



Results-Framework Document (RFD)
for
Directorate of Sorghum Research
(2014-2015)

Address: Rajendranagar, Hyderabad-500 030
Website ID: www.sorghum.res.in

Section 1: Vision, Mission, Objectives and Functions

Vision

Enhancing competitiveness of sorghum through value addition to food, feed, fodder, and biofuel types of sorghum, and to enable nutritional security and economic prosperity of dryland farmers

Mission

Develop technologies to enhance sorghum productivity, resource and input use efficiency and profitability of sorghum cultivation.

Objectives

1. Genetic enhancement and development of improved cultivars
2. Development and identification of appropriate crop production & protection technologies
3. Technology dissemination and capacity building

Functions

- To conduct basic and strategic research leading to technology development for increased productivity of sorghum, its diversified utilization, to promote profitability from sorghum based cropping systems and to serve as national repository of sorghum germplasm.
- To organize All-India multi-location, coordinated testing and identification of technologies for diverse sorghum ecologies.
- To coordinate breeder seed production of sorghum varieties and hybrid parental lines.
- To coordinate front-line demonstrations of proven varietal and production technologies.
- To disseminate knowledge and skills through formal training, informal out-reach activities and exploring ICT.

Section 2: Inter se priorities among Key Objectives, Success Indicators and Targets

| S No | Objectives | Weight | Actions | Success indicators | Unit | Weight | Target/ Criteria value | | | | |
|------|--|--------|---|---|--------|--------|------------------------|-----------|------|------|------|
| | | | | | | | Excellent | Very Good | Good | Fair | Poor |
| | | | | | | | 100% | 90% | 80% | 70% | 60% |
| 1 | Genetic enhancement and development of improved cultivars | 50 | Evaluation of genetic material | Breeding and germplasm lines evaluated | Number | 10 | 400 | 335 | 270 | 205 | 140 |
| | | | | Entries from the institute that are tested in AICRP trials for multi-location testing | Number | 10 | 11 | 9 | 7 | 5 | 3 |
| | | | | Lines identified for unique traits | Number | 5 | 6 | 5 | 4 | 3 | 2 |
| | | | Development of improved cultivars | Entries contributed for AICRP multilocation trial | Number | 10 | 36 | 30 | 24 | 18 | 12 |
| | | | | Varieties identified for release | Number | 5 | 3 | 2 | 1 | 0 | 0 |
| | | | Seed production programme | Breeder seed produced | MT | 5 | 14 | 12 | 10 | 8 | 6 |
| | | | | Truthfully labeled seed produced | MT | 5 | 17 | 14 | 11 | 8 | 5 |
| 2 | Development and identification of appropriate crop production & protection technologies. | 15 | Development and testing of new technologies | New technologies developed and tested | Date | 15 | 3 | 2 | 1 | 0 | 0 |
| 3 | Technology dissemination and capacity building | 15 | Demonstrations conducted | Front line demonstrations conducted | No. | 8 | 276 | 230 | 184 | 138 | 92 |

| | | | Farmers/ Extension officials training programmes organized | Trainings organized | | 7 | 4 | 3 | 2 | 1 | 0 |
|---|---|---|--|--|------|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| * | Publication/Doc umentation | 5 | Publication of the research articles in the journals having the NAAS rating of 6.0 and above | Research articles published | No. | 3 | 12 | 10 | 8 | 6 | 4 |
| | | | Timely publication of the Institute Annual Report (2013-2014) | Annual Report published | Date | 2 | 30.06. 2014 | 02.07 .2014 | 04.07 .2014 | 07.0 7.20 14 | 09.0 7.20 14 |
| * | Fiscal resource management | 2 | Utilization of released plan fund | Plan fund utilized | % | 2 | 98 | 96 | 94 | 92 | 90 |
| * | Efficient Functioning of the RFD System | 3 | Timely submission of Draft RFD for 2014- 2015 for Approval | On-time submission | Date | 2 | May 15, 2014 | May 16, 2014 | May 19, 2014 | May 20, 2014 | May 21, 2014 |
| | | | Timely submission of Results for 2013-2014 | On-time submission | Date | 1 | May 1 2014 | May 2 2014 | May 5 2014 | May 6 2014 | May 7 2014 |
| * | Enhanced Transparency / Improved Service delivery of Ministry/Depart ment | 3 | Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC) | Degree of implementation of commitments in CCC | % | 2 | 100 | 95 | 90 | 85 | 80 |
| | | | Independent Audit of implementation of Grievance Redress Management (GRM) system | Degree of success in implementing GRM | % | 1 | 100 | 95 | 90 | 85 | 80 |
| * | Administrative Reforms | 7 | Update organizational strategy to align with revised priorities | Date | Date | 2 | Nov.1 2014 | Nov.2 2014 | Nov.3 2014 | Nov. 4 2014 | Nov. 5 2014 |
| | | | Implementation of agreed milestones of approved Mitigating Strategies for | % of implementation | % | 1 | 100 | 90 | 80 | 70 | 60 |

| | | | | | | | | | | | |
|--|--|--|--|---------------------|---|---|-----|----|----|----|----|
| | | | Reduction of potential risk of corruption (MSC). | | | | | | | | |
| | | | Implementation of agreed milestones for ISO 9001 | % of implementation | % | 2 | 100 | 95 | 90 | 85 | 80 |
| | | | Implementation of milestones of approved Innovation Action Plans (IAPs). | % of implementation | % | 2 | 100 | 90 | 80 | 70 | 60 |

Section 3: Trend Values of the Success Indicators

| S. No. | Objectives | Actions | Success indicators | Unit | Actual Value FY 12-13 | Actual Value FY 13-14 | Target value FY14-15 | Projecte d value FY 15-16 | Projecte d value FY 16-17 |
|--------|---|--|---|--------|-----------------------|-----------------------|----------------------|---------------------------|---------------------------|
| 1 | Genetic enhancement and development of improved cultivars | Evaluation of genetic material | Breeding and germplasm lines evaluated | Number | 290 | 300 | 335 | 360 | 400 |
| | | | Entries from the institute that are tested in AICRP trials for multi-location testing | Number | 6 | 6 | 9 | 9 | 10 |
| | | | Lines identified for unique traits | Number | 5 | 4 | 5 | 5 | 6 |
| | | Development of improved cultivars | Entries contributed for AICRP multilocation trial | Number | 25 | 27 | 30 | 35 | 35 |
| | | | Varieties identified for release | Number | 2 | 2 | 2 | 2 | 2 |
| | | Seed production programme | Breeder seed produced | MT | 8 | 8 | 12 | 14 | 16 |
| | | | Truthfully labeled seed produced | MT | 7 | 7 | 14 | 16 | 18 |
| 2 | Development and identification of appropriate crop production & protection technologies | Development and testing of new technologies | New technologies developed and tested | Number | 2 | 1 | 2 | 2 | 2 |
| 3 | Technology dissemination and capacity building | Demonstrations conducted | Front line demonstrations conducted | Number | 200 | 200 | 230 | 250 | 250 |
| | | Farmers/ Extension officials training programmes organized | Trainings organized | Number | 2 | 2 | 3 | 3 | 3 |
| * | Publication/Documentation | Publication of the research articles in the journals having the NAAS rating of 6.0 and above | Research articles published | No. | 13 | 7 | 10 | 10 | 12 |

| | | | | | | | | | |
|---|--|--|--|------|------|------|--------------|----|----|
| | | Timely publication of the Institute Annual Report (2013-2014) | Annual Report published | Date | | | 02.07.2014 | | |
| * | Fiscal resource management | Utilization of released plan fund | Plan fund utilized | % | 99.8 | 99.2 | 96 | 96 | 97 |
| * | Efficient Functioning of the RFD System | Timely submission of Draft RFD for 2014-2015 for Approval | On-time submission | Date | - | - | May 16, 2014 | - | - |
| | | Timely submission of Results for 2013-2014 | On-time submission | Date | - | - | May 2, 2014 | - | - |
| * | Enhanced Transparency / Improved Service delivery of Ministry/Department | Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC) | Degree of implementation of commitments in CCC | % | - | - | 95 | - | - |
| | | Independent Audit of implementation of Grievance Redress Management (GRM) system | Degree of success in implementing GRM | % | - | - | 95 | - | - |
| * | Administrative Reforms | Update organizational strategy to align with revised priorities | Date | Date | - | - | Nov.2, 2014 | - | - |
| | | Implementation of agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC). | % of implementation | % | - | - | 90 | - | - |
| | | Implementation of agreed milestones for ISO 9001 | % of implementation | % | - | - | 95 | - | - |
| | | Implementation of milestones of approved Innovation Action Plans (IAPs). | % of implementation | % | - | - | 90 | - | - |

Section 4(a) : Acronyms

| S.No | Acronym | Description |
|------|---------|--|
| 1 | AICSIP | All India Co-ordinated Sorghum Improvement Project |
| 2 | DAC | Department of Agriculture and Co-operation |
| 3 | SAUs | State Agricultural Universities |
| 4 | NGO | Non Governmental Organisation |
| 5 | FLD | Front Line Demonstrations |
| 6 | ICT | Information and Communication Technology |
| 7 | AICRP | All India Co-ordinated Research Project |
| 8 | MT | Metric Ton |
| 9 | DSR | Directorate of Sorghum Research |
| 10 | KVK | Krishi Vignana Kendra |

Section 4(b): Description and definition of success indicators and proposed measurement methodology

| S.No. | Success Indicator | Description | Definition | Measurement | General Comments |
|-------|---|---|---|---------------------------|---|
| 1 | Breeding and germplasm lines evaluated | Source material for the improved varieties/hybrids to be evaluated | Evaluation of diverse germplasm and advanced breeding lines for different traits | Number of lines evaluated | |
| 2 | Entries from the institute that are tested in AICRP trials for multi-location testing | The promising varieties/hybrids in the station trials will be contributed for multi-location testing under AICSIP | The genotypes with superiority for yield, biotic and abiotic stress resistance over the checks in the station trials are given for AICSIP testing | Number of such lines | Targets for genotypes identified given in Section 2 and their respective trend values in Section 3 may vary as the genotypes for testing depend upon the availability of superior material with respect to yield, biotic and abiotic resistance/tolerance over the checks in station trials |
| 3 | Lines identified for unique traits | Germplasm and advanced breeding lines for specific traits such as stress resistance or quality | Identification of the lines with improved level of resistance or superior quality over the existing lines | Number of lines | The number depends on the availability of superior lines among the germplasm/ advanced lines tested |

| | | | | | |
|---|---|--|--|--|---|
| 4 | Entries contributed for AICRP multilocation trial | Total number of entries contributed by different centres for multilocation testing | Superior genotypes with higher yield over the checks from different centres are given for AICSIP testing | Number of lines contributed | Targets for genotypes identified given in Section 2 and their respective trend values in Section 3 may vary as the genotypes for testing depend upon the availability of superior material with respect to yield, biotic and abiotic resistance/tolerance over the checks in station trials |
| 5 | Varieties identified for release | Breeding lines tested along with checks in multi-location trials through All India Coordinated Research Projects and the best performing entries compared to checks are identified as new improved varieties for release | Best performing entries identified as a new variety for release | Number of such varieties/ hybrids identified | Targets for varieties identified given in Section 2 and their respective trend values in Section 3 may vary as the identification of varieties depend upon the availability of superior material with respect to yield, biotic and abiotic resistance/tolerance over the existing varieties |
| 6 | Breeder seed produced | Produce from nucleus and breeder seed is the starting point in seed chain of producing quality seeds for farmers | Breeder seed is the starting point in seed chain which is multiplied/converted in to foundation/certified seed | Quantity produced (Quintals) | Quantity may vary as per indent from DAC |
| 7 | Truthfully labeled seed produced | The seed produced under supervision of scientist with out certificate | Quality seed for distribution | Quantity produced (Quintals) | |
| 8 | New technologies developed and tested | Certain ideas and technologies may be developed which is reflected as usable technology and methodology developed | Any technology aimed towards improved productivity, quality or resistance | Number | |

| | | | | | |
|----|-------------------------------------|--|---|-------------------------------|--|
| 9 | Front line demonstrations conducted | Trials and demonstrations conducted for technology testing | On-farm trials aims at testing new technologies under farmers condition and management, by using farmers own practice as control. Frontline demonstration is the field demonstration conducted on farmers field under the close supervision of scientists | Number | |
| 10 | Trainings organized | Capacity building activities related to knowledge and skill improvement/ development programmes conducted for farmers, and extension personnel | Training is a process of acquisition of new skills, attitude and knowledge in the context of improving productivity | Number of training programmes | |

Section 5: Specific performance requirements from other departments that are critical for delivering agreed results

| Location Type | State | Organisation Type | Organisation Name | Relevant Success Indicator | What is your requirement from this organisation | Justification for this requirement | Please quantify your requirement from this Organisation | What happens if your requirement is not met |
|---|--|------------------------------|-------------------|------------------------------------|---|---|---|--|
| Seed production areas | All AICSIP centres | SAUs, AICSIP centres and DSR | DAC | Breeder seed produced | Indent for quantity of breeder seed and funds from Ministry | Variety wise indent for breeder seed | Quantity of breeder seed is produced as per the indent | Target will be achieved as per the indent and funds received |
| All the major sorghum growing states in the country | Maharashtra, Karnataka, Madhya Pradesh, Andhra Pradesh, Tamil Nadu, Rajasthan, Gujarat | SAUs, KVK and AICSIP centres | DAC, SAUs, NGO | Frontline demonstrations conducted | Funds for manpower and conduct of Front line demonstrations | FLDs is farmers' fields programme which is organized within radius of 20 to 50 km from the implementing centres & needs human power for long hours field work and timely field services | Rs. 12000/- per ha for critical inputs including field assistance | Target may not be achieved |

Section 6: Outcome/impact of activities of Department/Ministry

| S.N o. | Outcome/ impact | Jointly responsible for influencing this outcome / impact with the following organization(s)/ department(s)/ ministry(ies) | Success indicator(s) | Unit | 2012-2013 | 2013-2014 | 2014-2015 | 2015-2016 | 2016-2017 |
|--------|---|--|--------------------------|---------|-----------|-----------|-----------|-----------|-----------|
| 1 | Enhanced sorghum productivity | SAUs, AICSIP centers | Increase in productivity | Percent | 2 | 2 | 2 | 2 | 2 |
| 2 | Enhanced availability of quality human resources for agricultural research & development activities | SAUs | Capacity building | Number | 2 | 4 | 5 | 5 | 5 |