



COURSE REGISTRATION FORM

Teacher	Marina Putnik-Delić
University	University of Novi Sad, Faculty of Agriculture
Course	Plant water relations - theoretical and practical basis
Target	Agricultural Middle Schools
Type	online
Duration	2 days - 16 hours

Description

The course is designed to help school teachers to reduce the number of theoretical classes and increase number of practical classes by introduction of additional experimental work in the area of plant physiology. This approach will include active learning and will allow students to be more independent and self-confident. Theoretical and practical bases of this online course will employ modern teaching methods, make classes more interesting, with minimal investments. Students will be trained to make conclusions based on practical training, learn to actively engage in group work and acquire basic knowledge about plant water relations. The final aim is to enable students to perform various tasks related to studies in plant physiology applicable in agricultural production.

Contents

Objectives

Training school teachers to provide students with theoretical and practical knowledge (experimental exercises) adapted to equipment and other conditions existing in secondary schools:

- acquiring factual knowledge of plant physiology, especially water regime
- develop the skills of using the microscope and the basic techniques of working in laboratory (pipetting, measurement, ...)
- adoption of methods related to the topic- experimental procedures
- getting used to work in groups- teamwork
- exercising ability to analyze experimental results and draw conclusions

Activities

School teachers will attend the online course. They will be introduced to the topics which they may later, to the same or to a lesser extent incorporate into their classes. Different aspects of plant water relations will be represented and associated with examples and problems that really occur in agricultural production. They will be given a choice of experiments which they can perform under standard equipped school labs. These protocols are following a theory that is an integral part of the current curriculum of Ministry of Education for Biology classes. Teachers will be thought which theoretical knowledge their students should have as a

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Coordinator:
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prerequisite for performing experiments. During the course teachers will be supplied with tests by which they can access the level of student's theoretical and practical knowledge.

Materials

For the theoretical part of the course: computer

For the practical part of the course (experiments 1-4):

1. plant material, analytical balance, dryer;
2. internal epidermis of onion bulb leaf , razor blade, Petri dishes, pipettes, glass slides, microscope, tweezers;
3. potted plants, duct tape, aluminum foil, balance;
4. leaves of one dicotyledonous and one monocotyledonous plant (for example sugar beet and maize), colorless nail polish, transparent duct tape, glass slides, microscope