

Training Programme on
Advances in Experimental Designs and Analysis
 under the aegis of Centre of Advanced Faculty Training (CAFT)
 (December 06-26, 2018)

1. Full name (in block letters)

2. Designation

3. Present employer and address

4. Address to which reply should be sent (in block letters)

5. Permanent address

Telephone No. (off.).....(Res.).....(Mob).....

Fax No.....E-mail address.....

6. Date of birth

7. Sex (Male/Female)

8. Teaching/Research/Professional Experience (mention post held during last 5 years and number of publications)

9. Marital status: (Married/Unmarried)

10. Mention if you have participated in any training / Summer/Winter School/Short Course, etc. during last 5 years under ICAR/Other organizations

11. Academic record

Exam. passed	Subjects Main /Subsidiary	Year of Passing	Class Rank/ Distinction etc.	University/Institution
Ph.D.				
Masters degree				
Other (specify)				

12. Discipline.....

13. Level of knowledge of Computer usage.....

Signature of the Applicant with Date

14. Recommendations of forwarding Institute

Signature of the Forwarding Authority with Seal and Date

CERTIFICATE

It is certified that the information furnished above is correct. Traveling allowances will be paid / will not be paid by this office.

Signature of the Sponsoring Authority with Seal and Date

Climate at Delhi

The climate in Delhi is cold in the month of December. The average temperature during the daytime of that period ranges between 10-15° C, whereas the day time become more pleasant.

ICAR-IASRI, New Delhi (<http://www.iasri.res.in>)

IASRI is a premier Institute, established in 1959, mainly responsible for conducting research and imparting education/ training in the field of Agricultural Statistics, Computer Applications and Bioinformatics. There are six divisions in the Institute and the Institute is equipped with the modern facilities that include:

- ♦ **Computing Facilities** : The Institute has several computer laboratories well equipped with latest hardware and software packages along with modern teaching aids.
- ♦ **Library** : The e-library has rich collection of books and journals on Statistics, Computer Science and other related disciplines including on-line journals and bibliographic databases.
- ♦ **Guest house** : The Institute has a guest house with modest facilities to cater to the needs of the participants

Eligibility

- ♦ Master's degree in any discipline of agricultural statistics, statistics and agricultural sciences, or allied fields.
- ♦ Working in a position not below the rank of Scientist/Assistant Professor in ICAR Institutes/ SAU's/ Directorates/ NRCs/ State KVKs/ Central Agricultural Universities, etc.
- ♦ Working knowledge of computers is essential.

Nominations

Interested personnel fulfilling the eligibility conditions may apply through proper channel. The participants will be paid to and fro travel fare for the journey by Train as per their entitlement for the class of travel restricted, however, to the maximum of **AC II tier fare only (Excluding Rajdhani and Shatabdi)** or bus or any other means of transport in vogue as the case may be, if the same is not borne by sponsoring organization. Free boarding and lodging will be provided to the participants during the training programme as per ICAR guidelines on the CAF Training. The participants are advised not to bring family members with them.

*if the journey is performed by flight, **AC II tier fare** will be reimbursed only for **Air India**.

The maximum number of participants: 25
 Last date for receipt of nominations: 01.10.18
 Information to selected candidates: 15.10.18

All correspondence may be addressed to:

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ICAR-Indian Agricultural Statistics Research Institute
 Library Avenue, Pusa, New Delhi-110 012

**Training Programme
 on
 Advances in
 Experimental Designs and Analysis**

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 (December 06-26, 2018)



Course Coordinator : B. N. Mandal
Course Co-coordinators : Sukanta Dash
Anil Kumar



ICAR-INDIAN AGRICULTURAL STATISTICS RESEARCH INSTITUTE
 LIBRARY AVENUE, PUSA, NEW DELHI -110 012
 URL: <http://www.iasri.res.in>
 Please visit: www.iasri.res.in/design

*"It is the effective use of the tools of Statistical Design of Experiments that paved the way for the green revolution."
 - M S Swaminathan*

*"If your experiment needs statistics, you ought to have done a better experiment."
 - Ernest Rutherford*

Introduction

Design of experiments is an essential component of research in agriculture/animal/fishery and allied sciences. It is through the data collected from designed experiments that valid inferences are drawn. Efficient design of experiments and appropriate statistical techniques for analyzing the data are very crucial to obtain a meaningful interpretation of the investigation. It is very vital for the researchers, particularly agriculture/animal/fishery researchers to be acquainted with the efficient design of experiments, modern statistical techniques and use of computers. This course, therefore, aims to update the analytical skills of the agriculture/animal/fishery researchers and to provide them with an opportunity to study and learn the efficient design of experiments and analytical techniques of experimental data. The course is practical oriented and more emphasis would be given on interpretation of the results.

Objectives

- ♦ To provide advance training to the participants on the current developments in designing and analysis of agricultural experiments.
- ♦ To familiarize the participants with the statistical and computational tools for data.
- ♦ To upgrade the research, teaching and presentation skills of the participants.

Course Contents

The course has been structured in a series of modules with classroom lectures followed by practical on computers including the demonstration of statistical packages. Course material will be provided to all participants. The participants are requested to bring with them one or two problems and data sets of their own field. There will be ample opportunity for every participant to express his/her problems in analyzing the experimental data.

The main topics that would be covered under modules are:

Module I: Statistical Software Packages

- ♦ MS Excel
- ♦ SAS
- ♦ JMP Genomics
- ♦ R-Software
- ♦ Web Resources on Design of Experiments
- ♦ Statistical Package for Augmented Design
- ♦ Statistical Package for Factorial Experiments
- ♦ Statistical Package for Agricultural Research Data Analysis
- ♦ Indian NARS Statistical Computing Portal

Module II: Statistical Methods and Inference

- ♦ Descriptive Statistics and Data Exploration Techniques
- ♦ Tests of Significance
- ♦ Correlation and Regression

Module III: Design of Experiments

- ♦ Fundamentals of Design of Experiments
- ♦ Incomplete Block Designs
- ♦ Resolvable Block Designs
- ♦ Row-column Designs
- ♦ Factorial Experiments
- ♦ Block Designs with Factorial Structure
- ♦ Design of Experiments with Mixtures
- ♦ Split and Strip Plot Designs
- ♦ Response Surface Designs
- ♦ Designs with Nested Factors
- ♦ Designs for Making Test Treatments Vs Control Treatment (s) Comparisons

Module IV: Multivariate Methods

- ♦ Multivariate Analysis of Variance and Covariance
- ♦ Discriminant Analysis
- ♦ Cluster Analysis
- ♦ Principal Component Analysis
- ♦ Multidimensional Scaling
- ♦ Factor Analysis
- ♦ Stability and AMMI Analysis

Module V: Some Other Specialized Useful Techniques

- ♦ Variance Stabilizing Transformation
- ♦ Sampling Techniques
- ♦ Time series Analysis
- ♦ Non Linear Model
- ♦ ANCOVA
- ♦ Analysis of Repeated Measures
- ♦ G x E Interaction
- ♦ Non-parametric Methods in the Analysis of Experimental Data

Venue

ICAR-Indian Agricultural Statistics Research Institute
 Library Avenue, Pusa, New Delhi 110 012

Duration

December 06-26, 2018 (21 Days)