



Year: 2011-2012

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From the Director...



The small ruminants like goat are now a significant component of the livestock industry in drylands for the rural economy. Goat rearing is an important means of livelihood for small and marginal farmers, due to its short generation interval, high prolificacy, easy management and marketing. Although in India goat is primarily reared for meat, but now use of its milk is also picking up. This milk is especially recommended for infants, old and convalescent people. A major portion of goat milk is consumed locally and little is marketed presently. Out of the total goat milk production (4 MT/annum), 70 per cent yield comes from non-descript types. Many indigenous products are prepared from goat milk. These include cheese, paneer, khoa, chhena, butter, curd, shrikhand and ice cream.

The high growth rate of goat population in the country on account of its cost effectiveness has led to a total population of 140.54 million heads today and still growing fast. The awareness about improved goat rearing practices and application of new tools of biotechnology would definitely result in a big boost in the goat milk production. The conversion of such surplus milk into various value added products is important on account of better economic returns besides overcoming the goat milk's acceptability problems because of the foul odor or taste. The technologies developed for the value added goat milk products by this institute have great potential in coming years.

-M.M. Roy

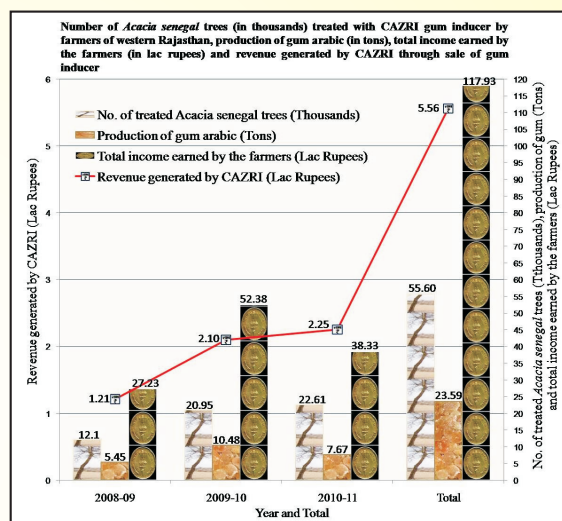


RESEARCH ACTIVITIES

CAZRI Gum Production Technology: A Unique Option for Livelihood Security in Hot Arid Region

The farmers of Chauhan and Baytu Tehsils of Barmer District, Shergarh and Phalodi Tehsils of Jodhpur, and some villages of Nagaur and Pali Districts have adopted the gum inducing technology in *Acacia senegal*. The number of trees treated with gum-inducer increased to 22600 during 2010-11, resulting in production of 6.7 t of gum arabic. In this way, they earned about Rs. 38.0 lakh, with an average rate of Rs. 500/- per kg during 2010-11. Since the network project on harvesting, processing and value addition of natural resins and gums has started at CAZRI centre, the villagers have earned Rs. 117.9 lakh by the sale of gum arabic in the local market, and CAZRI has earned Rs. 5.5 lakh by the sale of CAZRI gum inducer. This gum exudation technology has been adopted by large number of farmers and every year the population of treated trees of *A. senegal* is increasing substantially. Besides *A. senegal*, other gum yielding trees like *A. tortilis*, *A. nilotica*, *A. leucopholea*, *Prosopis cineraria*, *P. juliflora*, *Anogiessus rotundifolia*, etc. can be treated by this technique effectively for gum production.

-J.C. Tiwari



Production of gum arabic by farmers of western Rajasthan by using CAZRI gum inducing technology

OTHER ACTIVITIES

ICAR West Zone Sports Tournament

The ICAR West Zone Sports Tournament 2012 was organized during February 13-17, 2012. More than 450 sports persons and officials from 15 ICAR institutes from the West Zone (Rajasthan, Maharashtra, Gujarat and New Delhi) participated.

Shri Narendra Kumar Gujjar, DIG, BSF, Rajasthan Frontier, Jodhpur, was the Chief Guest and inaugurated the sports meet. Dr. M.M. Roy, Director, CAZRI, welcomed the Chief Guest and the sports contingents. Dr. Anurag Saxena, Secretary, Organizing Committee proposed a formal vote of thanks. Dr. Nisha Patel and Dr. R.K. Kaul conducted the function. Various events organized in the tournaments were athletics, such as races, shot put, javelin throw, discus throw, long jump and high jump for both men and women. The team events were badminton, basketball, table tennis, kabaddi, football, volleyball (smashing & shooting) and individual events, carrom and chess. A cultural programme was also organized on February 15, 2012. Ms. Smitha G.R., DMAPR and Mr. Bhuvanesh Verma, CAZRI, Jodhpur was adjudged as best women and men athlete, respectively. The overall championship was awarded to CAZRI, Jodhpur team on the basis of the overall best performance in different events.



Capacity Building Training on “High Science Tools and Methodologies in Planning, Implementation and Monitoring of Watershed Programme under IWMP”

Two capacity building training programmes on Watershed Management were organized by Division of Transfer of Technology, Training and Production Economics during 18-20 and 23-25 January, 2012. These were sponsored by Ministry of Rural Development, Government of India, New Delhi. Integrated watershed development has been considered as one of the most effective tools for sustainable agriculture development in rainfed area. The training programme was comprised of interactive classroom sessions, hands on practical as well as exposure visit of Bambor watershed successfully developed by CAZRI. The lectures were organized on various topics like preparation of detailed project report, watershed budgeting, audits and implementation issues, use of GIS and remote sensing in planning, management and impact assessment, pasture and grassland management for sustainable farming system etc. The programmes were attended by 40 senior officers from Kerala, Andhra Pradesh, Jharkhand, Chhattisgarh, Tamilnadu, Uttar Pradesh, Madhya Pradesh, Meghalaya, Haryana, Maharashtra and Rajasthan.



Training on “Study of Ethephon on Gum Production”

Training on “Study of Ethephon on Gum Production”, was imparted to 30 officers of Maharashtra Forest Department, Pune during 31st January to 3rd February 2012. There were nine lectures, one hands-on training and one-day visit to Barmer district where the stands of *A. senegal* are found in abundant.

Training on "Nano-technology for Enhanced Utilization of Native - Phosphorus by Plants and Higher Moisture Retention in Arid Soils"

A National Training on “Nanoparticle Production, Characterization and Utilization in Agriculture” from February 23 to March 3, 2012 was organized under World Bank funded NAIP project on “Nano-technology for Enhanced Utilization of Native - Phosphorus by Plants and Higher Moisture Retention in Arid Soils”. The purpose of this training programme was to develop human resources throughout the country for Nanotechnology Research. Twenty-four participants of 10 disciplines from different parts of India attended the training. Eminent scientists working on Nanotechnology in India and USA delivered 17 lectures each of 90 minutes, and 5 practical sessions each of 3 hours. The topics covered were: synthesis of nanoparticles by physical, chemical, biological and aerosol technique; entire characterization techniques of nanoparticles, clay based nanofabrication, plant response to nanoparticle application, nano based sensors, nano emulsions, nanotechnology research in aerosol and air quality, biosafety of nano materials and IPR issues. Defence laboratory was also visited. Director, CAZRI chaired the inaugural function, and Prof. Pratim Biswas, from Washington University the valedictory function.



Training on "Cattle Feed Block Production Technologies"

Training on 'Cattle Feed Block Production Technologies', sponsored by ATMA, Ratlam was organized during March 2-5, 2012. Eighteen farmers and two officers of KVK Ratlam participated.

Workshop on "Targeting Agri-Based Technological Interventions in Arid Western Rajasthan"

One day workshop, sponsored by Project Directorate of MPOWER (Mitigating Poverty in Western Rajasthan), Jodhpur was organized on 29th February 2012 by the Division of Transfer of Technology & Production Economics. Dr. M.M. Roy, Director CAZRI was the chairman and Mr. K.M. Noordeen, Deputy Director, MPOWER was the guest of honor at the inaugural session. The presentations were made on different technological and institutional options for enhancing agricultural productivity and rural livelihood. The main aim of the workshop was to identify suitable technological options that can be transferred to the fields in six districts of western Rajasthan under MPOWER. The major topics were technologies for NRM, integrated farming systems and agricultural diversification; crop, pasture, mushroom production; technological options for tapping solar energy etc. The workshop was attended by 72 delegates.

Workshop on "Utilization of *Prosopis juliflora*: Challenges and Opportunities"

It was held during 12-13th March, 2012. More than 100 delegates from different parts of the country participated. During the course of the workshop, the utilization aspects of *Prosopis juliflora* were debated, and the major recommendation of the workshop was that a multi-stakeholder approach is needed to manage the thickets of the species for enhancing livelihood opportunities of rural folk in arid regions.

Field Day

A field day on "Improved Cumin Production Technologies", was organized in Bheenjwadia Village on 2nd March. Scientists of the institute provided information on organic farming, weed management, rodent management, fodder production, and improved technologies in cumin crop. Dr. Shalander Kumar and Dr. Bhagwan Singh coordinated the field day.

Field Day on "Livestock Centric Technologies"

On 12th March 2012 field day was organized at village Harsolav to create awareness in the farmers community about the livestock centric activities taken by the consortia partners in NRAA Project involving Rajasthan, CAZRI, Gramin Vikas Trust and Livestock Development Board for improving the livestock productivity. RCDF Nagaur also participated in the programme and initiated the milk collection work in the adopted villages. Dr K.S. Ramachandra, Technical expert (Animal Husbandry & Fisheries), NRAA presided over the function and visited the farmers' fields in villages of Harsolav cluster to see the progress of various activities like soil moisture, compost, agro-horticulture, silvi-pasture, cactus plantation and work on fodder crops. The benefits of multi-nutrient-block, multi-nutrient-mixture and urea treatment in animal feeding systems were appreciated by the farmers. He emphasized the farmer's community to actively participate in this programme to get maximum benefits for livestock sector especially dairy production for improving their livelihood. About 300 farmers participated in this programme.

MOU Signed for Stakeholders Capacity Building

An MOU has been signed between CAZRI and MPOWER project (Mitigating Poverty in Western Rajasthan) on 29th March 2012 for capacity building of farmers and other stakeholders and transfer of improved technologies for sustainable agricultural development and improving rural livelihoods in six districts of western Rajasthan. The programme will be coordinated by the Division of Transfer of Technology & Production Economics.

Award

IEI Young Engineer Award: Dr. Deepesh Machiwal, Senior Scientist at RRS CAZRI, Kukma, Bhuj, received the award from the Institution of Engineers (India) on the occasion of the 25th National Convention of Agricultural Engineers at Kolkata, West Bengal held during January 19-20, 2012. He standardized methodology to assess groundwater potential using modern techniques of remote sensing and geographic information system in a cost-effective manner.



Distinguished Visitors

At CAZRI Stall at Paschimi Rajasthan Hastshilp Utsav-2012

Shri Pawan Kumar Bansal, Union Water Resource Minister, Govt. of India, New Delhi; Shri Sidharth Mahajan, IAS, Collector, Jodhpur; Shri Rameshwar Dadhich, Mayor, Nagar Nigam, Jodhpur; Smt. Durga Devi Balai, Zila Pramukh, Jodhpur; Shri Umesh Leela, Chairman, Marudhara Industries Association, Jodhpur; Shri Sunil Parihar, Mela Coordinator; and Shri S.L. Paliwal, General Manager, DIC, Jodhpur on January 5
Dr. K.S. Yadav, Vice-President, 20 Sutri Karyakram, Govt. of Rajasthan, Jaipur; Shri Badri Ram Jakhar, Member of Parliament, Govt. of India; Shri B.S. Detha, Agril. Commissioner, Govt. of Rajasthan, Jaipur; Shri B.K. Singh, Director, Agril. (ATMA) Project; Shri K.K. Goyal, I/c Director, Central Wool Development Board on January 11
Shri Narendra Kumar Gurjar, DIG, Rajasthan Frontier Headquarter BSF, Jodhpur on January 13
Hon'ble Shri Ashok Gehlot, Chief Minister, Govt. of Rajasthan; Smt. Surya Kanta Vyas, MLA, Govt. of Rajasthan; Shri Kailash Bhansali, MLA, Govt. of Rajasthan; Smt. Durga Devi Balai, Zeela Pramukh, Jodhpur; Shri Rajendra Solanki, Chairman, JDA, Jodhpur; Shri R.K. Jain, Commissioner, Jodhpur on January 15

At the Institute

Shri Rajiv Mehrishi, Additional Secretary, DARE & Secretary, ICAR, New Delhi; Dr. K.D. Kokate, DDG (Agriculture Extension), ICAR, New Delhi
Dr. B.S. Hansra, ADG, ICAR, New Delhi; Dr. A.M. Narula, Zonal Project Director, Zone-I Ludhiana; Dr. A.K. Gogai, Zonal Project Director, Zone-III, Baranpuri; Dr. A.K. Singh, Zonal Project Director, Zone-IV, Kanpur; Dr. N. Sudhakar, ZPD, Zone-V, Hyderabad; Dr. Y.V. Singh, Zonal Project Director, Zone-VI, Jodhpur; Dr. U.S. Gautam, Zonal Project Director, Zone-VII, Jabalpur; Dr. S. Prabhukumar, Zonal Project Director, Zone-VIII, Bengaluru on January 16
Shri B.L. Jangira, Ex-Director Finance, ICAR, New Delhi on January 17
Dr. G.S. Gujral, Head, Science British Council (India) New, Delhi and Dr. Kanupriya Harish, Project Director, Jal Bhagirathi foundation, Jodhpur on February 6
Dr. Noordin, Agriculture Officer, MPOWER, Jodhpur on March 1
Dr. J.C. Dagar, ADG, (NRM), ICAR, New Delhi on March 12

CAZRI Stall in Delhi

Hon'ble Her Highness Smt. Pratibha Devisingh Patil, President of India and Hon'ble Shri Sharad Pawar, Union Agriculture Minister, Govt of India, visited CAZRI Stall in Delhi on the occasion of Global Conference on Women in Agriculture on March 13-15.

Exhibitions

January 5-15: Paschimi Rajasthan Hastshilp Utsav-2012 at Rawan Ka Chabutra, Jodhpur
February 7: Kisan Mela (ATMA Project) at Chopasni Nursery, Jodhpur
March 2: Field day & Kisan Gosthi at village Bujawar, Jodhpur
March 13-16: Global Conference on Women in Agriculture at IARI Mela Maidan, New Delhi
March 19: Field Day on Cumin Crop at village Bujawar, Jodhpur

Appointments

Dr. Chandra Bhushan Pandey, Head of Division-I at Jodhpur on 06.02.2012
Dr. Vikas Khandelwal, Sr. Scientist (Plant Breeding) at RRS, CAZRI, Pali on 19.03.2012
Dr. Rajwant Kaur Kalia, Principal Scientist (Agro Forestry) at Jodhpur on 31.03.2012
Dr. Ramavtar Sharma, Principal Scientist (Genetics/Cyto Genetics) at Jodhpur on 31.03.2012

Promotions

Sh. Hari Dayal, T-6 (SMS) to T-7-8 (TO), w.e.f. 21.02.2004
Sh. Abhay Singh, T-4 (F/A) to T-5 (TO), w.e.f. 01.01.2011
Sh. Deva Ram, T-4 (Lab. Asstt. Photo Lab.) to T-5 (TO), w.e.f. 01.01.2011
Sh. Fateh Singh, T-4 (F/A) to T-5 (TO), w.e.f. 01.01.2011
Sh. Manga Ram Bhati, T-4 (F/A) to T-5 (TO), w.e.f. 01.01.2011
Sh. Surendra Kumar Sankhla, T-4 (Obs.) to T-5 (TO), w.e.f. 01.01.2011
Sh. Suresh Chandra Vyas, T-4 (F/F/T) to T-5 (TO), w.e.f. 29.05.2011
Sh. Hanwant Singh, T-4 (F/F/T) to T-5 (TO), w.e.f. 30.05.2011
Sh. Shankar Lal, T-3 (F/A) to T-4 (F/A), w.e.f. 01.01.2011
Sh. Kheta Ram, T-3 (F/A) to T-4 (F/A), w.e.f. 08.01.2011
Sh. Narendra Singh Chouhan, T-3 (F/A) to T-4 (F/A), w.e.f. 16.01.2011
Sh. Rajendra Kanojia, T-3 (F/M) to T-4 (F/M), w.e.f. 17.01.2011
Sh. Dev Raj, T-3 (F/A) to T-4 (F/A), w.e.f. 29.01.2011
Sh. Praveen Kumar Kachhawaha, T-3 (Mech.) to T-4 (Mech.), w.e.f. 24.02.2011
Sh. Nand Kishore, T-3 (F/A) to T-4 (F/A), w.e.f. 22.04.2011
Sh. Girdhari Lal, T-3 (F/A) to T-4 (F/A), w.e.f. 09.05.2011
Sh. Mahendra Singh Sonigra, T-3 (F/A) to T-4 (F/A), w.e.f. 01.07.2011
Sh. Madan Lal/ID, T-2 (F/A) to T-3 (F/A), w.e.f. 22.02.2011
Sh. Charanjeet Singh, T-2 (F/A) to T-3 (F/A), w.e.f. 10.03.2011
Sh. Dunga Ram, T-2 (F/A) to T-3 (F/A), w.e.f. 26.06.2011
Sh. Anil Kumar, T-2 (Driver) to T-3 (Driver), w.e.f. 29.06.2011
Sh. Gaffoor Khan, T-2 (Driver) to T-3 (Driver), w.e.f. 29.06.2011
Sh. Pabu Singh, T-2 (F/A) to T-3 (F/A), w.e.f. 20.09.2011
Sh. Mala Ram, T-1 (F/A) to T-2 (F/A), w.e.f. 04.05.2011

Transfers

Dr. Dilip Jain, Senior Scientist (AS&PE) from CIPHET, Ludhiana to CAZRI, Jodhpur on 16.01.2012
Smt. Santosh Kalwania, Jr. Clerk from RRS, Bikaner to Jodhpur on 24.03.2012

Superannuations

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, R/M (SSS); Smt. Kanudi, R/M (SSS); Smt. Maina, Mali
February 2012: Mrs. Pramila Raina, Principal Scientist (Soil Chemistry/Fertility)
March 2012: Sh. Dan Raj Vaishnav, AAO; Sh. Hanuman Ram, T-5 (TO); Sh. Kana Ram, S/M (SSS)

Visits Abroad

Dr. M. M. Azam, Senior Scientist visited 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 visited Bangladesh from January 22-26, 2012 to attend the Second Regional Committee of South Asia and China.



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