



# Mithun Digest

The bi-annual panorama.....

NATIONAL RESEARCH CENTRE ON MITHUN

VOL 6 NO. 2

JULY- DECEMBER 2009

## INSTITUTIONAL ACTIVITIES

### Visit of Planning Commission Members

A two-member committee of Planning Commission of India for Eastern Region headed by Dr. Niljyoti Maitra visited this Institute on 2<sup>nd</sup> July 2009 to overview the research and other developmental activities of the Institute. They interacted with the Director and other scientists and visited the Institute farm.



### Independence Day Celebration

Director of the Institute unfurled the national flag to celebrate the 63<sup>rd</sup> Independence Day of the nation on 15 August 2009 along with the all the staff, children, local people and the security contingent stationed in the campus. The Director encouraged all the scientists and other staff of the Institute to work hard for total benefit of the community and all-round development of this Institute in his morning speech. The day was celebrated with singing of our national anthem and various sporting events for the children who participated in a large number amidst jovial mood.



### Institute Management Committee (IMC) Meeting

The 13<sup>th</sup> IMC meeting of the Institute was held on 15<sup>th</sup> September 2009 in the committee hall of the Institute chaired by the Director and attended by other members including Dr. V. K. Singh, former Director, CSWRI; Dr. R. N. Goswami, Dean, Veterinary College, Khanapara and Dr. Utpal Baruah, Head, NBSSLUP, Jorhat. The committee confirmed the proceedings of the 12<sup>th</sup> IMC meeting and endorsed the action taken report briefed by the Chairman. The IMC also reviewed all the ongoing research projects and appreciated the work carried out by various scientists. They suggested taking up field studies in farmers field for validation of the research work carried out in the laboratory.



## हिन्दी प्रकोष्ठ:राजभाषा आयोग

राष्ट्रीय मिथुन अनुसंधान केन्द्र, झरनापानी, नागालैन्ड संस्थान में पूर्व वर्षों की भांति इस वर्ष दिनांक 15 सितम्बर 2009 से 22 सितम्बर 2009 तक हिन्दी सप्ताह का समारोह आयोजन किया गया इस शुभ अवसर पर संस्थान में हिन्दी सप्ताह का उद्घाटन 15 सितम्बर 2009को अपरह्न्य को 3 बजे संस्थान के सम्मेलन कक्ष में डॉ.चन्दन राजखोवा निदेशक द्वारा दीप प्रज्वलित करके



## Vigilance Awareness Week Celebration

The Vigilance Awareness Week was observed at National Research on Mithun (ICAR), Jharnapani, Medziphema, Nagaland from 3<sup>rd</sup> to 7<sup>th</sup> November, 2009. All the staff members participated in the programme. At the very outset the importance of observance of vigilance week were briefed out. Awareness about effective preventive measures need to be undertaken through system improvements and use of information technology like e-payments to vendors, suppliers etc., publishing complete details of tenders on websites, e-procurement, reverse auction and providing information of status of applications to citizens/public etc were also highlighted. The programme started with taking a pledge by the staff followed by speech competition, essay writing competitions as well as cartoon competition on vigilance awareness were also organized among the staff members of the institute. In the valedictory function all the speakers stressed the need of creating awareness on the issue and urged the staff members to be vigilant against the corruption. Prizes were distributed to the winners of the different competitions.



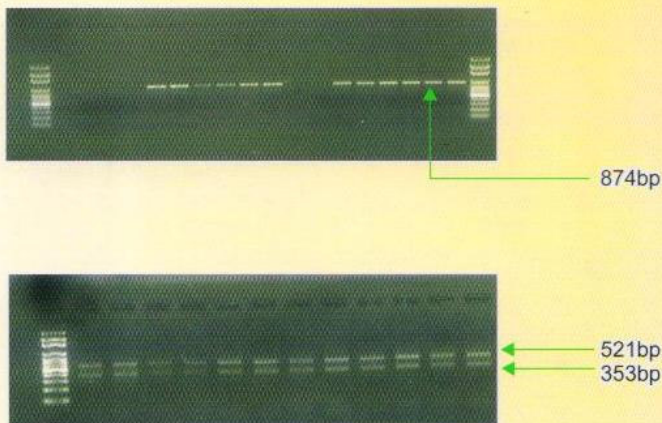
किया गया। इस समारोह में संस्थान के सभी अधिकारियों एवं कर्मचारी गण उपस्थित थे। संस्थान में राजभाषा हिन्दी के प्रयोग को बढ़ावा देने तथा हिन्दी में काम करने के प्रति जागरूकता एवं रुचि पैदा करने के उद्देश्य से संस्थान में हिन्दी सप्ताह के दौरान विभिन्न प्रतियोगिताओं का आयोजन किया गया। संस्थान के निदेशक के मार्ग दर्शन में पूर्व वर्षों की भांति इस वर्ष भी संस्थान के परिसर के अधिकारियों एवं कर्मचारियों बालक बालिकाओं के लिए भी कई प्रतियोगिताओं का आयोजन किया गया था।



## RESEARCH HIGHLIGHTS

### Genetic characterization of kappa casein gene of Mithun

Genomic DNA isolated from blood using standard protocol and PCR amplification was standardized using one set of bovine primers to amplify 874 bp region of exon IV of Mithun kappa casein gene. After this successful amplification, PCR-RFLP was carried out to explore genetic polymorphism in the kappa casein gene using a number of restriction enzymes. However, PCR-RFLP with HindIII could produce a definite pattern and two restriction fragments, 521 bp and 353 bp respectively, were separated in ethidium bromide stained 2% agarose gel electrophoresis.



### Determination of carrying capacity and silage making

The biomass production from locally available shrubs and grasses in the slope of hills was determined to be  $941 \pm 255.3$ g per sqm during autumn. Silage has been prepared using agro-industrial by-product (orange pulp after extraction of juice), grasses and paddy straw. The ratio of different combinations as used was as follows: Napier grass: orange pulp = 1:1; Napier grass : orange pulp = 1:2; Paddy straw: para grass:orange pulp = 1:1:4 Mixing of grasses and orange pulp during preparation of silages



### Artificial insemination in Mithun – a field trial for the benefit of farmers

Artificial insemination (AI) has become one of the most important techniques ever devised for the genetic improvement of farm animals. Although AI have been practising in Mithun at experimental farm of NRC on Mithun, Medziphema but we want it to take it to farmer's level. Considering it, a programme has been taken up to do AI in Mithun at Khonoma village at Nagaland.

Cryopreserved semen samples were used for inseminating the healthy Mithun cows. The semen samples were collected from adult bulls and cryopreserved in liquid nitrogen using tris-egg yolk-glycerol diluent. The progressive motility (%) of the cryopreserved semen was 40.5%. The percentage of live intact spermatozoa in cryopreserved sample was found to be 43.2%. The Mithun cows were inseminated using the cryopreserved semen. All the cows were conceived following insemination.



- Dr. K. M. Bujarbaruah, Hon'ble Vice Chancellor, Assam Agricultural University, Jorhat and Dr. S. Nagchan, Director, ICAR Research Centre for NE Region, Barapani: 31 October, 2009



Scientists and farmers interactions at Larka near Thevopisu village, Nagaland: 13 October, 2009

- Dr. K.K. Baruah, Director, NRC on Yak, Dirang: 5 November 2009



**MISCELLANY**

**Technology Injection Programme**

Scientists and farmers interactions at Wakro Village, Arunachal Pradesh: 22 August, 2009



### Participation in Agri Fair

Institute Stall at the Agriculture Fair of ICAR Research Complex for NEH Region, Nagaland Centre, Jharnapani during 28 October 2009



### Training programme

A 12-day "Training programme on Entrepreneurship Development" was conducted in the Institute during 1-12 December, 2009 to develop entrepreneurial skills among educated and unemployed young people of villages of Nagaland. A large number of participants took part in this training programme enthusiastically. Dr. Rinku Bharali coordinated the whole programme and ensured that the participants got some practical-oriented knowledge in a wide variety of topics in animal husbandry and horticulture.



## PERSONALIA

### New Appointment

- Dr. Naresh Kumar joined as Scientist (Veterinary Extension) on 29.07.2009.
- Sri Vizekrol joined as T-1 (driver cum mechanic) at KVK, Porba on 07.11.2009.
- Sri Keniseto Chucha joined as T-3 (Farm Manager) at KVK, Porba on 10.11.2009.
- Mrs. Liza Barua-Bharali joined as T-6 (SMS) at KVK, Porba on 23.11.2009.

### Relieving

- Dr. A. Dhali, Scientist (LPM) was relieved on 31.10.2009 to join NIANP, Bangalore as Sr. Scientist (Biotechnology).

### NAAS Associateship

- Dr. Mohan Mondal, Sr. Scientist (Animal Physiology): He has been selected as first NAAS Associate of this Institute. We are proud of his achievement.



### NRCM Scientist visited abroad

- Dr. Anupama Mukherjee, Sr. Scientist (AGB) visited Iowa State University, Ames, USA availing NAIP (New Delhi) sponsored International Training Programme in the area of "Marker Assisted Selection" for three months during 22 May to 20 August, 2009. She worked with Prof. Rohan Fernando of the Dept of Animal Science, ISU and acquired a good understanding and practical know-how regarding this emerging field of marker assisted selection in animals.



ACTIVITIES OF KVK



Demonstration on drudgery reduction through using maize sheller.



Exhibition organised during Technology week celebration.



Front Line Demonstration on Quality protien maize.



Skill training on Food processing during EDP.



On Farm Trial on early cauliflower under polyshade.



On Farm Trial on Tomato under polyshade.

## From The Director's Desk

It is my pleasure to write this column in this issue of Mithun digest – it is that feelings which touches my heart. This document which highlights the activities of this Institute is quite important for those researchers who are actively involved in research work on this species as well those tribal farmers who are the traditional rearers of Mithun.

During July – December 2009, the group of young scientist could generate many valuables information in different aspects in relation to this magnificent animal Mithun. The genetic characterization of kappa casein is a very important study because of its association in regard to quality assessment of Mithun milk. The work initiated in the field of silage making by using waste products from the food processing factory will be able to solve not only the requirement of animal feed shortage during winters, but also will solve the problem of disposal of these waste products which is otherwise not utilized for useful purpose. The assessment of Mithun meat quality with that of beef has proved that Mithun meat is superior to the beef in terms of scientific parameters and palatability. This itself will encourage farmers to rear this valuable animals for quality meat production. All protocols developed for Mithun needs its field validation and scientist have rightly chosen a village falling in the native tract of Mithun for this purpose I must congratulate them for extending the technology developed by the Institute in the framers field.


The performance of Mithun in different seasons with THI values will definitely help us to choose the right environment for Mithun rearing. This study will also help



us to know more about climatological effects to address many issues related to impending climate change.

The Institute have arranged the IMC meeting during the period with active participation from different honourable members along with the special invitee Dr.V.K.Singh, Chairman of QRT. The IMC apart from conducting normal agenda of the Institute has approved the proposal for placement of final QRT report to the authority in the Headquarter.

During this period apart from scientist activities, the Institute organized many events like Independence Day, Hindi Week and Vigilance Week celebration where in staff along with their family members participated in various events with enthusiasm and zeal. This shows the belongingness of the staff members towards the positive activities of the Institute. I must appreciate their team spirit and pray to God to bless them with the same spirit for future.

  
(C. Rajkhowa)  
Director

### The editorial escapade

Mithun digest, in true sense the panoramic glimpse of NRCM in this bi-annual avatar! It highlights the activities of this Institute in all its hues and grandeur – albeit in abridged manner. NRCM, situated in a furthest corner of this wonderful country could develop a sound reputation in the local tribal community of traditional Mithun rearers and owners by virtue of its service and



dedication of research work for this unique species of livestock. So little else to say, every efforts are made to include the tiny bits of information about the Institute which include her research highlights, her personnel, her recent news and most importantly – her opportunity of service among the farmers and Mithun keepers in this Mithun country. If this proves to be helpful and serves the purpose of the Institute, community, individual researchers or for that matter anybody else, then the efforts to put in all the information here would be worthwhile.



Publisher : Dr. C. Rajkhowa, Director, NRC on Mithun, Medziphema, Nagaland  
Editor : Dr. Sabyasachi Mukherjee, Sr. Scientist & I/C PME Cell

Tel Fax : (03862) 247341 e-mail: [nrcmithun@mailcity.com](mailto:nrcmithun@mailcity.com)

Web : [www.nrcmithun@res.in](http://www.nrcmithun@res.in)

