सत्यमेव जयते

भाकृअनुप
ICAR

# Indian Council of Agricultural Research

## Sponsored

# Winter School

on

## Integrated Breeding Approaches to Bring Climate Resilience and Accelerated Genetic Gain in Dryland Crops

**30 December 2025 – 19 January 2026**

**Organised by:**

## Rani Lakshmi Bai Central Agricultural University

**Jhansi-284003, Uttar Pradesh**

## About the University:

The Rani Lakshmi Bai Central Agricultural University has been established as an "Institution of National Importance" under Department of Agricultural Research and Education (DARE) by an Act of Parliament (Act No. 10 of 2014) in 2014. This university has been named in the memory of great freedom, queen of Jhansi Late Rani Lakshmi Bai. The objectives of the university are to impart education in different branches of agriculture and allied sciences, undertake research in agriculture, programmes of extension education and promote linkages with national and international educational institutes. The University headquarter is at Jhansi located in Bundelkhand region. The university has established different constituent colleges, namely: College of Agriculture, College of Horticulture & Forestry at Jhansi in Uttar Pradesh and College of Veterinary & Animal sciences, College of Fisheries at Datia in Madhya Pradesh. The third campus of the university is being established at Morena (MP) to house College of Horticulture.

## Course Background:

Climate change poses a serious threat to global food and nutritional security, particularly in dryland ecosystems characterized by erratic rainfall, temperature fluctuations, and frequent droughts. These fragile regions support millions of smallholder farmers dependent on rainfed agriculture, where climatic stresses often lead to yield instability and reduced productivity of crops such as oilseeds, pulses, cereals, millets, coarse grains and pseudo cereals. Developing climate-resilient varieties with enhanced productivity, stability, and adaptability is therefore crucial for sustaining agricultural growth and ensuring food security. Integrated breeding approaches that combine conventional breeding with genomics, speed breeding, transgenic, genome editing, phenomics and bioinformatics have transformed modern crop improvement.

The training programme on "Integrated Breeding Approaches to Bring Climate Resilience and Accelerated Genetic Gain in Dryland Crops" aims to build the capacity of young faculties/scientists and researchers in advanced breeding tools and techniques. Through hands-on sessions in molecular breeding, phenotyping, and bioinformatics, participants will gain practical skills to address challenges in dryland agriculture.

## Course Content:

Participants will be provided theoretical insights on Innovative breeding approaches, Plant Genetic Resources, Pre-breeding concept, Plant phenomics, Molecular Mapping, Hybrid breeding, Next generation sequencing, Speed breeding CRISPR-Cas System etc. and practical hands-on training on advance molecular techniques like DNA and RNA isolation/quantification, Construction of c-DNA library and RT PCR, gel electrophoresis, software applications for association mapping and phenotyping techniques. Besides this, they will be given opportunities to learn high end equipments like AAS, HPLC, GLC, whole grain analyzer, NIR, NMR and Advance Research Microscopy etc.

## Travel, Boarding and lodging:

The boarding/lodging and travel expenses of the selected participants will be borne under training programme budget as per ICAR guidelines. Accommodation will be provided at the University Guest house. The travel expenses will be restricted to maximum AC-II class train or state road transport bus fare by the shortest route as per GOI norms. Participants are required to produce tickets in support of their claim. Participants are advised to make their return reservations well in advance. The reimbursement will be made as per ICAR guidelines. Participants are requested not to bring any family member along with them.

**Registration fee:** There is no registration fee for the selected participants.

**How to reach the University:** RLBCAU, Jhansi is located on NH-75, Gwalior Road, Near Pahuj Dam in Jhansi district about 12 km from the Virangana Lakshmi Bai Jhansi Railway Station (Station code: VGLJ) and 15 km from the Jhansi Bus Stand.

## Eligibility:

Young faculty/scientist not below the rank of Assistant Professor/Scientist or equivalent from SAUs/CAUs/ICAR/National Institutes in the disciplines of Genetics & Plant Breeding/Biotechnology/Molecular Biology/Plant Physiology/Seed Science & Technology Vegetable breeding or in any other allied subject in Agriculture, are eligible to apply. A total 25 candidates will be selected for this course. The selection of the candidates will be made by a Screening Committee.

## How to apply?

Interested and eligible participants are advised to fill nomination proforma which can be downloaded from the university website (https://rlbcau.ac.in). Upload dully filled, signed by competent authority/Director/Head of the institution and scanned nomination proforma at the given registration link or mail it to email id on **training.gpb.rlbcau@gmail**.com on or before last date (12th December 2025). Selected candidates will be informed. They need to send their acceptance along with travel plan through email.

## Registration link:

https://docs.google.com/forms/d/e/1FAIpQLSdPg37vS6DliXuZyccNGXiAxnhvnyeiT-FUC7emWL98HFHqag/viewform?usp=preview

## Important Dates:

**Last date for submission of application : 10 December 2025**

**Intimation of selected participants : 12 December 2025**

**Chief Patron** : **Dr. A. K. Singh,** Vice-Chancellor, RLBCAU, Jhansi

**Patron** : **Dr. R. K. Singh,** Dean, College of Agriculture, RLBCAU, Jhansi

**Course Director** : **Dr. S. K. Chaturvedi,** Director Research, RLBCAU, Jhansi

**Course Cordinators** : **Dr. Rakesh Choudhary,** Scientist (Sr. Scale) -G&PB, RLBCAU, Jhansi
**Dr. Ashutosh Kumar,** Asst. Professor (Crop Physiology), RLBCAU, Jhansi
**Dr. Jitendra Kumar Tiwari,** Assoc. Professor & Head (G&PB), RLBCAU, Jhansi
**Dr. Rumana Khan,** Asst. Professor (G&PB), RLBCAU, Jhansi

**Course Co-Cordinators** : **Dr. M. K. Singh,** Asst. Professor (G&PB), RLBCAU, Jhansi
**Dr. Ashutosh Singh,** Asst. Professor (Biotechnology), RLBCAU, Jhansi
**Dr. S. K. Shukla,** Asst. Professor (Biochemistry), RLBCAU, Jhansi

## Contact Persons:

### Course Director

**Dr. S. K. Chaturvedi,** Director Research,
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### Course Cordinators

1. **Dr. Rakesh Choudhary,** Scientist (Sr. Scale) - G&PB
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Mobile: +91-8057072701

2. **Dr. Ashutosh Kumar,** Asst. Professor (Sr. Scale) Crop Physiology
Department of Basic Science
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Mobile: +91-9646353901

**All correspondence should be made on email id - training.gpb.rlbcau@gmail.com**

## Application form for ICAR Winter School

On

## "Integrated Breeding Approaches to Bring Climate Resilience and Accelerated Genetic Gain in Dryland Crops"

(30 December, 2025 – 19 January, 2026)

| | | |
|---|---|---|
| 1. Name (in Block letter) | | Photo |
| 2. Gender | | |
| 3. Date of Birth | | |
| 4. Designation | | |
| 5. Affiliation details with Address | | |
| 6. Mobile & Email | | |
| 7. Permanent address | | |

### 8. Educational Qualifications (From Graduation Onwards)

| Degree | Subject | Year | Percentage/Division | University |
|---|---|---|---|---|
| Graduation | | | | |
| Post Graduation | | | | |
| Ph.D. | | | | |

### 9. Teaching/Research experiences (post held during last 5 years)

| S. No. | Post held | Affiliation | From | To |
|---|---|---|---|---|
| | | | | |
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| | | | | |

### 10. Summer/winter school/training attended during last 3 years

| S. No. | Name of training | Venue | Period |
|---|---|---|---|
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| | | | |
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**Signature of the Applicant**

### CERTIFICATE

It is certified that the information furnished has been verified and found correct. Recommendation of the forwarding Authority/Institution

**Signature of the competent authority with official seal**

**Date:**

**Place:**

**Please note:** Upload the duly filled and scanned application form while submitting the online registration.