# Application form for Participation in ICAR Sponsored Winter School on

# Climate Change Led Abiotic and Biotic Stress In Farm Animals and Amelioration With Nutritional and Physiological Approaches

1-21 November, 2018

1.	Name (in block letters)	
2.	Designation	
3.	Employer address	
4.	Correspondence Address	
5.	Email address	
6.	Date of birth	
7.	Gender (M / F)	
8.	Teaching/Research/Extension	
	experience (years)	
9.	Number of Summer/Winter/Sl	oort
	Courses Attended in last 5 year	s
10	. Academic Qualification	

Degree	Discipline	Year	Class	University

11. Demand Draft for Rs. 50/ -in favor of ICAR Unit, NIANP Bengaluru or Postal order for Rs. 50/ payable at Bengaluru towards registration

Date:

Signature of Applicant

12. Recommendations of Forwarding Authority with seal

# PATRON

Dr. Raghavendra Bhatta Director, ICAR - NIANP, Bengaluru

## **COURSE DIRECTOR**

Dr. N K S Gowda Principal Scientist

## **COURSE COORDINATORS**

Dr. D Rajendran Principal Scientist

Dr. G Krishnan Senior Scientist

# **IMPORTANT DATES**

Receipt of applications: 31<sup>st</sup> August 2018

Acceptance/Confirmation: 15<sup>th</sup> September 2018

# Address for correspondence:

## Dr. N K S Gowda

Principal Scientist Animal Nutrition Division ICAR-NIANP, Adugodi Bengaluru - 560 030 Email : nksgowda@yahoo.co.in rajnutri@gmail.com Office Phone: 080-25711304; Fax: 080-25711420 Mobile: +91-9980827868, +91-8825964987

# ICAR Sponsored Winter School On

Climate Change Led Abiotic and Biotic Stress in Farm Animals and Amelioration with Nutritional and Physiological Approaches

# 1 - 21 November 2018



ICAR - National Institute of Animal Nutrition and Physiology Adugodi, Bengaluru - 560 030

### **ABOUT COURSE:**

In the growing animal agriculture scenario in India, Livestock and poultry plays a major role in rural and National economy. Improvement in genetics, feeding and management has resulted in highest production in terms of milk, meat and egg production during the recent past. Many environmental factors directly or indirectly affect the production performance of farm animals. Change in climatic conditions directly affect the production and reproduction level of animals. Stress is a diverse and complex phenomenon with various components initiating the events. Aberration in climate, reduced availability of feed and fodder causes multiple abiotic stresses to the animal and become potential threat for less production and lower income to the farmers. Disease spread and microbial load and environmental pollution are the main reasons of biotic stress. Inspite of all the stress factors, animals adapt to certain extent and survive with compromising the production and reproduction. There are several physiological regulatory mechanisms and nutritional strategies to reduce stress and improve production potential of animals. The theme of winter school will deal with such nutritional and physiological approaches to ameliorate multiple stress condition due to abiotic and biotic stress factors.

#### **COURSE CONTENT**

- Climate change and impact on livestock
- Climate change and biotic and abiotic stress
- Multiple stresses and amelioration
- Adaptation to stress
- Environmental protection and sustainability
- Ration balancing and precision feeding
- Stress and reproduction
- Green house gases and life cycle assessment
- Climate resilient livestock production
- Climate friendly feeding systems
- Livestock and water productivity

## **PRACTICALS / DEMONSTRATIONS**

- Estimation of stress biomarkers
- Estimation of micronutrients
- Feed Assist and ration balancing
- Estimation of exogenous toxic principles

- Estimation of stress hormones
- Estimation of methane emission
- In vitro gas production and feed evaluation
- Field visits
- Videos of NIANP technologies

#### **ELIGIBILITY AND DURATION OF COURSE**

Master's Degree and equivalent and working not below the rank of Assistant Professor/Equivalent in the concerned subject under SAU /ICAR/ICAR recognized institute/ Central Agriculture Universities. The course duration is 21 days (1-21 November, 2018). Outstation participants are requested to arrive latest by night of 31<sup>st</sup> October and plan to leave after 18 hours on 21<sup>st</sup> November 2018.

#### ACCOMMODATION

The participants will be provided free boarding and lodging in the Institute guest house on sharing basis. Participants are advised not to bring their families, as accommodation for them will not be entertained.

#### **HOWTO APPLY**

The participants will have to apply online at the CBP portal at https://cbp.icar.gov.in. After filling the online application, take a printout of the application and get it approved by the competent authority and upload the scanned copy on or before 31.07.2018. An advance copy (via email) may be sent directly to the Course Director. A registration fee of Rs. 50/- is applicable (non - refundable).

#### **TRAVEL ALLOWANCE**

The participants will be paid T.A. for to and fro journey by rail/bus/public transport by the shortest route, but restricted to A.C. II normal train fare only (on producing documentary evidence).

#### **INTAKE CAPACITY**

Twenty five participants

#### **HOWTO REACH**

The NIANP campus is about 8 Km from city railway / bus Station, 15 km from Yeswantpur railway station.

Prepaid taxi/auto can be availed at railway/bus station to reach NIANP, Adugodi, Bengaluru (opposite to BOSCH Company, Hosur Main Road).

#### **WEATHER**

Bengaluru will be quite cool and comfortable in the month of November (15 to  $26^{\circ}$  C). Moderate winter clothing is advised.

#### THE INSTITUTE

The National Institute of Animal Nutrition and Physiology (ICAR-NIANP), was established on 24th November, 1995 with a mandate to conduct fundamental research on basic nutritional and physiological aspects related to biophysical translation of nutrients for better utilization of boost farm economy. NIANP, a premier epicentre of scientific activities under the ICAR is located in Bengaluru (77 35'E, 12 58' N; 921 meters above MSL), the garden city and the Silicon valley of India. The Institute with a green campus of nearly 40 acres is in the heart of city on Hosur road, about 40 kms from the Bengaluru International Airport and 8 kms from the city railways station and central bus stand.

The Institute works with a vision of productivity enhancement for profitable and sustainble livestock production with a mission to improve production and reproductive efficiency in livestock through basic and strategic physiological and nutritional approaches. The NIANP has developed several technologies to enhance productive and reproductive performance of livestock at farm-gate level. In addition to conventional methods, novel approaches viz., genomic, proteomic and nanobiotechnological methods to enhance nutrient bioavailability to augment reproductive efficiency and facilitate adaptation strategies to climate change led stress in farm animals have been evolved.



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