



CIRG news



केन्द्रीय बकरी अनुसंधान संस्थान
Central Institute for Research on Goats



Straight talk....



Mankind from the dawn of civilization, has been utilizing different animal species for a variety of purposes viz. production of milk, meat, wool, leather, draught power, companionship, entertainment, research experimentation, sports and security etc. Livestock is deemed as the oldest wealth resource for mankind and has once been a symbol of economic status in the society. In India, the livestock production and agriculture are intrinsically linked, each one being dependent on the other and both crucial for the overall food security of the millions of the people of India. Livestock sector is an important sub-sector of the agriculture of Indian economy and plays a crucial role in rural economy, nutrition and livelihood security. This is one sector where poor contributes to the growth directly instead of getting benefit from growth generated elsewhere. The focus of the poor is on small animals like goat. The prolificacy of goat is the influencing factors. The returns are quick; losses, if any, are recovered soon. The poor can afford it. The goat husbandry system is also environment friendly. This sector plays an important and vital role in providing nutritive food rich in animal protein to the general public

and in supplementing family income and generating gainful employment in the rural sector, particularly among the landless, small, marginal farmers and women. Income from goat production accounts for significant percentage of total farm household's income in different states.

In our endeavor, we draw goodwill among the diaspora of our goat farmers of country. The future holds tremendous promise for the species like goat. To achieve this goal, the Institute is following a three-pronged approach: connect, nurture, and grow. To connect with the goat farmers wherever he or she is, nurture them in term of technical input and make them grow in order to give them livelihood security. The business panorama of goat is constantly changing at a fast pace and is expected to become more dynamic and vibrant in coming years. We as a goat institute are committed to strengthening this reputation by building upon tradition and encouraging innovation, but above all by ensuring the success of our goat farmers,

India is going through a challenging times both economically and socially. Our body of research and knowledge is based on the rich experience of our scientist. This makes our research programmes and consulting engagements very enriching and action-oriented We always try to give more emphasis on developing better technologies for sustainable goat production and livelihood security.

I wish good luck to all the goat farmers of the country for their continuous support. The editorial team of CIRG news deserves appreciation.

S. K. Agarwal
Director

Editorial Board - Chief Editor : **Dr. V. K. Gupta**, Editors : **Drs. N. Ramachandran, Souvik Paul, K. Gururaj.**

AICRP on Goat Improvement – Marching ahead

The All India Coordinated Research Project (AICRP) on Goats was initiated during the IV Five Year Plan (Year 1971-72) with its headquarters at NDRI, Karnal which was shifted to CIRG, Makhdoom during the year 1976. It is a unique, long term, structured programme aimed to bring upon genetic improvement and conservation of goat genetic resources of the country in their habitat. The programme explores genetic variations in local breeds through systematic animal identification, pedigree and performance recording, selecting superior goats on the basis of performance, validation of technologies and useful knowledge generated in research laboratories. This programme has given platform for structured breeding scheme in the country. The main objectives of the AICRP is (1) To enhance productivity of genetic resources in their habitat (2) to develop germplasm resource centers for goat breeds (3) To validate and implement breeding, feeding, and health control technologies in the field for improved goat production and health (4) Capacity building of stakeholders and goat keepers for sustainable and profitable goat husbandry and (5) To determine the role of goat husbandry in livelihood and food security of goat keepers. The technical programme aims to produce genetically superior goats for increased body weight, growth rate, milk yield and fecundity.

Presently, twelve breeds are covered through fourteen centres across the country with four new centers have been added.

The salient achievements of the programme are

i. Farm based units i.e. Barbari,

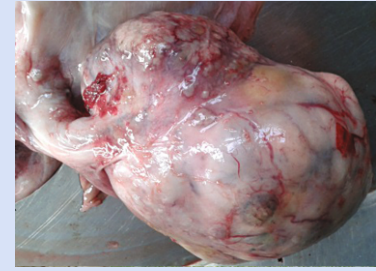
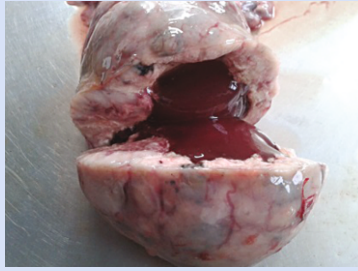
Jamunapari and Sirohi have implemented 12-18 generations of selection creating genetically superior goats and nucleus flock.

- ii. The animal identification has been implemented in farmers flocks for pedigree and performance recording over generations
- iii. Genetic and phenotypic variance as well as co-variance estimates have been estimated for 12 breeds of the country. These parameters are essentially required to decide breeding goals.
- iv. Multiplier flocks are being established at 27 locations across country to produce genetically superior goats for sustainable genetic improvement of goats.
- v. The infrastructure has provided opportunity to validate and test newer technologies. The introduction of health practices has resulted into approximately 80% reduction in morbidity in farmers flock and 30% reduction in mortality.
- vi. Improvement in health and genetic parameters has brought improvement in traits under selection in 12 goat breeds.
- vii. Approximately 1200 genetically superior goats are spared to farmers for breed improvement.
- viii. This project produces approx. 250 genetically superior goats of 12 breed each for breed improvement, have shown 182% population growth and income generation by about 5 times in last 5 years.

M S Dige, M K Singh, P K Rout and S K Singh

A goat with ovarian tumor

A non-descript female goat carcass of 8 years 3 months age was brought for postmortem with the clinical history of ill, unthrifty health. The carcass was weak and debilitated with mild anemic conjunctiva and oral mucosa. On necropsy, abdominal cavity was filled with moderate quantity (about 300-400 ml) of clear fluid. Lungs showed congestion and consolidation of left apical and cardiac lobes with presence of variable sized greyish-white nodules (4-7 mm diameter) embedded in the parenchyma. Pericardium showed clusters or grape-like bunches of multiple white nodules of 2-8 mm



diameter which were also seen attached in the omentum, pleural and peritoneal surfaces. Pelvic cavity revealed a large oval growth (in place of left ovary) weighing 1.5 Kg and measuring 15.8 x 11.9 cm in size. Apparently, it appeared to be neoplastic ovary growing enormously with presence of hemorrhagic and necrotic areas

on the surface of the growth (Fig. 1). On cutting, the growth showed a rim of solid tissue of 3-4 cm thickness, encapsulating a deep red coloured gelatin-like material (Fig. 2). The tumorous growth also involved both uterine horns which appeared solid and thickened. Tumorous tissues are under process for Histopathological diagnosis.

RVS Pawaiya and N Shivasharanappa

CIRG organized Farmers Awareness Programme at Odisha

CIRG organized Farmers awareness programme at Kendu Pali Village, Bargar district, Odisha on 28.2.2014 under NICRA project on “Assessing resilience of small ruminant production under changing climatic conditions in semi-arid zone”, on auspicious National Science Day. This event was organized with the help of local veterinary officers of Odisha and an NGO- Gopal Biotech Agro Farm Kendupali, Godbhaga, Bargarh. The awareness camp was attended by 150 traditional goat farmers from Sambhalpur, Bolangir, Kalahandi, Bargar and Jharsuguda tribal district of Odisha. About 100 goats were vaccinated against E.T. and treatment for various ailments was advised in clinical camp. The team of scientists of NICRA project Drs UB Chaudhary, P K Rout and Ashok Kumar also surveyed the traditional goat shelters in two villages and necessary suggestions were given to the goat farmers for modification under changing climatic



condition. Farmers were educated about suitable strategies for optimum productivity of livestock under changing climatic conditions through improved feeding, health, shelter management and goat breeding programme. In feedback, 42.55 % farmers reported that they knew about the climate change. Farmers appreciated the training programme and felt satisfied with the knowledge gained related to climate change and goat production. Director, Gopal biotech thanked CIRG for organizing this programme.

U B Chaudhary , P K Rout and Ashok Kumar

Adiponectin: an important regulator of physiological mechanisms in the body

Adipose tissue (AT) is traditionally considered as an energy storage organ, but results of studies carried out in recent past years proved that AT is not merely an organ for fat storage but can also produce and release a large number of bioactive chemical messengers. Various terms like 'adipokines' or 'adipocytokines' or 'adipocyte derived proteins' were coined to designate a whole series of these bioactive molecules. Adipokines appear to be involved in a broad range of normal physiological and pathophysiological mechanisms including growth, reproduction, lactation, regulation of inflammatory reactions etc. Among all adipokines, adiponectin (AdipoQ) has gained considerable attention because of its insulin sensitizing, antidiabetic, antiatherogenic and anti-inflammatory effects.

Adiponectin is a protein hormone of about 30-kDa consisting of 245 amino acids with structural homology to collagen VIII, X, complement C1q, tumor necrosis factor-alpha, interleukin-1 and other adipokines. The AdipoQ molecule is composed of four different regions namely N-terminal collagen-like sequence, C-terminal globular region, a signal sequence and a short species-specific region. Adiponectin is post-translationally modified by hydroxylation and glycosylation and is present in the circulation as low-molecular weight AdipoQ (~90 kDa), medium-molecular weight AdipoQ (~180 kDa) and high-molecular weight AdipoQ (~250 kDa). Biological activity and transduction mode are different for different multimeric forms of AdipoQ. High molecular weight form is most clinically relevant. However, some studies suggested that the percentage of each form with respect to the total adiponectin could vary as function of the different physiopathological conditions and this ratio is more important than the individual form. Adiponectin is the most abundant product of AT secreted in the blood circulation therefore, its

plasma level is considerably high in comparison to the other adipokines. Many other adipokines including leptin circulate at the level of picogram or nanogram per milliliter whereas AdipoQ circulates at microgram per milliliter.

Three putative AdipoQ receptors (AdipoR) are identified so far, these are AdipoQ receptor 1 (AdipoR1), AdipoQ receptor 2 (AdipoR2) and T-cadherin. These are seven-transmembrane domain receptors belong to a family of 11 progestin AdipoQ receptors (PAQRs), therefore AdipoR1 and AdipoR2 also known as progestin and AdipoQ receptor 1 and 2 (PAQR 1 and 2), respectively. Adiponectin receptors mRNA are widely expressed in many bovine tissues like organs of digestive tract, muscles but abundantly expressed in various parts of the brain including hypothalamus and pituitary gland, proopiomelanocortin, neuropeptide Y neurons and in the arcuate nucleus, suggesting potential role of AdipoQ in the central and peripheral regulation of energy balance.

Anti-inflammatory effects of AdipoQ is due to its ability to down regulate expression of pro-inflammatory molecules such as interleukin (IL)-6, IL-8, TNF- alpha, decrease reactive oxygen species production and oxidative burst as well as upregulation of anti-inflammatory cytokines such as IL-10. It's important metabolic effects include increase insulin signaling through AMP-activated protein kinase, increase fatty acid oxidation and glucose uptake by liver and muscle and decline in hepatic gluconeogenesis. In spite of being an important candidate for regulation of various physiological mechanisms, the information concerning role of AdipoQ in small ruminants is not available. The specific mechanisms for regulating the changes in circulating AdipoQ concentrations in different physiological stages and its biological importance remain to be elucidated in farm animals including sheep and goats.

S. P. Singh

Bio-resources that produce Methane in goats

Methane is the one of the major greenhouse gas being targeted for reduction under the Kyoto protocol because accumulation of methane is linked with global warming and have 21 times warming potential than carbon dioxide. Estimation of methane emissions by ruminant animals is the focus of present research in animal science to develop methane prediction models as well as formulation of strategies for mitigation of methane emission to reduce overall methane emissions. Ruminants produce 20 % methane of agricultural emissions. Leaves of seven bio-resources namely Aloe vera (Aloe barbadensis), Banana (Musa paradisiacal), Aanar (Punia granatum), Meetha neem (Murraya koenigii), Mehendi (Lawsonia inermis), Biskhapra (Boerhavia diffusa) and Khejri (Prosopis cineraria) were evaluated. Nutrient content of all the bio-resources were different ($p < 0.001$), and the gas production varied 57.7 to 161.7 ml/ g DM, which was the highest ($p < 0.001$) in Aloe vera and the lowest in Khejri leaves. Although, gas production was different among all feed resources, however gas production for each g DM fermented was similar in Banana, Aanar, Meetha neem and Mehendi leaves. Methane concentration in gas ranged from 14 to 21.2 %, where as ME (MJ/kg DM) varied from 4.75 to 7.11. Methane production in g/ kg DM and g/ kg fermented DM ranged from 6.7 to 18.9 g and 10.5 to 22.83 g respectively. Similarly, energy loss in the form of methane followed the trend of gas production, which ranged from 11.4 to 17.1 % of digestible energy. Methane production potential of the three concentrate pellet feed (16 % CP) was estimated in which different protein sources were used. The conventional protein supplement was used at

25 % in control pellet feed, linseed cake was replaced (w/w) by mustard cake and in another pellet feed guar korma (5.7%) and urea (1.3%) were used in replaced cakes. The methane production of the three feed varied from 38.87 to 47.08 ml/ g digestible DM. Mustard cake inclusion reduced methane production by 21.09 %, whereas the concentrate pellet containing guar korma and urea produced 4.83 % less methane in comparison to linseed cake included pellets. Methane production of Subabool leaves was estimated as sole and with 50 % concentrate feed. The concentrate pellet was containing CP 18% whereas subabool leaves having CP 26%. Subabool leaves produced 22.54 ml/methane in each g of digestible DM, whereas concentrate pellet produced 52.14 ml methane. The substrate, which contained subabool leaves and concentrate in a 50:50 ration produced methane 1.44 ml/ g digestible substrate. The methane energy loss (MJ/kg digestible DM) also followed the similar trend. Subabool leaves produced less methane than that occurred in concentrate pellet. In general, concentrate feed producing less methane in comparison to fodders, the reverse trend of methane production in the present study show that the quality of feed especially the protein content is responsible for the level of methane production. Therefore, methane production potential (MPP) of different feeds was varied from 13.4 to 36.4 ml/ g digestible DM. The Energy loss as methane was ranging from 0.53 to 1.45 MJ/kg Digestible DM. Replacement of linseed cake by mustard cake in concentrate pellet reduced methane production by 21%. The quality of fodder, especially the CP level is responsible in determining the MPP of the feed resources/ compound feeds.

M.K. Tripathi, Prabhat Tripathi, Ravindra Kumar and U.B. Chaudhary

Azolla- a cheap nutrition for goat

Goats with a population of 154 million are contributing a significant role in the livelihood and nutritional security of rural people in India. Majority of goats are reared by marginal and landless labourers with low income. They rarely feed their animal with conventional oil cakes or concentrate mixture. The cost of conventionally used protein supplements in livestock diets like ground nut cake and soya bean have more than doubled over the past few years due to their demand, export policy coupled with low production and more cultivation of other cash crops. Azolla a water fern, can be exploited by goat rearing people as a source of nitrogen for the animals. Azolla fixes atmospheric nitrogen in association with nitrogen fixing blue green alga *Anabaena azollae*, making it an excellent source of protein for livestock. It belongs to the family Azollaceae and order Pteridophyta. It grows naturally in stagnant water in drains, canals, ponds, rivers and water bodies including marshy lands. The plant is highly productive with the ability to double its weight in seven days. It can produce 9 tonnes of protein per hectare of pond per year. This will be a good as well as a cheap source of nitrogen or protein for the ruminants. Farmers can cultivate azolla in pond. Pond can be prepared with the help of polythene sheet which can retain water. Pond should be added with soil and some phosphorus source to provide essential nutrients and azolla culture.

Azolla (*Azolla microphylla*) has been found to



Cultivation of azolla in polythene pond

contain 79.69(%) organic matter, 17.30 (%) crude protein, 2.71(%) ether extract and 20.31(%) ash on dry matter basis. Among minerals it contains sodium (0.60%), potassium (0.73%), calcium (0.11%), copper (16.12 ppm) and zinc (71.47 ppm). This shows that azolla is good source of protein as well as minerals. The *in vitro* dry matter and organic matter digestibility (%) of Azolla (*Azolla microphylla*) with goat rumen liquor was 83.15 and 84.03 respectively. This shows that azolla can be a cheaper source of protein as well as minerals for goat. This can form a part of complete pellet feed for goats, thereby reducing the cost of pellet feed. Farmers can fetch more economic return from goat rearing by adoption of this technology.

Ravindra Kumar

Eco Day/World Environment Day 2014

The theme for year 2014 WED was 'Raise Your Voice Not The Sea Level' and the host country was Ngomeni Area in Magarini Sub-county in Kilifi County. The venue selected on the basis of bearing more sites with visible effects of wave erosion due to rising sea level.

In this regard, the UN has declared 2014 as "The International Year of Small Islands States". The theme calls for increased awareness on the effects of Climate Change and minimizing of carbon emissions to the atmosphere which contribute to global warming, the increased atmospheric temperatures caused the melting of ice in arctic and mountainous regions with prolonged rainy seasons and subsequently rise in sea-levels. This has serious implications to Small Island States and low lying coastal zones which risk being submerged thus threatening their survival.



CIRG Welcome Krishi Parivartan Yatra



The institute under the leadership of Dr. S. K. Agarwal, Director welcome Krishi Parivartan Yatra on 17th May 2014 which started from Hyderabad on 10th May 2014 and reached via

CIRG, Makhdoom, Mathura to ICAR, New Delhi on 18th May 2014.

Dr. A. C. Varshney, Vice Chancellor, DUVASU was the Chief Guest and Dr. S. K. Dubey, I/C CSWTRI, Chhalesar, Agra was the Guest of Honour on this occasion. Dr. R. P. Misra, Training Coordinator, NAIP, Krishi Bhawan, New Delhi, Dr. N. K. Barik, Principal Scientist, CIFA, Bhubaneswar and Chief Coordinator of Krishi Parivartan Yatra, Dr. Puneet Kumar, CPI, ZTM-BPPD, IVRI, Izatnagar were the special dignitaries of first such Yatra organized for the farmers. 34 successful farmers/entrepreneurs from different zones of the country were selected for this Yatra who have been part/beneficiaries of different NAIP projects and successfully used/ implemented different agro-technologies/ services for making their respective agribusiness in a more profitable and sustainable way. The main aim of this Yatra was to cross learn the ways and means of success stories across the country and to take the best of enterprises developed from various NAIP projects and share their success stories with other farmers and entrepreneurs. The chief guest of the function while delivering his inaugural address expressed happiness over his presence as part of this Yatra, appraised the house with respect to agricultural development over the time in our country especially record production of different agricultural commodities during the year 2013-14 and stated that 'Parivartan in Indian Agriculture' really happened. Dr. S.K. Agarwal, Director, CIRG in his welcome address highlighted the problems/challenges facing Indian agriculture and suggested to use 'Smart Management/Smart Delivery System' for tackling the challenges. He respected the 'Innovations' introduced by the Yatris. Dr. S. K. Dubey informed the Yatris regarding the function of

CSWTRI and welcomed all the farmers for queries related to soil/water at any time throughout the country. He thanked NAIP for taking technologies to farmers' doorstep. Dr R P Misra explained about the functioning of NAIP and different success stories/technologies developed/patents filed and appraised the house with respect to the infrastructure development taken place in NARS system through four components of NAIP. Dr. N. K. Barik informed that the Yatris were selected from 11 states and asked the Yatris for brief introduction about their success stories. The Yatris shared their experiences in their respective fields covering different pulses, cereals, vegetables, horticulture, floriculture technology and export of products, natural dyes, dairy, goats, poultry and fish etc and economic benefits out of using technologies/services of NAIP. A video about CIRG activities was shown to the Yatris in addition to different progressive farmers, women from Mahila Samakhya, an NGO from Mathura. The CIRG technologies/exhibits were displayed for the participants. Thereafter a Panel Discussion on Agribusiness Opportunities headed by Director, CIRG was arranged with its members viz., Dr Braj Mohan, Head, EE&SE section, CIRG, Dr P Tripathi, Sr Scientist, CIRG, Dr Arun Kumar, Sr Scientist, DRMR, Bharatpur and Sh. Sudhir Agarwal, progressive farmer, Mathura. Queries pertaining to different aspects of agriculture from Yatris and farmers were answered by either the panel members or entrepreneurs. Dr Ashok Kumar and Dr P K Rout Pr. Scientists of CIRG coordinated the programme with the help of different committees constituted for the purpose. The visit of different livestock units and laboratory units of CIRG were arranged for the Yatris and Entrepreneurs. Dr. Puneet Kumar offered vote of thanks to one and all who worked hard for the successful conduct of this programme.



National Training Programme on Scientific Goat Farming: opening new vistas for goat farmers

Capacity development programme leads to improve profitability and more positive attitudes towards profit orientation. Knowledge gap among different stakeholders is identified as one of the important constraints in goat production. Central Institute for Research on Goats organises 4 (once in a quarter) national training programmes for 10 days on Commercial Goat Farming. This programme is designed according to trainee's requirement and focus on goat breeding, feeding, health, housing, reproduction, value addition, techno-economic feasibility and marketing. After completion of this programme, trainees take initiatives to start goat farming at commercial level. Data collected from 1121 trainees participated in national training programme during 2006-07 to 2011-12 on number of participation, their age, education, occupational status, social group and their home state. Analysis revealed that number of trainees has increased from 62 to 266 per year between 2006-07 and 2011-12. State wise participation of trainees indicated that trainees from 22 states participated in different training programmes organized during the same period. State wise participation in terms of their share to total trainees showed that majority of the trainees were from northern states (60%) includes Uttar Pradesh (42%) followed by Haryana (12%),

Delhi (5%) and Punjab (2%). This may be due to close proximity of CIRG from these states. Central- western states represent about 20% trainees which include Madhya Pradesh (9%), Chattisgarh (3%) and Maharashtra (2.5%). And, 13% trainees participated from eastern states namely Bihar (7%), West Bengal (3%) and Jharkhand (2%). These trends indicated that the national training programme on commercial goat farming has gained importance across the country. Furthermore, about 72% of the trainees were between 30 to 40 years of age however, educational status of the trainees indicated that out of total trainees, 46% were graduate and post graduate and 7% were technically educated in different streams. Occupational status of trainees revealed that 54% of the trainees were engaged with agriculture and animal husbandry followed by business (21%) and service (15%). Merely, 3% of the trainees were unemployed. Distribution of trainees according to their social groups indicated that about 50% of the trainees belonged to general category. It shows that commercial goat farming is not associated with any particular social group. Keeping in view the above points, there is an urgent need for strengthening infrastructure to provide need based training to large number of goat farmers and other stakeholders.

A.K.Dixit, Braj Mohan, Khushyal Singh and Vijay Kumar

Filmy goats !!!

Naseeruddin Shah to star opposite a goat in Judhajit Sarkar's Bengali film

Naseeruddin Shah, the iconic actor of the Hindi film industry, is going to set foot in unchartered territories. He is to release his first Bengali film this summer, Judhajit Sarkar's 'Khasi Katha – A Goat Saga'. As uncanny as the title sounds, the premise will astound the audiences even further: Naseeruddin Shah shares screen space and stars opposite a talking goat. 'Khasi Katha' translates to 'The tale of a goat'. Khasi means a special breed of goat which is up for slaughter in a butcher house. The goat in this story is not much different. He is a prisoner waiting for the butcher's blade to strike him down. Who's the butcher? Shah, of course. Shah agreed to do this role immediately after reading the script.

(<http://www.americanbazaaronline.com/2014/05/30/naseeruddin-shah-star-opposite-goat-judhajit-sarkars-bengali-film/>)

An introduction to Government Schemes for Goat Farming

Goat is one of the important livelihood source of millions of people in India. For assisting these farmers, Government of India has many schemes. Some of these schemes are given below (for current financial year, schemes need government approval).

1. The National Mission for Protein Supplements (NMPS) is a sub-scheme of Rashtriya Krishi Vikas Yojana (RKVY). There are two major sets of activities proposed under this scheme: (a) Intensive goat production system and (b) to support conventional goat production with capacity building in the community.

(a) Promoting intensive goat production: Under this scheme farmer already having at least ten or more goats for a year or more will be eligible for assistance. Unit size up to 95 females plus 5 male goats will be supported. Beneficiaries with poorer resources will be provided half the admissible unit size. Units will be supported with provision of metal feeders, silage pit, health cover packages, vitamin/mineral supplementation, etc.

(b) Improving productivity of goats under conventional small holder / pastoral system: Clusters having flock of 2,000 goats will be identified in a radius of 10 KM areas, owners'/ goat rearers' names registered and veterinary health care to be provided to the goats of registered beneficiaries. Rural unemployed youth will be trained and enrolled by state Animal Husbandry Department as Goat Scouts on contract basis. There are provision of mass deworming, vaccination, area specific mineral mixture, fattening with concentrate feed at the rate 250 gram per day for 60 days per slaughter.

2. Conservation of threatened breeds of livestock: The objective of scheme is conservation/ preservation of such breeds, population of which has gone below 10,000 in respective breeding tract of small ruminants. 100 percent grant in aid is proposed under the scheme. Stakeholders under the scheme may be SAU, Research agency, NGOs, etc.

3. Central Sector Scheme "Integrated Development of Small Ruminants & Rabbits" (IDSRR): IDSRR provides for setting up cluster of small rearing units for farmers for which subsidy to the extent of 25% - 33% are available.

- Rearing unit of sheep and goats are 40+2. Total cost of the unit will be Rs.1.00 and subsidy will be 25% for general category entrepreneurs of the outlay subject to a max. of Rs. 25,000/- and 33.33% for SC/ST entrepreneurs, hilly and NE states including Sikkim of the outlay subject to a max. of Rs.33,300/- .
- Sheep and Goat Breeding units of 500+25. Total cost of the project will be Rs. 25.00 lakh and subsidy will be 25% for general category entrepreneurs of the outlay subject to a max. of Rs. Rs 6.25 lakh and 33.33% for SC/ST entrepreneurs, hilly and NE states including Sikkim of the outlay subject to a max. of Rs 8.33 lakh.

Beside these schemes, different states have their own schemes to assist and help stakeholders in goat sector. Interested person should contact their Block Development Officers (B.D.O.), Veterinary Officers (V.O.), Bank Officers, NABARD Officers, KVK personnel etc. for more information and help.

Vijay Kumar, Braj Mohan, A.K. Dixit and Khushyal Singh

Yeh Hai Bakrapur

Yeh Hai Bakrapur is a social satire set against the backdrop of rural India. A multi-layered film, it is based on the complex belief systems that prevail in Indian society and the conflicts that ensue thereon. The film's story revolves around the family of the Qureshis and their pet animal goat. Circumstances result in the goat acquiring rock star status in his village and beyond. Soon enough, people are fighting for a piece of the live goat, named shaik asif. A rollicking climax ensues that provides the perfect finale to the mayhem that preceded it. The film released in India on 9th May, 2014 to great reviews. (<http://www.imdb.com/title/tt3524410/>)

Extension and Farmers Education Programs

Farmers' Training organised

- 6 days training programme on Scientific Goat Farming for 30 farmers from 10-15 February, 2014. This training was sponsored by ATMA, Vaishali, Bihar.
- 10 days 57th national training programme on Scientific Goat Farming during 04-13 March, 2014 at CIRG, Makhdoom. It was attended by 58 participants from 12 states of the country.
- 5 days training programme on Scientific Goat Farming for 28 farmers and 6 farm women from district Bolangir, Odisha during 10-15 February, 2014. This training was sponsored by Gramin Vikas Kendra, Nalanda, Bihar.
- 10 days 58th National Training Programme on Scientific Goat Farming during 21-30 May, 2014 at CIRG, Makhdoom. It was attended by 51 participants from 14 states of the country.

Exhibition/KisanMela Participated

- Krishi Vasant Exhibition at Central Institute of Cotton Research, Nagpur on 09-13 February, 2014.
- Kisan Mela and Kisan Gosthi at Jawahar Bagh, Mathura, U.P., on 21.06.2013.
- "Showcasing of Agricultural Technologies" jointly organized by ICAR Research Complex for Eastern, Patna and Directorate of Knowledge Management in Agriculture, New Delhi during December 06-07, 2013 at ICAR Research Complex for Eastern Region, Patna, Bihar.
- 20th Sarson Vigyan Mela-cum Exhibition at Directorate of Rapeseed-Mustard Research (DRMR), Sewar, Bharatpur (Rajasthan) on 22-24 February, 2014.
- National Dairy Mela-2014 at NDRI, Karnal (Haryana) on 25-27 February, 2014 (Won IIrd Prize).
- Pusa Krishi Vigyan Mela at IARI, New Delhi on 26-28 February, 2014.
- Kisan Mela at IVRI, Izatnagar, Bareilly, U.P., on 28.02.2014 (Won IIIrd Prize).
- Kisan Mela at U.P. Pandit Deen Dayal Upadhyaya Pashu Chikitsa Vigyan Viswa Vidyalay Evam Go-Anusandhan Sansthan, Mathura, U.P., on 14-15 March, 2014 (Won Ist Prize).



Awards and Recognitions

- Dr Anil Kumar Goel, Principal Scientist (Animal Reproduction), PR&SM Division of this Institute received 'Fellowship Award of ISSAR-2013' from the Indian Society for Study of Animal Reproduction in recognition of his meritorious contribution to the Research, Training and Extension in the field of 'Animal Reproduction'. The award was bestowed upon him during the Annual Conference of the society held at Maharashtra Animal and Fisheries Sciences University, Nagpur on 08th January, 2014.
- Dr Ashok Kumar, Principal Scientist (Veterinary Medicine) received "Ram Lal Agrawal Gold Medal Award -2014" from Indian Society for Veterinary Medicine at Jammu for outstanding contribution in Veterinary medicine, particularly in Herbal drug Research on 15th Feb. 2014.
- Dr M.K. Tripathi, Principal Scientist (Animal Nutrition) has received "AJAS Best Reviewer Award 2013" by Asian-Australasian Journal of Animal Science for extending his comments on the quality of research manuscript, which were submitted to the journal for publication during 2013. This award was bestowed upon him in recognition of his outstanding efforts and contributions as an invaluable reviewer along with Dr. Tugay Ayasan, East Mediterranean Agricultural Research Institute, Turkey; Dr. Dongren Ren, University of Nebraska at Omaha, U.S.A. out of over 250 reviewers during the year.
- Dr M.K. Tripathi, Principal Scientist (Animal Nutrition) has appointed as Regional Director of International Goat Association for Indian sub-continent (India-Pakistan-Nepal).
- Dr M. K. Tripathi, Principal Scientist (Animal Nutrition) was appointed by ICAR as the "Sub-committee member on Sheep Nutrition" in the National Committee on Nutrient Requirement of Animals.
- Dr S. P. Singh, Scientist (Animal Physiology) completed his Ph. D. programme with ICAR International Fellowship at University of Bonn, Germany.
- Dr N Ramachandran Scientist PR&SM Division attended International training programme on "New Technologies for Sustainable Sheep and Goat Production" sponsored by ICARDA and JICA in Amman, Jordan from 26th January - 6th February, 2014. The training was covered through six modules from Breeding and Genetics, Reproduction and AI, Rangeland management, Fodder production in dry areas, Sheep and Goat health management and feeds and feeding etc. He has learned/got exposed for new techniques like cactus feeding, FEAST and TechFit techniques for use in small ruminant research. He had presented a case study on Artificial Insemination in Small Ruminants in India as per the direction of organizers at Amman, Jordan on 3rd February, 2014.
- A Post doc fellow Scholar (Dr Erick Virgile Azando From Republic of Benin) under C V Raman International Fellowship was guided by Dr Ashok Kumar Principal Scientist on " Effect of local anthelmintic plants on gastrointestinal nematodiasis in small ruminants" (15 Sep to 14 Dec 2013).



Inauguration of new laboratory building “Block- C” at CIRG

On 6th April, 2014 Dr. S. Ayyappan, Secretary, DARE and DG, ICAR inaugurated new laboratory block (BLOCK-C) of Central Institute for Research on Goats (CIRG), Makhdoom Farah, Mathura, in the presence of Dr. K.M.L. Pathak (DDG, Animal Sciences, ICAR), Dr. B.S. Prakash (ADG ,AN&P, ICAR), Dr. S.K. Agarwal (Director, CIRG), Dr. A.C. Varshney (VC, DUVASU, Mathura), Dr. Dheeraj Kumar (Director, DRMR, Bharatpur), Dr. S.K. Dubey (In-charge, CSWCRTI, Chhalesar, Agra), Dr. S.K. Garg (Dean, Veterinary College, Mathura) and all the scientist and staff of CIRG, Makhdoom. This new laboratory block will be utilized for the purpose of establishing a national referral laboratory for monitoring meat quality and standardization, Central Instrumentation Facility (CIF), Division of Genetics and Breeding and PME cell. While addressing the scientists and staff of the Institute, Dr. Ayyappan appreciated the research work and technologies generated by the institute. He urged scientists to depict goat as an animal of future and develop low-cost, pro-farmer, innovative technologies for sustainable goat production in the country. He also released a DVD on scientific goat farming on the occasion. Dr. K.M.L. Pathak, DDG (Animal Sciences), ICAR in his address assured that new laboratory facility will provide quality infrastructure for the research. Dr. B.S. Prakash, ADG (AN&P), ICAR emphasized on the need of conducting research on effect of climate stress on production performance in goats. Dr. S.K. Agarwal, Director, CIRG briefed about the achievements of the Institute and explained a roadmap for goat development in India. Later on all the dignitaries and guests also visited livestock units, agriculture farm, technology exhibition and research laboratories of Institute.



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