

## Selection of Superior Sires, Pre-breeding Evaluation, Quality Semen Production and Fertility Optimization in Dairy Animals - An Update (October 24 to November 13, 2017)

### ABOUT THE COURSE

Selection of superior bulls is very important as male is considered as half of the herd. Bulls are selected on the basis of dam's yield or progeny's performance and breed traits. Pre-breeding evaluation of breeding bulls is essential as poor libido, reduced semen quality and lower freezability are the major issues, which affect semen quality and conception rates. A know how and evaluation of physical, endocrinological, testicular thermoregulation, seminal parameters and freezability is essential for improved semen parameters. Cryopreservation inflicts undesired effects on sperm due to ice crystallization, lipid packing fault, membrane damage, cryocapacitation and apoptosis like changes. Assessing and minimizing these changes are crucial for increasing fertilization potential of sperms. A thorough knowledge of bull selection, management, nutrition, pre-breeding evaluation of bulls and quality semen production is essential.



### COURSE CONTENTS

- Criteria for bull selection.
- Breeding soundness evaluation.
- Ultrasonography and Colour doppler of male reproductive organs.
- Thermal Imaging of bulls
- Improved managerial techniques for breeding bulls.
- Use of electroejaculator for semen collection.
- Semen evaluation techniques (*in vitro*).
- Cryopreservation using biological freezer.
- Cryoinjury to sperm: structural and molecular aspects.
- Cryocapacitation and Lipid peroxidation.
- Impact of environmental toxicity on semen quality and fertility.
- Use of various additives, cryoprotectants, sugars on seminal parameters.
- Ovum pickup, IVF and Embryo transfer.

## ELIGIBILITY

- All teachers / scientists having MVSc degree.
- Working not below the rank of Assistant Professor in the State and Central universities / ICAR institutions, KVKs.

## DATE AND DURATION

**October 24 to November 13, 2017**

## LAST DATE TO APPLY

**September 20<sup>th</sup> 2017**

## HOW TO APPLY

Online application could be made by registering on the web portal as candidate at <http://cbp.icar.gov.in/HomePage.aspx> and selecting the desired training.

## BOARDING AND LODGING

Accommodation on twin sharing basis will be made in non-AC rooms in the University guest house (Scientist Home, Located near to Verka Milk Plant on Ferozepur Road). The participants are requested not to bring any family member with them. CAFT will bear travel expenses of trainees by the shortest route as per their entitlement for class of travel, which however is restricted maximum to AC II class by rail excluding Rajdhani express. The candidates are advised to make their travel reservations well in advance.

## ABOUT THE DEPARTMENT

Department of Veterinary Gynaecology and Obstetrics was established in 1976. Highly trained and weathered faculty is involved in; a) teaching animal reproduction to undergraduate & postgraduate students, b) carrying research to enhance reproductive efficiency of animals, and c) extending research to dairy farmers. Department has facilities of semen freezing laboratory, *In vitro* fertilization (IVF) laboratory/ RIA/ELISA, Ultrasonography, reproductive surgery and obstetrical maneuvering. Recognized as 'Centre of Advanced Studies' in 1995 and designated as 'Centre of Advanced Faculty Training' in 'Veterinary Gynaecology & Reproduction' in 2009 by Indian Council of Agricultural Research. Under CAS/CAFT, department has conducted 26 courses and trained 250 teachers/scientists from State Universities/ICAR institutes. Several renowned national / international scientists have visited to train faculty. The department has published 200 (2006-16) research papers in the journals of national and in international repute. Most of the faculty members have visited foreign countries to avail training programmes or to have higher qualifications.

## ABOUT LUDHIANA

Ludhiana city is situated on the banks of Sutlej river and is also known as Manchester of India. It is the largest city of Punjab and is considered major industrial and education hub of North India..

Ludhiana is known for its bicycles, hosiery and woolen industries. The climate during Oct - Nov will be comfortable. The city is very well connected by rail/ road to Delhi (320 km), Amritsar (136 km), Chandigarh (100 km) and Jammu (270 km). The Railway station and Bus stand are approx. 5 km away from the University campus

## Director

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