

CROPINNO

STEPPING UP SCIENTIFIC EXCELLENCE AND INNOVATION CAPACITY FOR CLIMATE-RESILIENT CROP IMPROVEMENT AND PRODUCTION

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D1.3 Plan for joint training course



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EXECUTIVE SUMMARY

Plan for joint training course is a deliverable of the CROPINNO project, funded as a HORIZON Coordination and Support Action by the European Commission under its Horizon Europe (HE) Programme. It is produced in the scope of Task 1.4 within Work Package 1: Strengthening scientific capacity. This document describes a plan for joint training course on innovative approaches to climate-resilient crop improvement and production organized by IFVCNS and supported by CROPINNO partners.

Plan for joint training course was drafted by IFVCNS, which is the leader of T1.4, with input from all partners.

1. INTRODUCTION

The aim of the Work Package 1 was to set up the basis for future excellence of IFVCNS in the use of multi-omics and phenotyping tools in crop improvement and to contribute to knowledge transfer and the increased application of these tools in crop improvement programs not only at IFVCNS, but also in the Western Balkans region. In this context, the main activity of the Task 1.4 was to establish a plan for a regular joint training course on innovative approaches to climate-resilient crop improvement and production. The course will be integrated into IFVCNS outreach activities and offered to PhD students, postdocs, researchers and industry professionals not only from Serbia, but also from the Western Balkans and other parts of the world, with focus on associated and developing countries.

2. BACKGROUND

The course under the working title “Advances in Plant Breeding, Trial Design and Analysis” will be dedicated to the field of crop improvement and will be taught by experienced researchers from IFVCNS and CROPINNO partners as to cover both classical and modern breeding tools and approaches. The course is planned specifically to address the limited availability of trained plant breeders emerging from academic programs. It will offer an opportunity for breeders to expand their knowledge on new strategies and technologies that are applied in both experimental and commercial breeding programs.

The course will aim to develop the skills and abilities of breeders both in academia and industry to enable them to enhance their breeding strategies and to become more valuable contributors to larger breeding programs. It will be primarily targeted towards personnel currently involved in plant breeding programs who would like to broaden their expertise, but also towards persons who have a background in biological or plant sciences and who wish to become plant breeders would also benefit from this course. To provide a personalized learning environment, the number of participants in the course will be limited to up to 30.

3. CURRICULUM



The curriculum will be developed by IFVCNS with input from CROPINNO partners and will be continuously adapted to reflect the new developments in the area of plant breeding. The following topics will be covered:

- Pre-breeding and Use of Genetic Resources
- Line Breeding: Bulk, Pedigree, Backcross
- Hybrid Breeding
- Breeding for Stress Resilience
- Tissue Culture in Breeding
- Molecular Breeding
- High-throughput Phenotyping
- Seed Production, Biology and Quality
- Field Trial Data Analysis
- Integrated Data Analysis

The lectures will be combined with visits to breeding nurseries and experimental fields at IFVCNS, as well as visits and demonstrations in the labs, depending on the course.

The course will be held in a one-week session and will take place at IFVCNS. In-person attendance will be required to receive a certificate of completion.

4. SUSTAINABILITY

The planned joint course would need to be financially self-sustainable, as to ensure it is held after the conclusion of CROPINNO. In order to achieve this, the course would need efficient organization and financial planning.

In order to efficiently manage the costs, the course would be held every second year at one location, that is at IFVCNS facilities. Since IFVCNS has 600 ha of experimental and breeding fields, there will be no extra costs for setting up the field visits. Furthermore, since most of the lecturers would come from IFVCNS, this will minimize the costs of travel and accommodation for lecturers from other institutions.

The main source of income for the course would be registration fee, that would cover all course materials, certificate, lunches and coffee breaks during the course, as well as travel and accommodation costs for the lecturers. Additional finances will be provided by applying to relevant calls for co-funding of scientific events, either by state or provincial authorities.

5. IMPACT

The joint training course is a key CROPINNO initiative to strengthen capacity in climate-resilient crop improvement. It will also promote networking among researchers, students and industry professionals, supporting knowledge exchange and long-term partnerships. Designed to be financially self-sustainable through registration fees and potential co-funding, the course



will remain high-quality, accessible and relevant over time. Overall, it will strengthen scientific capacity at IFVCNS and partner institutions, contribute to the education of the next generation of plant breeders with cutting-edge skills and advance climate-smart agriculture in the Western Balkans and beyond.

