Module I
Paper I
22nd June - 22nd August, 2015
Statistical Methods and Official Agricultural Statistics

Paper II
Use of Computers in Agricultural Research
Module II  
1st September - 21st November, 2015

Any three of the following paper(s) in applied areas.

Paper III  Sampling Techniques
Paper IV  Econometrics and Forecasting Techniques
Paper V  Design of Experiments
Paper VI  Statistical Genetics

Officers sponsored for this course can be nominated either for only one module thereof or both the module(s) of their choice.

The details of course contents, eligibility, qualification etc. are given in the Annexure (Enclosed).

You may like to nominate suitable candidates from your Deptt. / Organization to participate in the ensuing training programme. It may kindly be noted that the nominated officer(s) is /are relieved of his / their duties for participating in this course only after the receipt of a firm formal / written communication from this Institute regarding his / their selection.

Nomination form(s) duly completed may be sent to Shri S.D. Wahi, Course Director, IASRI, Library Avenue, Pusa, New Delhi -110012 on or before May 13, 2015.

Communications in this regard can also be sent by E-mail: sdwahi@iasri.res.in or FAX No. 91-011-25841564 to help avoid delays.

Information about the Institute and details of the course can also be seen from the Institute web site: http//www.iasri.res.in. Nomination form can also be downloaded from there.

I would like to add further that TA/DA of the participants may be borne by the Sponsoring Institutions. Further, the boarding and lodging charges at IASRI, New Delhi would be borne by the participants themselves. However, the participants from India are likely to be accommodated in the Guest House of the Institute @ Rs.50/- per day basis.

Yours faithfully,

( U.C. Sud )
Senior Certificate Course (Agricultural Statistics & Computing)

The duration of the Course is 6 months from
(June 22, 2015 – November 21, 2015)

This course would comprise of two independent modules
of three months duration each i.e.

Module I June 22 – August 22, 2015
Module II September 01 – November 21, 2015.

Degree in Science/Agriculture or allied fields with working
knowledge of Mathematics and handling of Statistical
Data. Only those candidates with sufficient knowledge of
Statistical Methods and Computer Use may be directly
admitted to Module II.

The Training Programme of this Course consists of
Lectures, Practicals and Use of Personal Computers.
There will be both theory and practical examination in
each paper. The detailed syllabus is given in the
Annexure.

A nominal fee of Rs.8000/- per participant per module
from India, US $ 500 per participant per module from
SAARC countries and US $ 1000 per participant per
module from other countries. Fee is payable at the
beginning of each module in the form of Bank draft
drawn in favor of Director, IASRI payable at New Delhi.

The candidates will be required to appear in the
examination at the end of each module. Those who
successfully qualify will be awarded certificates for each
module. Those candidates who complete both the
modules will be awarded the course certificate

Guest House accommodation is available at the Institute
premises. The charges for the same is Rs.50/- per day
for Indian, Rs 150/- per day for SAARC countries and Rs.
300/- per day for other countries participants.
DETAILED SYLLABUS

Module - I
Paper-I
June 22 - August 22, 2015
Statistical Methods and Official Agricultural Statistics

Statistical Methods

Descriptive Statistics: Compilation of data, Frequency distributions, Scatter diagram, Graphs, Charts, 3-D charts, Use of Computer-Graphic display of data, Measures of Central tendencies and dispersions.


Concepts of regression and correlation, Method of least squares, Multiple regression and Multiple correlation, Partial regression and Partial correlation. Estimation and Hypothesis testing: Concepts of point estimation and confidence intervals. Hypothesis testing, Simple hypothesis, Composite hypothesis, Tests based on Chi-square, t and F, ANOVA.

Agricultural Statistics


Paper-II

Use of Computers in Agricultural Research

Computer Fundamental – Number systems; Functional units of computer, I/O devices, primary and secondary memories.

Software – System software and Application software, Introduction to Windows and MS Office.

Programming Fundamentals with C++ - Algorithm development, techniques of problem solving, flowcharting, stepwise refinement; Representation of integer, character, real, data types; constants and variables; Arithmetic expressions. Assignment statement, logical expression; Looping and Decision Making Constructs; Arrays; Concepts of Object Oriented Programming, Encapsulation, Inheritance, Polymorphism; Functions; Classes and Objects; String Processing.

Networking fundamentals.

Internet basics.

Concepts of Data Base Management System.

Module-II September 01, 2015 to November 21, 2015

Any three of the following papers in applied areas.

Paper-III Sampling Techniques


Two stage sampling (equal and unequal units at both stages). Systematic sampling, Double sampling. Sampling on successive occasions, Non-sampling errors- Planning and organisation of sample surveys.

Problems in organizing and conduct of pilot and large scale sample surveys. Details of surveys conducted by the Institute.

Paper-IV Econometrics and Forecasting Techniques

Econometrics


Maximum likelihood estimation.

Concepts of multicollinerity, heteroscedasticity and autocorrelation, Durbin – Watson test, lagged variables, Dummy variables and index numbers.

Forecasting Techniques

Forecast models using weather variables – regression approach; Forecast models using plant characters – between year models, regression approach, within year models, probability models; Agro meteorological models using stress index, water requirement satisfaction index; Time series models; Forewarning of pests and diseases, Forecasting fish production; application of remote sensing techniques in forecasting.
Paper – V  Design of Experiments


Paper – VI  Statistical Genetics

Mendel’s laws, Linkage, sex-linked and sex-limited inheritance, Multiple alleles, Detection and estimation of linkage. Inheritance of characters showing continuous variation, Multiple factor hypothesis, components of variation, estimation of heritability, response to selection, indirect selection, Progeny row trials and compact family block designs. Use of Discriminant function for selection. Progeny testing and sire evaluation. Elements of population genetics, Hardy-Weinberg law, inbreeding and its effects.
**INDIAN AGRICULTURAL STATISTICS RESEARCH INSTITUTE**  
*(I.C.A.R.)*  
**LIBRARY AVENUE, PUSA, NEW DELHI : 110 012.*

**NOMINATION FORM :** Senior Certificate Course (Agril. Statistics & Computing)

1. **Module of the course for which nominated**  
   (Please tick)  
   - [ ] Module I  
   - [ ] Module II  
   - [ ] Both

2. **Name (in Block Letters)**
   
3. **Date of Birth/Age**
   
4. **Basic Pay and Scale of Pay**
   
5. **Official Address**
   
6. **Telephone Number/Telegraphic Address, if any**
   
7. **Residential Address**
   
8. **Educational Qualifications**
   
   Degree  
   University  
   Subjects  
   Year

9. **Total Experience**
   
   Post held  
   Orgn./Office  
   From  
   To

10. **Have you attended any course organised by this Institute previously. If yes give details:**  
    - [ ] Yes  
    - [ ] No

11. **Number of Bank Draft and name of the Bank**

**SIGNATURE OF NOMINEE**

Remarks of Sponsoring Authority:

Certified that the candidate is employed by our Deptt./Organisation and on return from the training he will be suitably employed so that his training is best utilised. The candidate would abide by all rules regulations of the Institute.

**SIGNATURE OF SPONSORING AUTHORITY**