



AgriTech Solutions: Innovating VET for Sustainable Agriculture
AgriTech Solutions: Innovative VET for sustainable agriculture
AgriTech Solutions: Innovative VET for Sustainable Agriculture
2024-1-RS01-KA210-VET-000244168

REPORT

From the implementation of an activity for the needs of the project

Review of existing qualifications

Overview of the prevalence of sustainable agricultural practices, precision agriculture, organic farming, renewable energy sources and the use of technology in agriculture in the qualification curricula.

Teacher Sonja Slavkovic, Efremcho Nikolov

Place Skopje

Qualification Phytomedicine Technician

Short description

This qualification provides the student with the knowledge, skills and competencies to

- identifying pests and diseases of agricultural crops
- implementing plant protection measures, in accordance with the principles of integrated plant protection
- preparation of a plan for the protection of individual agricultural crops
- preparation and application of plant protection products
- providing advice on plant protection
- application of plant protection products
- work in agricultural pharmacies selling plant protection products
- preparation of a forecast for the occurrence of certain diseases and pests.

The need to develop this qualification arose from the results of the analysis of the Agriculture, Fisheries and Veterinary sector. In the part of the analysis that covered new trends in the sector, special emphasis was placed on the increasing interest of the domestic, and especially the foreign market, in

ecologically healthy products, appropriate support has been expressed for the agricultural policy to increase ecological products, the so-called precision agriculture which includes the precise use of water, fertilizers and chemical protection agents, the creation of smaller amounts of waste materials and smaller input in production. Following the guidelines from the analysis that define the areas in which investments should be made, education is of primary importance which should enable continuous monitoring of new technological achievements (selection, seed production, environmental



Funded by
the European Union





AgriTech Solutions: Innovating VET for Sustainable Agriculture
 AgriTech Solutions: Innovative VET for sustainable agriculture
 AgriTech Solutions: Innovative VET for Sustainable Agriculture
 2024-1-RS01-KA210-VET-000244168

environment, the selection of appropriate fertilizers, the right combination of pesticides, etc.), which can only be achieved through continuous education, upgrading, as a significant factor for success. Therefore, changes are necessary in the educational process, with an emphasis on the modernization of programs and their adaptation to global trends. Based on a review of the curricula in vocational subjects, it can be concluded that the technologies of sustainable agricultural practices, precision agriculture, organic agriculture, renewable energy sources and the use of modern technologies in agriculture are represented to a certain extent. This qualification has been prepared according to the conditions at the time of its preparation in 2019. During this period, most of the specific areas of interest to the project have not yet reached the current technological development. This qualification places the main emphasis on phytomedicine.

Proposal for improving the existing qualification in terms of the representation of sustainable agricultural practices, precision agriculture, organic agriculture, renewable energy sources and the use of technology in agriculture in the curricula of the qualification

Proposals for improving the existing qualification in terms of the representation of sustainable agricultural practices, precision agriculture, organic agriculture, renewable energy sources and the use of technology in agriculture in the curricula of the qualification are:

- To provide practical examples of the use of instruments in agriculture
- To develop more types of organic fertilizers and their use in organic production
- All areas should be processed through all modular units, because agricultural mechanization is part of all production technologies in agriculture
- To provide practical programs and examples for sustainable development in agriculture
- Develop more environmental protection measures
- In this modular unit Production of grapevine and fruit and planting material, all 5 areas can be represented, especially the use of technology in agriculture, precision agriculture and sustainable agricultural practices
- In this modular unit Agrotechnical, ampelological and pomotechnical measures for vines and fruit trees can be represented in all 5 areas, with special emphasis on the application of each of the areas
- In this modular unit Agroecology and Agrotechnics can be all areas with multiple teaching content are represented, especially the use of



Funded by
the European Union





AgriTech Solutions: Innovating VET for Sustainable Agriculture
 AgriTech Solutions: Innovative VET for sustainable agriculture
 AgriTech Solutions: Innovative VET for Sustainable Agriculture
 2024-1-RS01-KA210-VET-000244168

technology in agriculture, precision agriculture and sustainable agricultural practices

- To provide practical programs for the application of agrotechnical and other measures in agricultural production
- To provide practical programs for the application of agrotechnical and other measures in horticultural production
- To provide practical programs for the application of agrotechnical and other measures in floristry production
- To provide practical experiences in applying the principles and measures for disease protection in agricultural crops
- To provide practical experiences in applying the principles and measures for protection against pests in agricultural crops
- To provide practical experiences in applying methods for combating diseases, pests and weeds in cultivated plants
- To provide practical experiences in the application of means for protecting the plants
- To provide practical experiences in applying procedures and measures for integral protection against diseases, pests and weeds in cultivated plants
- To provide practical experiences in the application of integrated protection in gardening and floriculture
- To provide practical experiences in applying principles in integral protection against economically harmful insects in grapevines and fruit trees species
- To provide practical experiences in the application of integrated protection against the most important economically harmful insects in fruit growing
- To provide practical experiences in the application of integral protection against gray mold grape moth (*Polychrosis botrana*) in viticulture
- To provide practical experiences in the application of integrated pest management in agriculture
- In this modular unit Fundamentals of Organic Agricultural Production
 Emphasis should also be placed on sustainable agricultural practices, renewable energy sources and the use of technology in agriculture.
- In this modular unit Measures in Organic Plant Production, in addition to measures in organic production, emphasis should also be placed on sustainable agricultural practices, renewable energy sources and the use of technology in agriculture.
- To provide practical programs for the use of new technology for protection against more significant polyphagous pests in gardening and floriculture
- To provide practical programs for the application of new technology for the protection of fruit trees from diseases and pests



Funded by
the European Union





AgriTech Solutions: Innovating VET for Sustainable Agriculture
AgriTech Solutions: Innovative VET for sustainable agriculture
AgriTech Solutions: Innovative VET for Sustainable Agriculture
2024-1-RS01-KA210-VET-000244168

- To provide practical programs for the application of new technology for protection against diseases and pests of vines
- To provide practical programs for the application of integrated protection in horticultural crops
- To provide practical programs for the application of integrated pest management in floriculture crops
- To provide practical programs for the application of integrated protection in viticulture and fruit growing
- To provide practical programs for monitoring and forecasting the most important diseases in viticulture and fruit growing
- To provide practical programs for the application of integrated pest management in agriculture
- To provide practical programs for the application of appropriate technologies in organic production of agricultural and horticultural crops, vegetables, fruits, grapes, aromatic, medicinal and wild plants

In Skopje

Teachers

Date 05/31/2025

Sonja Slavkovic, Efremcho Nikolov



Funded by
the European Union

