



NAHEP



Online Training Programme On **ANALYSIS OF AGRICULTURAL DATA USING STATISTICAL AND DATA MINING TECHNIQUES**

11th-20th JULY, 2023

Organizing Committee

**RVSKVV, Gwalior, MP
Coordinators**

**Dr. S.S Tomar
Dr. V.B. Singh
Dr. Shashi Yadav
Dr. Ankita Sahu**

**ICAR-IASRI, New Delhi
Coordinators**

**Dr. Sudeep Marwaha
Dr. Shashi Dahiya
Dr. Mrinmoy Ray**

By

National Agricultural Higher Education Project – Institution Development Plan (NAHEP-IDP),
Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, Madhya Pradesh

in collaboration with

National Agricultural Higher Education Project - Component 2 (NAHEP-Comp 2)
ICAR-Indian Agricultural Statistics Research Institute, New Delhi

Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, Madhya Pradesh

Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya (RVSKVV) Gwalior has been established by Govt. of Madhya Pradesh. The territorial jurisdiction of the Vishwa Vidyalaya is spread over 26 districts of Madhya Pradesh encompassing five Colleges (four Agriculture and one Horticulture); five Zonal Agricultural Research Stations (ZARS); four Regional Agricultural Research Stations (RARS); six Special Research Stations (SRS) and 22 Krishi Vigyan Kendras (KVKs). The University represents a well-knit and action-oriented network of education and research centers operating in agriculture, horticulture and allied fields in the state where the overall climate varies from semi-arid to sub humid with hot summer, cool and dry winter and 600-1000 mm mean rainfall range.

NAHEP - Institution Development Plan (IDP)

It's aim is to improve the educational relevance and quality of agricultural universities, with the intention of setting a precedent for other agricultural universities and guiding the ICAR in implementing reforms.

Additionally, the program aims to develop a skilled and capable faculty pool across all agricultural universities to significantly enhance the overall quality of agricultural education in India. This transformation will be achieved through the institutional development of agricultural universities throughout the country. Under the NAHEP - IDP, **Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior** has been implementing a project called "**Reinforcement of the Brand Value of University for Designing Market-Ready Graduates for Entrepreneurship and Employment Generation**" since 2019 with following Objectives:

- To create learning environment & effective teaching through modern classroom ambience.
- To enhance student's entrepreneurship skill, faculty competence their diversity & international outlooks.
- To leverage on alumni network, industry and partnerships towards quality & relevance of education & revenue generation.

ICAR – Indian Agricultural Statistics Research Institute (IASRI), New Delhi

ICAR-IASRI is a premier Institute established in 1959, mainly responsible for conducting research and imparting education/ training in the field of Agricultural Statistics, Computer Application and Bio-Informatics. There are six divisions in the Institute and the Institute is equipped with the modern facilities. The Institute has several computer laboratories well equipped with latest hardware and software packages along with modern teaching aids. The institute is also having national facility like Advanced Supercomputing Hub for Omics Knowledge in Agriculture (ASHOKA) and ICAR-Data Centre for unified communication and web hosting environment. State of art multi-layered cyber secured architecture comprised with variety of firewalls, anti-virus software(s) and other secured devices have been implemented in building ICAR-Data Centre to secure the data and information from any cyber threat or attack. Institute has developed several portal for agricultural data analysis i.e. Design of Experiments Server, Designed Experiments Information System, Sample Survey Resource Server, Strengthening Statistical Computing for NARS.

NAHEP Component 2

It's aim is to enhance ICAR's effectiveness in coordinating, guiding & managing agricultural higher education and its interactions with key stakeholders nationwide through interventions that increase the quality & relevance of agricultural higher education. ICAR - IASRI is the implementing agency of NAHEP Component 2 projects. NAHEP Component 2 leverages ICAR's comparative advantage in assessing systematic challenges

across the ICAR-AU system & incubating solutions. It is strengthening the Digital Infrastructure of Agricultural Universities, enhance the quality of Digital Content in the field of Agriculture and facilitate Digital Capacity Building to address the digital divide among stakeholders.

Training Overview

Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalay is organizing a **10 days training program** in collaboration with ICAR-IASRI, New Delhi on **Analysis of Agricultural Data using Statistical and Data Mining Techniques** to enhance the skill of participants and usability of statistical and data mining tools in agriculture.

The aim of this training program is to equip participants with the essential knowledge and abilities to proficiently analyze agricultural data utilizing advanced statistical and data mining methods. Participants will gain practical skills in applying diverse statistical and data mining techniques to analyse agricultural data enabling them to extract valuable insights for informed decision-making and optimization of agricultural practices.

Topics Covered in the Training:

- Artificial Intelligence and Knowledge Base Systems
- Overview of R Software
- Data Mining and Pre-Processing Techniques
- Classification Techniques for Data Mining
- Clustering as a Data Mining Tool
- Association Rule Mining
- Descriptive Statistics and Exploratory Data Analysis
- Statistical Procedures in MS-Excel
- Tests of Significance
- Diagnostics and Remedial Measures in Regression Analysis
- Hands-on Session: Non-Parametric Tests
- Introduction to Data Science
- Principal Component Analysis and Factor Analysis
- Cluster Analysis and Discriminant Analysis
- Time Series Analysis: Exponential Smoothing and ARIMA
- Non-parametric test
- PCA, Factor Analysis and Discriminant analysis
- Non-linear Growth models
- Classification and Regression Tree
- Machine Learning models for Time series modelling
- ANOVA and ANCOVA
- Correlation and Regression analysis
- Overview of Survey Sampling –SRS, Stratified sampling, Cluster and multistage sampling
- Self Organizing Maps
- Ensemble modelling
- Random Forests
- Non-Linear Statistical Modeling: Growth Models
- Non-Linear Time Series Modeling: ARCH/GARCH
- Logistic, Logit, and Probit Regression
- Survey Sampling Techniques: SRS, Stratified Sampling, Cluster and Multistage Sampling

Training Dates

11th-20th July, 2023

Online Mode

RVSKVV-BLP

Target Group

Persons pursuing/completed UG/PG and Ph.D from Agricultural Sciences or any Educational Institute

Registration Fee: INR 500
First Come First Serve Basis
Limited Seats Available: 50

Payment Details

Name of the bank - Axis Bank

Address of the bank - Athena, City Centre branch , Gwalior.

Beneficiary name - DFA-NAHEP-IDP-RVSKVV GWALIOR

Account no. - 921010021530194

Bank Account Type - Saving account

IFSC code - UTIB0000158

Registration and Payments

Candidates are required to complete the payment and then proceed to register themselves through the provided registration link. Please note that online registration is mandatory for attending the training program.

Google form for Registration :
https://docs.google.com/forms/d/1BQqEQ2cPKUF16F-eWEQo-FBF8aFw5_x-XJqRf_7SYI8/viewform?edit_requested=true

The last date for the registration is 8th July, 2023

Contact details

Dr. V.B.Singh - 9926689741

Dr. Shashi Yadav - 9589541459

Dr. Ankita Sahu - 8305917656

<https://www.rvskvv.net/>

<https://iasri.icar.gov.in/>