



# ज्वार अनुसंधान निदेशालय

## Directorate of Sorghum Research



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### In this issue.....

1. National Seminar on Millets
2. National Brainstorming Workshop for Promoting Millets
3. New books released
4. Launching of Vegan Prebaked multigrain roti
5. Sorghum foods stall at Home Science College
6. Best poster award to DSR at International Conference
7. Best poster awards at National Seminar on Millets
8. Lecture delivered
9. Visitors
10. Road shows during
11. Recognition to Dr SS Rao
12. Meetings/ Symposia / Workshop / Training/ Conference attended
13. Official Tours

### National Seminar on Millets

National Seminar on Millets was organized by Directorate of Sorghum Research (DSR), Hyderabad, at NIRD, Hyderabad on 12 November in collaboration with Directorate of Millets Development (DMD), Jaipur and National Institute of Rural Development (NIRD), Hyderabad, 2010. The seminar deliberated on the research and developmental issues on



Dr. RP Dua delivering the welcome address

millets and to plan strategies to help the dry land farmers to grow their way out of poverty through better access to markets and other support services. The seminar was inaugurated by the chief guest Dr. N Raghuvuera Reddy, Hon'ble Minister for Agriculture, Government of Andhra Pradesh in the presence of the Guests of Honour - Padmashree Dr. MV Rao, Former special DDG, ICAR, New Delhi, and former Vice-Chancellor, ANGRAU, Hyderabad, Dr. SS Kadam, former Vice-Chancellor, Marathwada Agricultural University, Parbhani, Maharashtra, Dr. EA Siddiq, Former DDG (CS), ICAR, New Delhi, Dr. Gurubachan Singh, Agriculture Commissioner, Government of India, and Dr. RP Dua, ADG (FFC), ICAR. The other dignitaries on the podium were Dr. JV Patil, Director, DSR and Mr. Mathew Kunnumkal, DG, NIRD. It was attended by more than 200 delegates including scientists, seed sector entrepreneurs, students and other stalwarts and policymakers from all over the country.

Dr. JV Patil, Director, DSR in his welcome address explained the importance of the millets to usher in food and national security in India. The deliberations were organized in four different sessions. The seminar discussed in detail on systems perspectives in setting the priorities on Millets development, utilization and entrepreneurship to

### समाचार सारांश

**कदन्न (मोटे अनाज) पर राष्ट्रीय संगोष्ठी** : भारतीय कृषि अनुसंधान परिषद, नई दिल्ली, ज्वार अनुसंधान निदेशालय, हैदराबाद, कदन्न विकास निदेशालय, जयपुर तथा राष्ट्रीय ग्रामिण विकास संस्थान, हैदराबाद के संयुक्त तत्वावधान में 12 नवंबर 2010 को रा.ग्रा.वि.सं. परिसर में कदन्न पर राष्ट्रीय संगोष्ठी का आयोजन किया गया। समारोह के मुख्य अतिथि डॉ. एन रघुवीरा रेड्डी, माननीय कृषि मंत्री, आंध्र प्रदेश ने संगोष्ठी का उद्घाटन किया। इस अवसर पर डॉ. एम वी राव, भूतपूर्व विशेष उप महानिदेशक, भाकृअनुप. तथा भूतपूर्व कुलपति आ.एन.जी.रंगा विवि. हैदराबाद, डॉ. एस एस कदम, भूतपूर्व कुलपति म.कृ.विवि. परभणी, डॉ. ई ए सिद्दीक, भूतपूर्व उप महानिदेशक (फसल विज्ञान), भाकृअनुप, डॉ. गुरुबचन सिंह, कृषि आयुक्त, भारत सरकार, नई दिल्ली, डॉ. आर पी दुआ, सहायक महानिदेशक (खाद्य एवं चारा फसल) भाकृअनुप, नई दिल्ली उपस्थित थे।

**कदन्न के प्रवर्धन हेतु राष्ट्रीय मस्तिष्क-मंथन कार्यशाला**: कदन्न को बढ़ावा देने हेतु योजना तैयार करने के उद्देश्य से कृषि तथा ग्रामिण विकास मंत्रालय ने संयुक्त रूप से रा.ग्रा.वि.सं. परिसर में 13 नवंबर 2010 को एक राष्ट्रीय मस्तिष्क मंथन कार्यशाला का आयोजन किया।

**पुस्तक/पत्रिका विमोचित** : निदेशालय के द्वारा रा.ग्रा.वि.सं. के परिसर में 12 नवंबर, 2010 को मोटे अनाज (कदन्न) पर आयोजित राष्ट्रीय संगोष्ठी में **रिसैट ट्रेड इन प्रोडक्शन युटिलाइजेशन एंड ट्रेड ऑफ सोरघम इन इंडिया** (पुस्तक) तथा **ज्वार सौरभ** (पत्रिका) का विमोचन किया गया।

**व्याख्यान** : राष्ट्रीय बीज मसाले अनुसंधान केंद्र, अजमेर द्वारा केंद्रीय बारानी कृषि अनुसंधान संस्थान, हैदराबाद में 16 नवंबर 2010 को आयोजित प्रशिक्षण कार्यक्रम में डॉ. जे एस मिश्र, प्रधान वैज्ञानिक, ज्वा.अनु.नि. ने बीज मसाले फसलों में खरपतवार प्रवर्धन विषय पर व्याख्यान दिया।

**आ.एन.जी.रंगा कृषि विश्वविद्यालय में ज्वार खाद्य पदार्थों का स्टाल** : गृह विज्ञान महाविद्यालय, आ.एन.जी.रंगा कृषि विश्वविद्यालय में 15 नवंबर 2010 को मधुमेह दिवस की पूर्व-संध्या पर आयोजित बैठक के दौरान ज्वार के खाद्य पदार्थों का स्टाल लगाया गया।

**पोर्टेगिशल ऑफ स्वीट सोरघम फॉर बायो एनर्जी, बायोमास, फूड एंड फाइबर इन ड्राई लैंड एगो-इकोसिस्टम** नामक पोस्टर को 12 नवंबर 2010 को कदन्न पर आयोजित राष्ट्रीय संगोष्ठी में तृतीय पुरस्कार प्राप्त हुआ। डॉ. एस एस राव, ए वी उमाकांत, एम एलंगोवन, सी वी रत्नावती, बी दयाकर राव, बी वी भट्ट तथा जे एस मिश्र इसके लेखक तथा सहयोगी हैं। दल के सभी सदस्यों को हार्दिक बधाई !

### आंगतुक

रा.कृ.अनु.प्र.अ. से 33 प्रशिक्षार्थी के दल ने 19 नवंबर 2010 को निदेशालय का दौरा किया। उन्हें संस्थान में संचालित प्रशासनिक गतिविधियों के संबंध में जानकारी प्रदान की गई।

कृषक प्रशिक्षण केंद्र, राजेन्द्रनगर से 30 महिला कृषक के दल ने 20 नवंबर 2010 को निदेशालय का दौरा किया। उन्हें यहां संचालित अनुसंधान गतिविधियों तथा ज्वार के स्वास्थ्यवर्धक तथा पौष्टिक महत्व के संबंध में जानकारी दी गई।

**सामूहिक चर्चा** : निदेशालय में शोध अध्येता तथा छात्रा के रूप में कार्यरत श्री एस कृष्णा तथा सुश्री पी संध्या रानी ने आ.एन.जी. रंगा कृ. विवि. में 23 नवंबर 2010 को **यूज ऑफ ट्रांसजेनिक एनिमल इन फूड प्रोडक्शन** विषय पर आयोजित चर्चा में भाग लिया।

**सार्वजनिक स्थलों तथा भाकृअनुप संस्थानों में ज्वार के खाद्य पदार्थों का प्रदर्शन** : रा.कृ.अनु.प्र.अ. की उपपरियोजना के अंतर्गत ज्वार के उत्पादों की प्रचार-प्रसार गतिविधियों को जारी रखते हुए नवंबर 2010 को दौरान के सार्वजनिक स्थलों जैसे - के वी आर पार्क, पद्मराव नगर पार्क तथा भाकृअनुप संस्थान जैसे - रा.कृ.अनु.प्र.अ., ति.अनु.नि. तथा चा.अनु.नि. में ज्वार के खाद्य पदार्थों का प्रदर्शन किया गया।

हिंदी सारानुवाद : डॉ. महेश कुमार

link farmers with the markets and to ensure that all important issues related to millet agriculture value chain are added. Dr B Dayakar Rao,



*Dr. JV Patil emphasizing on the importance of millets to the delegates*

Secretary, Organizing committee of the Seminar coordinated the above event with the help of several committees from DSR and staff under Millet Value Chain project of NAIP. This event was widely covered by print and electronic media.

**Release of Publications:** During the inaugural session, five publications were released by the dignitaries. The list of released publications are:

1. Souvenir entitled "Research and Development in Millets" by DSR, Hyderabad
2. "Recent trends in Production Utilization and Trade of Sorghum in India" by DSR, Hyderabad
3. "Status paper on Millets" by DMD, Jaipur
4. "Crop and state-wise improved cultivars of Millets" by DMD, Jaipur
5. Hindi Patrika "Jwar Saurabh" by DSR, Hyderabad.

**Exhibition:** Various public and private sector organizations and NGOs had set up their stalls and exhibited various millet based food products and grains of varieties and hybrids in the "Exhibition" organized during the National Seminar on Millets. This exhibition was inaugurated by Shri N Raghuvveera Reddy, Hon'ble Minister for Agriculture & Horticulture, Government of Andhra Pradesh.

**Poster Competition:** About 35 posters depicting vivid pictures and tables with significant information on millets were on the show adjacent to the venue of seminar hall. The committee constituted with professional selected the best posters and presented awards for first three top rating posters.

### National Brainstorming Workshop for Promoting Millets

National Brainstorming Workshop for Promoting Millets was organized jointly by the Ministry of Agriculture and Cooperation, Ministry of Rural Development and Indian Council of Agricultural Research (ICAR) at NIRD, Hyderabad on 13 November, 2010. More than 80 delegates comprising of administrators and policy makers from Central and State Governments; Research Institutions of ICAR, CSIR and ICMR; organizations like NIPHEM, MANAGE participated in the workshop. Dr. Gurubachan Singh, Agriculture Commissioner, Government of India and Dr. P K Basu, Secretary (A&C) made detailed presentations on Research and Development activities on Millets. During the workshop various



*National Brainstorming Workshop for Promoting Millets in progress*

issues including the scenario of millets during last five decades, areas of concern and required policy support, problems and prospects, Nutritional importance, success stories, product diversification of millets and expectation from the workshop were deliberated.

Dr. JV Patil, Director, DSR highlighted the issues in respect of sorghum crop including availability of large number of high yielding varieties, hybrids and other technologies for yield improvement. Dr. B Dayakar Rao made the presentation based on the three year pilot study on consortia mode led by DSR. Dr. PK Basu, Secretary (A&C) constituted a Task Force under the Chairmanship of Agriculture Commissioner to develop the programme for sustainable development and use of millets, which could be funded through RKVY on the pattern of Accelerated Pulse Production Programme (A3P).

### New books released

**Research and Development on Millets:** A special souvenir entitled "Research and Development on Millets" was released during National Seminar on millets by. This book is a compendium of 10 lead presentations and selected abstracts on millets organized in 5 different themes. The articles vividly elucidate the present scenario of the subject and highlight the perspective of future Research. This publication can be of immense value to researchers, policy makers, entrepreneurs and industrialists who strive for ensuring the nutritional and livelihood and sustainability of the resource poor farmers of India. This publication was compiled and edited by Drs JV Patil, B Dayakar Rao, AV Umakanth, VA Tonapi, Sujay Rakshit, SS Rao and KN Ganapathy. ISBN NO: 81-89335-32-4.

### Recent trends in Production Utilization and Trade of Sorghum in India:

This book gives a brief account on comprehensive study on profiling and market analysis of sorghum globally and in India including



*Shri Raghuvveera Reddy, MoA (AP), releasing a publication "Recent trends in production utilization and trade of sorghum in India"*

acreage, yield and production trends and consumption patterns of sorghum. Authors: Drs B Dayakar Rao, J V Patil, K Nirmal Reddy, H S Talwar, Vandana Varma, B Sriharsha and N Kachui. This book is a joint contribution from DSR-ITC (ABD) under NAIP sub-project on Millets value chain. ISBN NO: 81-89335-31-6.

**ज्वार सौरभ नामक पत्रिका का प्रथमांक विमोचित :** निदेशालय के द्वारा रा.ग्र.वि.सं. परिसर में 12 नवंबर, 2010 को [मोटे अनाज (कदन्न)] पर आयोजित राष्ट्रीय संगोष्ठी में डॉ. आर पी दुआ, सहायक महानिदेशक (खाद्य तथा चारा फसल), भा.क.अनु.प., नई दिल्ली के कर-कमलों से निदेशालय के द्वारा प्रकाशित 'ज्वार सौरभ' नामक पत्रिका के प्रथमांक का विमोचन किया गया। ज्वार अनुसंधान संबंधी गतिविधियों एवं ज्वार के वैकल्पिक उपयोगों को शोधकर्ताओं, सामान्य कृषकों आदि तक पहुँचाने के उद्देश्य से निदेशालय ने उक्त पत्रिका का प्रकाशन प्रारंभ किया है। पत्रिका का यह अंक ज्वार अनुसंधान एवं उपलब्धियों से संबंधित लेखों तथा निदेशालय, अ.भा.स.ज्वा.उ.प. तथा अन्य ज्वार अनुसंधान से संबंधित गतिविधियों का पुंज है। इसके प्रथम अध्याय में निदेशालय का परिचय तथा अन्य अध्यायों में ज्वार अनुसंधान से संबंधित विभिन्न विद्वानों के लेख प्रकाशित किए गए हैं। पत्रिका के प्रकाशक संस्थान के निदेशक, डॉ. जे वी पाटील तथा संपादक डॉ. जे एस मिश्र, डॉ. महेश कुमार, तथा डॉ. वी आर भागवत हैं।

### Launching of Vegan's Prebaked multigrain roti

M/s Vegan Agro Food Products, Hyderabad which has a MoU with DSR on Commercialization of Sorghum processed foods under NAIP subproject. It has launched multi-grain rotis (prebaked segment) in the

market. The product was launched by Shri. N. Raghuvēera Reddy, Hon'ble Minister for Agriculture & Horticulture, Government of Andhra Pradesh during the National Seminar on Millets 2010 in the presence of Shri Bharat Sankar (M/s Vegan Agro Foods) and Dr JV Patil, Director, DSR. The Jowar rich multigrain prebaked rotis are very nutritious and healthy for all age groups. These rotis have shelf life of 7 days under refrigeration. This pre-baked rotis should be baked completely on tawa equally on both sides before consumption. The preliminary efforts for MoA and commercialization with M/s Vegan Agro Food Products, Hyderabad are initiated by Dr B Dayakar Rao, CPI of the NAIP project.

### Sorghum foods stall at Home Science College

On the eve of "Diabetes Day" on 15 November, 2010 a seminar was organized at College of Home Science, Hyderabad, the diabetes capital of India by ANGRAU in association with DSR. The role of DSR was to create awareness on importance of millet foods in controlling diseases like diabetes. DSR set up a stall on Jowar foods and displayed posters and samples of processed products of sorghum. They also displayed the research findings of the studies on nutritional evaluation of sorghum on diabetic patients emerging out of collaboration with National Institute of Nutrition (NIN). Large number of participants including doctors, nutritionists, diabetic patients, researchers, scientists, private sector delegates and students visited the sorghum stall. Delegates showed keen interest on processed sorghum foods and nutritional importance of these products in controlling diabetes. This exhibition was organized under the Millet-Value Chain project and coordinated by Mrs. Vishala Devender and Ms Kiranmai.

### Best poster award to DSR at International Conference

DSR bagged **Best poster award** for the poster entitled "Transgenic sweet sorghum- production and molecular characterization" at the



The best poster award being received by G Rajini and S Krishna Murthy

International Conference on "Biotechnology: A Global Scenario" (under the session on Plant Biotechnology and Molecular Biology) conducted at Kakatiya University, Warangal during 2- 4 November, 2010. The authors for this award winning poster are KBRS Visarada, K Um a Tejaswi, G Rajini, N Saikishore, Kanti Meena, Monique Royer and SV Rao. People contributed behind the screen are Mr. S. Krishna Murthy, M Praveen, J Narasimha, HS Gawali and M Sai Kumar. *Congratulations to all the team members.*

### DSR bagged best poster awards

**1 Prize:** The poster entitled "Importance of starch quality in industry and identification of genetic stocks for specific starch quality" submitted by Swarnalatha M, Audilakshmi S, Elangovan M, and Patil JV, won the first prize in the National seminar on millets on 12 Nov, 2010 at NIRD.

**3 Prize:** The poster entitled "Potential of sweet sorghum for bio energy, biomass, food and fodder in dry land agro-ecosystems" won the III prize in the National seminar on millets on 12 Nov, 2010 at NIRD. Drs. SS Rao, AV Umakanth, M Elangovan, CV Ratnavathi, B Dayakar Rao, BV Bhat and JS Mishra are the authors/ contributors for this poster. *Congratulations to all.*

### Lecture delivered

Dr. JS Mishra delivered a lecture on "Integrated Weed Management in Seed Spice crops" in a training programme organized by National Research Centre on Seed Spices, Ajmer, Rajasthan on 16 November,

2010 at CRIDA, Hyderabad.

### Visitors

#### Assistant Directors of Agriculture & Horticulture

A team of 16 Assistant Directors from different districts of Agriculture and Horticulture department, Government of Andhra Pradesh visited



Visitors keenly listening to the video on research and development activities of sorghum

the institute on 19 November 2010 under the leadership of Mrs. M Shyamala, ADA, SAMETI. They were participants of training on Post Harvest Technology, which was organized by State Agricultural Management and Extension Training Institute (SAMETI), Old Malakpet, Hyderabad. This visit was a part of their training programme. They showed interest on the crop development, post harvest technologies and value addition in sorghum. Dr. RR Chapke briefed them about the institute profile, achievements made in the past and ongoing research activities.

The visitors were exposed to research and development activities of sorghum, and sweet sorghum through video shows. Most of them intensely enquired about feasibility of sweet sorghum cultivation in the farmers' fields. It was followed by visit to the food processing lab, and interacted with the experts on different aspects of sorghum foods preparation and marketing. Smt. Vishala Devender, Technical Officer, DSR elaborated the process of preparation of various sorghum products and its importance for human consumption. This visit was coordinated by Dr. RR Chapke with the help of Sh. Pramod Kumar, Technical Officer, Agricultural Extension Unit.

**NAARM trainees:** A group of 33 participants from the training programme on "Establishment & Finance Matters" NAARM, Hyderabad visited DSR on 19 November 2010. They were elaborated on the administrative activities including leave management system. They also visited various labs at DSR. The team was led by Mr. K Sanath Kumar, PS, DSR, and this visit was coordinated by Mr. NVRN Murthy, AFAO at DSR.

**Fam women:** A group of 30 women farmers from Farmer training centre, Rajendranagar, Hyderabad visited DSR on 20 Nov, 2010. They were briefed about the research activities and the importance of sorghum as health and nutritious food. Relevant literature was provided to them. They also visited food processing lab at DSR. The team was led by Ms K Sunitha, ADA, FTC and this visit was coordinated by Smt. Vishala Devender and NAIP team at DSR.

### Group discussion

Mr. S Krishna Murthy, JRF and Ms. P Sandhya Rani, student from Biotechnology lab, DSR participated in the group discussion on "Use of Transgenic animals in food production exploring social and ethical issues, held at Agri-Biotech foundation, ANGRAU campus, Hyderabad on 23 November 2010.

### Road shows during November

As part of promotional activity of Jowar products under NAIP's subproject road shows were organized at KBR Park and Padmarao Nagar Park and at ICAR Institutes like DOR, NAARM and DRR. NAIP team including Mrs. Vishala Devender, Kiranmai, Shailaja, Pavan Kumar, Ashok, Sandeep Kumar, and others actively participated under the guidance of Dr. B Dayakar Rao in these Road shows.

### Recognition to Dr SS Rao

Dr SS Rao, Pr. Scientist DSR chaired a session on "Sustainable Agriculture in relation to Global Climate Change" during the National Conference of Plant Physiology: Physiological and Molecular Approaches for Crop Improvement under Changing Environment, held at Banaras Hindu University, Varanasi from 25 to 27 November 2010. This conference was jointly organized by Deptt. of Plant Physiology, Instt. of Agric. Sciences. BHU & Indian Society for Plant Physiology, New Delhi.

## Meetings (M)/ Symposia (S)/ Workshop (W)/ Training (T) / Conference (C) attended

S. No	Name of the Official	Participated in	Type	Venue	Dates
1	P Mukesh	National Information & Communication Technology (NCT) Group meeting	M	NAAS Complex, New Delhi	2-6 Nov, 2010
2	K Sanath Kumar & D Rambabu	Training programme on Establishment & Finance Matters	T	NAARM Hyderabad	15-24 Nov, 2010
3	B Dayakar Rao	18 <sup>th</sup> Annual AERA Conference	C	NAARM, Hyderabad	18-20 Nov, 2010
4	B Dayakar Rao & P Mukesh	Workshop to formulate Guidelines for <i>Mahila kisan sas hakt hikan Pariyojana</i> (MKS P)	W	NIRD, Hyderabad	18-19 Nov, 2010
5	VA Tonapi	Interface Meeting on Database Management	M	NASC New Delhi	23 Nov, 2010
6	B Dayakar Rao	24 <sup>th</sup> National Conference on Agricultural Marketing	C	NAU, Navsari, Gujarat	23-25 Nov, 2010
7	IK Das	One-day sensitization cum training workshop on Project Information & Management System	T	NAARM, Hyderabad	25 Oct, 2010
8	NVR N Murty	Audit Review Meeting	M	NIANP, Bangalore	26 Nov, 2010
9	SS Rao & HS Talwar	National Conference of Plant Physiology	C	BHU, Varanasi	23-30 Nov, 2010
10	G Shyam Prasad	Training programme on "Data Analysis Using SAS"	T	NAARM, Hyderabad	24-30, Nov, 2010
11	SS Rao	Meeting on DBT -Sweetsorghum bagasse ethanol project - review	M	TERI, Gurgaon, New Delhi	29 Nov, 2010
12	JS Mishra	Presentati on of a lead paper at National Conference on Weed Management	C	TNAU, Coimbatore	30 Nov. 1 Dec, 2010

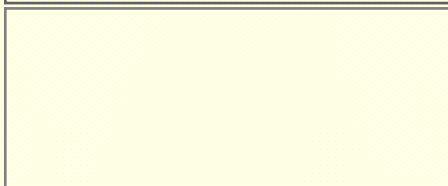
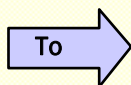
## Official Tours

S. No	Name of the Official	Place Visited	Dates	Purpose
1	JV Patil	Coimbatore & Bangalore	23 -30 Nov 2010	Monitoring of AICSIP Centres
2	AV Umakanth	OSN, Warangal	29 Nov, 2010	To monitor sowings of various AICSIP centres
3	Chari Appaji	CPPRI, Saharanpur	29 Nov - 4 Dec, 2010	To discuss with CPCRI possible collaboration on sorghum straw as a paper pulp

## Thought for the month

*"Direction is more important than speed. We are so busy looking at our speedometers that we forget the milestone."* - Anonymous

### Printed Matter / Book Post



#### Compilation, Editing & Lay-out :

Dr. KV Raghavendra Rao, Sh. K Sanath Kumar, Sh. HS Gawali & Dr. VA Tonapi

#### Chief Editor & Publisher:

Dr. JV Patil, Director,  
Directorate of Sorghum Research

**From:**

## Directorate of Sorghum Research (DSR)

Hq. Rajendranagar, Hyderabad, 500 030 (AP)  
Tel: 040-24015349, 24018651  
Fax: 040-24016378  
Email: dsrhyd-ap@nic.in  
Website: www.sorghum.res.in

**Centre on Rabi Sorghum (DSR), NH 9,**  
Bypass, Shelgi, Solapur - 413 006 (Mah.)  
Tel: 0217-2373456  
Telefax: 0217-2373456  
E mail: raut@sorghum.res.in

**Sorghum sub-station, Jalna**  
Krishi School  
Marathwada Agricultural University (MAU)  
Jalna-431 203, Maharashtra  
Tel: 9440 498352  
E mail: nagesh@sorghum.res.in