

**CRG**  
**ANNUAL**  
**REPORT**  
**2007-08**

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## EDUCATION AND TRAINING

### TRAINING PROGRAMMES ORGANIZED

The Institute imparts training on different aspects of goat rearing. The institute has programme for organizing trainings for groups of clients supported by National or International organizations for the benefit of farmers, extension workers or those related to goat production work. The fees vary for each of these courses depending on its period. The sponsors may request for details on specific training and its cost from the Institute.



### National Trainings

1. Ten days National Training Programme on Commercial Goat Farming held from 21<sup>st</sup> to 30<sup>th</sup> May, 2007 and total 35 trainees participated.
2. Ten days National Training Programme on Commercial Goat Farming held from 13<sup>th</sup> to 22<sup>nd</sup> August, 2007 and total 21 trainees participated.
3. Ten days National Training Programme on Commercial Goat Farming held from 12<sup>th</sup> to 21<sup>st</sup> November, 2007 and total 30 trainees participated.
4. Ten days National Training Programme on Commercial Goat Farming held from 11<sup>th</sup> to 20<sup>th</sup> February, 2008 and total 48 trainees participated.

In these four training courses in all 134 participants from 12 states i.e. 62 from U.P. followed by M.P. 21, West Bengal 16, Rajasthan 14, Bihar 9, Haryana 4, Chhatisgarh, Orissa 2, one each from Uttarakhand, Jharkhand Punjab and Delhi participated.

### International Training on Semen Biology and Embryo Transfer in Goats

A specialized training programme on Semen Biology and Embryo Transfer was organized in the institute for three Mongolian Scientists for a period of two months from 26<sup>th</sup> November 2007 to 25<sup>th</sup> January 2008. Trainees also visited I.V.R.I. Izatnagar, Bareilly; N.D.R.I. Karnal and C.S.W.R.I. Avikanagar, Rajasthan as a part of their course curriculum. The training programme was sponsored by the Ministry of External Affairs, Govt. of India under Indian Technical and Economic Cooperation (ITEC) Programme between two countries. Director of the Institute on the occasion of valedictory function on 25<sup>th</sup> January, 2008 emphasized the trainees to make liberal use of this training for augmenting livestock production in their country. He also expressed the hope that such training programmes will further strengthen the scientific and cultural relations between India and Mongolia.





### National Goat Fair and Scientists- Entrepreneurs- Farmers Interactive Meet

A three day National Goat Fair and Scientists-Entrepreneurs- Farmers Interactive Meet was held at CIRG Makhdoom in collaboration with the Indian Society for Sheep and Goat Production and Utilization, during 1-3 March, 2008. It was organized to provide an opportunity of meeting and sharing of information among the major stakeholders for promoting commercialization of goat production in the country. Director of the institute during the inaugural session



welcomed the delegates/ dignitaries, researchers and goat entrepreneurs. Hon'ble Minister of State for Agriculture, Food and Consumers' Affairs, Govt. of India, Shri Akhilesh Prasad Singh Ji inaugurated the National Goat Fair and Meet. The following activities/ events were organized:-

1. Live Exhibition of all the important Goat Breeds (Germplasm) available in the Country.
2. Pictorial and Live Exhibition on the Transferable Goat production Technologies developed by the Institute.
3. Exhibition Stalls of related ICAR Institutes, SAUs, Industry and State Development Departments.

4. Scientists- Entrepreneurs- Farmers Interactive Meet.
5. Scientists-Development Officers-Farmers Interactive Meet.
6. Goat Show and the Contests.



About one thousand participants comprising Commercial goat farmers, representatives from Meat Industry, State Animal Husbandry departments, Non Government Organizations, researchers, teachers, students, and development workers from 16 States of the country participated in the programme. The Interactive Meet was organized in three Technical Sessions viz. (i) Commercialization of goat farming: experiences from the field, (ii) Improved technologies and institutional support for commercial goat farming and (iii) Improved goat farming: constraints and options. In all, 12 Lead Papers were presented in Hindi language and included in the discussions. The commercial goat farmers and entrepreneurs actively participated in the deliberations. The issues and recommendations emerged from the above three Technical Sessions were later presented and discussed in the Plenary Session. The Interactive Meet greatly helped the commercial goat farmers and entrepreneurs not only in updating their knowledge on scientific goat production but

also strengthened the linkages among them. On this occasion four progressive goat and sheep farmers including two women from Maharashtra were honored as Bakari/ Bher Pundits. Dr. V.S. Vihan was the organizing secretary of the National Goat Fair and Dr. Shalander Kumar and Dr. U.B. Chaudhary coordinated the Interactive Meets.

### Teaching and Guidance

The Institute registered 10 students for master's degree and 12 for doctorate degree programme through Dr. B.R. Ambedkar University, Agra under different disciplines of goat production for pursuing their research work.





## SUCCESS STUDY

### PCR-RFLP for molecular typing of *Brucella* cultures

*Brucella melitensis* causes a worldwide zoonosis. It is one of the major causes of abortions in goats and sheep and the organism is secreted in the milk of infected animals. For molecular typing of *Brucella* isolates we have used the most promising molecular approach to date i.e. PCR-RFLP, which utilizes DNA polymorphism. We used the *omp2* gene of *Brucella* sp. as a locus of two nearly homologous repeated copies that differ slightly among *Brucella* species and biotypes in presence or absence of the *Pst* 1 site to differentiate between them. The *omp2* gene exists as a locus of two nearly homologous repeated copies (*omp2a* and *omp2b*) that differ slightly among *Brucella* spp. This information was utilized to design specific primers that amplify a 282-bp fragment, flanking *uPst* ream sequences of the 5 terminus of the two genes (*omp2a* and *omp2b*) and expanding downstream of the *Pst* 1 sites. Our results revealed that DNA fragments obtained from *B. melitensis* standard 16M strain and two isolates from seropositive goats identified as *B. melitensis* Rev1 strain produce three bands, an intact 282-bp fragment from the amplified *omp2a* gene that lacks the *Pst* 1 site and two smaller fragments of 238 and 44 bp, the product obtained from digestion of the *omp2b* amplified fragment. In contrast *B. melitensis* biovar 3 produced only two smaller fragments from both genes; (*omp2a* and *omp2b*), a 238-bp fragment and a 44-bp fragment. Because of the existing *Pst* 1 site polymorphism between brucella strains, the test may distinguish between different strains of *B. melitensis* Rev1 vaccine strain from *B. melitensis* biovar 3 field strain in less than 12 hours. This method can be used in clinical samples directly.

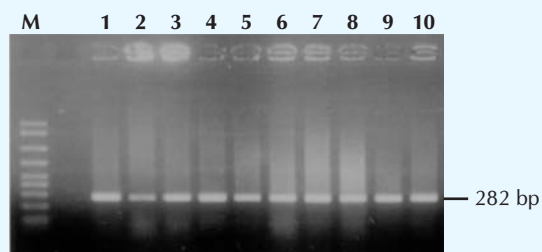


Fig. 1: Agarose gel electrophoresis of PCR-amplified *omp2* gene fragments from isolated *Brucella* strains. The Fig. shows a single band, a 282-bp DNA fragment.

Lanes 1: M, molecular size ladder (in base pairs);  
2, negative control; 3 and 4, *B. melitensis* strain Rev1; 5, 6, 7 and 8, *B. melitensis* biovar 3

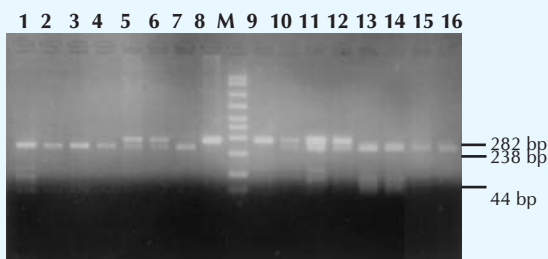


Fig. 2: Agarose gel electrophoresis of PCR-amplified *omp2* gene fragments from isolated *Brucella* strains.

Lanes 1: M, molecular size ladder (in base pairs);  
Lane 2 and 3, *B. melitensis* strain 16M  
Lane 4 and 5, *B. melitensis* strain Rev1;  
Lane 6 and 7, *B. melitensis* biovar 3

# TECHNOLOGY SERVICES

## Consultancy and Visit

The Institute rendered consultancy services (paid/free) on establishment and management of commercial goat farms to 290 goat entrepreneurs, students and goat farmers during the year. During this period 430 visitors from India and abroad visited the institute.

## Goat Germplasm Supplied

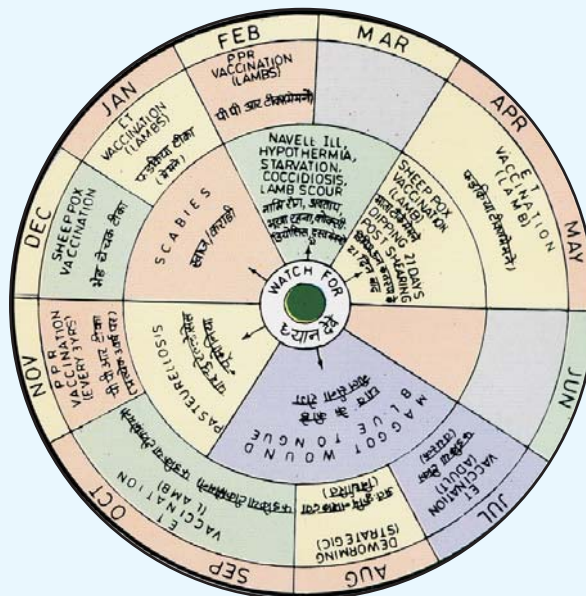
CIRG Makhdoom supplied 146 superior animals of Barbari, Jamunapari and Jakhrana breed to the progressive farmers and various government agencies for breed improvement programmes.

## Indigenous ELISA kits sold

A total of 25 kits were supplied to different institutions including TANUVAS, Chennai; Veterinary colleges, Mathura and Pondicherry, respectively.

## Diagnostic services provided

For the screening of map infection, samples (serum, fecal) from veterinary colleges, Mathura, Faizabad and Pondicherry and Regional centers of CSWRI, Avikanagar (SRC, Kodai Kanal and WRC, Bikaner) were received. These samples were screened by ELISA, microscopic examination, fecal culture and PCR.





## LINKAGES AND COLLABORATIONS

- The institute has developed effective linkages with NIANP, Bangalore; IVRI, Izatnagar; NBAGR, Karnal, IGNOU, New Delhi; NAARM, Hyderabad and various agricultural universities of the country.
- Institute is also running a project in collaboration with Biovet Pvt. Ltd., Bangalore under Public-Private Partnership Programme.





## AWARDS/HONORS RECEIVED

### Dr. S.V. Singh

- Awarded 'Helping Hand Fellowship' and so also his two Ph.D. students (Mr A.V. Singh and P.K. Singh) to attend and present papers at 9<sup>th</sup> International Colloquium on *Paratuberculosis*, Tsukuba Science City, Japan from 29.10.2007 to 2.11.2007.
- Awarded '2 years (2007-2009) membership' for International Association of *Paratuberculosis* by IAP, USA.

### Dr. Gopal Dass

Received "BHARAT JYOTI AWARD" for meritorious services, outstanding contributions and commendable role in the improvement and conservation of small ruminants (sheep) during a national seminar on "Economic growth and national integration" organized by India International Friendship Society (IIFS), New Delhi on 28.03.2008.

## METEOROLOGICAL OBSERVATIONS

(April 2007 to March 2008)

Month	Max. temp. (°C)	Min. temp. (°C)	Mean daily temp. (°C)	Vapour pressure (mmHg)	Relative humidity (%)	Rainfall (mm)/ wet days	Sun shine (hr)
April, 07	43.00	20.92	31.96	15.28	34.03	nil	296.0
May	44.73	24.02	34.37	18.95	39.84	8.0 (2)	286.50
June	42.92	28.43	35.68	22.76	52.57	71.0 (7)	181.9
July	37.37	26.16	31.77	25.43	72.11	55.60 (10)	180.1
August	37.27	25.53	31.40	25.27	74.59	132.4 (4)	182.3
September	37.22	23.62	30.42	23.29	66.96	22.20 (5)	248.2
October	37.40	13.92	25.66	12.02	39.24	nil	277.0
November	32.88	9.97	21.43	11.51	51.60	nil	221.9
December	25.24	5.58	15.41	9.09	45.56	nil	200.3
January, 08	22.44	4.18	13.31	8.15	59.18	nil	210.7
February	25.91	5.45	15.68	8.72	51.28	nil	251.4
March	36.87	13.58	25.23	11.47	41.57	nil	264.8

Max. temp. 50.0 C on June 9, 2007  
 Min. temp. -1.5 C on February 2, 2008  
 Annual Rainfall 289.2 mm in 28 days



## संस्थान द्वारा सम्पन्न राजभाषा कार्यक्रम

परिषद से प्राप्त निर्देश के अनुपालन में दिनांक 14 से 28 सितम्बर, 2007 के तक संस्थान में हिन्दी पखवाड़ा मनाया गया। इसके अन्तर्गत दिनांक 14.9.2007 को संस्थान के केन्द्रीय सभागार में एक विचार गोष्ठी का आयोजन किया गया, जिसमें संस्थान के विभिन्न वक्ताओं ने 'राजभाषा के प्रगामी प्रयोग का देश के सर्वांगीण विकास में महत्व' विषय पर अपने विचार व्यक्त किये। वक्ताओं द्वारा राष्ट्रभाषा का तात्पर्य, राष्ट्रभाषा की आवश्यकता, राष्ट्रभाषा के रूप में हिन्दी के विकास में उत्पन्न बाधाएँ तथा हिन्दी भाषा के प्रति हमारा कर्तव्य आदि विषयों पर व्यापक विचार प्रकट किये गये।

- 14 सितम्बर से प्रारम्भ इस पखवाड़े में संस्थान के कर्मचारियों एवं महिलाओं के लिए हिन्दी श्रुतलेख, हिन्दी हस्ताक्षर, हिन्दी अनुप्रयोग एवं हिन्दी अनुवाद प्रतियोगिता तथा बच्चों के लिए आओ बताओ इनाम पाओ तथा हिन्दी श्रुतलेख प्रतियोगिता का आयोजन किया गया। पखवाड़े का मुख्य आकर्षण हिन्दी शोध पत्र सम्मेलन रहा, जिसमें वैज्ञानिकों द्वारा अपने शोध पत्रों का हिन्दी में प्रस्तुतिकरण किया गया। हिन्दी पखवाड़ों का समापन एवं पुरस्कार वितरण समारोह का आयोजन निदेशक की अध्यक्षता में संस्थान केन्द्रीय सभागार में आयोजित



किया गया। अपने सम्बोधन में निदेशक एवं अध्यक्ष संस्थान राजभाषा कार्यान्वयन समिति अपने विचार प्रकट करते हुए कहा कि राष्ट्रभाषा किसी राष्ट्र की जनता की भाषा है। किसी भी देश की राष्ट्रभाषा वही हो सकती है जिसका अपने देश की संस्कृति, सभ्यता व साहित्य से गहरा सम्बन्ध हो तथा बहुसंख्यक जनता द्वारा बोली व समझी जाती हो। जिस प्रकार राष्ट्रगान, राष्ट्रीय ध्वज किसी स्वतंत्र राष्ट्र के गौरव, स्वाभिमान व श्रिमाता के प्रतीक होते हैं, उसी प्रकार राष्ट्रभाषा भी किसी राष्ट्र के स्वाभिमान की वाहक होती है। समारोह में राजभाषा पखवाड़े के अन्तर्गत आयोजित की गई विभिन्न प्रतियोगिताओं के विजयी प्रतियोगियों को निदेशक द्वारा पुरस्कृत कर सम्मानित किया गया।

- वर्ष 2007 में संस्थान समाचार 'अजामुख' के एक अंक (मार्च-दिसम्बर, 2007) का सफलतापूर्वक प्रकाशन किया गया। जिनमें बकरी पालन के विभिन्न विषयों से सम्बन्धित 10 लेख एवं 2 लोक गीतों को प्रकाशित किया गया।
- अनुभाग द्वारा वर्ष अन्तर्गत संस्थान राजभाषा कार्यान्वयन समिति की तीन त्रैमासिक बैठकों का आयोजन निर्धारित समयानुसार किया गया। जिसमें संस्थान के निदेशक एवं अध्यक्ष राजभाषा कार्यान्वयन समिति की उपस्थिति में प्रशासनिक/वैज्ञानिक कार्यकलापों में हिन्दी के प्रगामी प्रयोग से सम्बन्धित प्रगति का मूल्यांकन किया गया तथा निदेशक महोदय द्वारा समस्त विभागाध्यक्षों, अनुभाग प्रभारियों व प्रशासनिक अधिकारी को अपने दैनिक विभागीय कार्यों में हिन्दी के प्रयोग को



उत्तरोत्तर बढ़ते हुए निर्धारित 100 प्रतिशत की लक्ष्य सीमा को प्रत्येक दशा में प्राप्त करना सुनिश्चित करें।

- निदेशक एवं अध्यक्ष संस्थान राजभाषा कार्यान्वयन समिति द्वारा राजभाषा एवं विकास संस्था, गीता कालोनी, नई दिल्ली द्वारा दिनांक 7-9 मई, 2007 को गंगटोक (सिक्किम) में आयोजित 12वें हिन्दी सम्मेलन एवं कार्यशाला में सहभागिता की गई।
- श्री अरुण कुमार सिंघल, स्टेनोग्राफर एवं श्री मोहन लाल सैनी, वरिष्ठ लिपिक द्वारा केन्द्रीय अनुवाद ब्यूरो, राजभाषा विभाग (गृहमंत्रालय) नई दिल्ली के माध्यम से दिनांक 18-22 फरवरी, 2008 को 'संक्षिप्त अनुवाद प्रशिक्षण कार्यक्रम' पर आयोजित कार्यशाला में सहभागिता की गई।