ICAR–INDIAN AGRICULTURAL RESEARCH INSTITUTE, NEW DELHI

Online Training Programme on

Advanced Data Analytics and Impact Assessment in Agricultural Research

Hands-on training in R, from foundations to advanced statistical and econometric modelling,
and in Stata for rigorous impact assessment methods

16 – 27 NOVEMBER 2026 • 10 DAYS

MODE	SESSION TIMINGS	REGISTRATION FEE
Virtual (Zoom Platform)	2:30 PM – 5:30 PM (IST)	Rs 1500 (all participants)

PATRONAGE & COURSE TEAM

CHIEF PATRON
Dr Ch. Srinivasa Rao
Director & Vice-Chancellor
ICAR–IARI, New Delhi

CO-PATRON
Dr Viswanathan Chinnusamy
Joint Director (Research)
ICAR–IARI, New Delhi

COURSE DIRECTOR
Dr Alka Singh
Head, Division of Agricultural Economics

COURSE COORDINATORS
Dr Chiranjit Mazumder
Dr Mrinmoy Ray
Dr Renjini V. R.
Division of Agricultural Economics & A.K.M.U

Strengthening analytical skills • Advancing agricultural research • Enabling evidence-based policy

Organised by the Division of Agricultural Economics | Queries: head_eco@iari.res.in

ABOUT THE PROGRAMME

Evidence-based agricultural research today demands two complementary skills: modelling complex data with modern statistical and econometric tools, and establishing the credible causal effect of technologies, programmes and policies. This ten-day online programme brings both together in a single, hands-on course.

The first five days cover data discovery and a complete analytical workflow in R, including exploratory analysis, regression, discrete-choice, panel-data, multivariate and time-series modelling. The final five days cover Stata and applied impact assessment, including Propensity Score Matching, Difference-in-Differences, instrumental variables, systematic literature review and meta-analysis. Every session is practice-oriented and uses agricultural datasets.

10
TRAINING DAYS
Five days of data discovery and R analytics, followed by five days of Stata.

2
ANALYTICAL TRACKS
Statistical and econometric analysis in R and impact assessment in Stata.

20
EXPERT SESSIONS
Faculty and scientists of ICAR–IARI, IASRI and NIAP, New Delhi.

WHO SHOULD ATTEND

- **Scientists, faculty members and research professionals** of ICAR institutes, State and Central Agricultural Universities, UGC-recognised universities and allied research organisations.
- **M.Sc. and Ph.D. research scholars** in Agricultural Economics, Extension, Statistics, Agribusiness, Economics and allied social sciences.

PRE-REQUISITES & MODE OF DELIVERY

Prior knowledge

A Preliminary understanding of Basic Econometrics, as well as R software and Stata, is preferred

What you need

A laptop with R and RStudio installed. A trial version of Stata will be provided.

Sessions & certificate

Live Zoom sessions pairing a concept lecture with a guided exercise.

EXPECTED LEARNING OUTCOMES

- Build reproducible data workflows in R
- Estimate and diagnose regression models
- Apply discrete-choice and panel-data methods
- Model and forecast agricultural time series
- Apply multivariate analytical methods in R
- Manage and analyse data confidently in Stata
- Design credible counterfactual evaluations
- Apply PSM and IV methods
- Conduct SLR and meta-analysis
- Translate results into policy-relevant outputs

TRAINING SCHEDULE — 10 DAYS

Daily window 2:30 – 5:30 PM (IST)

Date	Time (IST)	Session	Resource Person
MODULE I • R FOUNDATIONS, DATA MANAGEMENT AND CORE ECONOMETRICS			
Day 1 Mon 16 Nov	2:30–3:30	Inaugural session with the Chief Patron, Co-Patron and Course Director	Dr Ch. Srinivasa Rao , ICAR–IARI Dr P K Joshi, President AERA Dr Viswanathan C ,ICAR–IARI
	4:00–5:30	Data Discovery for Agricultural Research: government, institutional and global databases	Dr Alka Singh, ICAR–IARI
Day 2 Tue 17 Nov	2:30–4:00	Descriptive statistics, exploratory data analysis and visualization in R	Dr Chiranjit Mazumder, ICAR–IARI
	4:00–5:30	Hypothesis testing, ANOVA and designed experiments in R	Dr Amrender Kumar, ICAR–IARI
Day 3 Wed 18 Nov	2:30–4:00	Linear regression: estimation, assumptions and diagnostics	Dr Chiranjit Mazumder, ICAR–IARI
	4:00–5:30	Discrete-outcome models: Logit, Probit, Tobit in R	Dr. Mrinmoy Ray, ICAR–IARI
MODULE II • ADVANCED STATISTICAL AND ECONOMETRIC MODELLING			
Day 4 Thu 19 Nov	2:30–4:00	Panel data: fixed effects, random effects and Hausman test	Dr Mrinmoy Ray, ICAR–IARI
	4:00–5:30	Multivariate analytics: PCA, factor analysis and clustering in R	Dr Mrinmoy Ray, ICAR–IARI
Day 5 Fri 20 Nov	2:30–4:00	Time-series forecasting: ARIMA, ETS with Hands on in R	Dr Mrinmoy Ray, ICAR–IARI
	4:00–5:30	Time-series forecasting: ARCH/GARCH models	Dr Mrinmoy Ray, ICAR–IARI
MODULE III • STATA FOR APPLIED ECONOMIC ANALYSIS AND IMPACT ASSESSMENT			
Day 6 Sat 21 Nov	2:30–4:00	Introduction to Stata: do-files, data management, graphics	Dr Nithyashree M. L., ICAR–IARI
	4:00–5:30	Hands-on session in Stata using agricultural data	Dr Nithyashree M. L., ICAR–IARI
Day 7 Mon 23 Nov	2:30–4:00	Impact assessment: counterfactuals and identification	Dr Aditya K. S., ICAR–NIAP
	4:00–5:30	Propensity Score Matching and balance diagnostics	Dr Aditya K. S., ICAR–NIAP
Mon 24 Nov		Holiday	
Day 8 Wed 25 Nov	2:30–4:00	Difference-in-Differences and event-study designs	Dr M. Balasubramanian, ICAR–IARI
	4:00–5:30	Hands on	
Day 9 Thu 26 Nov	2:30–4:00	Instrumental variables and endogenous switching regression	Dr Harish H.R. , ICAR-IARI
	4:00–5:30	Hands on	
Day 10 Fri 27 Nov	2:30–4:00	Systematic Literature Review (SLR) and Meta-Analysis	Dr Praveen K. V., ICAR–IARI
	4:00–5:00	Emerging issues in Agriculture research	Dr Smita Sirohi, ICAR National Professor, MS Swaminathan Chair Dr Anjani Kumar, Secretary, AERA
	5:00–5:30	Participants' feedback and valedictory session	Course Director and course team

BANK ACCOUNT DETAILS FOR FEE REMITTANCE

Account Holder : **Director, ICAR–IARI**
Bank : **Canara Bank**
Branch : **IARI, Pusa Campus, New Delhi**
Account Number : **90293050000017**
IFSC Code : **CNRB0019029**

Retain the transaction reference number — it must be entered in the registration form.

Scan to register
forms.gle/mGkbAnfrwxoV2szg6
Last date: 5 November 2026

Seats are limited. Selection is first-come, first-served, with preference to applicants in agricultural economics and allied social sciences.

Contact: Dr Alka Singh, Course Director & Head, Division of Agricultural Economics • head_eco@iari.res.in

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