

## APPLICATION FORMAT

### Abiotic Stress Impact on Livestock Production and Health

1. Full Name (Block letters):
2. Date of birth:
3. Designation:
4. Present employer with address:
5. Address for correspondence with Telephone / Mobile number, Fax number and Email:
6. Academic qualifications starting from graduate level:

Name of Degree	University	Year of Passing	Major Subject Offered

Signature of candidate

#### 7. Certificate from employer:

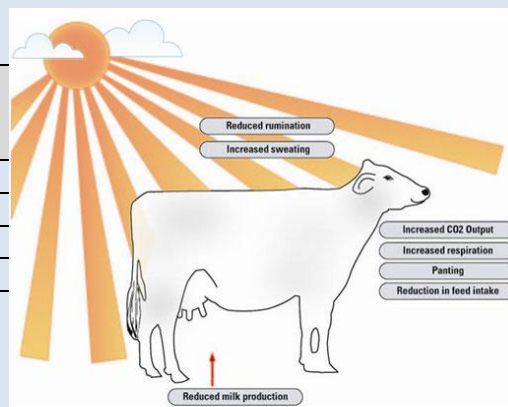
The application of Dr./Mr/Ms...is hereby recommended for attending the course entitled "Abiotic Stress Impact on Livestock Production and Health" being organized by CAFT in Veterinary Physiology, Division of Physiology & Climatology, IVRI, Izatnagar from 14.9.2012 to 05.10.2012. It is further certified that the information furnished by him/her has been verified and found correct.

Signature of recommending/  
sponsoring authority with seal

A Short Course  
on

## Abiotic Stress Impact on Livestock Production and Health

(September 14 to October 5, 2012)



**CAFT in Veterinary Physiology**  
**Division of Physiology and Climatology**  
**INDIAN VETERINARY RESEARCH INSTITUTE**  
**IZATNAGAR- 243 122 (U.P.) INDIA**



**Patron:**  
**Director, CAFT:**  
**Course Convener:**  
**Co-convener:**

**Director, I.V.R.I.**  
**Dr. G. Taru Sharma**  
**Dr. Puneet Kumar**  
Dr. G. Taru Sharma  
Dr. V.P. Maurya  
Dr. Mihir Sarkar  
Dr. Gyanendra Singh

**Core Faculty**

Dr. G. Taru Sharma  
Dr. Puneet Kumar  
Dr. V.P. Maurya  
Dr. Sadan Bagh  
Dr. Mihir Sarkar  
Dr. Gyanendra Singh  
Dr. Vikas Kumar

**Faculty**

Faculty of CAFT in Veterinary Physiology  
Faculty of IVRI from allied disciplines  
Guest faculty of distinguished Indian experts



**Contact for further correspondence:**

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## INTRODUCTION

Abiotic stress is defined as the negative impact of non-living factors such as extreme temperature, humidity, intense solar radiation in summer, drought, flood, high winds, and other natural disasters on the living organisms in a specific environment. The non-living variable must influence the environment beyond its normal range of variation to adversely affect the population performance or physiology of the organism in a significant way. Biodiversity is determined by many factors, and one of them is abiotic stress. If an environment is highly stressful, biodiversity tends to be low. If abiotic stress does not have a strong presence in an area, the biodiversity will be much higher. This idea leads into the understanding of how abiotic stress and endangered species are related. It has been observed through a variety of environments that as the level of abiotic stress increases, the number of species decreases. This means that species are more likely to become population threatened, endangered, and even extinct, when and where abiotic stress is especially harsh. In the scenario of climate change, abiotic stressors are likely to affect animal health and hence productivity directly, by altering the homeostasis and other thermo-regulatory responses to maintain the thermal balance and indirectly via affecting supply of feed and fodder, increasing vulnerability to diseases and pests. In the changing scenario of increasing global trade, food demand, adverse impact of climate change on productivity of livestock and threat from emerging livestock and zoonotic diseases, livestock sector is going to face numerous challenges which need to be addressed for composite livestock development.

## SHORT COURSE

A course of 21 days duration is being proposed in this very important area of abiotic stress in livestock. The participants may be selected from the disciplines of Animal Physiology, Animal Nutrition, Livestock Production and Management, Animal Genetics and Breeding, Meteorology, Agroforestry, Extension, Biochemistry, Biotechnology, Pathology, Toxicology, Immunology, Medicine, Surgery,

Gynecology and Obstetrics. Teachers, Research Workers, Clinicians and Technical Officers may be considered as participants.

## CAFT IN VETERINARY PHYSIOLOGY

Division of Physiology, Pharmacology & Biochemistry was formally established in 1970. Later on Division of Pharmacology & Toxicology as well as Biochemistry was separated and the existing Division was renamed as Division of Physiology and Climatology. On the basis of achievements in Animal Physiology research and teaching, ICAR granted the status of Centre of Advanced Studies in Veterinary Physiology to this division in 1995. The centre is having the responsibility of teaching and research with a mandate of training scientists and teachers of Universities and Research Institute. The Centre of Advanced Studies (CAS) was renamed as Centre of Advanced Faculty Training (CAFT) by the Council in the year 2010.



## INSTITUTE

Indian Veterinary Research Institute (IVRI) is a premier National Institute of Indian Council of Agricultural Research. The Institute was established in the year 1889 and has rendered services as National Institute for more than a century to the country. In 1983, IVRI was accorded the status of Deemed to be University by UGC for the award of M.V. Sc. and Ph.D. degree.

## COURSE CONTENT

Climatic variables of abiotic stress in livestock. Direct and indirect effects of abiotic stressors on production, reproduction and health of livestock.

Thermoregulation, Homeothermy and Homeostasis. Predicted climate change and abiotic stressors. Natural disasters. Stress indicators. Management of livestock under stress.

## SEMINAR

Participants are expected to deliver a short seminar highlighting their activities in the parent organization.

## CERTIFICATE

A certificate will be awarded to the participants on the successful completion of the course.

## FINANCIAL ASSISTANCE

No course fee will be charged for joining the course. The participants will be paid TA as per entitled class restricted to 2<sup>nd</sup> AC and DA for the journey period, provided they produce a certificate from the parent organization to the effect that they are not being paid TA and DA for this course. The participants will have to produce documentary evidence of travelling in the entitled class.

## BOARDING AND LODGING

Local hospitality including free boarding and lodging will be arranged in the institute guest house. Local participants will be provided with minimum hospitality of lunch, tea, coffee etc.

## APPLICATIONS

**The application must reach to the Director, CAFT on or before August 31, 2012.** Intending participants who anticipate delay in sending their application through proper channel must send an advance copy of the application through E-mail to [hdpcevri@gmail.com](mailto:hdpcevri@gmail.com); [drpuneet2006@gmail.com](mailto:drpuneet2006@gmail.com); [drpuneet2011@yahoo.com](mailto:drpuneet2011@yahoo.com). The scanned copy of their forwarded application may be sent by post or email to Director, CAFT. However, it will be the responsibility of participants to bring duly forwarded application at the time of joining the course. ***Selection will be made on first come first serve basis.***