

## PATRON-IN CHIEF

Dr. Raja Ali Raza Anwar CS/Chairman, PAEC

## PATRON

Dr. Masood Iqbal CS/Member (Science), PAEC

Dr. Zahid Mukhtar CS/DG (A & B), PAEC

## ORGANIZING COMMITTEE

Dr. M. Yussouf Saleem CS/Director, NIAB

Dr. Manzoor Hussain (T.I.) DCS/Head PBGD NIAB

Dr. Muhammad Rashid, DCS, NIAB (Organizer)

Dr. M. Kashif Riaz Khan, DCS, NIAB

Dr. Mian Abdul Rehman Arif PS, NIAB

Mr. Jafar Hussain PS, NIAB

## FACULTY

Dr. M. Yussouf Saleem CS/Director, NIAB

Dr. Muhammad Rashid, DCS, NIAB

Dr. Muhammad Kashif Riaz Khan, DCS, NIAB

Dr. Amjad Hameed, PS, NIAB

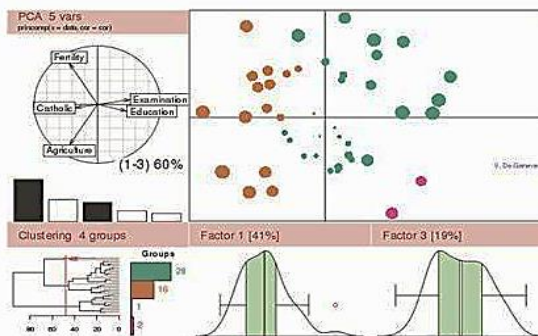
Dr. Mian Abdul Rehman Arif, PS, NIAB

Mr. Jafar Hussain, PS, NIAB

Ms. Ayesha Wadood, JS, NIAB

Ms. Maria Ghaffar, JS, NIAB

Ms. Saba Akram, JS, NIAB



## ENQUIRIES/INFORMATION

### Workshop Coordinator

Dr. Muhammad Rashid

DCS/Organizer,

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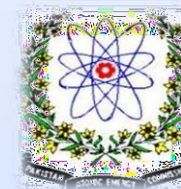
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Application form can be downloaded from

Web: <http://www.niab.org.pk>



Training workshop on

## “SCIENTIFIC DATA ANALYSIS USING R-PACKAGE”

(February 26-29, 2024)



at

**NUCLEAR INSTITUTE FOR AGRICULTURE  
AND BIOLOGY (NIAB)**  
FAISALABAD, PAKISTAN

(PAKISTAN ATOMIC ENERGY COMMISSION)

## WORKSHOP PREAMBLE

The Nuclear Institute for Agriculture and Biology (NIAB), an establishment of Pakistan Atomic Energy Commission (PAEC), is primarily a research Institute involved in goal oriented biological and agricultural research. NIAB has competent 74 scientists, 52 of them holding Ph.D. degrees in diverse disciplines of science. Utilizing the expertise and the facilities available at the Institute, NIAB conducts annually different training courses in the field of agricultural research in which students, researchers and teachers participate.

The four days training workshop has been designed to acquaint the participants with R and RStudio that plays pivotal role in agriculture, offering powerful tools for data analysis, visualization, and modeling, thereby enhancing research efficiency and productivity.

In agriculture, R packages provide researchers with various statistical techniques for analyzing crop yields, soil properties, and weather data. This enables scientists to identify patterns, trends, and correlations critical for making decisions regarding crop management, and breeding programs. R's flexibility allows for customization of analyses to suit specific agricultural contexts, making it an invaluable tool for optimizing agricultural practices and improving productivity.

Overall, the integration of R and RStudio has revolutionized data-driven decision-making processes, driving innovation, and advancing scientific knowledge in the field of agriculture.

## WORKSHOP DESCRIPTION

### Lectures:

- Getting started with R & RStudio
- Brief history and introduction to R & RStudio
- Installation of R and RStudio
- Requirements for Data analysis in RStudio
- Source for codes and script
- R for PCA, Correlation and cluster analysis
- Multi trait genotype idiom (MGIDI) using R
- R shiny-apps i.e. FieldHub, Circos etc.
- Analysing data from CRD, and RCBD using the ANOVA approach and post-ANOVA test through R.

## SCHEDULE

### Time and venue:

**February 26-29, 2024**

Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad, Pakistan

### Receipt of application:

Duly filled Application form along with copy of CNIC and two passport size photographs must reach the organizer by **February 19, 2024**. Application form can be downloaded from NIAB website ([www.niab.org.pk](http://www.niab.org.pk)). Advance copy of application as scan can be sent by email ([mrashid\\_niab@yahoo.com](mailto:mrashid_niab@yahoo.com)).

### Registration Fee:

Students: Rs. **3000/-**

Researchers/Faculty members: Rs. **4000/-**

### Award of certificates:

Certificates will be awarded to all participants.

### Travel & accommodation:

The nominating institutions/participants themselves shall arrange and bear the cost of travel and stay.

Working lunch will be available at NIAB Officers cafeteria on cash payment.