

Rationale of the course

The contribution of India to the international livestock gene pool is remarkable. The recent developments in the field of molecular genetics and bioinformatics along with advanced statistical analysis techniques have helped to make tremendous genetic progress in various livestock species. But the rate of genetic improvement in AnGR of India is not on par with other countries due to inadequate and unreliable information on performance of indigenous animals, as well as on population size and structure. The proposed training programme is intended to create adequate human resources by providing hands-on-training to the participants on advanced statistical, molecular and bioinformatic tools for productivity enhancement of indigenous AnGR.

Important Dates

Last date of receipt of application
15th September, 2017
Intimation to the selected candidates
22nd September, 2017

Course Contents

Present Status and Future Prospects of Cattle Production System in India; Issues and Challenges; Marker Assisted Selection; Genomic selection; Field Progeny Testing of Breeding Bulls; Cross breeding; Statistical packages LSML, SAS, WOMBAT; Univariate and multivariate animal models; Random regression model; Artificial Neural Network models for analysis of cattle breeding data

Cytogenetics; PCR and its variants; Real Time PCR based expression analysis; SNP genotyping; Recombinant DNA Technology: Concept to Practices; Proteomics in livestock Research; ELISA; Western blot; SDS PAGE and its application; Bioinformatics tools for cattle genome Analysis; Genome annotation; Next generation sequencing data and Genome assembly; RNA Seq/ Differential Gene expression/Transcriptome Analysis; Genome Editing and CRISPER Technology; Whole genome sequencing and Genome-Wide Association study; Gene silencing technologies for augmenting livestock health and productivity; Transcriptome profiling using micro array data analysis; Micro RNAs

Sexing of Bovine Spermatozoa; Analysis of bull spermatozoal morphology using CASA; Assisted Reproductive technologies for augmenting fertility; Culturing of bull spermatogonial stem cells and identification of biomarkers; Sperm sexing in bulls; Evaluation of sperm cell viability, capacitation status and acrosome integrity in breeding bulls; Thermal Stress and its Amelioration in Breeding Bulls; Nutrigenomics

Eligibility

Master's Degree in the discipline of animal / veterinary and allied sciences

Working not below the rank of Scientist or Assistant Professor or equivalent from SAUs/ CUs/ DUs/ ICAR/ National Institutes/ KVKs

Number of participants

A total of 25 candidates will be selected for this course. The selection of candidates will be made by a screening committee as per the available guidelines of the ICAR.

Procedure for Application

The applicants desirous of participation may send their online nomination for the training through CBP portal site (<http://iasri.res.in/cbp>) as per the procedure mentioned. The hard copy of the successfully uploaded application must be sent to the Course Director after approval of the competent authority along with a postal order/DD of Rs 50/- (Non-refundable). The amount will be drawn in favour of **ICAR Unit, CIRC** payable at **SBI, Meerut**. In case of any difficulty in applying online using CBP portal, the participants may also send their duly filled application form in the given format after getting necessary approval from their competent authority of the organization to the Course Director on the address given in the brochure.

About the Institute

The CIRC - Central Institute for Research on Cattle (Formerly known as Project Directorate on Cattle) was established at Meerut on 3rd November 1987 as a nodal institution to monitor, coordinate and support all research and development projects for cattle improvement. The prime emphasis of the institute has been on the evaluation of indigenous and crossbred bulls to supply the male germplasm to cater the breeding requirement of the country for increasing the milk production. The institute undertakes research for optimizing productivity of cattle by employing latest strategic breeding with incorporation of cutting edge molecular tools. Besides, the institute is also working on nutritional, management and reproductive interventions.

Location and weather

The Institute is located at a distance of 65 km north-east of New Delhi and is well connected to other parts of the country by rail as well as road. Being the initial stage of winter season, during the month of November the weather at Meerut is expected to be cool.

Travelling Allowance

Participants will be paid to and fro travel fare by rail by the shortest route as per their entitlement class of travel restricted to the maximum of AC II tier fare or bus or other means of transport in vogue as the case may be. The original tickets are to be produced by the participants for effecting the reimbursement of travelling allowance. No DA will be paid by the organizers to the participants.

Patron

Dr. B. Prakash

Director, CIRC, Meerut

Course Director

Dr. Umesh Singh

Principal Scientist
ICAR-Central Institute for Research on Cattle
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Meerut, U.P. State
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Course Coordinators

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Application Form

Training course on “Omic technologies and modern breeding approaches for conservation and productivity enhancement of indigenous cattle resources”

01st – 21st November, 2017

1. Name
2. Designation
3. Date of birth & Age
4. Sex
5. Educational qualification
6. Discipline and field of specialization
7. Full address of the present employer
8. Employment record
9. Full address for correspondence
10. Email
11. Telephone or Mobile and Fax No.
12. Research Project handled/handling
13. No. of Publication in journals
13. Details of training/ seminar/ short course attended during the last five years
14. Details of registration fee paid

DD No.

Dated

Recommendation by head of Division

Signature

Dean/Director/Principal

Date



Announcement

ICAR Winter School

Omic technologies and
modern breeding approaches
for conservation and
productivity enhancement of
indigenous cattle resources

Sponsored by

Indian Council of Agricultural
Research,
Krishi Anusandhan
Bhavan-II, Pusa,
New Delhi-110 012



1-21st November, 2017 (21 days)



ICAR-Central Institute for Research
on Cattle

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