



Regional Training Course on Molecular Markers and Tilling Applications for Crops Improvement

Hosted by

The Government of Poland

through the

University of Silesia

Katowice, Poland

25 September to 6 October 2023

Ref. No.: TN-RER5024-2301106

Information Sheet

Purpose

The purpose of the event is to train the participants on molecular markers and tilling applications for crops improvement.

Working Language(s)

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

Deadline for Nominations

Nominations received after 1 July 2023 will not be considered.

Project Background

The 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. Nuclear technology will be used for generating new beneficial mutations followed by mutation breeding to develop improved lines and varieties. Increasing drought and salt tolerance is the target of the project, together with increase of productivity and other traits available.

The overall objective of the project is to support 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. The expected outcome is the enhanced productivity and resilience to climate change of major food crops in the region.

Scope and Nature

This training will provide practical/theoretical knowledge related to molecular techniques that can be used in conjunction with induced mutations for genetic improvement in crop breeding. The course will comprise practical and theoretical sessions on:

- Molecular approach to speed selection of mutants;
- Marker assisted breeding and molecular marker application in mutation breeding;
- Genotypic screening for desired mutations in genes of interest;
- The use of DNA markers, DNA sequencing and targeted induced local lesions in genomes (TILLING) in applications related to the improvement of mutant populations generated using nuclear techniques and chemical agents.

Participation

The Member States participating in the TC project RER5024 are invited to nominate up to two candidates with qualification/experience corresponding to the requirements described under “Participants’ Qualifications and Experience”.

The IAEA encourages female researchers and young researchers to apply for this training.

Participants' Qualifications and Experience

The participants of the training course should be currently engaged in mutation breeding and have basic knowledge in molecular techniques. Laboratory experience on molecular breeding is an advantage. Participants should have a strong affinity and interest in modern plant breeding methods involving, induced mutation, mutation screening. Nominated candidates should be plant breeders, agronomists, or biologists currently involved in the use of molecular techniques in conjunction to mutation breeding. Applicants should include a detailed description on how the knowledge acquired in this fellowship will contribute to their mutation breeding research.

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. Download and complete the [Designation of Beneficiary and Emergency Contact Form](#), and upload to InTouch+ ('Profile' tab under the personal section) specifying the document name. If already provided, kindly discard this step; and
 - c. Search for the relevant technical cooperation event (EVT2301106) 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](#).

NOTE: A medical certificate signed by a registered medical practitioner dated not more than four months prior to starting date of the event must be submitted by candidates when applying for a) events with a duration exceeding one month, and/or b) all candidates over the age of 65 regardless of the event duration.

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 will receive an allowance from the IAEA sufficient to cover their costs of lodging, daily subsistence and miscellaneous expenses. They will also receive either a round-trip air ticket based on the most direct and economical route between the airport nearest their residence and the airport nearest the duty station through the IAEA's travel agency AX Travel Management, or a travel allowance, or they will be reimbursed travel by car/bus/train in accordance with IAEA rules for non-staff travel.

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.

Note for female participants

Any woman engaged by the IAEA for work or training should notify the IAEA on becoming aware that she is pregnant.

The Board of Governors of the IAEA approved new International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The Standards deal specifically with the occupational exposure conditions of female workers by requiring, inter alia, that a female worker should, on becoming aware that she is pregnant, notify her employer in order that her working conditions may be modified, if necessary. This notification shall not be considered a reason to exclude her from work; however, her working conditions, with respect to occupational exposure shall be adapted with a view to ensuring that her embryo or foetus be afforded the same broad level of protection as required for members of the public.

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