



NDRI News

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From the Director's Desk



To meet the Mandate of providing R&D and HRD solutions for the entire country's dairy industry and livestock farmers, Western and Eastern Regional Stations of NDRI were established. It helped in identifying major constraints in dairy production and to offer plausible solutions to them through research and extension activities. These regional stations were also to serve as a vital link between NDRI, Karnal and the far-flung areas of the regions of the country for transfer of technologies developed at the Institute and provide appropriate feedback. The research work undertaken at these stations was to be mainly strategic and applied in nature, and the thrust of research was essentially to improve the socio-economic condition of dairy farmers of these regions. The Western Regional Station (WRS) was established at Aarey Milk Colony, Bombay in 1962 and was subsequently closed in 1984.

The Eastern Regional Station (ERS) established at the Central Dairy in Calcutta in 1964 was shifted to Kalyani Nadia district, about 50 km North of Calcutta during 1966 and located in the Administrative Building of Kalyani University. The Regional Animal Nutrition Research Centre of ICAR till then located at Haringhata, West Bengal, was merged with ERS of NDRI with effect from June 1, 1968. In 1978, the Government of West Bengal granted 100 acres of land at Kalyani where cattle sheds, forage unit, staff quarters etc. were gradually built up. The Station built its own laboratory building and the entire station started functioning within the same campus from May, 1987. The mandated area of operation of this Station besides eastern states of Bihar, Jharkhand, West Bengal, Orissa and Andaman & Nicobar Islands, also included the seven hill states of North-East.

Eastern Regional Station, Kalyani has in the past made significant contributions in the assessment of feed and nutrient resources in Eastern and North-eastern parts of the country. The station is currently involved in undertaking research on identification of the specific problems of dairy production and management in the eastern region on continuing basis, carrying out strategic and applied research for improvement of production, management and economic aspects of dairying in the region and creating awareness and transfer of technology through training, demonstration and extension services.

In view of its important role in promoting dairying as a major driver for bringing about nutritional and rural livelihood security in its area of operation, strengthening of Eastern Regional Station both in terms of Human Resource and infrastructure, has been a priority of the Institute. The Station has also been recognized as the regional campus of the NDRI Deemed University for Post Graduate teaching and research programs. Though, the establishment of State Agricultural Universities in the region has caused some overlapping of activities, Eastern Regional Station of NDRI, by virtue of its specialized nature of work, will continue to be relevant in serving the livestock farmers in promoting the 'Continuing White Revolution'.

The current issue of NDRI News Letter is devoted to the Eastern Regional Station to highlight its research and teaching / training contributions and re-emphasize its role in supporting dairy development in its respective areas of operation.

A. K. Srivastava

(A. K. Srivastava)

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EASTERN REGIONAL STATION, KALYANI - AN OVERVIEW



Main Building of ERS, Kalyani

Eastern Regional Station was established to identify the major constraints of dairy production in eastern and north eastern India and to offer plausible solutions through research and extension activities to these problems. The Eastern Regional Station serves as a vital link between the NDRI, Karnal and the far-flung areas of the eastern region of the country for transfer of technologies developed at the Institute and provides appropriate feedback to the scientists to fine tune the technologies. The research work undertaken at this station is mainly strategic and applied in nature, and the thrust of research is to improve the socio-economic conditions of dairy farmers of this region.

OBJECTIVES

- To identify the specific problems of dairy production and management in the eastern region on continuing basis.
- To undertake strategic and applied research for improvement of production, management and economic aspects of dairying in the region.
- To maintain the elite cattle germplasm for obtaining optimum productivity, and create database to act as a repository information centre on dairying.
- To create awareness and transfer of technology through training, demonstration and extension services.

INFRASTRUCTURE

The Eastern Regional Station has infrastructure facilities like Research laboratories, Cattle Herd, Fodder Farm, Library, Computer section, Guest House etc. The research work undertaken at this station is mainly strategic and applied in nature.

Presently, there are six sections namely Animal Nutrition, Livestock Production & Management, Dairy Economics, Dairy Extension, Animal Biotechnology and Animal Genetics and Breeding which are actively engaged in research, training and extension work.

THRUST AREAS

- Identification and evaluation of feeds and fodder resources.
- Rumen microbial manipulation to improve productivity of dairy animals.
- Micronutrient mapping & development of area specific mineral mixture.
- Genetic improvement of milch animals through identification and dissemination of superior germplasm by application of emerging reproductive and molecular technologies.
- Development and evaluation of suitable Dairy Production System.
- Impact of dairy development on rural economy.

CATTLE YARD

The Cattle Yard of the Station maintains around 150 cattle belonging to purebred Tharparkar and the Jersey crossbreds with the indigenous dam breeds e.g. Red Sindhi and Tharparkar. The cattle yard comprises of Calf shed, Heifer shed, Experimental animal shed, Milch animal shed, Machine Milking unit etc. which are utilized for production, research as well as for hands on training, demonstration and



orientation for the dairy farmers of the region on different aspects of scientific dairy farming.

FODDER FARM

Forage Section is engaged in cultivation of quality fodder crops (including organic fodder) in about 27 hectare area. Besides cultivation of fodder crops, the section also has a mini workshop for regular servicing of agricultural machinery including tractors, chaff cutter etc.

There is a small vermicompost unit used for production of vermicompost. The unit is also used for training and demonstration purpose. There is also an agri-meteorological observatory from where regular meteorological observations are recorded.

LIBRARY & COMPUTER CENTRE

The Library has 1500 books, 3000 volumes of bound journals and other periodicals in the field of Dairying.

The computer centre has networking and data entry facilities for statistical analysis of experimental data of various research projects and Cattle Yard. In addition, the data of milk production, fodder and feed supply, reproductive performance and meteorology is maintained on day to day basis.

TRAINING, EXTENSION & TECHNOLOGY TRANSFER

Round the year, the Station renders extension services including training programmes, Exhibitions, Field visits, Farmer-Scientist Interface, Capsule courses, Orientation programmes, Health & fertility camps, Off-campus training camps etc.



Scientists-Farmers Interaction at village

The following on-campus programmes are organized at regular intervals for the dairy farmers, unemployed rural youth, students, members of Dairy Cooperative Societies, SHGs and NGOs on request:

- Fifteen days training on "Scientific Dairy Farming".
- Capsule course (5 days) on "Animal Nutrition Fodder Production".
- Capsule course (5 days) on "Dairy Farm Management".
- One day Orientation programme on "Good Dairy Practices".
- Six weeks training on "A.I. and Veterinary First Aid" for AI workers sponsored by Milk Unions.
- Laboratory Attachment Summer Training Programme (1-2 months) for the UG & PG level students.



SALIENT ACHIEVEMENTS

Some of the salient achievements of the station for the last two decades are as follows:

- Nutrient deficiency status of eight different Agro-ecological regions (AER) in Eastern India were identified and the nutritional interventions recommended for sustainable milk production.
- Studies on Shelter Management Systems of dairy cattle in rural areas revealed that open sheds with tiled roof and brick/ RCC floor could provide relatively comfortable micro environmental conditions and could enhance production performance in hot-humid agro climatic conditions of Eastern India.
- Energy and protein deficiency were identified in dairy cattle and dzomo in Eastern Himalaya Region. Feeding of balanced concentrate mixture, UMMB and reclamation of the pasture lands were recommended to overcome the nutrient deficit.
- Cattle embryos were produced by in vitro fertilization in the modular incubator chamber using in vitro matured cattle oocytes isolated from cattle ovaries collected from Kolkata slaughterhouse.

- To meet the green fodder requirement of cattle, a package of practices was developed and recommended for cultivation of different forages and forage combinations suitable to this region.
- The study on clean milk production revealed that course correction advice to the farmers regarding adoption of appropriate hygienic measures and providing better ventilation and drainage facilities in the cattle shed had better impact on milk quality.
- Effect of dietary manipulation of rumen fermentation was studied using locally available vegetable oils. *In vitro* studies revealed that inclusion of sunflower oil significantly reduced ruminant methane production and ciliate protozoal population. Supplementation of sunflower oil thrice in a week improved the growth rate and feed conversion efficiency of growing calves.
- Mineral mixture supplementation @ 25 g/day improved the conception rate (50%) in anoestrous heifers and cows. Increased dose (@ 25 g/d, BD) alongwith tonophosphane and vitamin A injection further improved the reproductive performance.
- The comparative proximate composition and dietary protein and fiber fractions of locally available concentrate ingredients were analyzed. Based on chemical composition, availability and price of the ingredients suitable concentrate mixtures were formulated and suggested for the eastern India.
- Based on studies on crop rotations at ERS, fodder farm, six crop combinations in different seasons were found suitable based on per hectare yield and cost of production per quintal.
- Vermi-compost are being prepared and utilized for fodder production (Oats+Mustard, Oats, SSG and Maize combination crops) without applying basal dressing chemical fertilizer
- The chemical composition and nutritive value of various non-conventional feed resources viz. water hyacinth, Jute leaf, Jhanji (*Scirpus articulatus*), Banana plant, *Stylosanthes guanensis*, Dinannath grass, Ricebean, Desi Kalai, *Saccharum spontaneum* etc. were estimated.
- Chemical composition, palatability and nutritive value of some important fodder tree leaves fed to cattle in different states of eastern region were estimated.
- The traditional method of chhana production, its marketing, cost effectiveness and related constraints at field level was studied. The study revealed chhana making is sustained because of poor marketing of raw milk from remote villages and as a traditional method of preservation of milk solids.

Workshops/Seminars organized in recent past

- A National Convention on "Sustainable and Integrated Dairy Development in Eastern and North-Eastern Region: Status and Strategies" was organized at Eastern Regional Station of NDRI during 11th -12th December, 2008.

EXTENSION ACTIVITIES

- One special off campus infertility & animal health camp was organized at Sibpur WMPCS on 22nd July, 2010 in which 45 women beneficiaries were present and 74 animals were treated for different reproductive diseases.
- A special Anestrous Deworming Camp was organized on 16th August, 2010 at Udaypur WMPCS in which 72 animals brought by 42 farmers were examined.
- A special Animal Health and Infertility Camp was organized on 30th August, 2010 at Natungram WMPCS in which 27 women beneficiaries were present and 44 animals were treated for different reproductive diseases.
- Two 5 day Capsule courses on Dairy Cattle management were organized from 27.07.2010-31.07.2010 and 23.08.2010-27.08.2010. A total number of 19 women beneficiaries sponsored by Ichhamati Milk Union, 24 parganas (N) attended the training programs.
- Farmers Induction Programme (FIP) was organized on 21st August, 2010 in which 54 women farmers of Kishan Milk Union (Nadia) were given exposure in dairy cattle management, nutrition, fodder production, and milk production.
- A group of 34 women dairy farmers had an orientation visit at ERS dairy cattle herd on 7th July, 2010.
- During July to September, 2010, a total no. of 5 Awareness Programmes were conducted by the scientists and technical officers to create awareness among the dairy farmers regarding scientific dairy management practices, nutrition and animal health management. A total of 155 farmers belonging to different WMPCS named Natungram, Sunanda, Asharu, Pat Simulia, Beri-1 participated in these programmes.
- Fodder Demonstration and seedling distribution Programme was organized at Natungram WMPCS on 30th August, 2010 in which 14 women farmers were given root slips of para, guinea, hybrid napier etc.



MAIN STATION NDRI, KARNAL

RESEARCH NEWS

Bajra Lassi (Milk-Pearl Millet Based Fermented Beverage)

(S. K. Kanawjia, Dharam Pal, F. C. Garg and A. K. Singh)

A technology was developed for manufacture of Bajra Lassi (Milk-Pearl Millet Based fermented Beverage) using milk solids and pearl millet. Development of Bajra lassi is based on the selection of milk solids source; selection of level, form & stage of addition of pearl millet solids; fermentation conditions and stabilization of developed product in terms of preventing sedimentation and wheying-off in the product during storage. Although the traditional product is prepared from sour buttermilk, yet keeping in view the suitability for industrial production and easy availability, skim milk or standardized milk is selected as source of milk solids for development of the beverage. Pearl millet solids are added to milk in three different forms viz. a) raw flour obtained from milling pearl millet grains, b) slurry obtained by

grinding of soaked pearl millet grains and c) flour obtained after grinding of 24 h & 48 h germinated and dried pearl millet grains (malt). These solids are incorporated at two stages i.e. before fermentation and after fermentation. NCDC-167 starter culture is added for fermentation to obtain desirable acidity in the curd. After fermentation salt and spices are added and packaged in suitable size packages (LDPE pouches). The shelf life of the beverage packaged in LDPE films is about seven days at refrigeration storage. The shelf life could be enhanced from 7 days to 35 and 28 days at refrigeration storage by adding Potassium sorbate and Nisin or MicroGARD, respectively.

Mechanized Production of Doda Burfi Using Scraped Surface Heat Exchanger

(Devaraju. R. and R. K. Kohli)

Feasibility of mechanized production of Doda Burfi using SSHE was studied. Doda Burfi was manufactured by adding precooked germinated wheat flour, colour, skim milk powder, citric acid

solution and sugar. The investigation was carried out to optimize the various process parameters like scrapper speed, steam pressure and different stages of sugar addition to get the best quality of Doda Burfi. The performance was evaluated on the basis of sensory evaluation (9 point hedonic scale) and texture profile analysis.



ACADEMIC AFFAIRS/ DEEMED UNIVERSITY NEWS

Scholars Qualified for the Award of Ph.D. Degree

Scholar	Guide/ Discipline	Title of Thesis
Mr. Jitender	Dr. S. K. Sood (Animal Biochemistry)	Quantification of Structure Activity Relationship between Performing Antimicrobial Peptide(s) and Phospholipids Bilayer.
Ms. Rekha Chawla	Dr. G. R. Patil (Dairy Technology)	Development of Technology for Functional Doda Burfi.
Mr. Jagan Mohanarao Gali	Dr. S. K. Atreja (Animal Biochemistry)	Identification of Capacitation Associated Tyrosine Phosphoproteins in Buffalo Spermatozoa.
Mr. Sanjay Kumar	Dr. A. K. Puniya (Dairy Microbiology)	Molecular Diversity of Rumen Methanogens and Strategies for Methane Mitigation <i>In Vitro</i> .
Ms. T. Uma Maheswari	Dr. Rameshwar Singh (Dairy Microbiology)	Isolation, Characterization and Genotypic Heterogeneity of <i>Streptococcus thermophilus</i> Strains.

TRANSFER OF TECHNOLOGY

Krishi Vigyan Kendra (KVK)/

Dairy Training Center (DTC)

Training Programmes Organized

During the period under report, in all 24 training programmes (On-campus, Off-campus & training-cum-visits) on different aspects of dairy production and processing, crop & vegetable production, vermiculture, bee-keeping and home science were organized in which 683 farmers, women, rural youth and extension functionaries from Assam, Jharkand, Bihar, Himachal Pradesh, Uttar Pradesh, Sikkim and Uttarakhand participated.

Women in Agriculture Day

KVK celebrated "Women in Agriculture" day on 04.12.2010 at village Khera Chhapra of Karnal in which 70 farm women participated. They were apprised of various scientific technologies in dairy farming, crop production, milk processing and home science.

Dairy Extension Division

Dairy Education at Farmers' Door

In continuation of the effort of disseminating the dairy production and processing technologies to the farmers at their doorstep, a team of scientists visited 2nd Saturday of each Month during the period under report. Extension scientists of the team Dr. B. S. Meena, Dr. R. Senthil and Dr. Jancy Gupta acted as

coordinator of each visit and obtained the feedback from the participating farmers.

Infertility, Veterinary Aid Campaigns and Women Empowerment Programmes

A total of seventeen infertility and veterinary aid campaigns and seven Kisan Sangosthies were organized in Nasirpur, Nasirpur-Tilla, Subari, Budhakhera, Shahpur, Dadupur, Ganjogarhi, Amaritpur Kalan and Kulwaheri villages. During the Campaigns 385 cases of ectoparasite and 90 cases of endoparasite were treated. Also seven programmes participated by the farm women were conducted.

Training and Exposure Visits

A three day (November 19-21, 2010) Training & Exposure visit on scientific dairy farming was organized by Dairy Extension Division at NDRI for 45 progressive dairy farmers of Deharadun District (UK) which was sponsored by J. K. Trust Gram Vikas Yojana, Deharadun District (UK). The farmers were provided training on improved breeding, feeding and management practices.

RECENT HAPPENINGS

National Symposium on "Climate Change & Livestock Productivity in India"

National Dairy Research Institute, Karnal and Indian Association of Animal Production jointly organized a National Symposium on "Climate Change & Livestock

Productivity in India" on 7th and 8th October, 2010. Chairman, Haryana Association and Former DG ICAR Padambhushan Dr. R. S. Paroda inaugurated the Symposium and Dr. A. K. Gahlot, VC, Rajasthan University of Veterinary and Animal Sciences delivered the valedictory address.



9th Convocation of National Academy of Veterinary Sciences (India)

The 9th Convocation of National Academy of Veterinary Sciences (India) was held on 30th October 2010 at NDRI. Sh. Rudra Gangadharan, IAS, Secretary Dept. of Animal Husbandry, Dairying and Fisheries, Govt. of India delivered the Convocation Address. Sh. Gangadharan applauded the role played by veterinarians in taking care of animal health and production in the country. Dr. A. S. Nanda, Animal Husbandry Commissioner, Govt. of India emphasized on the need to increase the intake capacity of veterinary colleges to provide adequate health coverage for its livestock. A National Convention on 'Zoonotic Diseases : Present Status and Future Roadmap' was also organized on this occasion. Dr. A. K. Srivastava, Director and Vice-Chancellor, NDRI, Karnal delivered the key-note address on the importance of Zoonotic diseases.

Training Programme on Laboratory Testing and Product Manufacturing

Technology Business Incubator (TBI), National Dairy Research Institute Campus, Karnal successfully organized a 4 days Training Programme on Laboratory Testing and Product Manufacturing from 11th -14th October, 2010. There were 11 participants sponsored by NABARD. Shri Ravinder Kumar, DGM, Una, NABARD was the Chief Guest at the valedictory program and Dr. Vivek Pathania, DDM, Una, NABARD was the Guest of Honour.

29th Meeting of the Board of Management

The 29th meeting of the Board of Management of NDRI was held on 25.10.2010 under the chairmanship of Dr. A. K. Srivastava, Director of the Institute. Among the Hon'ble members of the BOM present included Dr. K. M. L. Pathak, DDG (AS), ICAR; Dr. K. M. Bujarbaruah, Former DDG (AS) & VC, AAU, Jorhat, Assam; Dr. M. C. Sharma, Director IVRI; Dr. B. B. Mallick, Former

Director IVRI & VC, WBUA & FS, Kolkatta; Dr. M. P. Yadav, Former Director IVRI & VC, SVPUAT, Meerut; Dr. S. L. Goswami, Joint Director (Res.) NDRI; Dr. G. R. Patil, Joint Director (Academic) NDRI; Sh. V. R. Srinivasan, Dy. Director (Fin.) ICAR and Sh. J. K. Kewalramani, Joint Director (Admn.), NDRI, Karnal.

NDRI-Industry Meet

One day NDRI-Industry Meet was organised on 1st December, 2010 wherein 96 participants from Industry and NDRI interacted on transfer of technologies developed at NDRI and their commercialization. Senior level representatives from 22 Industries/Dairy Cooperatives/ Federations/ NRDC including Nestle India Ltd.; Mother Dairy; Healkraft Pharma (India) Pvt. Ltd., Baddi, (Himachal); Neugen Diagnostics Pvt. Ltd. Hyderabad; R. B. Petro-Chem, Mehsana; Food & Biotech Enginners (Pvt.) Ltd., New Delhi; Genetix Biotech Asia Pvt. Ltd., New Delhi; Danone India, Gurgaon; I.D.M.C Limited, Gujarat; Vivante Foods, Ahmedabad; Wockhardt Limited, Ambala-Chandigarh Highway, Punjab; Chanakya Dairy, Mandi, Govindgarh; Everest Instruments Pvt. Ltd., Visnager; SSP Pvt Ltd, Faridabad; GCMF Ltd., Annad; Modern Dairy, Karnal; Poshak Agrivet, Karnal; The Ambala Distt. Cooperative Milk Producers Union Ltd., Ambala Cantt; Haryana Dairy Development Cooperative Federation, Panchkula, Haryana; Milk Plant Ballabhgarh and Milk Fed, Punjab participated in the Meet.

All India Dairy Husbandry Officers' Workshop-2010

All India Dairy Husbandry Officers' Workshop was organized by NDRI on 3rd - 4th December, 2010. The theme of the workshop was "Animal Husbandry and Dairy Technologies for Food and Nutritional Security and Empowerment of Farmers". The workshop provided an opportunity for Dairy Husbandry/Animal Husbandry Officers of the states to discuss the emerging problems and issues of dairying under field conditions, with the scientists and provide inputs for the development of strategies to handle these field related problems.

Forty four delegates from 15 states of the country, such as Sikkim, Meghalaya, Uttar Pradesh, Orissa, Kerala, Andhra Pradesh, Jammu and Kashmir, Madhya Pradesh, Gujarat, Rajasthan, Uttarakhand, Himachal Pradesh, Punjab, Haryana and New Delhi participated in the workshop.

Second Meeting of National Core Group on Probiotics

The 2nd meeting of National Core Group on Probiotics organised by NDRI in collaboration with Hi-Tech Biosciences Ltd., Yakult Danone India Pvt. Ltd., New Delhi and Nestle India Ltd., Gurgaon. was held at NAS



Complex, Pusa, New Delhi on 15th Nov., 2010. The main thrust of this meeting was to have an open interactive interface between the industry personnel and all the Scientists, Medical practitioners, Nutritionists and other stake holders involved in R & D work on probiotics and to discuss the major issues and challenges related to product development, functional efficacy and health claims associated with probiotic foods in the context of clinical studies on human subjects in the country so as to validate their specific health claims. The meeting was attended by more than sixty participants. Dr. G. P. Talwar, Director, Talwar Research Foundation and former Director, NIN was the Chief Guest. Dr. A. K. Srivastava, in his presidential address, emphasized the need for new initiatives for building a strong synergy between the scientists, clinicians and other professionals involved in probiotic research and industry and called upon all the stake holders to work in tandem so that the health benefits of probiotic foods reach all the sections of the society. Dr. Srivastava also briefed the house on the progress of initiatives taken by NDRI for designating the National Core Group on probiotics as a registered society in the name of "Probiotic Association of India". Dr. G. P. Talwar in his inaugural address complimented the efforts being taken at NDRI for the promotion of probiotic foods as biotherapeutics for management of gut health and well being.

Winter School on Dairy Entrepreneurship Development

NDRI organized a 21 day Winter School on "Dairy Entrepreneurship Development for Economic and Social Change" from 10th -30th Nov., 2010, which was attended by 25 participants from different parts of the country. Prof. Ramesh Chand, Director, NCAP, New Delhi, inaugurated the winter school. The programme concluded with the Valedictory Address of the Director, NDRI, Dr. A. K. Srivastava on the topic, "Zoonotic Diseases: Caution for Dairy Entrepreneurs".

Memorandum of Agreement between NDRI and NRDC Extended

Existing Memorandum of Agreement between NDRI and National Research Development Corporation (NRDC) was extended up to 19th Sept. 2012 and signed on 21st Dec. 2010 in presence of officials of NDRI, NRDC and Department of Scientific and Industrial Research (DSIR).

Mr. Sonenath Ghosh, Chairman and Managing Director, NRDC Delivered Lecture on IPR

Mr. Sonenath Ghosh, Chairman and Managing Director, National Research Development Corporation (NRDC) delivered lecture on 'Intellectual Property Rights' as part of awareness programme on

21st Dec., 2010. Scientific community at NDRI and faculty of other research and teaching from other organization attended.

CAC and CIC meeting of NAIP projects Conducted

Consortium Implementation Committee (CIC) Meeting of eight NAIP projects chaired by Director, Dr. A. K. Srivastava was conducted on 22nd Dec., 2010. Consortium Advisory Committee (CAC) meeting of two NAIP projects titled 'Characterization and differentiation of embryonic and spermatogonial stem cells in cattle and buffaloes' and 'A value chain on zona free cloned embryos for quality animal production from elite buffaloes and pashmina goats' were conducted on 24th Dec., 2010

NDRI - Britannia Industries Meet

Core Scientific Group from NDRI and Technical Group from Britannia Industries Ltd. met on 18th November, 2010 for working out possible area of research, which can be funded by Britannia Industries Ltd. Scientific concepts were presented by NDRI scientists and evaluated for merit for funding by Britannia.

DISTINGUISHED VISITORS

- 29-30.10.2010 Dr. Richard Ipsen, Department of Food & Science, University of Copenhagen, Denmark.
- 22.11.2010 Visit of 22 member delegation from Germany.

VISITS ABROAD

- **Dr. Latha Sabikhi**, Sr. Scientist, Dairy Technology Division was deputed to undertake International Training in the area of Probiotics under the NAIP (Component 2) titled "**A Value Chain of Composite Dairy Foods with Enhanced Health Attributes**" from 25th August to 22nd October, 2010 at the South Dakota State University, USA.
- **Dr. S. K. Sirohi**, Sr. Scientist, Dairy Cattle Nutrition was deputed to participate in 4th International Conference on Animal Nutrition (ICAN 2010) Malaysia from 21st - 23rd Sept., 2010.

HONOURS/ AWARDS

A.A. Awad, M.A.A. Azzam Ali and Latha Sabikhi were awarded the "**Best Poster Award**" for their poster entitled "**Technology of cereal-rich fermented dairy food using barley flour and selected probiotic strains**" at the 11th Egyptian Conference on Milk and Dairy Products for a Healthy Future, Cairo, Egypt. on 1st - 3rd Nov., 2010.

PERSONALIA

Joining

- Sh. Sathish Kumar. M. H., Scientist (Dairy Processing) joined at Dairy Technology Division, NDRI Karnal on 17th Sept., 2010.

- Sh. Devaraja, H. C., Scientist (Dairy Processing) joined at Dairy Technology Division, NDRI Karnal on 27th Sept., 2010
- Mr. Sunil Kumar, T-6 (Instrumentation workshop) joined at Dairy Engineering Division, NDRI Karnal on 2nd August, 2010.

Promotions

- Sh. Naresh Kumar Verma, Assistant promoted as Asstt. Admn. Officer w.e.f. 01.07.2010.
- Sh. Khub Chand, P.A. promoted as Private Secretary w.e.f. 01.09. 2010.

- Mrs. Nirmala Kumari, Mrs. Shukla Vermani, Mrs. Prem Kumari, Mrs. Parvesh Lata and Mrs. Simita Roy (ERS-Kalyani) P.A. promoted as Private Secretary w.e.f. 26.10. 2010.

Retirements/Transfers

- Sh. F. C. Garg, Scientist (SG) (Dairy Technology) retired from Council's services w.e.f. 31.08.2010.
- Sh. O. P. Bareja, Private Secretary retired from Council's services w.e.f. 31.08.2010.
- Sh. Puspendra Kumar, Sr. A. O. promoted as C.A.O. and relieved from NDRI w.e.f. 08.09.2010 to join at IARI, Pusa, New Delhi.

SOUTHERN REGIONAL STATION, BANGALORE

Hindi Day Celebrations

Hindi day was organized on 28th Oct 2010 and Prof. G. Ashwathnarayan (Retd.), V. V. Puram Arts & Commerce College, Bangalore was the Chief Guest. Many cultural events were organized coinciding the celebration.

Winter School

Winter school on "Advances in Dairy Production Management for Precision Output in Relation to Trade and Environment" from November 22 to December 14, 2010, was inaugurated by Dr. R. Prabakaran, Vice-Chancellor, Tamil Nadu Veterinary and Animal Science University. Dr. G. R. Patil, Joint Director (Academics) chaired the session and released a detailed training program brochure of Southern Regional Station. Course curriculum in the form of text book entitled "Advances in Dairy Production; Precision output, Environment and Trade" was released by Dr. R. Prabakaran. On this occasion booklets on silage making in Kannada and English written by Dr. Bandla Srinivas and Dr. Siddaramanna, were released by Sri. M. L. Gajendran, Managing Director, Kolar Milk Union (KOMUL), Karnataka. A folder on Indigenous cattle genetic resource of Southern India compiled by Dr. K. P. Ramesha, was also released by Dr. Satish Kulkarni, Head, Southern Regional Station.

FORTHCOMING EVENTS AT NDRI

- International Conference on Frontiers in Reproductive Biotechnology and 21st Annual Meeting of the Indian Society for the Study of Reproduction and Fertility (ISSRF) on 9th – 11th Feb., 2011.
- 9th Convocation of NDRI Deemed University on 19th February, 2011.
- National Dairy Mela on 26th – 27th Feb., 2011.

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Joint Director, (Res.)

राजभाषा मास-2010 के कार्यकलाप

राजभाषा समारोह एवं पुरस्कार वितरण का आयोजन 19 अक्टूबर, 2010 को किया गया। संस्थान द्वारा चलाई जा रही वैज्ञानिक एवं तकनीकी मूल हिंदी लेख लेखन प्रोत्साहन योजना के अन्तर्गत वैज्ञानिकों एवं तकनीकी अधिकारियों को पुरस्कृत किया गया।

उपलब्धियां/पुरस्कार व सम्मान

नगर राजभाषा कार्यान्वयन समिति, करनाल द्वारा संस्थान में किए जा रहे राजभाषा कार्यान्वयन संबंधी उल्लेखनीय कार्यकलापों हेतु संस्थान को प्रथम राजभाषा पुरस्कार, 2009-10 के लिए श्री प्रदीप टम्टा, माननीय सांसद एवं सदस्य, संसदीय राजभाषा समिति के करकमलों द्वारा दिनांक 25/11/2010 को प्रदान किया गया।

विशेष सम्मान

संस्थान के श्री जे. के. केवलरमानी, संयुक्त निदेशक (प्रशासन)/कुलसचिव द्वारा विगत कई वर्षों से दिए जा रहे अभूतपूर्व सहयोग के लिए उन्हें लाइफ टाइम एचीवमेंट (जीवन पर्यन्त उपलब्धि) स्वरूप विशेष सम्मान प्रदान किया गया।



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