



Virtual Event - Regional Training Course on Field Experimental Design and Data Analysis for the Advancement of Mutant Populations

Hosted by

The International Atomic Energy Agency
IAEA Headquarters

21 November to 2 December 2022

Ref. No.: TN-RER5024-2205512

Information Sheet

Purpose

The purpose of the event is to train participants in statistical rigor in field-testing for the selection of improved varieties, experimental design and statistical analysis to be applied in a mutation breeding program; in practical applications of statistical methodologies covered in mutation breeding; and in the use of open-source software for field experimental data analysis in single and multi-location trials.

Working Language(s)

The working language(s) of the event will be **English**.

Deadline for Nominations

Nominations received after **21 October 2022** will not be considered.

Project Background

The TC project RER5024 is aimed at supporting the production of major food crops with higher yields, improved quality, and better resilience to climate change through mutation breeding and combined biotechnologies to contribute to food security in Europe and Central Asia.

Scope and Nature

Kindly note that the training will be held from 10:00-15:00 (Central Europe Time).

This virtual training course will provide theoretical (lectures), case studies and practical demonstrations (software use) related to experimental design for early and advanced generation testing; data recording, and statistical analysis of field experiments for mutant populations advancement, multilocation trials, GxE, and stability analysis using open-source software. Discussion between participants and the trainer will be encouraged. Participants will be tested at the end of the training to ensure their engagement with the course.

Online pre-assessment survey will be shared to participants to understand their background on data science experience in plant breeding and their expectations from the course.

The training will be divided in two weeks.

- Week 1 will focus on statistical analysis, experimental design and applications used for mutant populations advancement.
- Week 2 will focus on an update in statistical methods for data analysis using open-source software.

Expected Outputs:

Developed capacities on field experimental design and data analysis for the advancement of mutant populations in the Member States from Europe and Central Asia.

Participation

The virtual regional training course is open to up to two candidates per Member States participating in the TC project RER5024. A maximum of 25 participants will be accepted for the event.

Participants' Qualifications and Experience

The regional training course is designed for breeders, agronomists, biologists, and plant pathologists from Member States involved in mutation breeding programmes with at least 2-year experience in phenotypic data analysis for plant research who have taken university-level and/or postgraduate level courses which covered basic statistics methods and experimental design in agriculture. Kindly note that

candidates are expected to submit the evidence for this. Candidates currently in charge of performing phenotypic evaluations and design field experiments in mutation breeding research are especially encouraged to apply.

During the training course participants should have a laptop that can connect to internet, download, and run open-source statistical software.

Application Procedure

Candidates wishing to apply for this event should follow the steps below:

1. Access the InTouch+ home page (<https://intouchplus.iaea.org>) using the candidate's existing Nucleus username and password. If the candidate is not a registered Nucleus user, she/he must create a Nucleus account (<https://websso.iaea.org/IM/UserRegistrationPage.aspx>) before proceeding with the event application process below.
2. On the InTouch + platform, the candidate must:
 - a. Finalize or update her/his personal details, provide sufficient information to establish the required qualifications regarding education, language skills and work experience ('Profile' tab) and upload relevant supporting documents;
 - b. Search for the relevant technical cooperation event (EVT2205512) under the 'My Eligible Events' tab, answer the mandatory questions and lastly submit the application to the required authority.

NOTE: Completed applications need to be approved by the relevant national authority, i.e. the National Liaison Office, and submitted to the IAEA through the established official channels by the provided designation deadline.

For additional support on how to apply for an event, please refer to the [InTouch+ Help page](#). Any issues or queries related to InTouch+ can be addressed to InTouchPlus.Contact-Point@iaea.org.

Should online application submission not be possible, candidates may download the nomination form for the training course from the [IAEA website](#).

Administrative and Financial Arrangements

Nominating authorities will be informed in due course of the names of the candidates who have been selected, and will at that time be informed of the procedure to be followed with regard to administrative and financial matters.

Selected participants who indicate their need, will receive financial support to contribute to the expenses of their costs for internet connection for the duration of the event in line with IAEA rules and procedures.

Disclaimer of Liability

The organizers of the event do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in approving his/her participation, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.

IAEA Contacts

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