CIRB NEWS

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Central Institute for Research on Buffaloes, Sirsa Road, Hisar
केन्द्रीय भैंस अनुसंधान संस्थान, सिरसा रोड, हिसार

Inside

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Dr K.D. Kokate, DDG (Agri. Extension, ICAR) visits CIRB, Hisar

Buffalo Mela for Nili-Ravi breed was organized on December 1, 2012 in collaboration with Indian Society for Buffalo Development, Hisar at the occasion of foundation day of CIRB Sub-campus, Nabha to commemorate the silver jubilee year of sub- campus, Nabha. Sh Inderjeet Singh (Director, Punjab Dairy Development Board) was the chief guest. Dr B. K. Joshi (Director, NBAGR, Karnal) and Dr R. K. Singh (Director, NRCE, Hisar) were the guests of honour. Dr R. K. Sethi (Director, CIRB, Hisar) presided over the function.

More than 200 farmers participated in the event and 110 Nili-Ravi buffaloes of the farmers from Punjab and Haryana villages participated in animal competition held under five categories viz. adult female buffaloes, breeding males, heifers, young bulls and overall champion of the mela. Exhibition organized during the mela was an attraction for farmers and various companies / manufacturers / developmental agencies as well.

Buffalo Mela at Sub-Campus, Nabha

Chief- guest, Shri Inderjeet Singh

Dr R. K. Sethi (Director, CIRB) lighting the lamp during the Mela

Farmer's animals at competition

Chief-guest & Dr R.K. Sethi giving away prizes to farmers

RESEARCH NOTES

Genetic improvement of Murrah buffalo

Test mating from 9 bulls of 13th set was initiated in July 2011 and completed in December, 2012 for genetic improvement programme of the Murrah buffaloes under the Network Project on Buffalo Improvement. Final selection of 14th set of breeding bulls was completed which comprises of 12 bulls from CIRB, GADVASU, NDRI and IVRI. Test mating of the 14th set of bulls will start from 1st January 2013.

Progeny test evaluation of bulls: Performance records of daughters born from 15 breeding bulls of 9th set which completed 1st lactation was compiled and evaluated. Bull no. 1994 from GADVASU, Ludhiana top ranked with sire index 2487 followed by bull no 5258 from NDRI, Karnal having sire index 2466 indicating percent superiority of 11.73 and 10.52 % respectively over the contemporary daughters. Herd average was estimated as 2239 kg from 270 daughters over various farms as well as in the field

Top Ranking bull of 9th set

Number: 1994

Location : GADVASU, Ludhiana

Born on	16-06-2003
Dam No.	1884
Best Yield (kg)	2938
Av. Yield (kg)	2534/4 (2147)
Sire No.	392 (CIRB - P)
Sire Dam No	238
Best Yield (kg)	2594
Sire Index (kg)	2118/13
No of semen doses available	3441

Annual Review Meet: XIth Annual Review Meet of the Network Project was held at NDRI, Karnal on August 24, 2012 under the Chairmanship of Dr K. M. L. Pathak (Deputy Director General, AS, ICAR). The progress of the project for the year, 2011-12 was

reviewed and future plan was discussed. During the meet chairman indicated satisfaction and stated that Network Project has done excellent work and the institutions like NDRI and CIRB have made enormous contribution in white revolution in the country, thus playing its role in making India number one in milk production. It was recommended that preserved semen should be free from diseases and semen freezing labs should be of MSP standards. All centres should follow the uniform feeding, management and data recording. Superior germplasm from field shall be infused in the herd. Number of Artificial Insemination in the field shall be achieved as per the targets fixed for the respective centre. ADG (AP&B) emphasized that the success stories of the project be publish regularly.

Field progeny testing programme (FPT)

A total of 2606 artificial inseminations were done in ten adopted villages with the semen of 9 test bulls of 13th set during July-December 2012. The conception rate was worked out as 47.57%. During the period 796 calving were recorded, out of which 401 were female calves. In this period 59 progenies, 41 of 10th and 18 of 11th set also calved at various field unit centres for which monthly test day milk recordings are in progress. The average age at first calving for these 59 daughters calved was 41.42 months. During the period under report 24 daughters completed the lactation, 12 daughters sold before the lactation was completed and monthly test day milk recording of 57 daughters is in progress. The microchips were inserted in all female progenies born till October, 2012 for permanent identification and a total of 573 female progenies of 10th to 13th set of different age are standing at various field unit centers for future milk recordings.

CIRB extends embryo transfer to adopted villages

For the first time, Embryo transfer technology is extended to the adopted villages of the institute. Under the leadership of Dr. P S Yadav Head, Physiology and Reproduction Division and Dr. RK Sharma, Pricipal Investigator, embryos produced in the elite females inseminated with progeny tested bulls of the institute was transferd in the heifer of Sh. Lal Chand from village Bado Patti in Hisar which resulted in pregnancy. Facility of the embryo transfer is extended to the farmers for producing more superior animals using less producing foster mothers at farmer's door using advance technology.

Impact of different plant extracts on rumen fermentation and methanogenesis in buffaloes

Secondary metabolites in plants have potential to improve rumen fermentation by reducing methane and increasing propionate production for enhanced buffalo productivity. Extracts were prepared using various solvents from leaves of Siris (*Albizia lebbek)*, Guava (*Psidium guajava*), Sahjan (*Moringa oleifera*) and fruits of Clove (*Syzygium aromaticum*) and incubated in an *in vitro* rumen fermentation system to test at different dose levels, measuring various parameters of rumen fermentation. Results indicated that extracts of all the plants have anti methanogenic activity to different extent with aqueous extracts of Siris leaves having highest (94%) reduction potential. Since some of the extracts also suppressed in vitro dry matter digestibility and neutral detergent fibre digestibility at higher levels of inclusion, suitable dose level needs to be decided before use in the practical diet of ruminants to get maximum reduction in methane production without the cost of feed digestibility. Further *in vivo* studies are being undertaken.

Dry Colostrum-Supplement for buffalo calf survivability

Late colostrum feeding or feeding of poor quality colostrum are main causes of failure of passive transfer (FPT) in calves. Options are scanty, when available colostrum is of low quality/quantity. Storage of colostrum for supplementation to calves though not a common practice at farms but assures availability of adequate quantity of good quality colostrums, if dam is unable to produce due to mastitis, death, or various other causes. We developed spray –dried buffalo colostrums.

Colostrums supplement was prepared using dry powder colostrums, fortified with essential nutrients and disease preventive agents for feeding newborn calf. Based on estimated proximate principals i.e. fat, protein, minerals etc. in fresh and developed dry powder, calf-diet was formulated for first 4 days after birth. Feeding trial on 12 new-born buffalo calves indicated that estimated levels of total blood serum immunoglobulin were comparable in re- constituted dry colostrum supplement and maternal colostrum fed calves. Body weight obtained from birth to age of three months was also comparable in weaned and suckling calves. It is ready to use diet supplement for the new- born calf.

INTERACTION WITH FARMERS

Training programme for farmers

Training programme on '*Dairy buffalo management for improved production*' was organized at CIRB, Sub-campus-Bir Dosanjh, Nabha during September 25th to October 4th, 2012. Dr K.P. Singh and Dr V. B. Dixit (Head, Division of Buffalo Genetics and Breeding, CIRB, Hisar) inaugurated the programme and gave brief information about the role of buffaloes in rural livelihood and improvement in productivity through management, breeding and feeding of buffaloes. The scientists from institute provided valuable practical training, demonstrations and lectures on buffalo management, health- care, artificial insemination, genetic improvement in production performance using superior breeding bulls, selection criteria for breeding animals, formulation of concentrate feed and mineral mixture.

Farmer's training organized at Nabha

	Farmers	Title for Training	No. of participants	Duration
CIRB, Hisar	ATMA, Jodhpur	Improved Buffalo Husbandry	30	Oct 3-7, 2012
	Haryana	Mahila Prashikshan	30	July 9-13, 2012
	Haryana	Buffalo Husbandry and AI	15	July 2-13, 2012
	Haryana	Buffalo Husbandry and A I	15	Dec 16-28. 2012
Sub-Campus, Nabha	Patiala, Punjab	Dairy buffalo management for improved production	30	Sep. 25-Oct. 4,12

Institute participation in Seminar-cum exhibition at NDRI, Karnal

Institute participated in the seminar on the topic, 'Prosperity through Diversified Agriculture' organized by NDRI, Karnal on 22 -23rd December, 2012. Hon'able Chief Minister of Haryana, Dr Bhupinder Singh Hooda was the, chief-guest. Dr V.B. (Principal Scientist, CIRB, Hisar) demonstrated the technologies developed at institute in this exhibition.

Hon'able Chief Minister, Haryana, Dr. Bhupinder Singh ji Hooda visited exhibition at NDRI, Karnal

Mahila Prashikshan at Hisar

Training programme on 'Improved Buffalo Husbandry' was organized for women during July 9-13, 2012 at the institute. Thirty women farmers participated and evinced keen interest in Lectures, demonstrations, visits to different labs, which were conducted during this period. Lectures were given on feeding requirement of buffaloes, care of recently calved buffaloes, colostrum feeding in new-born calves, identification of heat symptoms in buffaloes, nutrients in concentrate and mineral mixture and use of antioxidants for improved productivity of buffaloes etc. Demonstration on preparation of balanced –feed, hay and silage were given. A visit to AI lab was conducted and they were given lecture on importance of AI in buffaloes. Dr Nishi Sethi

Farmer's training organized at Nabha

(Associate Director, Farm Advisory Services, CCS, HAU) graced the valedictory function as chief-guest on July 13, 2012. Addressing the farmers, she emphasised on role of women and their contribution in buffalo husbandry, which is very well acknowledged by one and all today and distributed certificates to the participants at this occasion. Dr P. Sikka (Principal Scientist) and Mrs. Sunesh Balhara (Scientist) co-ordinated the training Programme.

Farmer's Training sponsored by ATMA

Training programme was organized on 'Improved Buffalo Husbandry' during October 2012, at this institute which was sponsored by ATMA, Jodhpur. Thirty farmers from Jodhpur district of Rajasthan participated in this event. The training programme included lectures on breeding, feeding, health and management. Practical demonstrations on preparation of balanced feed, hay, silage etc were conducted. Visits to Tractor Training Institute, Central Sheep Breeding Farm, CCS, HAU Hisar were arranged for farmers during this programme. Pre and post evaluation of training programme was also conducted. Certificates were distributed to farmers after completion of the programme.

Institute participation in KVK Conference and Exhibition

The institute participated in the exhibition, organized at PAU Ludhiana during November 21-23, 2012. The exhibition was inaugurated by the Hon'able Minister of Agriculture, Shri Sharad Pawar. Dr S. Ayyapan (Director General, ICAR) and Dr K.D. Kokate (DDG extension) also visited the institute stall.

Herd performance (January to June, 2012)

Traits	Nili-Ravi	Murrah
Wet average	8.67 kg	8.19 kg
Herd average	5.01 kg	5.20 kg
Calf Mortality	2.80%	0.75 %
305 days or less lact. Milk yield	2093 Kg	2385 kg
Sale of Breeding Bulls	-	61
Semen doses		
Frozen	13256	33100
Supplied/sold	8774	7631/48505
Balance in stock	40211	234083

Agriculture production (January to June, 2012)

Agriculture Produce	Sub-campus, Nabha	CIRB, Hisar
Fodder produced	10,856 Qt	19720.10 qt
Silage	2145 Qt	2643.90 qt
Grain produced	4178.94 Qt	1067.00 qt

Field demonstration on preparation of concentrate and mineral mixture

Field demonstration programme on feed formulation and preparation of mineral mixture /concentrate mixture was organized in Kakrala village, dist. Patiala, Punjab on October 19, 2012. Forty five farm women participated in the programme. Preparation of economical concentrate and mineral mixture for buffalo feeding was demonstrated by Dr. Raman Malik, Senior Scientist, to improve buffalo milk production using locally available feed ingredients reducing cost of concentrate mixture by 50 percent. Dr. K. P. Singh explained the role of buffaloes in rural livelihood and importance of dairy products of buffalo milk.

Field demonstration programm for farm Women of Dist Patiala, Punjab

MEETINGS AND SEMINARS: Institute Research Committee meeting was held under the chairmanship of Dr R.K. Sethi on Nov. 3, 2012. Seven completed projects and 9 new projects were discussed besides the on-going projects during this meeting. The chairman suggested that all the finalized RPF-III and I may be bound and a copy of the same may be kept in library.

Institute Animal Ethic Committee meetings were held on September 4, 2012 and November, 17, 2012

EVENTS

Organized Agri-Education day

School children learning the buffalo breeds

School children at Animal- show

Agri- Education day was organised on 27.11 2012 at CIRB, Hisar with the aim to educate the school children about the career opportunities in field of agriculture. Dr P.S.Yadav, Principal Scientist, co-ordinated the event. More than 400 students of class IX to XI from Vidya Devi Jindal, St. Mary, DPS, OP Jindal Modern, St Kabir and Shri Krishna Parnami School visited the institute. Dr R.K. Sethi, Director CIRB, explained 'National Agricultural Research System' comprising of State Agricultural Universities, Veterinary and Animal Science Universities, Central Universities and Deemed universities., imparting education under Indian Council of Agricultural Research. He enumerated the career opportunities for youth as research scientists, animal health specialists, agriculture officers in banks, forest officers, remount veterinary corps of Indian army and fast growing dairy/meat industry with promising career potential in view of growing importance of buffalo. He revealed the possibility of *School children learning the buffalo breeds* working as agricultural scientists /engineers in more than hundred research institutes where research is conducted on agricultural /cash crops, animals, poultry and fishes. A vast scope of post graduation in agri- business at management institutes like IIMS and business schools was emphasized. Film on institute activities and exhibition-show, projecting significance of buffalo breeding, nutrition, reproduction and management, research were key features during this event. Lab -visit and animal- show were also organised on this day. Students took keen interest in all these activities.

World Animal Day Celebration

World Animal Day Celebration at sub- campus, Nabha

The 'World Animal Day' was celebrated on 4th October, 2012, at Nabha for creating awareness of animal biodiversity, role of Buffalo Genetic Resources of India and their importance in food security and employment generation in rural population. Farmer's training on "*Dairy buffalo management for improved production*" was concluded on this day.

The farmers were given certificates. Presentation on "The role of farmers in conservation and improvement of buffaloes" was made by OIC, Nabha. He advised them to take the benefit of Nabha campus for their need and advocated conduction of such programs from time to time in order to strengthen the buffalo husbandry practices in the area.

Celebrations on Independence Day: Staff members of CIRB Sub Campus Nabha with their family members and farmers from adjoining villages planted bird and soil friendly trees of economic importance as: Teak, sesame, bottle Pam, Neem, Ambla etc. on this occasion. Dr K. P. Singh, officer in-charge, Sub - Campus Nabha, and Forest officer, Shri Suwarn Singh

delivered lectures on "Environmental importance of trees" on this day. Around 450 trees were planted in 2.0 acres of agriculture-land and animal farm of the campus.

VISITORS AT INSTITUTE

Name of the Visitor		Date
1.	Dr Saber Mohamed Abd-Allah, Associate Professor, Theriogenology, Faculty of veterinary Medicine, Beni Suef University, Egypt visiting scientist at institute under CV RAMAN International fellowship for African Researchers	March –June 2012
2.	Dr R.M.Acharya, Former DDG (AS), ICAR	13.9.12

Personallia

Joinings	Dr Vishal Mudgal, Sr. Scientist	17.08.2012
	Dr Sarita Yadav, Scientist, Vety. Microbiology	30.11.2012
Retirements	Shri. Ishwar Singh	31.12.2012
Promoted	Dr Raman Malik, Sr. Scientist to Principal Scientist	01.01.2010
	Dr SP Yadav, Scientist to Sr. Scientist	17.01.2011
	Dr Shaitan Singh, T-5 to T-6	01.01.2012
	Shri Satish kumar, SSS to T-1	15.09.2012
	Shri VPS Poonia, T-(7-8) to T-9	21.01.2006
	Shri Rajiv Mehta, T-6 to T-(7-8)	01.01..2011
	Shr Jagdish Prashad T-(7-8) to T-9	03.02.2012
	Shri Jitender Kumar T-5 to T-6	01.07.2012
	Shri Sushil Kumar, T-5 to T-6	01.07.2012
	Shri Mohinder Singh, T-4 to T-5	01.07.2012
	Shri Mahabir Singh, T-3 to T-4	29.06.2012
Transfers	Dr R.S. Pippal, T-6	18.08.2012
Demise	Shri Rameshwar, SSS	13.09.2012

Recognitions/Best Article Award

National Bureau of Animal Genetic Resources, Karnal celebrated its 29th foundation day on September 21, 2012. Dr K. P. Singh was awarded Best Article Award (Second), published in Pashudhan Prakash, Vol. II, year 2011.

SECTOR NEWS

Modern Animal Shed at Central Institute for Research on Buffaloes, Hisar

A real state of art animal management facility of automatic feeding, milking, cleaning and data recording system for 200 milch buffaloes and 100 followers under regulated ambient temperature at institute which is the first of its kind in North India, especially, employing species oriented required management for enhanced production performance of buffaloes. Facilities of night herding, wallowing tanks, sprinklers for heat dissipation, heat stress amelioration by using appropriate ceiling construction material besides estrus monitoring system are part of sheds design.

Director's Desk

Dr R.K. Sethi
Director, CIRB

Sev

R K Sethi