

Assistant: Sh Hemant Kumar
T-9: Sh. Mohan Lal Swami
T-7-8: Sh. Murl Manohar Purohit, Sh. Hari Dayal
T-6: Sh. Khem Chand
T-5: Sh. Abhay Singh, Sh. Deva Ram, Sh. Fateh Singh, Sh. Manga Ram Bhati, Sh. Surendra Kumar Sankhla, Sh. Suresh Chandra Vyas, Sh. Hanwant Singh
T-4: Sh. Shankar Lal, Sh. Kheta Ram, Sh. Narendra Singh Chouhan, Sh. Rajendra Kanojia, Sh. Dev Raj, Sh. Praveen Kumar Kachhawaha, Sh. Nand Kishore, Sh. Girdhari Lal, Sh. Mahendra Singh Sonigra, Sh. Vinod Purohit
T-3: Sh. Madan Lal/ID, Sh. Charanjeet Singh, Sh. Dunga Ram, Sh. Anil Kumar, Sh. Gaffoor Khan, Sh. Pabu Singh,
T-2: Sh. Mala Ram
T-1: Sh. Ramesh Chandra, Sh. Bhanwar Singh, Sh. Surendra Kumar, Dunga Ram



Transfers

Dr. S.S. Rao, Sr. Scientist transferred from CAZRI to NBSS&LUP, RRS, Udaipur; Dr. Dilip Jain, Senior Scientist (AS&PE) from CIPHET, Ludhiana to CAZRI, Jodhpur; Smt. Santosh Kalwania, Jr. Clerk from RRS, Bikaner to Jodhpur; Dr. S.P.S. Tanwar, Sr. Scientist (Agronomy) from RRS Pali to Jodhpur; Dr. P. Raja, Senior scientist from RRS Jaisalmer to Jodhpur; Sh. Deyanandan Unnithan T., T-3 (Driver), from RRS, Jaisalmer to CPCRI, Reg. Stn. Kayamkulam, Kerala; Sh. Rajendra Choudhary, F/G (SSS) from RRS, Bhuj to Jodhpur; Sh. Moti Lal Bajrolia, T-4 (Agril. Eco.) from RRS, Pali to Jodhpur; Sh. Ravi Kumar, T-3 (F/A) from RRS, Pali to Jodhpur; Dr. M.M. Azam, Sr. Scientist (Organic chemistry) transferred to Directorate of Rice Research, Hyderabad; Sh. Dipankar Saha, Scientist (Sel. Grade) (Economic Botany) transferred from RRS, Sorbhog of CRIJAF, Barrackpore, Kolkata (WB)

Superannuations

October, 2011: Dr. P.B.L. Chaurasia, Principal Scientist

November, 2011: Sh. Durlabh Chand, Asstt. Adm. Officer

December, 2011: Dr. H.C. Bohra, Principal Scientist, Sh. Kheta Ram, SSS and Sh. Basti Ram, SSS

January 2012: Dr. B.L. Gajja, Principal Scientist (Agriculture Economics); Sh. Brij Kishore Mathur, T-9 (Comp. Prog.); Sh. Bhanwar Lal Verma, T-5 (TO); Smt. Geeta, SSS; Smt. Kanudi, SSS; Smt. Maina, SSS

February 2012: Mrs. Pramila Raina, Principal Scientist

March 2012: Sh. Dan Raj Vaishnav, AAO; Sh. Hanuman Ram, T-5 (TO); Sh. Kana Ram, SSS

April 2012: Sh. Radhay Shyam Purohit T-7-8 (TO), Sh. Dev Raj T-4 (F/A) and Sh. Rohitas T-2 (F/M)

May 2012: Dr. Amal Kar, Principal Scientist (Geography), Sh. Chain Singh, SSS

June 2012: Sh. Vidhyadhar, T-9 (TO) and Sh. Gani Khan/Pusa Khan, RRS, Pali, SSS



August 2012: Sh. Chander Darwani, Asstt. and Sh. Khamisha Khan, SSS (Voluntary on 1.8.2012), Sh. M.L. Sharma, T-5 (TO), Sh. Murl Manohar Singh, T-4 (FA), Smt. Laxmi/Ganga Ram, SSS

September 2012: Shri Bal Kishan Soni, Principal Scientist, Sh. Gani Khan, SSS

Visits Abroad

- Dr. R.K. Bhatt (October 24 to 25, 2011 to attend the Geo-Carbon Conference: Carbon in a Changing World, at FAO Headquarter.
- Dr. Dheeraj Singh, Training Organizer, to Nairobi, Kenya from November 13 to 18, 2011 to participate in 2nd GKRAS Annual Meeting and International Conference on Innovations in Extension and Advisory Services.



- Dr. T.K. Bhati, Principal Scientist to Burkina Faso from December 14 to 19, 2011 to participate in 9th International Workshop on Sustainable Management of Marginal Drylands-Phase 2 (SUMAMAD-2), at Bobo Dioulasso.
- Dr. M.M. Azam, Senior Scientist to USA from January 9 to May 8, 2012 to attend the USIEF Full Bright Nehru Environmental Leadership Programme 2011-12.
- Dr. M.M. Roy, Director to Bangladesh from January 22-26, 2012 to attend the Second Regional Committee of South Asia and China.
- Dr. Shalander Kumar, Head, Div. VI to Tucson (USA) from May 29-31, 2012 for participation in International conference on Climate Change Adaptation: Adaptation Futures-2012, at University of Arizona, Tucson.
- Dr. R.K. Bhatt, Head, Div. III, Dr. T.K. Bhati, Principal Scientist (Agronomy) and Dr. B.K. Mathur Principal Scientist (Animal Nutrition) to Dubai (UAE) from June 25-28, 2012 to attend the workshop for CGIAR research program on Dryland Systems (CRP.1.1) on Integrated Agricultural Production Systems for the Poor Vulnerable in Dry Areas.
- Sh. Pradeep Kumar, Scientist (Horticulture) to Viterbo, Italy for three years on April 30, 2012 to pursue Ph.D. at University of Tuscia under ICAR International Fellowship Award 2011-12.

Resignation

Sh. S. Gopalsundarja, Scientist (Economic botany) on 22.8.2012 to IAS.

Obituary

Sh. Amar Nath Bohra, T-3 (Workshop) on 07.10.2011; Sh. Bhana Ram, SSS on 08.04.2012; Sh. Ramdeen Dewasi, SSS on 13.05.2012

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GAZE THROUGH THE YEAR PASS'E

October 2010 - September 2011



CENTRAL ARID ZONE RESEARCH INSTITUTE
 JODHPUR 342 003



Year 2011 was good year in terms of rainfall and its distribution. This year though the onset of monsoon was late but the total rains are more than the annual average which are useful for the perennial crops, trees, shrubs and horticulture plants. Some of the major research highlights and events since the previous foundation day are as follows:

Research Highlights

- An area of 3410 sq. km of Tharad and Vav tehsils of Banaskantha district has been assessed for natural resources. Quality of ground water is largely brackish to saline with average EC of 4.684 dS m⁻¹.
- *Soil biodiversity in grasslands of arid western plain*: Maximum meso-fauna-population was in overgrazed natural grassland+tree pasture system, represented by Sminthuridae, Brachystomellidae, Isotomidae and Entomobryidae. The Palaeosomatidae, Epilohmanniidae and Rhodocaridae were the dominant mites.
- *Sinorhizobium kostiense* (PC-4) inoculation, N₂ fixing bacteria, has been identified to increase the biomass of the seedlings of Acacia senegal.
- Two hybrids (MH 1695 and MH 1696) of pearl millet have been identified to yield grain more than 2.1 t ha⁻¹, an increase of more than 33% over HHB 67.
- Seed production: 60 kg breeder seed of pearl millet, 625 kg of moth bean, 29 kg nucleus seed of moth bean and 6 t truthfully labeled seed of mung bean, clusterbean, moth bean, sesame, pearl millet, mustard and cumin were produced.
- Seed storage technology in cumin is standardized. Seed treatment with carbendigen and stored in tin containers was the best for seed storage.
- CAZRI-G2021 and CAZRI-2025 have been identified to yield more than 23 kg fruit yield per tree in gonda.
- Seedless Santa Margherita Bailice, Rossa Castel Sardo, Rojax Roja-4, Pianta 25, Trunzara Red San Cono, A Giant and Militelo White, exotic material of cactus pear (*Opuntia ficus indica* L.) showed 100% survival.
- In *Cenchrus ciliaris*, IMTCC-10-2 (21.3 t, 4.8 t ha⁻¹) at Jodhpur, IMTCC-10-8 (12.8 t, 8.0 t ha⁻¹) at Bikaner and IMTCC-10-10 (14.0 t, 4.2 t ha⁻¹) at Pali were the highest yielders for green and dry forage.
- Foliar spray of 1% urea at pre-and post-flowering in clusterbean increased the seed yield to 893 kg ha⁻¹, 56.9% more than the control.
- Under organic farming, a combination of neem cake (400 kg ha⁻¹) + bio-pesticide (3% neem oil) spray and manure application (4.5 t ha⁻¹) enhanced the seed yield to 1015 kg ha⁻¹ in sesame and 537 kg ha⁻¹ in clusterbean.
- In agro-forestry system, the net returns (Rs. 32290 ha⁻¹) and B:C ratio (2.42) were maximum in *Prosopis cineraria* + pearl millet var. ICPT-8203.
- The feeding of ardu and neem leaves to goats showed high acceptability and palatability, however, dry matter intake and average daily gain were more in animals fed on ardu leaves.
- Balanced concentrate mixture prepared using *P. juliflora* pods did not adversely affect the health, growth and reproduction of the Tharparkar cows.
- CAZRI Pashu Aahar (concentrate) having *P. juliflora* pod flour is made available for commercial use.
- A consortium of *Bacillus firmus* and *Trichoderma harzianum* for the control of soil borne plant pathogens has been developed.
- *Tatera indica* population of rodent increased from 60% in 2005 to 84% in 2011 at CR Farm CAZRI, Jodhpur.



- A solar energy based thermal unit is designed, developed and tested to heat 25 L tumba oil to more than 60°C in 3-4 hour for using in bio-diesel production through trans-esterification.
- CAZRI gum production technology in Acacia senegal is widely accepted by the farmers of western Rajasthan and farmers have earned Rs. 117.9 lakh by the sale of gum.
- For capacity building of farm women through selected agro-based technologies, 22 demonstrations on kharif season crops were conducted.
- Most of the decisions regarding domestic activities are taken by the women, whereas, regarding agriculture and livestock by the men. 66.7% decisions about animal breeding, 83.3% about feeding and 85.3% for cattle management are taken jointly.

Cold Desert Regional Research Station at Leh (J&K): Sh. Rigzin Spalldar, Chief Executive Counselor, Ladakh Autonomous Hill Development Council along with Dr. S. Ayyappan, Director-General, ICAR and Secretary, DARE and Dr. A.K. Singh, DDG (NRM), ICAR, New Delhi laid the foundation stone on 18th August, 2012. For the Cold Desert Regional Research Station at Leh, twenty three ha land allotted by LAHDC, Leh at village Stakena for the station.

Patents: Two patent applications were processed and submitted to NRDC. Publications: Findings of the research work are published in the national and international peer reviewed journals regularly. To disseminate the knowledge, findings of the research and technologies tested at farmer fields, various articles in Hindi, bulletins, extension folders/leaflets were published and distributed to the beneficiaries.

Celebrations: CAZRI Foundation Day (October 1), Children's Day (November 14), Daumi Ekta Week (November 19-25), Flag Day (November 25), Women's Day in agriculture (December 5), Republic Day (January 26), National Science Day (28 February), International Women' Day (8 March), Earth Day (22 April), World Environment Day (5 June), Field Day on Guar (May 8), World Day to Combat Desertification (June 17), Sangosthi on Hamari Beti Hamari Shan (July 17); Agriculture Education Day (August 7), Independence Day (August 15), Hindi Week (September 14-22),

Meetings: The Fifth Meeting of the VIth Research Advisory Committee (April 17), Meeting of the Solar Energy Devices and Farm Implements (May 3), Meeting of Expert Committee on Rodent Control (May 5), Meeting of Chairman and Members of Biodiversity Board, Gujarat with CAZRI Scientists (May 10), Institute Joint Staff Council (May 26), Institute Management Committee (May 30), Institute Research Council (May 21-24 and June 22-23), Group Meeting Combating Desertification and Developing Rural Livelihood on Sustainable basis in Hot Arid Region of Coastal and Peninsular India (June 12), Cold Arid Network Partners Meeting (June 13).



Workshops/Kisan Mela: National Symposium on Resource Utilization through Integrated Farming system and Biodiversity Conservation in Drylands at Bhuj (December 20-22), Workshop for Targeting Agri-Based Technological Interventions in Arid Western Rajasthan (February 29), NAIP All India Workshop on Utilization of *Prosopis juliflora*: Challenges and Opportunities (March 12-13), Farmers Fair-cum-Farm Innovation Day (September 12)

Sports: CAZRI hosted Inter Zonal Sports Tournament (February 13-17) in which 450 sports persons and officials from 15 ICAR Institutes from West Zone (Rajasthan, Maharashtra, Gujarat and New Delhi) participated.

Group visits: More than 2500 farmers, student/trainees and Central/State Department Officers from various states visited the Institute at Hqs. and RRSs.

Demonstrations : KVKs conducted 122 demonstrations on improved crop and livestock production technologies, 21 training programmes for 538 farmers & farm women, and other 4 extension activities.

Exhibitions

November 3-5, 2011: Bharat Nirman Jan Soochna Abhiyan Mela at Balotra, Barmer; *November 16-18, 2011:* Mushroom Production at CAZRI, Jodhpur *December 5, 2011:* International Woman Day at Village Purkhawas, Luni Panchayat Samiti, Jodhpur; *December 20-22, 2011:* National Symposium on Resource Utilization through Integrated Farming System and Biodiversity Conservation in Dryland at Bhuj, Gujarat; *January 5-15, 2012:* Paschimi Rajasthan Hastshilp Utsav-2012 at Rawan Ka Chabutra, Jodhpur *February 7, 2012:* Kisan Mela (ATMA Project) at Chopasni Nursery, Jodhpur *March 2, 2012:* Field day & Kisan Gosthi at village Bujawar, Jodhpur *March 13-16, 2012:* Global Conference on Women in Agriculture at IARI Mela Maidan, New Delhi; *March 19, 2012:* Field Day on Cumin Crop at village Bujawar, Jodhpur; *April 1, 2012:* District level Kissan Mela (ATMA Project) at Chopasni Nursery, Jodhpur organized by State Agril. Department, Jodhpur *May 11-12, 2012:* National Science Day at AFRI, Jodhpur

Appointments

Sh. Jabbar Singh as Regular Mazdoor on 25.10.11, Mr. Sushil Kumar as Scientist (Agronomy) on 22.12.2011, Ms. Monika Shukla as Scientist (Agronomy) on 23.12.2011, Mr. Venkatesan K. as Scientist (Economic Botany) on 23.12.2011, Dr. Chandra Bhushan Pandey, Head of Division-I on 06.02.2012, Dr. Vikas Khandelwal, Sr. Scientist (Plant Breeding) on 19.03.2012, Dr. Rajwant Kaur Kalia, Principal Scientist (Agro Forestry) on 31.03.2012, Dr. Ramavtar Sharma, Principal Scientist (Genetics/Cyto Genetics) on 31.03.2012, Dr. Aravind Kumar Jukanti, Senior Scientist (Plant Breeding) on 26.4.2012, Sh. Gopalsundaraja, Scientist (Economic Botany) on 2.5.2012, Sh. Indra Bhushan Kumar, AO on 8.6.2012, Ms. Sumti Ela, Assistant on 20.07.2012, Dr. Mahesh Kumar Gaur, Sr. Scientist (Geography) on 5.9.2012 and Sh. Virendra Charan, Assistant on 7.09.2012 .

Promotions

Director: Dr S.M. Deb, Head, RRS, Pali to NRC on Yak, Dirang (Arunachal Pradesh)

