Central
Government by the Authority in the Official
Gazette any claim attributable to the
contribution of the people of that village or
local community as the case may be in the
evolution of any variety for the purpose of
staking a claim on behalf of such village or
local community; (2) Where any claim is
made under sub-section (1), the centre
notified under that sub-section may verify
the claim made by such person or group of
persons or such governmental or non-
governmental organisation in such manner
as it deems fit and if it is satisfied that such
village or local community has contributed
significantly to the evolution of the variety
which has been registered under this Act, it
shall report its findings to the Authority; (3)
When the Authority, on a report under sub-
section (2) is satisfied, after such enquiry as
it may deem fit, that the variety with which
the report is related has been registered
under the provision of this Act, it may issue
notice in the prescribed manner to the
breeder of that variety and after providing
opportunity to such breeder to file objection
in the prescribed manner and of being
heard, it may subject to any limit notified by
the Central Government, by order, grant
such sum of compensation to be paid to a
person or group of persons or governmental
or non-governmental organisation which
has made claim under sub-section (1) to the
Authority, as it may deem fit; (4) Any
compensation granted under sub-section
(3) shall be deposited by the breeder of the
variety in the Gene Fund; (5) The
compensation granted under sub-section
(3) shall be deemed to be an arrear of land
revenue and shall be recoverable by the
Authority accordingly.

42. Protection of innocent infringement:
Notwithstanding anything contained in this
Act—(i) a right established under this Act shall not be deemed to be infringed by a farmer who at the time of such infringement was not aware of the existence of such right; and (ii) a relief which a court may grant in any suit for infringement referred to in section 65 shall not be granted by such court nor any cognizance of any offence under this Act shall be taken for such infringement by any court against a farmer who proves, before such court, that at the time of the infringement he was not aware of the existence of the right so infringed.

43. **Authorization of farmer's variety:** Notwithstanding anything contained in section 28 and sub-section (6) of section 23, where an essentially derived variety is derived from a farmers' variety, the authorization under sub-section (1) of section 28 shall not be given by the breeder of such farmers' variety except with the consent of the farmers or group of farmers or community of farmers who have made contribution in the preservation or development of such variety.

44. **Exemption from fee:** A farmer or group of farmers or village community shall not be liable to pay any fee in any proceeding before the Authority or Registrar or the Tribunal or the High Court under this Act and the rules made there under: **Explanation:** For the purposes of this section, fee for any proceeding includes any fee payable for inspection of any document or for obtaining a copy of any decision or order or document under this Act or the rules made there under.

45. **Gene Fund:** (1) The Central Government shall constitute a Fund to be called the National Gene Fund and there shall be credited thereto—(a) the benefit sharing received in the prescribed manner from the breeder of a variety or an essentially derived variety registered under this Act or propagating material of such variety or essentially derived variety, as the case may be; (b) the annual fee payable to the authority by way of royalty under sub-section (1) of section 35; (c) the compensation deposited in the Gene Fund under sub-section (4) of section 41; (d) the contribution from any national and international organisation and other sources; (2.) The Gene Fund shall in the prescribed manner be applied for meeting—(a) any amount to be paid by way of benefit sharing under sub-section (5) of section 26; (b) the compensation payable under sub-section (3) of section 41; (c) the expenditure for supporting the conservation and sustainable use of genetic resources including in-situ and ex-situ collections and for strengthening the capability of the Panchayat in carrying out such conservation and sustainable use; (d) the other expenditures of the schemes relating to benefit sharing, framed under section 46.

46. **Framing of schemes etc:** (1) The Central Government shall, for the purposes of section 41 and clause (d) of sub-section (2) of section 45 frame by notification in the Official Gazette, one or more schemes. (2) In particular and without prejudice to the generality of the provisions of sub-section (1), the scheme may provide for all or any of the following matters, namely:—(a) the registration of the claims for the purposes of section 41 under the scheme and all matters connected with such registration; (b) the processing of such claims for securing their enforcement and matters connected therewith; (c) the maintenance of records and registers in respect of such claims; (d) the utilisation, by way of disbursal (including apportionment) or otherwise, of any amounts received in satisfaction of such claims, (e) the procedure for disbursal or apportionment by the Authority in the event of dispute regarding such claims; (f) the utilisation of benefit sharing for the purposes relating to breeding, discovery or development of varieties; (g) the maintenance and audit of accounts with respect to the amounts referred to in clause (d).

**Chapter VII: Compulsory License**

47. **Power of Authority to make order for compulsory license in certain circumstances:** (1) At any time, after the expiry of three years from the date of issue of a certificate of registration of a variety, any person interested may make an application to the Authority alleging that the reasonable requirements of the public for seeds or other propagating material of the variety have not been satisfied or that the seed or other propagating material of the variety is not available to the public at a reasonable price and pray for the grant of a compulsory license to undertake production, distribution and sale of the seed or other propagating material of that variety; (2) Every application under sub-section (1) shall contain a statement of the nature of the applicant's interest together with such particulars as may be prescribed and the facts upon which the application is based; (3) The Authority, after consultation with Central Government, and if satisfied after giving an opportunity to the breeder of such variety, to file opposition and after hearing the parties, on the issue that the reasonable requirements of the public with
respect to the variety have not been satisfied or that the variety is not available to the public at a reasonable price, may order such breeder to grant a license to the applicant upon such terms and conditions as it may deem fit and send a copy of such order to the Registrar to register such license under sub-section; (3) or section 29 on payment of such fee by the applicant as is referred to in that sub-section.

48. When requirement of public deemed to have not been satisfied: In determining the question as to whether the reasonable requirements of the public for seeds of a variety or its propagating material as referred to in sub-section (1) or sub-section(3) of section 47, the Authority shall take into account—(i) the nature of the variety, the time which has elapsed since the grant of the certificate of registration of the variety, price of the seed of the variety and the measures taken by the breeder or any registered licensee of the variety to meet the requirement of the public; and (ii) the capacity, ability and technical competence of the applicant to produce and market the variety to meet the requirement of the public.

49. Adjournment of application for grant of compulsory license: (1) If the breeder of a variety registered under this Act in respect of which any application has been pending before the Authority under section 47 makes a written request to the Authority on the ground that due to any reasonable factor, such breeder has been unable to produce seed or other propagating material of the variety on a commercial scale to an adequate extent till the date of making such request, the Authority may on being satisfied that the said ground is reasonable, adjourn the hearing of such application for such period not exceeding twelve months in aggregate as it may consider sufficient for optimum production of the seed or propagating material of such variety or essentially derived variety, as the case may be, by such breeder; (2) No adjournment of the application under sub-section (1) shall be granted unless the Authority is satisfied that the breeder of the variety registered under this Act in respect of which such application is made has taken immediate measures to meet the reasonable requirements of the public for the seeds or other propagating material of such variety.

50. Duration of compulsory license: The Authority shall determine the duration of the compulsory licenses granted under this Chapter and such duration may vary from case to case keeping in view the gestation periods and other relevant factors but in any case shall not exceed the total remaining period of the protection of that variety and when a compulsory license is granted the prescribed authority shall in the prescribed manner make available to the licensee of such compulsory license, the reproductive material of the variety relating to such compulsory license stored in the National Gene Bank or any other centre.

51. Authority to settle terms and conditions of licence: (1) The Authority shall, while determining the terms and conditions of a compulsory licence under the provisions of this Chapter, endeavour to secure—(i) reasonable compensation to the breeder of the variety relating to the compulsory licence having regard to the nature of the variety, the expenditure incurred by such breeder in breeding the variety or for developing it and other relevant factors; (ii) that the compulsory licensee of such variety possesses the adequate means to provide to the farmers, the seeds or its other propagating material of such variety timely and at reasonable market price; (2) No compulsory licence granted by the Authority shall authorize the licensee to import the variety relating to such licence or any seed or other propagating material of such variety from abroad where such import would constitute an infringement of the rights of the breeder of such variety.

52. Revocation of compulsory licence: (1) The Authority may, on its own motion or on application from an aggrieved person made to it in the prescribed form, if it is satisfied that a compulsory licensee registered under this Chapter has violated any terms or conditions of his licence or it is not appropriate to continue further such licence in public interest, it may after giving such licensee an opportunity to file opposition and of being heard make order to revoke such licence; (2) When a licence is revoked under sub-section (1) by an order of the Authority, the Authority shall send a copy of such order to the Registrar to rectify the entry or correct the register relating to such revocation and the Registrar shall rectify the entry or correct the register accordingly.

53. Modification of compulsory licence: The Authority may, on its own motion or on application from the licensee of a compulsory licence, after providing the opportunity of being heard to the breeder of the variety registered under this Act relating to such compulsory licence, if it considers, in public interest, so to do, modify, by order, such terms and conditions as it thinks fit and send a copy of such order to the Registrar to correct the entries and register according to such modification and the
Chapter VIII: Tribunal

54. Tribunal: The Central Government may, by notification in the Official Gazette, establish a Tribunal to be known as the Plant Varieties Protection Appellate Tribunal to exercise the jurisdiction, powers and authority conferred on it by or under this Act.

55. Composition of Tribunal: (1) The Tribunal shall consist of a Chairman and such number of Judicial Members and Technical Members as the Central Government may deem fit to appoint; (2) A Judicial Member shall be a person who has for at least ten years held a judicial office in the territory of India or who has been a member of the Indian Legal Service and has held a post in Grade-II of that service or any equivalent or higher post for at least three years or who has been an advocate for at least twelve years; Explanation:—For the purposes of this sub-section (1),—(i) in computing the period during which a person has held judicial office in the territory of India, there shall be included any period, after he has held any judicial office, during which the person has been an advocate or has held the office of a member of a tribunal or any post, under the Union or a State, requiring special knowledge of law; (ii) in computing the period during which a person has been an advocate, there shall be included any period during which the person has held judicial office or the office of a member of a tribunal or any post, under the Union or a State, requiring special knowledge of law after he became an advocate; (3) A Technical Member shall be a person who is an eminent agricultural scientist in the field of plant breeding and genetics and possesses an experience of at least twenty years to deal with plant variety or seed development activity, or who has held the post in the Central Government or State Government dealing with plant variety or seed development equivalent to the Joint Secretary to the Government of India for at least three years and possesses the special knowledge in the field of plant breeding and genetics; (4) The Central Government shall appoint a Judicial Member of the Tribunal to be the Chairman thereof; (5) The Central Government may appoint one of the members of the Tribunal to be the Senior Member thereof; (6) The Senior member or a Member shall exercise such of the powers and perform such of the functions of the Chairman as may be delegated to him by the Chairman by a general or special order in writing.

56. Appeals to the Tribunal: (1) An appeal shall be preferred to the Tribunal within the prescribed period from any—(a) order or decision of the Authority or Registrar, relating to registration of a variety; or (b) registration as an agent or a licensee of a variety; or (c) determining the benefit sharing by the Authority; (d) order or decision of the Authority regarding revocation of compulsory licence or modification of compulsory licence; or (e) order or decision of Authority regarding payment of compensation, made under this Act or rules made there under; (2) Every such appeal shall be preferred by petition in writing and shall be in such form and shall contain such particulars as may be prescribed; (3) The Tribunal in disposing of an appeal under this section shall have the power to make any order which the Authority or the Registrar could make under this Act.

57: Orders of the Tribunal: (1) The Tribunal may, after giving both the parties to the appeal an opportunity of being heard, pass such orders thereon as it thinks fit; (2) The Tribunal may, at any time within thirty days from the date of the order, with a view to rectifying the mistake apparent from the record, amend any order passed by it under sub-section (1), and shall make such amendment if the mistake is brought to its notice by the appellant or the opposite party; (3) In every appeal, the Tribunal, where it is possible, hear and decide such appeal within a period of one year from the date of filing the appeal; (4) The Tribunal shall send a copy of any orders passed under this section to the Registrar; (5) The orders of the Tribunal under this Act shall be executable as a decree of a civil court.

58. Procedure of Tribunal: (1) The powers and functions of the Tribunal may be exercised and discharged by Benches constituted by the Chairman of the Tribunal from among the Members thereof; (2) A bench shall consist of one Judicial Member and one Technical Member; (3) If the members of a Bench differ in opinion on any point, the point shall be decided according to the opinion of the majority, if there is a majority, but if the members are equally divided, they shall state the point or points on which they differ, and the case shall be referred to the Chairman for hearing on such point or points by one or more of the other Members and such point or points shall be decided according to the opinion of the majority of the Members who have heard the case, including those who first heard it; (4) Subject to the provision of this Act, the Tribunal shall have power to
regulate its own procedure and the procedure of Benches thereof in all matters arising out of the exercise of its powers or the discharge of its functions, including the places at which the Benches shall hold their sitting; (5) The Tribunal shall, for the purpose of discharging its functions, have all the powers which are vested in the Registrar under section 11, and any proceeding before the Tribunal shall deemed to be judicial proceeding within the meaning of sections 193 and 228 and for the purposes of section 196 of the Indian Penal Code, and the Tribunal shall be deemed to be a civil court for all the purposes of section 195 and Chapter XXV of the code of Criminal Procedure, 1973; (6) Notwithstanding anything contained in any other provisions of this Act or in any other law for the time being in force, no interim order (whether by way of injunction or stay or any other manner) shall be made on, or in any proceedings relating to an appeal unless—(a) copies of such appeal and of all documents in support of the plea for such interim order are furnished to the party against whom such appeal is made or proposed to be made; and (b) opportunity is given to such party to be heard in the matter.

59. Transitional provision: Notwithstanding anything contained in this Act, till the establishment of the Tribunal under section 54, the Intellectual Property Appellate Board established under section 83 of the Trade Marks Act, 1999 shall exercise the jurisdiction, powers and authority conferred on the Tribunal under this Act subject to the modification that in any Bench of such Intellectual Property Appellate Board constituted for the purpose of this section, for the Technical Member referred to in subsection (2) of section 84 of the Trade Marks Act, 1999, the Technical Member shall be appointed under this Act and he shall be deemed to be the Technical Member for constituting the Bench under the said sub-section (2) of section 84 for the purposes of this Act.

Chapter IX: Finance, accounts and audit

60. Grants by Central Government: The Central government may, after due appropriation made by Parliament by law in this behalf, make to the Authority grants and loans of such sums of money as the Central Government may think fit for being utilized for the purposes of this Act.

61. Authority Fund: (1) There shall be constituted a fund to be called the Protection of Plant Varieties Authority Account and there shall be credited thereto—(a) all grants and loans made to the Authority by the Central Government under section 60; (b) all fees received by the Authority and the Registrars except the annual fee determined on the basis of benefit or royalty under subsection (1) of section 35; (c) all sums received by the Authority from such other sources as may be decided upon by the Central Government; (2) The Protection of Plant Varieties Authority Account shall be applied for meeting—(a) the salaries, allowances and other remuneration of the Chairperson, officers and other employees of the Authority and allowances, if any, payable to the members; (b) the other expenses of the Authority in connection with the discharge of its functions and for purposes of this Act.

62. Budget, accounts and audit: (1) the Authority shall prepare a budget, maintain proper accounts and other relevant records (including the accounts and other relevant records of the Gene Fund) and prepare an annual statement of account in such form as may be prescribed by the Central Government in consultation with the Comptroller and Auditor-General of India; (2) The accounts of the Authority shall be audited by the Comptroller and Auditor-General of India at such intervals as may be specified by him and any expenditure incurred in connection with such audit shall be payable by the Authority to the Comptroller and Auditor-General of India; (3) The Comptroller and Auditor General of India and any other person appointed by him in connection with the audit of the accounts of the Authority shall have the same right and privileges and authority in connection with such audit as the Comptroller and Auditor General generally has in connection with the audit of the government accounts and, in particular, shall have the right to demand the production of books, accounts, connected vouchers and other documents and papers and to inspect any of the offices of the Authority; (4) The accounts of the Authority as certified by the Comptroller and Auditor General of India or any other person appointed by him in his behalf together with the audit report thereon shall be forwarded annually to the Central Government and that Government shall cause the same to be laid before each House of Parliament.

63. Financial and administrative powers of the Chairperson: The Chairperson shall exercise such financial and administrative powers over the functions of the Authority as may be prescribed: Provided that the Chairperson shall have the authority to delegate such of his financial and administrative powers as he may think fit to
a member or any other officer of the Authority subject to the condition that the member or such officer shall, while exercising such delegated powers, continue to be under the direction, control and supervision of the Chairperson.

Chapter X

64. Infringement: Subject to the provisions of this Act, a right established under this Act is infringed by a person—(a) who, not being the breeder of a variety registered under this Act or a registered agent or registered licensee of that variety, sells, exports, imports or produces such variety without the permission of its breeder or within the scope of a registered licence or registered agency without permission of the registered licensee or registered agent, as the case may be; (b) who uses, sells, exports, imports or produces any other variety giving such variety, the denomination identical with or deceptively similar to the denomination of a variety registered under this Act in such manner as to cause confusion in the mind or general people in identifying such variety so registered.

65. Suit for infringement etc.: (1) No suit—(a) for the infringement of a variety registered under this Act; or (b) relating to any right in a variety registered under this Act, shall be instituted in any court inferior to a District Court having jurisdiction to try the suit; (2) For the purpose of clauses (a) and (b) of sub-section (1), "District court having jurisdiction" shall mean the District Court within the local limit of whose jurisdiction the cause of action arises.

66. Relief in suits for infringement: (1) The relief which a court may grant in any suit for infringement referred to in section 65 includes an injunction and at the option of the plaintiff, either damages or a share of the profits; (2) The order of injunction under sub-section (1) may include an ex parte injunction or any interlocutory order for any of the following matters, namely:—(a) for discovery of documents; (b) preserving of infringing variety or documents or other evidence which are related to the subject matter of the suit; (c) attachment of such property of the defendant which the court deems necessary to recover damages, costs or other pecuniary remedies which may be finally awarded to the plaintiff.

67. Opinion of scientific adviser: (1) When the court has to form an opinion upon any question of fact or a scientific issue, such court may appoint an independent scientific adviser to suggest it or to enquire and report upon the matter to enable it to from the desired opinion; (2) The scientific adviser may be paid such remuneration of expenses as the court may fix.

B. Offences, penalties and procedure

68. Prohibition to apply the denomination of a registered variety: (1) No person other than the breeder of a variety registered under this Act or a registered licensee or registered agent thereof shall use the denomination of that variety in the manner as may be prescribed; (2) A person shall be deemed to apply the denomination of a variety registered under this Act who—(a) applies it to the variety itself; or (b) applies it to any package in or with which the variety is sold, or exposed for sale, or had in possession such package for sale or for any purpose of trade or production; or (c) places, encloses or annexes the variety which are sold, or exposed for sale, or had in possession for sale or for any purpose of trade or production, in or with any package or other thing to which the denomination of such variety registered under this Act has been applied; or (d) uses the denomination of such variety registered under this Act in any manner reasonably likely to lead to the belief that the variety or its propagating material in connection with which it is used is designated or described by that denomination; or (e) in relation to the variety uses such denomination in any advertisement, invoice, catalogue, business letter, business paper, price list or other commercial document and such variety is delivered to a person in pursuance of a request or order made by reference to the denomination as so used; (3) A denomination shall be deemed to be applied to a variety whether it is woven in; impressed on, or otherwise worked into, or annexed or affixed to, such variety or to any package or other thing;
such variety; Shall unless he proves that he acted, without intent to defraud, be punishable— (i) With imprisonment for a term which shall not be less than three months but which may extend to two years; or (ii) fine which shall not be less than fifty thousand rupees but which may extend to five lakh rupees; or (iii) both.

71. Penalty for selling varieties to which not authorized or to which false denomination is applied, etc. : Any person who sells, or exposes for sale, or has in his possession for sale or for any purpose of trade or production any variety to which any false denomination is applied or to which an indication of the country or place in which such variety was made or produced or the name and address of the breeder of such variety registered under this Act has been falsely made, shall, unless he proves—(a) that having taken all reasonable precautions against committing an offence against this section, he had at the time of commission of the alleged offence no reason to suspect the genuineness of the denomination of such variety or that any offence had been committed in respect of indication of the country or place in which such variety registered under this Act, was made or produced or the name and address of the breeder of such variety; (b) that, on demand by or on behalf of the prosecutor, he gave all the information in his power with respect to the person from whom he obtained such variety; or that otherwise he had acted innocently, be punishable—(i) with imprisonment for a term which shall not be less than six months but which may extend to two years; or (ii) with fine which shall not be less than fifty thousand rupees but which may extend to five lakh rupees; or (iii) both;

72. Penalty for falsely representing a variety as registered: Whoever makes any representation with respect to the denomination of a variety or its propagating material or essentially derived variety or its propagating material not being variety or its propagating material or essentially derived variety or its propagating material registered under this Act to the effect that it is a variety or its propagating material or essentially derived variety or its propagating material registered under this Act or otherwise represents any variety, or its propagating material or essentially derived variety or its propagating material not registered under this Act to the effect that it is registered under this Act shall be punishable— (i) with imprisonment for a term which shall not be less than six months and may extend to three years; or (ii) with fine which shall not be less than one lakh rupees but which may extend to twenty lakh rupees; or (iii) both;

73. Penalty for subsequent offence: Whoever, having already been convicted of an offence under this Act is again convicted of such offence shall be punishable for the second and for every subsequent offence— (i) with imprisonment for a term which shall not be less than one year but which may extend to three years; or (ii) with fine which shall not be less than two lakh rupees but which may extend to twenty lakh rupees; or (iii) both.

74. No offence in certain cases: The provisions of this Act relating to offences shall be subject to the right created as recognized by this Act and no act or omission shall be deemed to be an offence under the provisions of this Act if such act or omission is permissible under this Act.

75. Exemption of certain persons employed in ordinary course of business: Where a person accused of an offence under this Act proves that in the ordinary course of his employment, he has acted without any intention to commit the offence and having taken all reasonable precautions against committing the offence charged, he had, at the time of the commission of the alleged offence, no reason to suspect the genuineness of the act so charged as an offence and on demand made by or on behalf of the prosecutor, he gave all the information in his power with respect to the persons on whose behalf the offence was committed, he shall be acquitted.

76. Procedure where invalidity of registration is pleaded by the accused: (1) Where the offence charged under this Act is in relation to a variety or its propagating material or essentially derived variety or its propagating material registered under this Act and the accused pleads that the registration of such variety or its propagating material or essentially derived variety or its propagating material, as the case may be, is invalid and the court is satisfied that such offence is prima facie not tenable, it shall not proceed with the charge but shall adjourn the proceedings for three months from the date on which the plea of the accused is recorded to enable the accused to file an application before the Registrar under this Act for the rectification of the register on the ground that the registration is invalid; (2) If the accused proves to the court that he has made such application within the time so limited or within such further time as the court for sufficient cause allow, the further proceedings in the prosecution shall stand stayed till the disposal of such application for rectification; (3) If within a period of three months or within such extended time as may be allowed by the court, the accused fails to apply to the Registrar for rectification of the register, the court shall proceed with the case as if the registration were invalid; (4) Where before institution of a complaint of an offence referred to in subsection (1), any application for the rectification of the register concerning the registration of the variety or its propagating material, as the case may be, was pending.
material or essentially derived variety or its propagating material, as the case may be, in question on the ground of invalidity of such registration has already been properly made to and is pending before the Registrar, the court shall stay the further proceedings in the prosecution pending the disposal of the application aforesaid and shall determine the charge against the accused in conformity with the result of the application for rectification.

77. Offences by companies: (1) If the person committing an offence under this Act is a company, the company as well as every person in charge of, and responsible to, the company for the conduct of its business at the time of the commission of the offence shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly; Provided that nothing contained in sub-section shall render any such person liable to any punishment, if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence; (2) Notwithstanding anything contained in subsection (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or that the commission of the offence is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly; Explanation — For the purpose of this section—(a) "company" means any body corporate and includes a firm or other association of individuals; and (b) "director", in relation to a firm, means a partner in the firm.

Chapter XI: Miscellaneous

78. Protection of security of India: Notwithstanding anything contained in this Act, the Authority or the Registrar shall—(a) not disclose any information relating to the registration of a variety or any application relating to the registration of a variety under this Act, which is considered prejudicial to the interest of the security of India; and (b) take any action regarding the cancellation of registration of such varieties registered under this Act which the Central Government may by notification in the Official Gazette specify in the interest of the security of India. Explanation:— For the purpose of this section, the expression "security of India" means any action necessary for the security of India which relates to the use of any produce of any variety registered under this Act directly or indirectly for the purposes of war or military establishment or for the purposes of war or other emergency in international relations.

79. Implied warranty on sale of registered variety, etc.: Where a denomination of a variety or its propagating material or essentially derived variety or its propagating material registered under this Act has been applied to the variety or its propagating material or essentially derived variety or its propagating material, as the case may be, on sale or in the contract for sale of such variety or its propagating material or essentially derived variety or its propagating material, as the case may be, seller shall be deemed to warrant that the denomination is a genuine denomination and not falsely applied, unless the contrary is expressed in writing signed by or on behalf of the seller and delivered at the time of the sale of the variety or its propagating material or essentially derived variety or its propagating material, as the case may be, on contract to and accepted by the buyer.

80. Death of party to a proceeding: If a person who is a party to a proceeding under this Act (not being proceeding in a court) dies pending the proceeding, the Authority or the Registrar, as the case may be, may, on request, and on proof to the satisfaction of such Authority or Registrar, of the transmission of the interest of the deceased person, substitute in the proceedings his successor in interest in his place, or, if the Authority or the Registrar is of opinion that the interest of the deceased person is sufficiently represented by the surviving party, permit the proceedings to continue without the substitution of his successor in interest.

81. Right of registered agent and registered licensee to institute suit: The registered agent or the registered licensee of a variety or its propagating material or essentially derived variety or its propagating material registered under this Act may institute appropriate proceedings in the court under this Act on behalf of the breeder of such variety or its propagating material or essentially derived variety or its propagating material, as the case may be, if such agent or licensee has been authorized in the prescribed manner by such breeder for doing so.

82. Evidence of entry in register, etc., and things done by authority and the registrar:29: (1) A copy of any entry in the register, or of any document issued under this Act purporting to be certified by the Authority or the Registrar and sealed with the seal of such Registrar or the Authority, as the case may be, shall be admitted in evidence in all courts and in all proceedings without further proof or production of the original; (2) A certificate purporting to be under the hand of the Authority or the Registrar, as the case may be, as to any entry, matter or things that such Authority or the Registrar is authorized by this Act or the rules to make or do shall be prima
facie evidence of the entry having been made, and of the content thereof, or of the matter or things having been done or not done.

83. Authority and registrar and other officers not compellable to production of register, etc.: The Authority or the Registrar or any officer working under the Authority or the Registrar, as the case may be, shall not, in any legal proceedings be compelled to produce the register or any other document in its or his custody, the content of which can be proved by the production of a certified copy issued under this Act in the prescribed manner or to appear as a witness to prove the matter therein recorded unless by order of the court, as the case may be, made for special case.

84. Document open to public inspection: Any person may, on an application to the Authority or the Registrar, as the case may be, and on payment of such fee as may be prescribed, obtain a certified copy of any entry in the register or any other document in any proceedings under this Act pending before such Authority or Registrar or may inspect such entry or document.

85. Report of the Authority and the Registrar to be placed before Parliament: The Central Government shall cause to be placed before both Houses of Parliament once a year a report regarding the performance of the Authority under this Act.

86. Government to be bound: The provisions of this Act shall be binding on the Government.

87. Proceedings before authority: All proceedings before the Authority or the Registrar, as the case may be, relating to registration of variety or essentially derived variety, registration of agent, registration of licence or registration of compulsory licensing under this Act shall be deemed to be judicial proceedings within the meaning of section 193 and 228 and for the purpose of section 196 of the Indian Penal Code and the Authority or the Registrar, as the case may be, shall be deemed to be a civil court for the purpose of section 195 and Chapter XXVI of the Code of Criminal Procedure, 1973.

88. Protection of action taken in good faith: No suit, prosecution or other legal proceedings shall lie against the Central Government, or against the Chairperson, or members, or the Registrar or any person acting under such Government, Authority, or Registrar under the provisions of this Act, for anything which is done in good faith or intended to be done in pursuance of this Act or any rule, regulation, scheme or order made thereunder.

89. Bar of jurisdiction: No civil court shall have jurisdiction in respect of any matter which the Authority or the Registrar or the Tribunal is empowered by or under this Act to determine.

90. Member and staff of Authority etc. to be public servants: The Chairperson, members and the officers and other employees of such Authority and the Registrar-General and the officers and other employees working under him shall be deemed to be public servants within the meaning of section 21 of the Indian Penal Code.

91. Exemption from tax on wealth and income: Notwithstanding anything contained in the Wealth-tax Act, 1957, the Income-tax Act, 1961, or any other enactment for the time being in force relating to tax on wealth, income, profits or gains, the Authority shall not be liable to pay wealth tax, income tax or any other tax in respect of their wealth, income, profits or gains derived.

92. Act to have overriding effect: The provisions of this Act shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force or in any instrument having effect by virtue of any law other than this Act.

93. Power to remove difficulties: (1) If any difficulty arises in giving effect to the provisions of this Act, the Central Government may, by order, published in the Official Gazette, make such provisions not inconsistent with the provisions of this Act as may appear to be necessary for removing the difficulty:
Provided that no order shall be made under this section after the expiry of two years from the date of commencement of this Act. (2) Every order made under sub-section (1) shall be laid before each House of Parliament.

94. Power to make regulations: (1) The Authority may, with the previous approval of the Central Government, by notification in the Official Gazette make regulations consistent with this Act and the rules made thereunder to carry out the provisions of this Act; (2) In particular, and without prejudice to the generality of the foregoing power, such regulations may provide for all or any of the following of this Act.

(a) duties and jurisdiction of Registrars under sub-section (4) of section 12; (b) the terms of office and the conditions of service of the Registrars under sub-section (5) of section 12; (c) the criteria of distinctiveness, uniformity and stability for registration of extant variety under sub-section (2) of section 15; (d) the manner in which a single and distinct denomination to a variety shall be assigned by the applicant under sub-section (1) of section 16; (e) matters governing the assignment of denomination of variety under sub-section (2) of section 17; (f) the time within which the
Registrar may require the applicant to propose another denomination under sub-section (3) of section 17; (g) the form of application under clause (d) of sub-section (1) of section 18; (h) the standards for evaluating seeds during tests under sub-section (1) of section 19; (i) to specify the quantity of seeds or other propagating material including parental line seeds to be deposited by a breeder under section 27; (j) the limitations and conditions subject to which a breeder may authorize a person to sell, market or otherwise deal with variety under sub-section (2) of section 28; (k) the form for authorization under sub-section (3) of section 28.

95. Power of the Central Government to make rules: (1) The Central Government may, by notification in the Official Gazette, make rules to carry out the provisions of this Act; (2) In particulars, and without prejudice to the generality of the foregoing powers, such rules may provide for all or any of the following matters, namely—(i) the terms of office of the Chairperson and the manner of filling the post under sub-section (6) of section 3; (ii) the salary and allowances of the Chairperson and his conditions of service in respect of leave, pension, provident fund and other matters under sub-section (7) of section 3; (iii) the time and place of meetings of the Authority and the rules of procedure in regard to the transaction of business at its meetings (including the quorum at its meetings) and the transaction of business of its Standing Committee appointed under sub-section (7) of section 3 under sub-section (1) of section 4; (iv) the control and restriction regarding appointment of the officers and employees of the Authority and the method of such appointment, scale of pay and allowances and other conditions of service under section 6; (v) the powers and duties of the chairperson under section 7; (vi) the terms and conditions subject to which and the manner in which the measures referred to in sub-section (1) of section 8 may provide for the registration of extant or new varieties under clause (a) of subsection (2) of that section; (vii) the manner for arranging production and sale of the seeds under clause (d) of sub-section (2) of section 8; (viii) the salary and allowances of Registrar-General of Plant Varieties and the conditions of service in respect of his leave, pension, provident fund and other matter under sub-section (3) of section 12; (ix) the matters to be included in the National Register of Plant Varieties under sub-section (1) of section 13; (x) the manner of authorizing a person under clause (e) of sub-section (1) of section 16; (xi) the fee under clause (g) and the other particular under clause (i) which shall accompany the application under sub-section (1) of section 18; (xii) the period within which after making application a proof of the right to make the application is to be furnished under sub-section (3) of section 18; (xiii) the form of application under provision to section (1) of section 18; (xiv) the fee to be deposited by applicant under sub-section (2) of section 19; (xv) the manner and method of conducting the tests referred to in sub-section (1), under sub-section (3) of section 19; (xvi) the manner of advertising specifications of variety for registration including its photograph or drawing under sub-section (1) of section 21; (xvii) the manner of making application and the fee payable for allowing further period to give notice and the manner of giving notice under sub-section (2) of section 21; (xviii) the manner of sending counter statement under sub-section (4) of section 21; (xix) the manner of submitting evidence and the time within which such evidence may be submitted under sub-section (6) of section 21; (xx) the documents and the fee which shall accompany the application under sub-section (2) of section 22; (xxi) the tests to be conducted and the procedure to be followed under sub-section (4) of section 23; (xxii) the form of a certificate of registration and the other authority to which a copy thereto shall be sent under sub-section (9) of section 24; (xxiii) the form of a certificate of registration and the other authority to which a copy thereto and the maximum time for issuing the certificate of registration shall be sent under sub-section (2) of section 24; (xxiv) the manner of giving notice to the applicant under sub-section (3) of section 24; (xxv) the contents of the certificate and the manner of publishing such contents and inviting claim of benefits sharing under sub-section (1) of section 26; (xxvi) the form for submitting claims of benefit sharing and the fee to be accompanied therewith under sub-section (2) of section 26; (xxvii) the manner in which and the time within which opposition to claims shall be submitted under sub-section (3) of section 26; (xxviii) the fee payable for renewal or further renewal of period of validity of certificate of registration under sub-section (6) of section 26; (xxix) the manner of making reference under sub-section (7) of section 26; (xxx) the manner of making an application for registration for title and the fee to be accompanied therewith under sub-section (4) of section 28; (xxxi) the manner of referring the disputes regarding registration of entitlement under sub-section (4) of section 28; (xxxii) the manner to enter into a certificate the brief conditions of entitlement under sub-section (5) of section 28; (xxxiii) the manner of making an application for varying the terms of registration under clause (a), of sub-section (9) of section 28; (xxxiv) the manner of making an application by the registered breeder and certain others for cancellation of terms of registration under clause (b) of sub-section (9) of section 28; (xxxv) the manner of application by any person other than the breeder, his succession, the registered agent or the registered licensee for cancellation of terms of registration under clause (c) of sub-section (9) of section 28; (xxxvi) the manner of application for
cancellation of the terms of registration under clause (d) of sub-section (9) of section 28; (xxxvii) the manner of application for cancellation of the terms of registration under clause (e) of sub-section (9) of section 28; (xxxviii) the manner to issuing notice to Registered breeder, and certain others under sub-section (10) of section 28; (xxxix) the manner of giving notice to the Registrar under sub-section (1) of section 33; (xl) the manner of notifying to the registered agent or registered licensee under sub-section (2) of section 33; (xli) the period within which the notice of opposition under sub-section (3) of section 33 may be given; (xlii) the manner of making application under section 34; (xliii) the manner depositing fee payable under sub-section (2) of section 35; (xliv) the manner of making application under sub-section (1) of section 36; (xlv) the manner of applying to the Registrar under sub-section (2) of section 36; (xlvi) the manner of giving notice under sub-section (4) of section 36; (xlvii) the manner of application under sub-section (1) of section 37; (xlviii) the manner of making application under sub-section (2) of section 37; (xlix) the manner to apply to the Registrar under sub-section (1) of section 38; (l) the manner of advertising application and to give notice to the Registrar, and the time from the date of the advertisement within which a person may give such notice under sub-section (2) of section 38; (li) the manner of advertising the denomination of the variety under sub-section (3) of section 38; (lii) the manner of claiming compensation and filing of opposition under sub-section (2) of section 39; (liii) the manner of recognition and reward from the National Gene Fund under clause (2) of section 42; (liv) the particulars to be contained in the application under sub-section (2) of section 47; (lv) the authority and the manner in which such authority shall make available to the compulsory licensee the reproduction material of the variety under section 50; (lvi) the form for making application under sub-section (1) of section 52; (lvii) the period within which an appeal shall be preferred under section 56; (lvi) the form of petition and the particulars which such petition shall contain under sub-section (3) of section 56; (lvi) the manner of issuing notice and filing objection under sub-section (3) of section 41; (lvi) the manner of receiving benefit sharing under clause (9) of subsection (1) of section 45; (lvi) the manner for applying Gene Fund under sub-section (2) of section 45; (lv) the period within which an appeal shall be made under sub-section (1) of section 60; (lvii) the form of petition and the particulars which such petition shall contain under sub-section (2) of section 60; (lviii) the form for preparing annual statement of accounts under sub-section (1) of section 62; (lix) the financial and administrative powers which the Chairperson shall exercise under section 63; (lx) the manner of using the denomination of a variety under sub-section (1) of section 68; (lx) the manner of authorising registered agent or registered licensee under section 81; (lxii) the manner of issuing certified copy of Register, or any other document under section 83; (lxiii) the fee payable for obtaining a certified copy of any entry in the Register, or any other document under section 84; (lxiv) any other matter which is to be, or may be, prescribed or in respect of which this Act makes no provision or makes insufficient provision and provision, is, in the opinion of the Central Government, necessary for the proper implementation of this Act.

96: Rules, regulations and schemes to be laid before Parliament: Every rule and every regulation and every scheme made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive session, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or regulation or scheme or both Houses agree that the rule or regulation or scheme should not be made, the rule or regulation or scheme shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or regulation or scheme.
CHAPTER I: PRELIMINARY

I. Notification
1. Short title and commencement
(a) These rules may be called the Protection of Plant Varieties and Farmers' Rights Rules, 2003.
(b) They shall come into force on the date on which the Act shall come into force.

2. Definitions - In these rules, unless the context otherwise requires
(a) “Act” means the Protection of Plant Varieties and Farmers’ Rights Act, 2001(53 of 2001);
(b) “Authority” means the Protection of Plant Varieties and Farmers’ Rights Authority established under sub-section (1) of sec. 3;
(c) “Chairperson” means the chairperson of the Authority appointed under clause (a) of sub-section (5) of section 3;
(d) “fee” means the fee specified in the Second Schedule;
(e) “Form” means a Form specified in the First Schedule;
(f) “Gazette” means the Official Gazette of the Government of India;
(g) “journal” means the monthly Journal of the Authority;
(h) “non-official member” means a member of the Authority other than a member, ex-officio;
(i) “notice” means a notice issued by the Tribunal or the Registrar or the Authority under the Act;
(j) “Registrar” means a Registrar of Plant Varieties appointed under sub-section (4) of section 12 and includes the Registrar General of Plant Varieties appointed under sub-section (3) of that section;
(k) “Schedule” means a Schedule annexed to these rules;
(l) “section” means a section of the Act;
(m) “representation” means any written communication addressed to the Authority or the Registrar in any proceeding under the Act;
(n) all other words and expressions used, but not defined in these rules, but defined in the Act, shall have the meanings respectively assigned to them in the Act.

3. Details of particulars to be furnished while making an application or representation
(a) Save in case of forms specified by the Authority under the Act, every person making an application or representation under the Act or these rules, shall furnish the particulars in the Forms specified in the First Schedule;
(b) If any application or representation has been filed without furnishing all the particulars as specified in the relevant Forms specified in the First Schedule, the Authority or the Registrar, as the case may be, shall give one month’s notice to the applicant or the person, who has filed the application or the representation to file such particulars.
(c) In the event the applicant or the person, who has filed the application or the representation, defaults or fails to rectify the application or the representation, as the case may be, in terms of the notice under sub rule (2) within one month as allowed, the said application or the representation shall be liable to be rejected without any further notice.
(d) Where no Form is specified for any purpose, the applicant may adopt as nearly as may be a Form specified in the First Schedule with such modifications and variations as may be considered necessary.

4. Office of the Authority
A. The office of the Authority shall, for all proceedings under the Act, be the head office of the Authority at New Delhi or the branch office, as the case may be, within whose territorial limits
(a) the applicant for registration of the plant variety or the farmers’ right has his principal place of business or domicile; or
(b) the applicant for registration of the plant variety or the farmers’ right, whose name is first mentioned in the application, resides or has his principal place of business or domicile, if the application is made jointly in the names of two or more persons; or
(c) the agent or licensee of the registered breeder has his principal place of business or domicile.

B. Notwithstanding anything contained in sub-rule (1), until the branch offices are established, the appropriate office for all proceedings under the Act shall be the head office of the Authority at New Delhi.

5. Address for service of notices, etc.
A. Every person including the applicant, concerned in any proceeding to which the Act or these rules apply, shall furnish to the Authority or the Registrar the...
complete address for service in India and that address shall be treated for all purposes connected with such proceedings or the rights granted, as the address of the person or persons in the proceedings.

B. Unless such an address is given, the Authority or the Registrar shall be under no obligation either to proceed or deal with any proceeding or to send any notice that may be required to be given under the Act or these rules.

6. Procedure regarding application, representation and issue of notices

A. Every application or representation shall be made in writing, signed by the applicant or the person who has made the representation, and delivered to the Registrar or the Authority at its office.

B. The names and addresses of the applicants and other persons shall be given in full, together with their nationality and such other particulars, as are necessary for their identification and for sending communications to them.

C. (a) All applications, representations and documents filed or required to be filed under the Act or the rules shall be filed in triplicate: Provided that in cases where the Registrar or the Authority requires more than three copies of such applications, representations, or documents, the applicant or the person, who has filed the application or the representation, shall be required to supply as many copies as is specified by the Authority or the Registrar.

(b) In case of failure to furnish the required number of copies within a period of three months, the Registrar or the Authority may reject the application or the representation or may treat the application or representation as withdrawn.

D. Any application, representation or document required to be sent to or filed with the office of the Authority or the Registrar may be delivered either by hand or by registered letter with acknowledgement due or electronic mail, addressed to the Authority or to the Registrar at their office.

E. If any application or a representation or document is delivered to the Authority or the Registrar by hand, an acknowledgement receipt shall be issued by the Authority or the Registrar’s office with its seal.

F. In case of delivery by registered post with acknowledgement due or by electronic mail, it shall be presumed to have been filed, or given at the time when the same has been received by the office concerned.

G. Any written communication addressed to an applicant or the holder of any right under the Act, at his address in the Register of Plant Varieties maintained under the Act or at the address for service furnished under rule 5 in any proceedings under the Act or these rules, at the address appearing on the application or notice of opposition or reply or counter reply or any such representation, shall be presumed to be properly addressed.

H. Provided that in cases where the receipt of such a representation or application has been delayed beyond the normal period of delivery or transmission, such a delay may be condoned.

I. All notices and written communications addressed to an applicant or to any holder of right, in any proceeding under the Act or these rules, and all documents forwarded to the applicant or the holder of any right or an opponent shall, except when they are sent by special messenger, be sent by registered post acknowledgement due or by electronic mail.

J. (a) The acknowledgement receipt issued by the office concerned or the postal certificate receipt shall be the sufficient proof as to the delivery or sending of any document under the Act or these rules.

(b) In case of transmission by electronic mail, the electronic receipt with the recognized digital signature, by the applicant or the person, who has made the representation, shall be the proof of the receipt.

7. Application not to be admitted in certain cases

No application or representation shall be made to the authority or registrar covering the subject-matter already included in an earlier application made by the same person, and such subsequent application shall not be admitted by the registrar or the authority, as the case may be.

8. Fees

A. The amount of fees payable in respect of the registration of plant varieties and grant of any right under the Act or any application or notice of opposition or reply or counter reply required to be filed under the Act and other matters shall be as per the rates specified in the Second Schedule.

B. (a) The fees payable may either be paid in cash or may be sent by money order or postal order or bank draft or cheque payable to the Authority or the Registrar, as the case may be, at their respective
offices, drawn on a scheduled bank at the place where the office is situated.
Explanation : For the purposes of these rules, “scheduled bank” means a bank included in the Second Schedule to the Reserve Bank of India Act, 1934 (2 of 1934).

(b) Any cheque or draft (not including the fees in cash) on which the value specified therein cannot be collected in cash within the time allowed for the payment of the fees, shall be accepted at the discretion of the Registrar.
(c) The stamps shall not be received in the payment of any fees payable under these rules.
(d) Where a fee is payable in respect of the filing of a document or application or representation, the date on which the entire fee is paid shall be the date of filing of the document or the representation.

C. Where any test is required to be conducted under any of these rules, the applicant or the concerned person shall be required to pay the requisite fee specified in the Second Schedule.

D. Any application or representation or document shall be liable to be rejected on account of non-payment of fees and no test shall be conducted unless and until the parties interested deposit the required amount of fees as specified in the Second Schedule.

9. Size, etc., of documents
All documents and copies of documents, except affidavits and drawings, sent to or left at the office of the Authority or otherwise furnished to the Registrar shall be written, typewritten, lithographed, or printed (either in the Hindi or in the English language unless otherwise directed or allowed by the Authority or the Registrar-General) in large and legible characters with deep indelible ink with lines widely spaced upon one side only of strong white paper of a size of approximately 33.00 centimetres by 20.50 centimetres (13 inches by 8 inches) or 29.7 centimetres by 21 centimetres (11 3/4 inches by 8 1/4 inches) with a margin of at least four centimetres (one and a half inches) on the left-hand part thereof.

10. Affidavits
The affidavits required to be filed under these rules shall be dated and signed at the foot and shall contain a statement that the facts and matters stated therein are true to the best of the knowledge, information and belief of the person making the affidavit.

CHAPTER II: Plant Varieties and Farmers’ Rights Protection Authority

11. Manner of Selection and Appointment of the Chairperson
A. The Chairperson shall be appointed by the Central Government on the basis of a panel of names recommended by a Selection Committee comprising of the following, namely:
(a) Secretary, Department of Agriculture and Co-operation, Government of India – Chairman.
(b) Secretary, Department of Agriculture Research and Education, Govt. of India – Member.
(c) One Expert nominated by Ministry of Agriculture, Government of India – Member.
B. The Department of Agriculture and Cooperation of the Central Government shall act as the nodal department for the selection and appointment of the Chairperson.
C. The Chairperson shall be of the rank of the Secretary to the Government of India and the appointment as chairperson shall either be on deputation or on contract basis.
D. If the Selection Committee constituted under sub rule (1) recommends any person who is not a government servant but fulfills qualifications given in clause (a) of sub-section (5) of section 3, such appointment may be made on contract basis.
E. Term of Office of the Chairperson - The Chairperson shall hold office for a term of five years or up to the age of sixty-five years, whichever is earlier, and shall be eligible for re-appointment:
Provided that no Chairperson shall hold office for a total period exceeding ten years, or after he has attained the age of sixty-five years, whichever is earlier.

12. Salary, allowances, conditions of service, leave, pension, provident fund etc. of the Chairperson
The Chairperson shall be entitled to such salary, allowances, leave, pension, provident fund and other perquisites as are admissible to a Secretary to the Government of India.

13. Resignation or removal of the Chairperson from office in certain cases
A. The Chairperson may resign from his office by giving notice in writing to the Central Government.
B. The Central Government shall remove the Chairperson from office if he, -
(a) is or at any time has been, adjudicated as an insolvent;
(b) has been convicted of an offence which, in the opinion of the Central Government, involves moral turpitude;
(c) has become physically or mentally incapable of acting as the Chairperson;
(d) has failed in discharging the duties and responsibilities under the Act and the rules made there under;
(e) has acquired such financial or other interest as is likely to affect prejudicially his function as the Chairperson;
(f) has, in the opinion of the Central Government, so abused his position as to render his continuation in office detrimental to the public interest;
(g) any other substantiated ground which is unbecoming of a public servant under the Government of India: Provided that the chairperson shall not be removed under this sub-rule unless he has been given a reasonable opportunity of being heard in the matter.

14. Term and allowances of non-official members
A. Every non-official member of the Authority shall hold office for a period of three years from the date of his appointment.
B. The Central Government shall appoint new non-official member of the Authority within six months of the expiration of the term of the non-official member.
C. A non-official member shall be entitled to sitting allowance and traveling expenses, at such rate as may be fixed by the Central Government from time to time in this regard.

15. Proceedings of the Authority
A. The Authority shall meet at least twice in a year at the head quarters of the Authority or at such place as may be decided by the Chairperson.
B. The Chairperson shall, upon a written request of not less than five members of the Authority or upon a direction of the Central Government, call a special meeting of the Authority.
C. At least fifteen days' notice of an ordinary meeting and three days' notice of a special meeting specifying the purpose, the time and the place at which such meeting is to be held, shall be given to the members.
D. Every meeting shall be presided over by the Chairperson and in his absence, by a Presiding Officer to be chosen by the members present from amongst themselves.
E. The decision of the Authority shall be taken by a majority of the votes of the members present and voting and in the event of equality of votes, the Chairperson or in his absence, the member presiding over the meeting shall have a second or casting vote.
F. Every member shall have one vote.
G. The quorum for the meeting of the Authority shall be five.
H. No member shall be entitled to bring forward for the consideration of a meeting any matter of which he has not given ten days' notice to the Member-Secretary unless the Chairperson, in his discretion, permits him to do so.
I. The notice of the meeting may be given to the members by delivering the same by messenger or sending it by registered post to his last known place of residence or business or in such other manner as the Chairperson or the Member-Secretary may, in the circumstances of the case, think fit.

16. Chairman and proceedings of the Standing Committee
A. The Chairperson shall select a member of the Standing Committee appointed by him under sub-section (7) of section 3 from amongst the members of that Committee to preside over its meeting.
B. In the absence of the member selected under sub-rule (1), the meeting of the Standing Committee shall be presided over by the member who shall be elected by the members present at meeting from amongst themselves.
C. The decision in the meeting of the Standing Committee shall be taken by a majority of the members present and voting and in the event of equality of votes, the member selected under sub-rule (1) or in his absence, the member presiding over the meeting shall have a second or casting vote.
D. Every member shall have one vote.
E. The quorum for the meeting of the Standing Committee shall be three.
F. The convener of the Standing Committee may, in consultation with the Authority, determine the venue of its meetings any where in India; and serve notice of such meeting to all members at least fifteen days in advance.

17. Appointment of Expert Committee by the Authority
A. The Authority may appoint such experts or consultants as it considers necessary to seek guidance and assistance in technical areas demanding specialized advisory inputs, to enable the Authority...
for efficient discharge of its duties and functions.
B. The Authority may appoint such other committees as may be necessary for the efficient discharge of its duties and functions.
C. The Authority may, in consultation with the Central Government, fix the quantum of remuneration, payable to the experts and consultants.

18. Salary, Allowances and Conditions of service of the Registrar-General
A. The Registrar-General shall be an official equivalent to the rank of the Additional/Joint Secretary to the Government of India and he shall be appointed by the Authority on deputation or transfer or on contract basis.
B. The Registrar-General shall be governed by the Central Government rules in respect of his salary and other allowances including pension, leave, traveling and daily allowances as are admissible to an Additional Secretary to the Government of India.
C. The Registrar-General shall be a person having proven managerial, or legal or Intellectual Property Rights or agricultural development experience.
D. The term of office of the Registrar-General shall be a period of five years or until he attains the age of sixty years, whichever is earlier: Provided that no candidate who may not have at least two years tenure in the office shall be appointed as Registrar-General.
E. A person on completion of one term as Registrar-General shall be eligible for a second term of three years or until he attains the age of sixty years, whichever is earlier.

19. The method of appointment of officers and other employees of the Authority
A. The Authority may make recruitment and appointment to the posts of officers specified in the Fourth Schedule.
B. The Authority shall after advertising the posts in the Employment News and at least one national daily recruit officers and other employees of the Authority by the method of direct recruitment or contract basis by selection after conducting interview.
C. Notwithstanding anything contained in sub-rule (1) and subject to the approval of the Central Government the Authority may also appoint such other officers and employees as may be required by it on transfer or deputation basis or on contract basis.
D. The salary, allowances and other conditions of service of the officers and employees of the Authority shall be the same as applicable to Central Government servants of equivalent rank.
E. If any question on the service conditions of any officer or employee of the Authority arises, it shall be decided by the Central Government.

20. Powers and Duties of the Chairperson
A. In addition to the duties specified in the Act, the Chairperson shall have powers of general superintendence and directions in the conduct and management of the affairs of the Authority, to enable the Authority in effectively discharging its duties and overseeing the compliance of the provisions of the Act, and the rules and regulations made thereunder.
B. The Chairperson shall also discharge such other duties and functions as the Authority may by general or special order in writing delegate to him or the Central Government may authorize him to discharge from time to time.
C. The Chairperson shall convene, preside over and conduct the meetings of the Authority and be responsible for carrying out all decisions taken by the Authority.
D. The Chairperson shall guide and facilitate the development of new plant varieties by protecting the rights of the breeders, researchers, farmers, and community of farmers as provided under the Act.
E. The Chairperson shall facilitate and act on his satisfaction for compulsory licensing of registered plant varieties and advise the Central and the State Governments on the restriction of public use of any such registered plant varieties which may invite action under sub-rule (4).

21. General functions of the Authority
A. The Authority shall advice the Central Government in relation to the provisions contained in the sub-section (2) of section 29 for specifying and notifying the genera and species for the purposes of registration of new plant varieties other than extant varieties and farmers’ varieties.
B. The Authority shall register extant varieties under clause (a) of sub-section (2) of section 8 within such period as may be determined by it with suitable test criteria to conform distinctiveness, uniformity and stability (hereinafter referred to as DUS) of such varieties.
C. The Authority shall develop DUS test and other test criteria and conduct such tests for characterization of each variety of
22. **Matters to be included in the National Register of Plant Varieties**

The National Register of Plant Varieties shall contain the following particulars of each registered variety, namely:

- (1) Registration Number;
- (2) Nationality of Breeder(s);
- (3) Denomination as granted;
- (4) Date of Grant of Registration;
- (5) Date on which application was received;
- (6) Provisional number given to the application;
- (7) Date of Gazette notification;
- (8) Grouping of the plant variety (new, extant or farmers);
- (9) Classification of the variety (typical variety, hybrid variety or essentially derived variety);
- (10) Denomination of variety, Common Crop name to which the variety belongs, Taxonomical Lineage of the Crop in Botanical names;
- (11) Key Passport data of the variety;
- (12) Essential characters making the variety distinct;
- (13) Starting date of protection;
- (14) Expiry date of protection;
- (15) Date of revocation with other details (grounds etc.);
- (16) Name and address of the applicant(s);
- (17) Address for service of document(s);
- (18) Name and address of the breeder(s) (in case breeder is not the applicant);
- (19) Name and address of the legal representative (if applicable);
- (20) Name, address and other details of the licensee and terms of license (if applicable);
- (21) Name, address and other details of the agent with jurisdictional rights, if any (if appointed);
- (22) Type of crop;
- (23) Name of the family, genus, species, variety and common name;
- (24) Name and address of the breeder of initial variety (in case of essentially derived variety);
- (25) Details of the acquisition of propagating material/ seeds (if applicable);
- (26) Details of parental material used in the development (if applicable);
- (27) Name and address of the contributor(s) of genetic material (if applicable);
- (28) Any other feature specified by the Authority or Registrar-General;
- (29) Country of origin of the plant variety;
- (30) Brief description of the variety along with characteristic details of the nearest variety including results of DUS testing, supplemented with the drawings or photographs or both;
- (31) In case of compulsory licensing, name and address of licensee with other details (terms and conditions, revocation, etc), if applicable;
- (32) Declaration and details of the renunciation to the variety (if applicable);
- (33) Details of benefit sharing;
- (34) Details of opposition, revocation, restoration, maintenance (whatever applicable);
- (35) In the case of varieties protected outside India prior to registration in the country, following additional information shall be entered in the National Register of plant varieties namely:
  - (a) Name of the country(ies) where protection is made along with the denomination of the variety in each of them,
  - (b) Date of first protection with country,
  - (c) Variation in important trait with respect to first filing,
  - (d) Country wherein the Variety was first commercialized with date,
  - (e) Any other feature specified by the Authority or Registrar-General;
- (36) In case of a convention application, the following information shall also be furnished, namely
  - (a) Name of the convention country
(b) Passport data of the convention application
(c) Date of application
(d) Date of grant of registration
(e) Registration number
(f) Denomination as accepted
(g) Date of Gazette notification
(h) Starting date of protection
(i) Expiry date of protection
(j) Whether the variety has been sold or otherwise disposed of within and outside the country, if so, details thereof

23. Registration of Extant Plant Varieties under sub-section (2) of section 15
The Registrar shall register every extant variety within three years from the date of its notification under the Act, with respect to the genera and species eligible for registration subject to conformity to the criteria of distinctiveness, uniformity, and stability as laid down under the regulations: Provided that the Registrar may, for reasons to be recorded in writing, register an extant variety after the expiry of the said period of three years.

24. Application to authorize a person to register a variety under clause (e) of sub-section (1) of section 16
An application to authorize a person to register a variety under clause (e) of sub-section (1) of section 16 shall be made in Form PV-1, given in the First Schedule, by a person specified in sub-section (1) of that section.

25. The fee payable under clause (g) of sub-section (1) of section 18 for making application for registration of plant variety
The fee for making application for registration of a plant variety under section 14 shall be such as specified in column (3) of the Second Schedule for the purpose.

26. Proof of the right of making application under sub-section (3) of section 18
A. Where an application for registration is made by the successor or assignee of the breeder under sub-section (3) of section 18, he shall furnish documentary proof, at the time of making such application or within six months of making such an application, as to the right to make such an application for registration.
B. The documentary proof, in case of an assignment, shall be furnished in the manner specified in Form PV - 2, given in the First Schedule and in case of succession, or a succession certificate or any other document in support of succession proving the applicant to be the successor shall be furnished.

27. Fee for conducting tests under Sec. 19
The applicant shall deposit the requisite fee for the purpose as specified in column (3) of the Second Schedule with the Registrar for conducting the required tests under Sec 19.

28. Manner and method for conducting tests under section 19
A. (a) The Authority shall charge separate fees for conducting DUS test and special test on each variety.
(b) The special tests shall be conducted only when DUS testing fails to establish the requirement of distinctiveness.
(c) The DUS testing shall be field and multi-location based for at least two crop seasons and special tests be laboratory based.
(d) The fee for DUS and special tests shall be such as provided in column (3) of the Second Schedule for the purpose.
B. If the Registrar, after initial scrutiny of the application for registration, is satisfied that the application is in order, he shall notify the applicant to deposit the requisite fee, as specified in column (3) of the Second Schedule, within a period of two months for conducting the DUS test.
C. On receipt of the fee, demanded under sub-rule (1), the Registrar shall consider the application for further processing.
D. The DUS test shall be necessary for all new varieties except essentially derived variety.
E. The manner of testing essentially derived varieties shall be decided by the Authority on a case-to-case basis.
F. The DUS test shall be conducted on a minimum of two locations.
G. The Authority may recognize and empanel institutions having adequate facilities for conducting DUS or special tests in the country for conducting such tests.
H. The Authority shall notify the adopted methods of conducting the DUS and special tests.
I. The Authority shall develop and publish in its journal guidelines for the DUS test for each crop.
J. The samples of seeds or propagules in respect of which an application for registration has been made and parental lines under registration submitted for the DUS and special tests and deposited at the National Gene Bank shall present the maintainable standards of genetic purity.
and uniformity and germination, sanitary and phytosanitary standards.

29. Advertising of application for registration under section 21 -

A. Every application for registration of a variety which has been accepted and the details thereof including specifications shall, upon such acceptance under sub-section (1) of section 20, be advertised by the Registrar in the manner specified in Form – 0-1 of the Third Schedule.

B. In every such advertisement under sub-rule (1), the Registrar shall mention the place or places where a specimen of the variety may be inspected.

C. The contents of such advertisement shall include
   (a) Name, passport data and source of parental line or initial variety used to develop the variety in respect of which an application for registration has been made;
   (b) Description of the variety bringing out its character profile as specified under the DUS test Schedule;
   (c) Essential characteristics conferring distinctiveness to the variety;
   (d) Important agronomic and commercial attributes of the variety;
   (e) Photographs or drawings, if any, of the variety submitted by the applicant; and
   (f) Claim, if any, on the variety.

30. Notice of opposition under sub-section (2) of section 21

A. Any interested person, may within three months from the date of advertisement of an application for registration, may give a notice of opposition to the registration of a plant variety in Form PV-3 of the First Schedule.

B. The fee payable for filing an opposition referred to in sub-rule (1) shall be as specified in column (3) of the Second Schedule: Provided that no such fee shall be payable in respect of an opposition made by a farmer or group of farmers, or village community.

C. A copy each of the notice of opposition received against a specific application shall be referred to the applicant by the Registrar within three months from the last date of filing of opposition.

D. An applicant shall be entitled to submit point-wise counter statement to the opposition not later than two months from the date of service of the copy of the notice of opposition, failing which the Registrar shall decide the merits of the opposition and notify his decision by giving reasons there for.

E. Every counter-statement under sub-rule (4) shall be in Form PV-4 of the First Schedule.

F. Copies of counter to opposition submitted by the applicant within the time specified in sub-rule(4), shall be conveyed to the person opposing the application, within a period of 30 days of its receipt, requiring the opposing person to submit the final opposition within a period of 30 days from the date of service of the counter from the applicant.

G. The Registrar, may at his discretion, allow any correction of error or amendments in the notice of opposition or counter statement if such alteration is requested by the persons concerned in writing.

H. (a) The security referred to in sub-section (8) of section 21 shall be payable as an amount decided by the Authority.
(b) In case the opposition is found to be frivolous, the Registrar may direct payment of cost as determined by him to the applicant from out of the security amount received and the balance of the security amount shall be deposited in the Authority.
(c) In case the opposition succeeds, the security amount shall be refunded to the opposition party.

31. Compliance with Time Schedule

The time schedule provided for advertisement, opposition, defense, hearing and amendment of specification under these rules shall not be extended and failure in compliance with these time schedules shall forfeit the opportunity granted.

32. Manner of submitting evidence and time limit for filing notice of opposition, counter-statement or producing evidences under section 21

A. Any evidence, upon which the opponent may rely, shall be submitted in duplicate to the Registrar with a copy to the applicant within one month from the receipt of counter-statement of the applicant.

B. Any evidence upon which the applicant may rely shall be submitted in duplicate to the Registrar with a copy to the opponent within thirty days from the date of receipt of opponent’s evidence.

C. No further evidence shall be submitted by either party except by leave or directions of the Registrar.

D. The copies of all the documents, except plant variety application, referred to in the notice of opposition or in any counter-statement filed in connection
with the opposition shall be in triplicate unless the Registrar directs otherwise.

E. Where a document, is in a language other than English, and is referred to or relied upon in the notice, statement or evidence, an attested translation in English thereof shall be furnished in triplicate.

F. The time-limit for filing the evidence shall not ordinarily be extended except by a special order of the Registrar given on an application filed by the person seeking extension of time and on payment of the fee specified in the Second Schedule and such an application for extension shall be in Form PV 5 of the First Schedule.

33. Application for the registration of essentially derived variety under section 23

A. The application for registration of an essentially derived variety shall be accompanied by the following documents, namely:
   (a) An affidavit sworn by the applicant stating that such a variety does not contain any gene or gene sequence involving terminator technology;
   (b) A statement giving details of the brief description of the characteristics of the variety to substantiate novelty, distinctiveness, uniformity and stability; and
   (c) The details of parental material used.

B. The application under sub-rule (1) shall be accompanied by the fee as specified for the purpose in column (3) of the Second Schedule.

34. Manner and method for conducting test under section 23

The tests referred to in sub-section (3) of section 23 shall be conducted by the Authority in consultation with the Central Government.

35. Certificate of registration under section 23

The Registrar shall issue to the applicant a certificate of registration of an essentially derived variety in the manner specified in Form 0-2 of the Third Schedule and send a copy of the registration to the Authority and to such other body (ies) as may be notified by the Central Government for information.

CHAPTER IV: REGISTRATION AND BENEFIT SHARING

36. Certificate of registration under section 24

A. The certificate of registration of a plant variety, other than an essentially derived variety, under sub-section (2) of section 24 shall be in Form 0-2 of the Third Schedule.

B. The Registrar shall issue the certificate of registration under sub-section (2) of section 24 within three years of the date of filing of application subject to the fulfillment of all other requirements.

C. A copy of the certificate of registration issued under sub-section (2) of section 24 shall be sent to the Authority; and to such other body or agency, which the Central Government may, by notification in the official gazette specify.

37. Notice to the applicant under section 24

A. If, within a period of twelve months, the application for registration of a plant variety other than an essentially derived variety is not completed in the circumstances given in sub-section (3) of section 24, the Registrar shall issue thirty days notice to the applicant at the address of his principal place of business in India, or if, he has no principal place of business in India, at the address for service in India stated in the application, but if the applicant has authorized an agent for the purpose of the application, the notice shall be sent to the agent and a duplicate thereof to the applicant for filing of the application or such further time as the Registrar may allow for completion of registration.

B. The notice under sub-rule (1) shall be in Form 0-3 of the Third Schedule.

38. Renewal and revision of registration under section 24

A. (a) On receipt of an application from the applicant, the Authority may review and renew the initial duration of registration as mentioned in sub-section (6) of section 24.

(b) Every application for review and renewal under sub-rule (1) shall be made in Form PV-6 of the First Schedule and filed during twelve to eighteen months prior to the expiry of the initial period of registration.

(c) Every application under sub-rule (1) shall be accompanied with the fee payable for the remaining years under the initial period of registration, at the rate fixed for the year preceding the year of application, along with arrears, if any.

B. a) The renewal of registration may be applied for either for the remaining period of total aggregate duration of validity of the registration or for any period within such remaining period.

(b) In case, the applicant prefers for a period less than the total aggregate duration, no application shall be
entertained for the further renewal of registration.

C. (a) The fee payable for such extended period of registration beyond nine years in the case of trees and vines and six years in the case of other crop varieties, as the case may be, shall be based on average annual fee levied during the last two years of the said initial period of registration.

(b) The annual fee shall be uniform for the extended period of the registration and be payable in advance in single installment.

D. The Authority shall within such intervals as it thinks appropriate publish a list of varieties registered as well as renewed under the Act with the particulars of the period of registration, name and address of right holders periodically in its journal and in the Official Gazette.

39. Publication of contents of the certificate invite-ing claims for benefit sharing under Sec. 26

Upon the issuance of the registration certificate under sub-section (8) of section 23, or sub-section (2) of section 24, the Authority shall, for the purpose of inviting claims for benefit sharing under the Act, shall advertise the following details of the registration certificate, namely -

(a) the registration number along with the date of grant,
(b) the name and address of the applicant or breeder in whose name the certificate has been issued or registered,
(c) denomination of the variety,
(d) name of the family, genus, species, variety and common name,
(e) parentage and geographical location of the variety,
(f) the details of the distinguishing features or the characteristics,
(g) in case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived.
(h) the name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety.
(i) the terms and conditions of the agreement, if any, entered into between the breeder and the contributor.
(j) if the variety is sold or otherwise disposed of, details thereof.

40. Benefit sharing claim under section 26

A. Upon the publication of the particulars of a certificate under sub-section (1) of section 26, a person or group of persons or firm or a non-governmental organization can make a claim under sub-section (2) of that section for benefit sharing in Form PV-7 of the First Schedule within a period of six months from the date of such publication. Provided that in special circumstances, the Authority may extend the time limit beyond the period of six months.

B. The person or persons or firm or the non-governmental organization, who has made an application for benefit sharing, shall provide the following information, namely:

(a) the contribution made by the person or the group of persons or firm or community or the non-governmental organizations to the genetic development of the plant variety;
(b) the capacity in which the person or the group of persons or the non-governmental organisation is making the claim for benefit sharing;
(c) in case of “essentially derived varieties”, the terms and conditions in which authorization has been given;
(d) the commercial viability or the actual market performance of the variety so registered.

C. An applicant for benefit sharing shall pay the fee as specified for the purpose, in column (3) of the Second Schedule.

41. Opposition to a claim for benefit sharing under section

A. On receipt of a copy of the claim for benefit sharing, the registered breeder of the plant variety may accept the claim and accordingly intimate the same to the Authority within a period of three months from the date of such receipt.

B. In the eventuality of the plant breeder failing or defaulting to tender the intimation under sub-rule(1) within the period of three months, referred to in sub-rule(1) it shall be presumed that he has no opposition to such claim and the claim shall be decided accordingly.

C. If, within a period of three months of receipt of notice of claim, the breeder of the plant variety files his opposition to the claim for benefit sharing, such an opposition shall be taken into consideration while disposing or deciding the claim for benefit sharing.

D. Every notice of opposition, under sub-rule(3) shall be in Form PV-8 of the First Schedule.

E. The Authority, upon receiving the reply from the registered breeder, shall furnish a copy of such reply to the claimant for benefit sharing.
F. The registered breeder or the claimant to benefit sharing shall furnish supporting document and other evidence, which shall be duly considered by the Authority while disposing of any claim for benefit sharing.

42. Determination of benefit sharing under section 26
The Authority shall, by order, determine the amount of benefit sharing to a variety according to clauses (a) and (b) of sub-section (5) of section 26 and taking into account the following criteria, namely -
(a) the contribution of the claimant in selecting, conserving and providing the genetic material,
(b) the contribution of such genetic material in providing one or more traits which conferred high commercial value to the variety, and
(c) the contribution of such genetic material to impart high combining ability to the parents of the hybrid variety relating to benefit sharing.

43. Reference for recovering benefit sharing under section 26
In case of default or failure on the part of the breeder of the variety to deposit the amount of benefit sharing in the Gene Fund, as per the order of the Authority of section 26, required under sub-section(6) within a period of three months from the date of such order, the Registrar shall make a reference to the District Magistrate under sub-section (7) of that section 26 in Form O-4 of the Third Schedule.

44. Application for registration of title of agent or licensee under section 28
A. An application under sub-section (4) of section 28 for registration as an agent or licensee, as the case may be, shall be made in Form PV-9 of the First Schedule.
B. The application for title by a licensee or an agent shall be accompanied by three attested copies of the agreement or instrument of entitlement or any other documentary evidence.
C. The proposed agent or licensee may also be required to produce such other documents and information as may be required by the Registrar in support of the proof of title.
D. The applicant under sub-section (4) of section 28 shall pay the fee as specified for the purpose in column (3) of the Second Schedule.

45. Reference of disputes of entitlement under section 28
A. While referring a dispute under sub-section (4) of section 28 to the Authority for determination the Registrar shall furnish all the relevant information related to dispute with three copies of all the documents and evidence available with his office.
B. On receipt of an order of the Authority in respect of the dispute, the Registrar shall furnish copies of the order to the persons involved for necessary compliance.

46. Certificate of registration of entitlement under section 28
The certificate of registration to be issued to a registered licensee or an agent by the Registrar under sub-section (4) of section 28 shall be in Form O-5 of the Third Schedule.

47. Application and procedure for varying or cancelling terms of regn. under Sec. 28
A. An application under clauses (a), (b), (c), (d), or (e) of sub-section (9) of section 28 for variation or cancellation of the terms of registration of a registered breeder or his successor or any other person shall be in Form PV-10 of the First Schedule.
B. Every application under sub-rule (1) shall be accompanied by a fee as specified for the purpose in column (3) of the Second Schedule.

48. Notice and proceedings under section 28
A. The Registrar shall issue notice of every application under sub-section (10) of section 28 in Form O- 6 of the Third Schedule to the registered breeder or the agent or the licensee.
B. Any person to whom a notice has been issued under sub-rule (1) and who intends to oppose or intervene in any proceedings under section 28, shall, within three months of the receipt of such notice, give notice of opposition or intervention to the Registrar in Form PV-11 of the First Schedule.
C. On receipt of a notice of opposition or intervention the Registrar shall furnish a copy of it to the applicant.
D. The Registrar may accept or refuse the application or accept it subject to any condition, modification or limitation as directed by the Authority and shall inform the parties in writing accordingly.

CHAPTER V: SURRENDER AND REVOCATION OF CERTIFICATE OF REGN. AND RECTIFICATION AND CORRECTION OF REGISTER

49. Surrender of cert. of regn. under Sec. 33
The registered breeder may at any time, by giving notice to the Registrar offer to surrender his certificate of registration of plant variety in Form PV-12 of the First Schedule, under sub-section (1) of section 33.
50. Procedure on application for surrender of certificate of registration under section 33
A. The Registrar shall give notice in Form O-7 of the Third Schedule, every notice of offer made under rule 50 to the registered agent or the licensee relating to such certificate.
B. (a) Any person who has been given a notice of surrender of certificate of registration under sub-rule (1), who intends to oppose the surrender, shall within three months of the receipt of such notice, give notice of opposition to the Registrar in Form PV-13 of the First Schedule, and shall send therewith a written statement setting out the nature of the opponents’ interest, the facts relied upon along with the notice of opposition.
(b) The Registrar shall thereupon serve the notice of opposition along with the written statement received by him to the applicant.
C. If the applicant desires to contest the opposition, he shall file or leave at the appropriate office a reply statement setting out fully the grounds upon which the opposition is contested, within a period of three months from the date of receipt of the copy of the written statement by him under sub-rule (2) and deliver to the opponent a copy thereof.
D. The applicant or any person to whom a notice under sub-rule (1) has been issued may, make an application to the Registrar in Form PV-14 of the First Schedule, for seeking an opportunity of being heard.
E. On receipt of an application, under sub-rule(4), the Registrar may fix the time and place of hearing and issue notice to the parties accordingly and the interested parties may appear and give or file evidence in support of their case.
F. The Registrar may accept or refuse the application or accept it subject to any condition, amendments, modifications or limitations and shall, accordingly, inform the parties in writing.
G. If the Registrar accepts the registered breeder’s offer of surrender of the plant variety, he shall by order direct the registered breeder to return the certificate of registration and on receipt of such certificate, the Registrar shall, by order, notify the surrender in the Official Gazette.

51. Application for revocation of protection granted to a breeder under section 34
Any person may make an application to the Authority in Form PV-15 of the First Schedule, for revocation of protection granted to a breeder in respect of a variety on any of the grounds laid down under clauses (a) to (h) of section 34.

52. Procedure on application for revocation under rule 52
A. The Authority shall issue notice in Form O-8 of the Third Schedule, to the registered breeder of any application received by it under rule 52.
B. (a) In case the registered breeder intends to oppose the application for revocation of protection, he shall, within three months from the date of receipt of such notice, give notice of opposition to the Authority in Form PV-16 of the First Schedule, and shall send therewith a written statement, setting out the facts upon which he bases his case and the relief sought.
(b) The Registrar shall serve the notice of opposition along with the written statement received by him to the applicant.
C. If the applicant desires to contest the opposition, he shall file or leave at the appropriate office, a reply setting out the grounds upon which the opposition is contested, within a period of three months from the date of receipt of the copy of the written statement by him under sub-rule (2) and deliver to the opponent a copy thereof.
D. (a) The applicant and the registered breeder may make an application to the Registrar in Form PV-17 of the First Schedule, seeking an opportunity of being heard.
(b) The Registrar may, on receipt of such application, fix such time and place for hearing and issue notice to the parties accordingly and the interested parties may appear and give or file evidence in support of his case.
(c) The Registrar may, accept or refuse the application or accept it subject to any condition, amendments, modifications or limitations and shall, accordingly inform the parties in writing.
E. If the Authority accepts the application for revocation of the plant variety, it may direct, by order, the registered breeder to return the certificate of registration and on receipt of such a certificate, the Registrar shall by order notify the revocation of the plant variety in the Official Gazette.

53. Payment of annual fee for retention of registration under section 35
The registered breeder, agent and licensee shall pay an annual fee for retention of registration at such rate as specified for the purpose in column (3) of the Second Schedule.
54. Application for cancellation or change of certificate of registration under section 36
   A. Any person may make an application for changing the certificate of registration on the grounds laid down under sub-section (1) of section 36 to the Registrar.
   B. Every application under sub-rule (1) shall be made in Form PV-18 of the First Schedule and shall be accompanied by a statement of the grounds on which it is made.

55. Procedure on application for cancellation or change of certificate of regn. under section 36
   The Registrar may accept or refuse the application or accept it subject to any condition, amendment, modification or limitation as he may think fit to impose and shall inform the concerned parties in writing accordingly: Provided that no application shall be rejected unless the applicant has been given a reasonable opportunity to make a representation against such rejection.

56. Application to rectify the register under section 36
   Any person may make an application to the Registrar, in Form PV-19 of the First Schedule, stating the grounds on which it is made, for making, expunging or varying the entry on the grounds laid down under sub-section (2) of section 36.

57. Procedure on application to rectify the Register under rule 57
   The Registrar may accept or refuse the application for making, expunging or varying the entry or accept it subject to any condition, amendment, modification or limitation as he may think fit to impose and shall inform the concerned parties in writing accordingly: Provided that no application shall be rejected unless the applicant has been given a reasonable opportunity to make a representation against such rejection.

58. Cancellation or change of registration or rectification of the Register by the Registrar under section 36
   A. The Registrar while exercising the powers under sub-section (4) of section 36 to cancel the registration, may make changes to the registration, or in case of rectification of the register, shall give notice in Form O-9 of the Third Schedule to the registered breeder, agent or licensee, if any, and to any other person who appears to the Registrar to have any interest in the plant variety, and shall state the grounds on which the Registrar intends to take any action.
   B. If any person who has been given a notice under sub-rule (1) intends to oppose the action of the Registrar, he shall within three month from the date of the receipt of such notice, give the notice of opposition to the Registrar in Form PV-20 of the First Schedule, and shall send therewith a written statement setting out the facts upon which he bases his case and the relief sought for.
   C. The Registrar after hearing the person to whom a notice under sub-rule (1) has been given may pass such order as he may think fit and shall, accordingly, inform the parties in writing.

59. Application for correction of Register by the registered breeder under section 37
   An application for correction of the Register may be made by the registered breeder of the plant variety to the Registrar under sub-section (1) of section 37 in Form PV-21 of the First Schedule, for making any change as laid down in clauses (a) to (c) of sub-section (1) of that section.

60. Procedure on application for correction of the Register under rule 60
   The Registrar may accept or refuse the application made under rule 60 for correction of register or accept it subject to any condition, amendments, modifications or limitations as he may think fit and shall, accordingly, inform the parties in writing.

61. Application for correction of the Register by the registered agent or licensee under section 37
   An application for correction of the Register may also be made by the registered agent or the licensee to the Registrar under sub-section (2) of section 37 in Form PV-22 of the First Schedule on the grounds laid down in sub-section (2) of that section.

62. Procedure on application for correction of the Register under rule 62
   A. The Registrar shall issue notice of every application under rule 62 in Form O-10 of the Third Schedule, to the registered breeder.
   B. The Registrar may accept or refuse the application or accept it subject to any condition, amendment, modification or limitation he may think fit and shall, accordingly, inform the parties in writing. provided that tests referred to in sub-section (3) of section 23 shall be conducted by the Authority in consultation with the Central Government: Provided that no application shall be rejected unless the applicant has been given a reasonable opportunity to make a representation against such rejection.
63. Alteration of denomination of a registered variety under section 38
A. An application, to delete any part or to add or to alter the denomination of a registered variety, under sub-section (1) of section 38, shall be made by the breeder to the Registrar in Form PV-23 of the First Schedule.
B. The Registrar may determine whether and subject to what conditions, if any, the amendments shall be allowed.
C. (a) The Registrar shall advertise the application for alteration in denomination in the Gazette or a journal or a daily newspaper and shall also advertise the nature of the proposed alteration in the denomination therein.
D. The Registrar shall issue notice to all the persons, who, in his opinion, may have an interest in the matter.

64. Procedure on application for alteration of denomination under rule 64
A. Any interested person may, within 3 months from the date of advt. of an application for alteration in denomination of a registered variety, under sub-section (2) of section 38, give a notice of opposition to the proposed change in denomination of a registered variety in Form PV-24 of the First Schedule.
B. The Registrar shall serve a notice to the breeder about the opposition received for the proposed change in denomination and shall give an opportunity to both the parties of being heard, if so desired, before deciding the matter.
C. In the event of leave being granted for alteration of denomination, the denomination as so altered shall be advertised in Gazette or a journal or a daily newspaper in Form O-11 of the Third Schedule.

CHAPTER V: FARMERS’ RIGHTS

65. Claim for compensation under section 39
A. Any farmer, group of farmers or the organisation of the farmers may make an application, under sub-section (2) of section 39, to the Authority to claim compensation.
B. Every application under sub-rule (1) shall be in Form PV-25 of the First Schedule.

66. Procedure on application for claim for compensation under rule 66
A. The Authority shall give notice to the registered breeder about the compensation claim received in respect of the registered variety.
B. After receiving a notice from the Authority under sub-rule (1), the registered breeder may, within three months from the date of receipt of such notice, file notice of opposition in Form PV-26 of the First Schedule.
C. In the eventuality of the breeder failing or defaulting to tender his opposition, within a period of three months, from the date of receipt of the notice for compensation, it shall be presumed that he has no opposition to such claim and accordingly such claim shall be decided.
D. The Authority shall, upon receiving opposition from the breeder give opportunity to both the parties of being heard and may direct the breeder to pay such compensation to the farmer, the group of farmers or the organisation of the farmers, as the case may be as it deems fit.

67. Issue of notice under section 41
A. On receiving the report from the centre notified under sub-section (1) of section 41, in respect of claims filed by a person or group of persons or governmental or non-governmental organisation, for compensation to the people of any village or local community for their contribution in the development of new variety, and if satisfied, the Authority may issue notice to the registered breeder or his assignee or registered agent in Form O-12 of the Third Schedule.
B. Upon receiving the notice from the Authority, the registered breeder or his assignee or registered agent may file objection to the claim for compensation within three months in Form PV-27 of the First Schedule.
C. The Authority, upon receiving objection from the registered breeder or his assignee or registered agent, shall give opportunity of being heard to both the parties and after deciding on the eligibility for and quantum of compensation shall, direct, the breeder to pay compensation to the person, the group of persons or governmental or non-governmental organisation which has made the claim under sub-section (1) of section 41 and deposit the requisite funds within a period of two months with the Gene Fund.

68. Manner of receiving benefit sharing under section 45
The breeder of a variety or essentially derived variety shall deposit the amount of benefit sharing, as required under sub-section (6) of section 26, with the Gene Fund.
69. Manner of applying the Gene Fund under section 45
A. The Authority shall pay the amount of benefit sharing, compensation required for use of genetic material towards evolution of new and essentially derived variety, to meet expenditure incurred for conservation and sustainable use of genetic resources and for the framing of schemes related to benefit sharing.
B. The Gene Fund shall be applied for meeting the following purposes in accordance with the priority made hereunder :-
(a) to support and reward farmers, community of farmers, particularly the tribal and rural communities engaged in conservation, improvement and preservation of genetic resources of economic plants and their wild relatives, particularly in areas identified as agro-biodiversity hot spots;
(b) for capacity building on ex situ conservation at the level of the local body, particularly in regions identified as agro-biodiversity hot spots and for supporting in-situ conservation;
(c) on benefit sharing and compensation in accordance with sub-section (5) of section 26 and sub-section (3) of section 41; and
(d) on transaction cost of administering the Gene Fund.

CHAPTER VII: COMPULSORY LICENSE

70. Compulsory licensing under section 47
A. Any interested person may, after the expiry of three years from the date of issuance of a certificate of registration of a variety make an application to the Authority, in the Form PV-28 of the First Schedule along with the fee specified under the Second Schedule under sub-section (1) of section 47 for grant of compulsory license.
B. The application for compulsory license under sub-section (1) shall -
(a) specifies particulars of variety denomination, generic and specific name of the variety or varieties concerned,
(b) contain the grounds for issue of compulsory license with supporting documents, and
(c) be supported by -
   i) qualification, technical and financial capabilities of the person making such request with evidence,
   ii) particulars of the holder of the right to the variety,
   iii) written evidence that the person, making such request, has exhausted all measures for voluntary license.
C. If after considering the application under sub-rule (1), the Authority is satisfied that a prima facie case has not been made for grant of compulsory license, it shall notify the applicant accordingly.
D. On receipt of an application for grant of compulsory license under sub-rule(1), the Authority shall serve notice to the breeder of such variety or his assignee or registered agent inviting his opposition within one month from the receipt of such notice.
E. On receiving a notice under sub-rule(4), the registered breeder or his assignee or registered agent may give notice of opposition in Form PV-29 of the First Schedule, which shall be supported by documentary proof to substantiate the ground or grounds of opposition.
F. If after giving an opportunity to both the parties of being heard, the Authority is satisfied that there is a need for the grant of compulsory license, he may order the breeder or his assignee or registered agent to license the variety on such terms of royalties and other remuneration as it may deem fit.

71. Manner of making material available under section 50
The Authority shall make available to the licensee of such compulsory license, the reproductive material of the licensed variety from the Gene Bank or any other centre, including the initial breeder of such variety.

72. Revocation of compulsory license under section 52
A. (a) Any person in respect of compulsory license aggrieved may, under sub-section (1) of section 52, make an application in Form PV-30 of the First Schedule to the Authority, for revocation of compulsory license on any of the grounds specified in sub-section (1) of section 47 or section 52.
(b) The application under sub-rule(1), shall be supported by evidence.
B. The Authority on its own motion or on receipt of the application from the aggrieved person under sub-rule(1), may give notice to the licensee.
C. The licensee may file an opposition to an application under sub-rules (1) or a proceeding under sub-rule(2), in Form PV-31 of First Schedule with the Authority,
D. The Authority shall after considering the opposition filed under sub-rule (3) and after giving an opportunity to the licensee of being heard passing an order of revocation or refuse to grant such order.
CHAPTER VIII: FINANCE, ACCOUNTS AND AUDIT

73. Financial and administrative powers of the Chairperson under section 63
A. The Chairperson shall exercise such financial and administrative powers over the functions of the Authority as are exercisable by a Head of Department under the General Financial Rules in accordance with the accounts and financial rules of the Government of India.
B. The Chairperson may, delegate such financial and administrative powers in writing as he may deem fit, to a member or any subordinate officer of the Authority not below the rank of a Registrar or equivalent subject to the condition that the member or officer so authorised shall, write exercise such delegated powers continue to be under the direction, control and supervision of the Chairperson.

CHAPTER IX: MISCELLANEOUS

74. Manner of authorizing registered agent or registered licensee under section 81
A. A breeder of a variety or its propagating material or essentially derived variety or its propagating material registered under the Act, may make an application under section 81, in Form PV-32 of the First Schedule, for authorizing the registered agent or registered licensee or his assignee to institute appropriate proceedings in any court of law on his behalf.
B. Where any authorization has been made under sub-rule (1), the service upon the agent of any document relating to any proceeding or matter under the Act or these rules shall be presumed to be a service upon the person so authorizing him; and all communications directed to be made to a person in respect of any proceeding or matter may be addressed to such agent, and all appearances before the Authority relating thereto may be made by or through such agent.
C. Notwithstanding any thing contained in sub-rules (1) and (2), the Authority may, if it considers necessary, require the signature or presence of an applicant, opponent or party to such proceeding or matter.

75. Manner of issuing certified copy under section 84
Any interested person may, under section 84, make an application in Form PV-33 of the First Schedule, along with fee specified in the Second Schedule, to the Authority or Registrar for obtaining certified copies of any entry in the Register, certificates or extracts of plant variety application or other records maintained by the Authority and any document required in any proceedings under this Act and pending before such Authority or Registrar; and he may make a request in similar manner and for similar purpose to inspect such entry or document.
## II. Schedule - First Schedule

{See rule 3(1)}

<table>
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<tr>
<th>Form No.</th>
<th>Sections and rules</th>
<th>Title</th>
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<td>Notice of Opposition against variation/ cancellation of the term of Registration</td>
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<td>Application for correction in National Plant Variety Register by Owner/Breeder</td>
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<td>Application to alter Denomination of a Registered Plant Variety</td>
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<td>Notice of Opposition to Application to Alter Denomination of a Registered Plant Variety</td>
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Fee

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<td>4</td>
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<td>Individual-5000 Educational-7000 Commercial-10000</td>
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<td>5</td>
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<td>Individual-5000 Educational-7000 Commercial-10000 Per year</td>
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<td>Rs 5000</td>
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<tr>
<td>7</td>
<td>Application for registering as agent /licensee</td>
<td>Rs 10000</td>
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<td>8</td>
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(See rule 2(c))

Forms to be used by Registrar and the central government

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<tr>
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<td>Notice of application for revocation of registered variety</td>
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<td>0-9</td>
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<td>Section 37(2) and Rule 63</td>
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(See rule 20(1))

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<th>Scale of pay</th>
<th>Qualifications and experience</th>
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<tbody>
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<td>1</td>
<td>Financial Advisor</td>
<td>1</td>
<td>Director</td>
<td>14,300 – 18,300</td>
<td>A Degree from a recognized University or equivalent at least eight years experience in financial/Accounts management.</td>
</tr>
<tr>
<td>2</td>
<td>Legal Advisor</td>
<td>2</td>
<td>Deputy Secretary</td>
<td>10,000 – 15,200</td>
<td>An Advocate at least eight years practice as such and having special knowledge in Intellectual Properties, Management and Transactions.</td>
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<tr>
<td>3</td>
<td>Senior Accounts Officer</td>
<td>1</td>
<td>Under Secretary</td>
<td>10,000 – 15,200</td>
<td>A Degree in Commerce from a recognized University or equivalent with at least eight years experience as an Accounts Officer.</td>
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<td>4</td>
<td>Accounts Officer</td>
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<td>8000-13,500</td>
<td>A Degree in Commerce or Economics as one of the subject at Degree level from a recognized University with at least six years experience on accounts related matters.</td>
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<td>5</td>
<td>Technical Assistant</td>
<td>6</td>
<td>Technical Assistant</td>
<td>5,500-9,000</td>
<td>A Degree in Agricultural Science or allied field like botany or biotechnology with at least 4 year experience in plant varietal improvements and seed development activities.</td>
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<tr>
<td>6</td>
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<td>5</td>
<td></td>
<td>5,500-9,000</td>
<td>A Degree from a recognized University in Computer Applications and at least one year experience in Data Base Management.</td>
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</tbody>
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FORM – PV – 1

(See rule 25)

THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001

AUTHORIZATION FORM

I/We¹……………………………………………………………………………………………………………………………………………

……………………………………………………………………………………………………………………………………………hereby authorise²…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………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FORM – PV – 3
{See rule 31(1)}
THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001
NOTICE OF OPPOSITION

I/We\(^1\)…………………………………….. hereby five notice of opposition, to the application for registration of plant variety registration No.\(^2\)……………., published on ……………………for the following reason(s) :-
1. …………………………………………………………………………………………….
2. …………………………………………………………………………………………….
3. …………………………………………………………………………………………….

Dated this……….day of……………….2000 (Signature)\(^3\) …………………………….

To
The Registrar
The Plant Varieties Registry
At………………………….

1. Name, address and nationality of the person(s) filing notice of opposition
2. Registration number as advertised
3. Signature of the person(s) filing notice of opposition

I/We hereby declare that the facts and matter stated herein are true to the best of my/our knowledge, information and belief.

Dated this……….day of……………….2000 (Signature)\(^4\) …………………………….

FORM – PV – 6
{See rule 39(1)(b)}
THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001
APPLICATION FOR RENEWAL OF REGISTRATION OF PLANT VARIETIES

I/We\(^1\)……………………………………..apply for the renewal of the plant variety registration No.\(^2\)………………..dated…………………………….in respect of the plant variety\(^2\)…………………………..having denomination…………………………..

The notice of renewal of the registration may be sent to the following address in India:- …………………………………………………………….

Dated this……….day of……………….2000 (Signature)\(^3\) …………………………….

To
The Registrar
The Plant Varieties Registry
At………………………….

1. Insert full name with surname and address of the applicant(s)
2. Name of the registered plant variety
3. Signature of the applicant(s)
THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001

APPLICATION FOR BENEFIT SHARING

I/We hereby apply that my/our name(s) may be registered as person(s) entitled to benefit sharing in respect of the plant variety, registration no.:

The grounds for my/our being entitled to benefit sharing are given below:
1.
2.

The details of the plant variety in respect of which I/We am/are claiming benefit sharing are as follows:

Plant Variety of which the registration Number is

And in proof of my/our entitlement to benefit sharing whereof I/we transmit the accompanying documents with a certified copy thereof.

My/our address for service in India is

Dated this day of 200

(Signature)

To

The Registrar
The Plant Varieties Registry
At

1. State full Name and address as stated in the application for registration.
2. Name(common/botanical) of the plant variety and crop
3. Specify the particulars of such documents, giving its date, and parties to the same and showing how the claim made is substantiated
4. State the name of the place of the appropriate office of the Plant Variety Registry

Signature of the Applicant or of his agent or assignee
FORM – PV – 9
(See rule 45(1))

THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001

APPLICATION FOR REGISTRATION AS AN AGENT OF LICENSEE

I/We 1………………………………………….. hereby apply for registration as an agent or licensee under sub-section (4) of Section 28 of the Protection of Plant Varieties & Farmers’ Right Act, 2001.

I/We hereby declare that I/We am/are an authorized agent or licensee in respect of the plant variety 2……………………, registration No…………………… and that I/We am/are fully eligible to be a registered agent for licensee under section 28 of the Protection of Plant Varieties and Farmers Rights Act, 2001 (53 of 2001) and the rules made therein. Given below is my /our particular:

1. Name in full beginning with surname (in capital letters)……………………………
2. Address of the place of residence……………………………………………………
3. Father’s Name…………………………………………………………………………
4. Nationality……………………………………………………
5. Date and Place of Birth……………………………………………………
6. Occupation in full………………………………………………………………………
7. Principal place of business…………………………………………………………
8. Address of the branch office, if any………………………………………………
9. Documents enclosed 3
   1…………………………………………………..
   2…………………………………………………..

I/We also hereby declare that the information given above are true to the best of my/our knowledge and belief.

Dated this…………day of……………………200

Address 4…………………………………………………………………………..(Signature) 5…………………………………………………………

To
The Registrar
The Plant Varieties Registry
At……………………………………………………

1. Insert name (in full), address and nationality of the persons entitled to benefit sharing
2. Denomination, variety, registration number and other details of the plant variety(ies) in respect of which benefit sharing is claimed.
3. Specify the particulars of such documents, giving its data and parties to the same and showing how the claim made is substantiated.
4. Full address of the persons who has/have the claim for benefit sharing
5. To be signed by the Applicant(s) or authorized licensee(s) or agent(s) or legal successor(s) or assignee(s)
FORM – PV – 15
(See rule 52)
THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001

APPLICATION FOR REVOCATION OF THE CERTIFICATE OF REGISTRATION OF THE PLANT VARIETY REGISTERED UNDER THIS ACT BY ANY PERSON

In the matter of plant variety .................................., of crop.......................... having registration No.................................... registered in the name of......................... application is hereby made by.......................... being the.................................. 2 of the above mentioned registered plant variety for revocation of the certificate on one of the following grounds and in circumstances that are stated fully in the accompanying statement.

1. That the grant of certificate of registration has been based on incorrect information furnished by the applicant.
2. That the certificate of registration has been granted to a person who is not eligible for protection under this Act.
3. That the breeder did not provide the Registrar with such information, documents or materials as required for registration under this Act.
4. That the breeder has failed to provide an alternative denomination of the variety which is the subject matter of the registration to the Registrar in case where the earlier denomination of such variety provided to the Registrar is not permissible for registration under this Act.
5. That the breeder did not provide the necessary seeds or propagating material to the person to whom compulsory license has been issued under section 47 regarding the variety in respect of which registration certificate has been issued to such breeder.
6. That the breeder has not complied with the provisions of this Act or rules or regulation made there under.
7. That the breeder has failed to comply with the direction of the Authority issued under this Act.
8. That the grant of certificate of registration is not in the public interest.

All Communications relating to this application be sent at the following address

Dated this........date of.........................200 (Signature)......................

To
The Plant Varieties Authority/Registry
At.................................................

1. Insert the name of the applicant
2. Nature of relationship of the applicant with the registered plant variety
3. Address of the applicant
4. Signature of the applicant or his agent

State the name of the place of the appropriate office of the Plant Varieties Registry
FORM – PV – 25
(See rule 66(2))
THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001
APPLICATION FOR COMPENSATION

I/We \( \ldots \ldots \) hereby request that I/We may be compensated in respect of the plant variety \( \ldots \ldots \) of the crop \( \ldots \ldots \), having registration No \( \ldots \ldots \) and denomination \( \ldots \ldots \) for failure of propagating material to perform as per stipulated expectation under given conditions.

In support of my/our entitlement to compensation, I/We are enclosing the following evidence(s)

1. \( \ldots \ldots \)
2. \( \ldots \ldots \)

My/Our Address for services is

\( \ldots \ldots \)

Dated this \( \ldots \ldots \) day of \( \ldots \ldots \) 200\( \ldots \ldots \) (Signature) \( \ldots \ldots \)

To
The Authority,
The Protection of Plant Varieties and Farmers’ Right

1. Insert name (in full), address and nationality of persons making request for compensation
2. Specify the particulars of evidences showing how the claim made is substantiated
3. To be signed by the Applicant(s) along with the name(s), and official seal, if any.

FORM – PV – 28
(See rule 71(1))
THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001
GRANT OF COMPULSORY LICENSE

I/We \( \ldots \ldots \) hereby apply for the grant of compulsory license for plant variety \( \ldots \ldots \) of crop \( \ldots \ldots \), having registration No \( \ldots \ldots \) published on \( \ldots \ldots \) on the following grounds, namely:

1. The reasonable requirements of the public for seeds or other propagating material of the variety have not been satisfied.
2. The seeds or propagating material of the variety not available to the public at reasonable price.

The documentary evidence in support of my/our interest and the facts stated above and copies thereof are herewith enclosed:

1. \( \ldots \ldots \)
2. \( \ldots \ldots \)
3. \( \ldots \ldots \)

I/We declare that the facts and matters stated herein are true to the best of my/our knowledge, information and belief.

My/Our address for address for service in India is \( \ldots \ldots \)

Dated this \( \ldots \ldots \) day of \( \ldots \ldots \) 200\( \ldots \ldots \) (Signature) \( \ldots \ldots \)

To
The Authority, Protection of Plant Varieties and Farmers’ Rights

1. State the name (in full), address and nationality of the Applicant(s)
2. To be signed by applicant(s) or if the applicant(s) is/are absent from India by authorized patent agent.
Annexure III: Addresses of UPOV Member States

ALBANIA / ALBANIE / ALBANIEN
National Seeds and Seedlings Institute
Ministry of Agriculture, Food and Protection of Consumer, Rr. Siri Kodra, Tirana
Tel. (355 4) 230 324
Fax: (355 4) 230 324
e-mail: petrittopi@yahoo.com
website: www.eshff.gov.al

ARGENTINA / ARGENTINE / ARGENTINIEN
Instituto Nacional de Semillas (INASE)
Secretaría de Agricultura, Ganadería y Pesca
Ministerio de Economía y Obras y Servicios Públicos
Avda. Paseo Colón 922-3, Piso, Of. No. 347
1063 Cuidad de Buenos Aires
Tel. (54-11) 4349 24 97
Fax. (54-11) 4349 24 17
e-mail: inase@sagyp.mecon.ar
website: http://www.inase.gov.ar

AUSTRALIA / AUSTRALIE / AUSTRALIEN
The Registrar
Plant Breeder's Rights, IP Australia
P.O. Box 200, Woden, A.C.T. 2606
Tel. (61-2) 6283 2999
Fax. (61-2) 6283 7999
e-mail: pbr@ipaustralia.gov.au

AUSTRIA / AUTRICHE / ÖSTERREICH
Bundesamt für Ernährungssicherheit
Institut für Sortenwesen
Postfach 400, Spargelfeldstrasse 191
A-1226 Wien
Tel. (43-1) 732 16 40 00
Fax. (43-1) 732 16 42 11
e-mail: sortenwesen@ages.at
website: http://www.ages.at

AZERBAIJAN / AZERBAÍDJAN / ASERBAIDSCHAN / AZERBAYÁN
State Commission on the Test and Protection of Selection Novelty
Necif Narimanov st., 7A, 1006 Baku
Tel./Fax (994-12) 462 5420
e-mail: yujiyev@agroagency.gov.az

BELARUS / BÉLARUS / BELARÚS
Committee for the State Testing and Protection of Plant Varieties of the Republic of Belarus
90, Kazintza str.
Minsk 220108
Tel. (375-17) 277 0421 / 277 7051
Fax. (375-17) 278 3530
e-mail: sortr@mshp.minsk.by

BELGIUM / BELGIQUE / BELGIEN / BÉLGICA
Service public fédéral économie, P.M.E., Classes moyenne & énergie
Office de la Propriété Intellectuelle
North Gate III – 5ème étage
16, bd du Roi Albert II, B-1000 Bruxelles
Tel. (32-2) 277 8275
Fax. (32-2) 277 5262
e-mail: camille.vanslembruck@economie.fgov.be
website: http://economie.fgov.be/opri-die.htm

BOLIVIA / BOLIVIE / BOLIVIEN
Dirección Nacional de Semillas
Secretaría Nacional de Agricultura y Ganadería
Avda. 6 de Agosto 2006, Edif. V. Centenario, Casilla 4793, La Paz
Tel. (591-2) 441 153 / 441 608
Fax. (591-2) 441 153 / 441 608
e-mail: semillas@ceibo.entelnet.bo
website: http://www.semillas.org

BRAZIL / BRÉSIL / BRASILIEN / BRASIL
Serviço Nacional de Proteção de Cultivares – SNPC (National Plant Varieties Protection Service)
Secretaria de Desenvolvimento Agropecuário e Cooperativismo – SDC, Ministério da Agricultura, Pecuária e Abastecimento, Esplanada dos Ministérios, Bloco D, Anexo A, Sala 251 CEP 70043-900, Brasilia, DF, Brazil
Tel. (55-61) 3218 2547 / 2549
Fax. (55-61) 3224 28 42
e-mail: snpc@agricultura.gov.br
website: http://www.agricultura.gov.br Serviços>Cultivares>Proteção

BULGARIA / BULGARIE / BULGARIEN
State Patent Office of the Republic of Bulgaria
52 B, Dr. G.M. Dimitrov Blvd. BG-1040 Sofia
Tel. (359-2) 873 51 75
Fax. (359-2) 873 51 78
e-mail: bpo@bg.net
website: http://www.bpo.bg
Central Office “Variety Testing”
Executive Agency for Variety Testing, Field Inspection and Seed Control (IASAS)
125 Tzarigradsko shose Blvd., Block 1
1113 Sofia
Tel. (359-2) 700 375; Fax. (359-2) 71 36 35
Addresses of UPOV Member states

CANADA / KANADA / CANADÁ
Plant Breeders’ Rights Office
8th Floor, 2 Constellation Crescent
Ottawa, Ontario K1A 0Y9
Tel. (1-613) 221-7521
Fax. (1-613) 228-4552
e-mail: vsisson@inspection.gc.ca

CHILE / CHILI
Ministerio de Agricultura
Servicio Agrícola y Ganadero (SAG)
Departamento de Semillas
Avenida Bulnes 140, Casilla 1167-21
Santiago de Chile
Tel. (56 -2) 696 29 96, 698 22 44
Fax. (56 -2) 696 64 80
e-mail: semillas@sag.gob.cl
website: http://www.sag.gob.cl

CHINA / CHINE
Plant Variety Protection Office
Ministry of Agriculture
Building 20, Maizidian Street
Beijing 100026
Tel. (86 -10) 641 930 29 / 641 916 77
Fax. (86 -10) 641 930 82 / 641 916 78
e-mail: cnppv@agri.gov.cn
website: http://www.cnppv.cn/default.htm

CZECH REPUBLIC / RÉPUBLIQUE TCHÈQUE / TSCHECHISCHE REPUBLIK / REPÚBLICA CHECA
Central Institute for Supervising and Testing in Agriculture, Department of Plant Variety Rights
Za Opravnou 4
150 06 Praha 5 - Motol
Tel. (420-2) 572 11755
Fax. (420-2) 572 11752
e-mail: motol@oaz.zeus.cz

DENMARK / DANEMARK / DÄNEMARK / DÍNAMARCA
Danish Institute of Agricultural Sciences
Department of Variety Testing
Tegløværksvej 10, Tystofte, DK-4230 Skælskør
Tel. (45) 5816 0600
Fax. (45) 5816 0606
e-mail: afs.djf@agrsci.dk
website: http://www.agrsci.org

ECUADOR / ÉQUATEUR
Instituto Ecuatoriano de la Propiedad Intelectual
Dirección Nacional de Obtenciones Vegetales
Avenida República 396 y Diego de Almagro
Edificio FORUM 300, 1er piso, Quito
Tel. (593-2) 2508 000, ext. 340
Fax. (593-2) 2508 026
e-mail: ieipi@interactive.net.ec

ESTONIA / ESTONIE / ESTLAND
Plant Production Inspectorate
Variety Control Department
Vabaduse plats 4
71020 Viljandi
Tel./Fax (+372) 43 33 4650
e-mail: pille.ardel@plant.agri.ee
website: http://www.plant.agri.ee

EUROPEAN COMMUNITY / COMMUNAUTÉ EUROPÉENNE / EUROPÄISCHE GEMEINSCHAFT / COMUNIDAD EUROPEA
Community Plant Variety Office
P.O. Box 10121, 49021 Angers Cedex 02
France
Visitors’ address:
3, boulevard Foch, 49004 Angers
France
Tel. (33-1) 41 25 64 32
Fax. (33-2) 41 25 64 10
website: www.cpvo.europa.eu

FINLAND / FINLANDE / FINNLAND / FINLANDIA
Plant Variety Board, Plant Variety Rights Office
Ministry of Agriculture and Forestry
Hallituskatu 3a, Helsinki, Box 30
FIN-00023 GOVERNMENT
Tel. (358-9) 160 3316
Fax. (358-9) 88663
e-mail: arto.vuori@mmm.fi
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Instituto Colombiano Agropecuario (ICA)
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Fax. (385-31) 275 193
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MAROC / MOROCCO / MAROKKO / MARRUECOS
Chef
Service de Contrôle des Semences et Plants
Direction de la Protection des Végétaux, des Contrôles Techniques
Et de la Répression des Fraudes
Ministère de l’Agriculture, du Développement Rural et des Pêches Maritimes
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NETHERLANDS / PAYS-BAS / NIEDERLANDE / PAÍSES BAJOS
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Fax. (31-318) 82 25 89
e-mail: plantenrassen@minlnv.nl
Website: http://www.plantenrassen.nl

NEW ZEALAND / NOUVELLE-ZÉLANDE / NEUSEELAND / NUEVA ZELANDIA
Commissioner of Plant Variety Rights
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Fax. (64 4) 978 3691
e-mail: info@pvr.govt.nz
Website: http://www.pvr.govt.nz

NICARAGUA
Registro de la Propiedad Intelectual
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Tel. (505) 267 3061, 237 2417, 267 2417 ext. 1279, 1221
Fax. (505) 267 5393
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Website: http://www.mific.gob.ni/comercio/dirme rcados/propintelectual.html or http://www.rpi.gob.ni/procevv.htm

NORWAY / NORVÊGE / NORWEGEN / NORUEGA
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PARAGUAY
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POLAND / POLOGNE / POLEN / POLONIA
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PORTUGAL
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Fax. (351-213) 613 222
email: info@dgpc.min-agricultura.pt
website: http://www.dgpc.min-agricultura.pt

REPUBLIC OF KOREA / RÉPUBLIQUE DE COREÉ / REPUBLIK KOREA / REPÚBLICA DE COREA
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Ministry of Agriculture and Forestry
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Fax: (+82-31) 467-0161
email: info@seed.go.kr
website: http://www.seed.go.kr

REPUBLIC OF MOLDOVA / RÉPUBLIQUE DE MOLDOVA / REPUBLIK MOLDAU / REPÚBLICA DE MOLDOVA
State Commission for Crops Variety Testing and Registration, Ministry of Agriculture
Bul. Stefan cel Mare 162
C.P. 1873, 2004 Chisinau

Plant variety protection made easy
ROMANIA / ROUMANIE / RUMÄNIEN / RUMANIA
State Office for Inventions and Trademarks (OSIM)
5, Ion Ghica Str., Sector 3
P.O. Box 52, 70018 Bucharest
Tel. (40 -1) 315 90 66
Fax. (40 -1) 312 83 66
Website: http://www.osim.ro

RUSSIAN FEDERATION / FÉDÉRATION DE RUSSIE / RUSSISCHEN FÖDERATION / FEDERACIÓN DE RUSIA
State Commission of the Russian Federation for Selection Achievements Test and Protection
Orlikov per., 1/11, 107139 Moscow
Tel. (7 -495) 207 49 26
Fax. (7 -495) 411 83 66
Website: http://www.gossort.com

SINGAPOUR / SINGAPORE / SINGAPUR
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51 Bras Basah Road #04-01 Plaza by the Park
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Ministry of Agriculture
Dobrovicova 12
812 66 Bratislava
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SLOVENIA / SLOVÉNIE / SLOWENIEN / ESLOVENIA
Phytosanitary Administration of the Republic of Slovenia
Ministry of Agriculture, Forestry and Food (MAFF)
Einspielerjeva 6
1000 Ljubljana

SPAIN / ESPAGNE / SPANIEN / ESPAÑA
Oficina Española de Variedades Vegetales (OEVV)
Ministerio de Agricultura, Pesca y Alimentación
C/ Alfonso XII n° 62, 2 planta, 28014 Madrid
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Fax. (34) 91 347 67 03
Website: http://www.mapa.es

SWEDEN / SUÈDE / SCHWEIZ / SUECIA
Swedish Board of Agriculture (Jordbruksverket)
Crop Production Division, S-551 82 Jönköping
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Website: http://www.siv.se

SWITZERLAND / SUISSE / SCHWEIZ / SUIZA
Bundesamt für Landwirtschaft
Büro für Sortenschutz
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CH-3003 Bern
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Fax. (41-31) 322 26 34
Website: www.blw.admin.ch

TRINIDAD AND TOBAGO / TRINITÉ-ET-TOBAGO / TRINIDAD UND TOBAGO / TRINIDAD Y TABAGO
Controller, Intellectual Property Office
Ministry of Legal Affairs
72-74 South Quay, Port of Spain
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Fax. (1-868) 624 12 21
Website: info@ipo.gov.tt

TUNISIA / TUNISIE / TUNESIEN / TÚNEZ
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e-mail: sops@sops.gov.ua
Website: http://www.sops.gov.ua/index.htm

UNITED KINGDOM / ROYAUME-UNI
/ VEREINIGTES KÖNIGREICH / REINO UNIDO
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The Plant Variety Rights Office and Seeds
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e-mail: mike.wray@defra.gsi.gov.uk
website: www.defra.gov.uk/planth/pvs/default.htm

UNITED STATES OF AMERICA / ÉTATS-UNIS
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Mail Stop International Relations
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Alexandria, VA 22313-1450
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Fax. (1-571) 273 0085
Website: http://www.uspto.gov

The Commissioner
Plant Variety Protection Office

Agricultural Marketing Service
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Ministry of Agriculture and Rural Development (MARD)
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Ba Dinh District
HANOI
Viet Nam
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Definitions

**Access** is the acquisition of biological resources, their derivatives, community knowledge, innovations, technologies or practices as authorized by the National Competent Authority.

**Agronomy:** The science of husbanding crop production in different ways to improve yield, quality and income with concurrent care to soil and environment.

**Benefit Sharing** is the sharing of whatever accrues from the utilization of biological resources, community knowledge, technologies, innovations or practices.

**Benefit Sharing:** This is applicable to the biological resource and traditional knowledge conserved by communities. Whenever a party outside the community accesses these resources and commercializes them with or without value addition or innovation, an equitable part of the benefit gained by the party is to be shared with the community. Like communities, it is applicable to individuals too.

**Biodiversity:** The variety of diverse life forms, from microorganism to man, at species, genes and ecosystem levels existing in a given place at a given time.

**Biological resource** includes genetic resources, organisms or parts thereof, populations, or any other component of ecosystems, including ecosystems themselves, with actual or potential use or value for humanity.

**Branded Seeds:** Seeds of registered plant varieties, which are marketed in packets or may containers with appropriate label indicating the registration particulars.

**Breeder:** A person or a group or a community who either develops an improved plant variety or conserves a traditional variety.

**Centre of Origin:** Geographical region where a given species of crop plant is believed to have evolved, identified and domesticated for cultivation and also notable for its right genetic variability.

**Character:** Any specific detectable and discretely describable or measurable (qualitative or quantitative) feature of a plant or animal (see also distinct).

**Collector** is any natural or legal person, entity or agent obtaining access to biological resources, local practices, innovations, knowledge or technologies under authority given by the National Competent Authority.

**Commercialize:** The process of using a plant or its product in trade with a view to make economic gain.

**Community Gene Bank:** A specially devised seed storage facility created to assist farming community, where the seeds of different farmers’ varieties are deposited by concerned farming and tribal communities for conservation for long years without losing its viability.

**Community Knowledge** or indigenous knowledge is the accumulated knowledge that is vital for conservation and sustainable use of biological resources and/or which is of socio-economic value, and which has been developed over the years in indigenous/local communities.

**Community Rights** are those rights held by local communities over their biological resources or parts or derivatives thereof, and over their practices, innovations, knowledge and technologies.

**Conservation:** The process of safe preservation of a plant variety by continuous cycle of sowing, saving and re-sowing its seed or by its storage in viable state in gene bank.

**Derivative** is a product developed or extracted from a biological resource; a derivative may include such products as plant varieties, oils, resins, gums, proteins etc.

**Distinctiveness:** One or few unique characters by which each plant variety is distinguished from another.

**Domestication:** The process by which man changed plants and animals from their wild state to the state by which he can use them in agriculture.

**Endemic:** Those plant or animal species restricted in their occurrence to a specific geographic region.

**Ex Situ Condition** is the condition in which a biological resource is found outside its natural habitat. Under the present law, any lineage that is cultivated within its country of origin is not considered to be in an ex situ condition.

**Ex-situ:** Outside the native place. Used in the context of conservation of species or variety at a location outside its native habitat.

**Extant variety:** A plant variety, which is currently under cultivation, and includes improved variety released by the public or private
research institutions, farmers’ varieties and any other varieties in public domain

**Farmer:** a person, who grows a crop by cultivating the land himself or by supervision the cultivation of land through other persons or who conserves and preserves traditional varieties or wild species of crop plants.

**Farmers’ variety:** A plant variety, which is either developed by a farmer or community of farmers or conserved by them for long period.

**Folk variety:** A traditional variety, which is known to the farmers but essentially not as much agronomically evolved as the farmers’ variety.

**Genetic diversity:** The over all differences among all varieties and wild relatives of a crop species, which are transmitted from seed to seed.

**Genetic Purity:** The inherent property of a plant variety to manifest consistency for all of its characters over generations.

**Genome:** Each character of any living organism is determined by one or few genes inherited from its parents. All of its characters are similarly determined by many such genes. The sum total of all these genes or the genetic material present in an organism is called genome. These genes are arranged in specific number or microscopic bodies called chromosomes.

**Homeland:** Homeland of a crop plant means its center or origin

**Hybrid:** Refers to immediate offspring of cross between two parental varieties. In some cases hybrids perform superior than the best parental variety.

**Improved variety:** A plant variety, which is developed in the recent past and possessing attributed superiority in one or more economic characters in relation to other extant varieties.

**Improvement:** The process of developing improved or high yielding varieties from existing varieties.

**In-situ Condition** is the condition in which a biological resource is found in its ecosystem or natural habitat. In the case of a domesticated or cultivated variety, its condition is in situ when that variety is found in the cultural context in which its specific properties have been developed.

**Indigenous:** Species or varieties native to a region for long time either by cultivation or by natural existence.

**Innovation** is any generation of a new, or an improvement of an existing, collective and/or cumulative knowledge or technology through alteration or modification, or the use of the properties, values or processes of any biological material or any part thereof, whether documented, recorded, oral, written or in whatever manner otherwise existing.

**In-situ conservation:** Conservation of species or variety by cultivation or protection at its native habitat.

**Intellectual Property Right:** Intellectual Property Right (IPR) is a legal right offering exclusive right to commercialize an intellectual work such as an invention, development of a plant variety, composition of a new music, authoring a new novel, etc to person or persons responsible for such work. This legal ownership is applicable only in the country where it was granted and shall cease on completion of 15-20 years, in the case of plant variety and patent.

**Land races:** The varieties of a crop, which have undergone minimal selection from farmers, but are highly adapted to different regions and growing conditions.

**Local Community** is a human population in a distinct geographical area, with ownership over its biological resources, innovations, practices, knowledge, and technologies governed partially or completely by its own customs, traditions or laws.

**Mutation:** Spontaneous inheritable change to the gene or genes governing one or more characters of a living organism. Mutation can occur due to natural or man-made causes.

**National Competent Authority** is the entity authorized by the State to supervise and watch over the implementation of one or more of the components of the present law.

**National Gene Fund:** A special fund created under the Protection of Plant Varieties and Farmers’ Right Act to promote conservation of agricultural crop genetic diversity at farmer, community and Panchayat levels.

**Natural Out crossing:** The natural process by which seed is produced by a plant on getting pollinated by another plant belonging to the same or different variety with the help of wind, insect or other agent.

**New varieties** are those varieties newly developed by either scientist breeders or others including farmers.

**Peoples’ Biodiversity Register:** A register stipulated under Biological Diversity Act, 2002 to be maintained by every panchayat, listing all forms and kinds of biodiversity present within its jurisdictional area,
describing their use and associated traditional knowledge.

**Plant Breeder’s Right:** An exclusive right legally assigned to the person or persons who had developed a plant variety to commercially produce, process, market, trade, import or export the seed or the propagating materials of that plant variety.

**Prior Informed Consent (PIC)** is the giving by a collector of complete and accurate information, and, based on that information, the prior acceptance of that collector by the government and the concerned local community or communities to collect biological resources, or indigenous knowledge, or technologies.

**Propagating material:** Any plant part, including seed, which is used for the repeated cultivation or propagation.

**Propagation:** The act of repeated cultivation of a plant variety with seeds or propagating materials saved from previous crop.

**PVP Authority (Plant Variety and Farmers’ Rights Protection Authority):** An official authority established under the Protection of Plant Varieties and Farmers’ Rights Act to undertake administration related to the implementation of this Act at all India level.

**Registrar of Plant Varieties:** An official designated as ‘Registrar’ under the Protection of Plant Varieties and Farmers’ Right Act, who may register the plant varieties.

**Registration:** The legal process of granting of exclusive right called Plant Breeder’s Rights on a plant variety under the Protection of Plant Varieties and Farmers’ Rights Act.

**Reward and recognition:** A system of monetary or non-monetary incentives provided under the Protection of Plant Varieties and Farmers' Rights Act to promote conservation and improvement of genetic diversity of crop plants by individual or community of farmers.

**Saving:** The process of carefully selecting, harvesting, processing and storing a part of the crop for its subsequent propagation.

**Scientific crop improvement methods:** The methods of crop improvement based on the science of Genetics.

**Stability:** The consistent expression of different characters of a plant variety during repeated propagation.

**Terminator Gene:** A gene system that could be introduced into a plant variety by biotechnological method to prevent germination of seed saved by farmers with a view to promote seed sale of the variety. This gene system terminates the life of seed after its first production.

**Traditional variety:** A plant variety selected and traditionally grown by farmers for long period.

**Uniformity:** The similarly required among all plants constituting a variety in respect of all characters during and across generations.

**Variety differences:** Detectable differences among varieties a crop plant for one or more characters, which are used to distinguish each variety.

**Viability:** The capability of planting materials such as seed to germinate.

**Wild races/relatives:** Those species related to a cultivated crop species, but not used in agriculture.

**World Trade Organisation:** Established in 1995 the World Trade Organisation (WTO) is the only global international organization, dealing with the rules of trade between nations and is governed by the WTO agreements negotiated and signed by member countries. At present 147 countries, including India, are its members. The stated goal of WTO is to help producers of goods and services, exporters, and importers conduct their business.