



Central Arid Zone Research Institute

CAZRI NEWS

Year: 2012-2013

No. 3, October-December

From the Director...



Adaptation strategies to deal with the climatic variability, especially in arid and semiarid regions have evolved over the years of experience by farming communities. The farmers' perception and coping strategies are largely based on the village level variables in climatic conditions. The adaptation practices are based on risk taking ability of the farmers/communities and the long and short term weather patterns and occurrence of severe droughts. The traditional adaptation practices are focused mainly on the natural resource base available around the farmers/communities.



However, with changes in the socio-economic conditions like inappropriate intensification of land use, weakening of collective action against natural disasters, mining of ground water, high grazing pressures and generalized interventions call for a different strategy to adaptation. Now, there is greater scope to incorporate use of new conservation technologies, support innovative institutional arrangements and avail of the off farm employment opportunities.

An integrated approach involving the elements of traditional adaptations and the new ones is required for dealing with the climate sensitive situations. Dissemination of climate change information through appropriate extension methodologies in various agro-ecologies; appropriate choice of the farming enterprise based on climatic variability, farmers' adjustments and market conditions; institutional support during recurrent droughts or occasional floods are suggested.

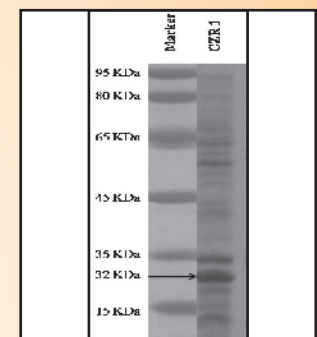
In order to harness the opportunities in the changing economic, technological and institutional setups; enhancements in the capacity of farmers and other stakeholders is a key area that deserves to be accorded higher priority.

-M.M. Roy

RESEARCH ACTIVITIES

Identification of Protein Responsible for Biosynthesis of Nanoparticles

The extracellular fungal proteins that are responsible for the synthesis of metal nanoparticles from their precursor compounds were subjected to SDS-PAGE analysis to characterize on the basis of molecular weight. As a result of SDS-PAGE various dense and light protein bands of different molecular weight were observed after silver staining of denatured polyacryl amide gel. It was found that 32 kDa proteins are responsible for nanoparticle synthesis whereas, other proteins might play role in nanoparticle capping and stability.



J.C. Tarafdar

SDS-PAGE profiles of extracellular proteins of *Aspergillus terreus* CZR 1 used for nanoparticle synthesis

Patents

Title	Inventors	Application/ Publication No.	Date	Status (Filed/ Published/Granted)
Biosynthesis of metal nanoparticle from fungi	Tarafdar, J.C. and Raliya, Ramesh	Indian Patent Application No. 149/DEL/2012	January 01, 2012	Published (Journal No. 44/2012)
Nanoinduced bacterial polysaccharide production	Tarafdar, J.C., Raliya, Ramesh and Praveen Kumar	Indian Patent Application No. 404/DEL/2012	February 14, 2012	Published (Journal No. 37/2012)

OTHER ACTIVITIES

Foundation Day: The Institute celebrated its 53rd Foundation Day on 1st October. Dr. V.N. Sharda, Member, ASRB, New Delhi delivered the Foundation Day Lecture as Chief Guest on "Strategies for Drought Management in Arid Zones". He emphasized the importance of contingency planning to minimize the impact of drought on livestock and human wellbeing. Speaking on the occasion as the guest of honour, Dr. R.P. Dhir, Former Director, CAZRI, shared his reminiscence of developing the Institute from Desert Afforestation Station. Dr. K.R. Solanki, Former Assistant Director General (Agroforestry), ICAR, while giving his special remarks emphasized that the Institute should aim for convergence to grow for synergetic benefits. Dr. M.M. Roy, Director, CAZRI, highlighted the significant achievements of the institute and future challenges to the arid zone. Dr. Roy mentioned establishment of a new research station at Leh, Ladakh to address the issues of cold arid region. Eight best workers of CAZRI were awarded the prizes for their meritorious contribution in the development of the institute.

Sheep Pen at Experimental Area, Chandan: Dr. A.K. Singh, DDG (NRM) inaugurated the Sheep Pen at Experimental Area, Chandan on 6th October 2012. He also visited CAZRI, RRS, Jaisalmer and interacted with the officers of the State Line Department to share their views on ongoing activities in the area.

Off-campus Specialized Short-Term Trainings for Improving Efficiency of Technical and Administrative Staff: NAARM faculty conducted trainings during October 4-8 and November 19-22, 2012 for Technical Personnel, and during October 5-9, 2012 for Administrative personnel.

Workshop on 'Technologies for Sustainable Agriculture in Arid Region: One day workshop, sponsored by NABARD, was organized by the Division of Transfer of Technology & Production Economics at the Institute on 1st November, 2012 for District Development Managers of NABARD from different districts of Rajasthan. The inaugural session was chaired by Dr. M.M. Roy, Director, CAZRI, and Chief General Manager, NABARD, Jaipur was the guest of honor. The aim of the workshop was to provide first-hand opportunity to know about the potential technologies that could be considered for financial support from the commercial banks/NABARD through different bankable projects. The Heads of Divisions made the presentations on different technological and institutional options for enhancing agricultural productivity and rural livelihood. The major topics discussed in the workshop were technologies for NRM, integrated farming systems and agricultural diversification; crop, pasture, mushroom production and technological options for tapping solar energy and mechanization in agriculture. 40 delegates attended the workshop.

Mateera Field Day: It was organized on 5th November, 2012 at CAZRI, RRS, Jaisalmer to create awareness for seed purpose mateera as better livelihood option. More than 70 farmers of Jaisalmer district participated and were very much delighted to see the experimental site of mateera under rainfed conditions.

Specialized training on "Crop Syst Crop Model" (5-10 Nov. 2012): Six days specialised training programme was organised at CAZRI, RRS, Bikaner under ICAR-ICARDA Collaborative Research Project: "Improving Crop and Water Productivity in Indira Gandhi Canal Command Area". Twelve participants from CAZRI and SKRAU participated in the training. Dr. B.D.Sharma, Officiating Director, CIAH, inaugurated the function. Dr. Mariya Glazirina (Crop Modeling Expert) and Dr. Vinay Nangia (Hydrologist) from ICARDA coordinated the training. The training comprised of basic theory, practical and hands on practices on familiarization with the concept, installation of model, creation of different input files related to weather, soil, crop & management, soil organic matter, nitrogen, salinity, crop phenology, crop growth data, soil hydraulic properties etc. Finally the model was calibrated for a given set of data for single crop and crop rotation. The closing ceremony of the function was graced by Dr. M.M. Roy, Director.

XXII ICAR Regional Committee Meeting: XXII ICAR Regional Committee Meeting for Zone VI covering states Rajasthan, Gujarat, Dadra and Nagar Haveli and Daman & Diu was held on November 16-17, 2012 at CAZRI Jodhpur. Dr. S. Ayyappan, DG, ICAR chaired the meeting, and emphasized on the conservation of best germplasm of crops and livestock to evolve climate resilient varieties, to replicate the solar energy based devices developed by CAZRI in other states. More than 150 senior officers including DDGs, Vice-Chancellors, Directors, Scientists and agricultural officers participated in the meet.

Symposium on Managing Stress in Drylands under Climate Change Scenarios (MSDC 2012): It was jointly organized by Arid Zone Research Association of India (AZRAI) and Central Arid Zone Research Institute, at Jodhpur as part of Golden Jubilee Celebration of Arid Zone Research Association of India during December 1-2, 2012. ICRISAT, Hyderabad cosponsored the symposium. More than 200 delegates from India and two international delegates from Syria attended the Symposium. Chief Guest Justice N.N. Mathur, Vice Chancellor, National Law University, Jodhpur inaugurated in the presence of Dr Peter Craufurd, Regional Coordinator, ICRISAT, Hyderabad who was the Guest of honor. Dr. M.M. Roy, Director welcomed the honorable guests and delegates, and Dr S. Kathju, Editor-in-Chief, Annals of Arid Zone, AZRAI briefed about the AZRAI's history and activities. There were three oral presentations and over 80 papers were presented as posters. The Symposium had over 20 lead lectures by eminent



scientists. A field visit was organized to acquaint the delegates to arid-agro-ecosystem. The past Chairmen, Secretaries and Editor-in-Chiefs of the Association were felicitated on this occasion. Notable among the veteran executive members were Dr. G.L. Jain, Dr. Pratap Narain, Dr. N.V. Patil, Dr. K.R. Solanki, Dr. N.L. Joshi, Dr. Amal Kar, Dr. S. Kathju and Dr. S.K. Verma. Dr. H.P. Singh, an eminent Dryland Agriculture Scientist and former Director CRIDA, chaired the valedictory session.

Training Programme on 'Improved Agricultural Technologies for Higher Productivity in Arid Region': Three-day Training was organized at CAZRI for team leaders and project workers of MPOWER from 6 districts on 4-7 December 2012. Chief Guest Dr. T.S. Rathore, Director, AFRI appreciated the collaboration between CAZRI and MPOWER which would help in mitigating rural poverty through increased agricultural productivity. He emphasized the importance of perennial trees system based agriculture for sustainability in arid region. Lectures were delivered on relevant topics like improved agro techniques for raising field crops, reclamation of saline and sodic soils, seed production of field crops, integrated nutrient management and disease management in field crops, improved irrigation methods etc. Dr. Shalander Kumar informed that the program would be targeting towards developing climate resilient farming systems in the selected arid districts.

Award: Dr. D.T. Doshi Award- 1st prize for best paper presentation to Dr. Shalander Kumar at 20th Annual Conference of Agricultural Economics Research Association at IARI, New Delhi, October 8-10, 2012.

Celebration of Women's Day in Agriculture: Women's day in agriculture was celebrated by Krishi Vigyan Kendra, CAZRI, Jodhpur on 4th December 2012 at Lunawas village of Luni Panchayat Samiti of the Jodhpur. The objective of the programme was to create awareness among farmwomen about agricultural technologies and other women related issues. More than 300 women and girls from nearby villages of Luni Panchayat Samiti participated in the programme and interacted with the scientists and other guests present at this occasion. The students of K.N. Girls College, Jodhpur performed a 'role play' on "Agricultural Education among Rural Girls" to motivate the farmwomen to send their girls for higher education in agricultural field. Lectures on "centric agricultural technologies and farm implements", "women education", "balance feed for children", "organic farming", "safe grain storage", "Govt. sponsored schemes for agricultural development" were also delivered during the programme. A quiz competition regarding knowledge of women on farm technologies was held and prizes were distributed to the winners. Some of the young farmwomen and village Sarpanch (Women) expressed their views regarding problems and aspirations of rural women. Officer-in-charge, KVK, Project Director, ATMA Jodhpur, officials from line department, subject matter specialists, women scientists and officers of the CAZRI, and KVK interacted with the participants and delivered the lectures on different topics. The participants also appreciated the exhibition.

Celebrations

Vigilance Awareness Week: October 29 to November 3, 2012

Quami Ekta Week: November 19-25, 2012

Flag Day: November 23, 2012

Exhibitions

November 16-17: Regional Committee Meeting, CAZRI, Jodhpur

November 24: Van Bhawan Udgatan at Jodhpur

November 26-30: Third International Agronomy Science Congress at New Delhi

Distinguished Visitors

October 1: Dr. V.N. Sharda, Member, ASRB, New Delhi

October 4: Dr. S.P.S. Ahlawat, (Chairman), Dr. D. Kumar, Head, Department of Parasitology, Pondicherry Veterinary College, Pondicherry Dr. D. K. Rao, Principal Scientist, Parasitology, NAARM, Hyderabad, Ms. K.I. Rolfe, NGO, Lohit Pashupalak Sansthan, Pali and Dr. N.V. Patil, Director, Members of QRT of NRC on Camel, Bikaner visited CAZRI, RRS, Jaisalmer. They showed keen interest in desert plants particularly medicinal.

October 5: Mr. D.R. Meena, Member, Revenue Board, Ajmer

October 19: Mr. M.L. Kumawat, IPS (Retd.) Vice-Chancellor, Sarda Patel Police Security and Criminal Justice, University, Jodhpur; Sh. Bhupendra Singh, IPS, Addl. DGP-Cum-Director, Rajasthan Police Academy, Jaipur

November 1: Dr. J. Mamen, Chief General Manager, NABARD, Rajasthan

November 8: Dr. Pearl Tiwari, Director, ACF, Mumbai

November 15-17: Dr. S. Ayyappan, Secretary, DARE, Govt. of India & Director General, ICAR; Dr. K.D. Kokate, DDG, (KVK); Dr. M.M. Pande, DDG (NRM); Dr. K.M.L. Pathak, DDG (Animal Sci.); Dr. Arvind Kumar, DDG (Horti.); Dr. Shekha, Vice-Chancellor, Agril. Univ. Anand; Dr. A.R. Pathak, Vice-Chancellor, Agril. Univ. Navsari

November 24: Hon'ble Shri Ashok Gehlot, Chief Minister of Rajasthan; Smt. Beena Kak, Forest and Tourism Minister of Rajasthan; Sh. V.S. Singh, Chief Secretary; C.I., Niranjana Arya, Commissioner; Sh. N.S. Charan, Addl. Commissioner; Sh. Gaurav Goyal, Collector, Jodhpur; Sh. Rameshwar Dadhich, Mayor Jodhpur visited CAZRI Stall on the occasion of inauguration of Van Bhawan, Jodhpur

December 1-2: Hon'ble Shri N.N. Mathur, Vice-Chancellor, National Law University, Jodhpur; Dr. Peter Craufurd, Res. Prog. Director, ICRISAT, Hyderabad; Dr. H.P. Singh, Ex-Director, CRIDA, Hyderabad

Group Visits

Farmers- 890; Farm women-45; Students-535; Trainees Police/ Forest-60 and Central/State Department Officers-27.



Appointment

Dr. Devidayal, Head, RRS, Kukma-Bhuj on November 23, 2012

Promotions:

Dr. R K Goyal, Sr Scientist (S & WCE) to Principal Scientist (PS), w.e.f. 1.1.2010
Dr P.C. Moharana, Sr. Scientist (Geography) to PS, w.e.f. 1.1.2009
Dr M.P. Rajora, Sr. Scientist (Plant breeding) to PS, w.e.f. 1.1.2009
Dr (Mrs) Sharmila Roy, Sr. Scientist (Agri. Ent.) to PS, w.e.f. 1.1.2009
Dr (Mrs) Nisha Patel, Sr. Scientist (Agri. Ent.) to PS, w.e.f. 1.1.2010
Dr (Mrs) Anjly Pancholy, Sr. Scientist (Genet. and Cytogenetics.) to PS, w.e.f. 1.1.2009
Sh. A.K. Gangwani, FAO to Sr. FAO, w.e.f. 08.10.2012
Sh. P.K. Tiwari, AF&AO to FAO, w.e.f. 05.11.2012
Sh. Bhanwar Singh Jodha, T-5 (TO) to T-6 (TO), w.e.f. 01.01.2007
Sh. Ramesh Chandra Meena, T-5 (TO) to T-6 (TO), w.e.f. 19.10.2011
Sh. Pradhuman Singh Bhati, T-5 (TO) to T-6 (TO), w.e.f. 06.02.2012
Sh. Daleep Singh Mertia, T-5 (TO) to T-6 (TO), w.e.f. 24.02.2012
Dr. Rakesh Pathak, T-5 (TO) to T-6 (TO), w.e.f. 27.02.2012
Dr. Surendra Poonia, T-5 (TO) to T-6 (TO), w.e.f. 10.03.2012
Sh. Sanjay Kumar Dasora, T-5 (TO) to T-6 (TO), w.e.f. 17.03.2012
Sh. Gulab Singh, T-4 (F/A) to T-5 (TO), w.e.f. 31.12.2011
Sh. Rana Ram, T-4 (F/A) to T-5 (TO), w.e.f. 01.01.2012
Sh. Khet Singh, T-4 (F/A) to T-5 (TO), w.e.f. 01.01.2012
Sh. Abdul Sammad, T-4 (F/A) to T-5 (TO), w.e.f. 01.07.2012
Sh. Jera Ram, T-4 (F/A) to T-5 (TO), w.e.f. 01.01.2012
Sh. Jairoop Ram, T-4 (F/A) to T-5 (TO), w.e.f. 01.01.2012
Sh. Mahendra Singh Nathawat, T-4 (F/A) to T-5 (TO), w.e.f. 01.01.2012
Sh. Satyanarayan Sen, T-4 (Mech.) to T-5 (TO), w.e.f. 01.01.2008
Sh. Virendra Kumar Harsh, T-4 (D/M) to T-5 (TO), w.e.f. 01.01.2010
Sh. Mangta Bari, T-4 (D/M) to T-5 (TO), w.e.f. 01.01.2010
Sh. P.C. Bawankar, T-4 (Fitter) to T-5 (TO), w.e.f. 01.01.2010
Sh. Raghuveer Singh Rathore, T-4 (Mech.) to T-5 (TO), w.e.f. 12.12.2011
Sh. Govind Parihar, T-3 (F/Farm) to T-4 (F/Farm), w.e.f. 08.09.2011
Sh. Dawar Ram, T-3 (F/A) to T-4 (F/A), w.e.f. 26.11.2011
Sh. Madan Lal/Heera Lal, T-3 (F/A) to T-4 (F/A), w.e.f. 29.11.2011
Sh. Veer Singh, T-3 (F/A) to T-4 (F/A), w.e.f. 31.12.2011
Sh. Jalam Singh Rathore, T-3 (F/A) to T-4 (F/A), w.e.f. 10.03.2012
Sh. Hanuman Ram, T-3 (F/A) to T-4 (F/A), w.e.f. 11.03.2012
Sh. Kumbh Singh, T-3 (F/A) to T-4 (F/A), w.e.f. 11.03.2012
Sh. Pradhana Ram Choudhary, T-3 (F/A) to T-4 (F/A), w.e.f. 11.03.2012
Sh. Poona Ram Bishnoi, T-3 (F/A) to T-4 (F/A), w.e.f. 12.03.2012
Sh. Sunil Kumar, T-3 (F/A) to T-4 (F/A), w.e.f. 13.03.2012
Sh. Babu Lal Jajra, T-3 (F/A) to T-4 (F/A), w.e.f. 18.03.2012
Sh. Lalit Kumar Choudhary, T-3 (F/M) to T-4 (F/M), w.e.f. 01.08.2012
Sh. Jasraj Jaipal, T-2 (F/A) to T-3 (F/A), w.e.f. 10.03.2012
Sh. Maga Ram, T-2 (Driver) to T-3 (Driver), w.e.f. 10.03.2012
Sh. Hira Rama Choudhary, T-2 (Driver) to T-3 (Driver), w.e.f. 11.03.2012
Sh. Ashok Kumar Sarvate, T-2 (F/A) to T-3 (F/A), w.e.f. 11.03.2012
Sh. Gopal T-2 (F/A) to T-3 (F/A), w.e.f. 15.07.2012
Sh. Ganga Singh, T-1 (F/M) to T-2 (F/M), w.e.f. 21.07.2012

Visits Abroad

Dr. P.C. Moharana, PS (Geography) visited Bloomington USA to participate in the training course under Fulbright Nehru Environmental Leadership Program, 2012-13 on GIS based arid land management system from October 1, 2012 to January 31, 2013
Dr. J.C. Tewari, PS (Forestry) visited la-Paz Bolivia to participate in the 10th International Workshop of Sustainable Management of Marginal Drylands - Phase II (SUMAMAD-2), during November 12-14, 2012

Superannuations

November 2012: Sh. Joy Varghese, AAO; Sh. Jabbar Singh, T-2 (F/A); Smt. Pushpa Devi/Pukhraj, SSS; Sh. Jalam Singh, SSS, Pali
December 2012: Dr. T.K. Bhati, PS (Agronomy), Dr. Arun Kumar, PS (Plant Pathology), Sh. A.K. Gangwani, Sr. FAO; Smt. Chuki/Gumna Ram, SSS, Pali.

Obituary

Sh. Surendra Singh Solanki, Sr. Clerk on 26.12.2012

Published by : Director, CAZRI, Jodhpur 342003
Contact : Ph.: 91-0291-2786584 (O), 91-0291-2788484 (R), Fax: +91-0291-2788706
E-mail: director@cazri.res.in; Website: http://www.cazri.res.in
Editorial Committee : S.K. Jindal, D.V. Singh, Nisha Patel and Ajayvir Singh Sirohi
Compilation : S.B. Sharma