

PLANNING AND ESTABLISHMENT OF A FRUIT TREE ORCHARD: AN INTRODUCTION TO INNOVATIVE CULTIVATION TECHNOLOGIES

Module purpose	The purpose of this module is to form the student's knowledge about the establishment of an orchard with the introduction of innovative cultivation technologies, the selection of the area, the preparation of the soil, the placement of fruit plants and the ability to carry them into practice.
Study results	After learning this module, the student should: 1) present the specifics of choosing a location and organizing the area, 2) carry out land preparation work to establish an orchard, plant placement in the orchard, and planting fruit trees, by introducing innovative cultivation technologies.
Module evaluation procedure	Acceptable module performance is the achievement of a satisfactory level of performance criteria for each outcome.
Learning Outcome 1	Acceptable module performance is the achievement of a satisfactory level of performance criteria for each outcome.
Execution criteria	1) performs site mapping, 2) presents the specifics of choosing a location for an orchard, 3) presents the specifics of organizing the orchard area.
Assessment form	The evaluation of the result will be carried out through testings and practical tasks. The student will be given questions on the selection of the site for the orchard and the characteristics of the area, and through the practical task, the slope, location, road network of the orchard area will be presented, based on topography, soil type, landslides and climatic conditions, to assess the location in relation to the suitability of the cultivation of fruit varieties. Program details of the result: - selection of the site for the orchard, relief of the area, stratification of slopes, soils and subsoils,

	<ul style="list-style-type: none"> - groundwater, the influence of large water bodies, - area of the orchard, distribution of species and varieties, division of the orchard into sections, road network, - orchard protective plantings. <p>The achievement of the result is considered satisfactory if the student mainly answers the questions and completes the practical task.</p>
Learning Outcome 2	To carry out soil preparation for the orchard establishment, the placement of plants in the orchard, fruit trees planting with introducing innovative cultivation technologies.
Execution criteria	<ol style="list-style-type: none"> 1) presenting the the soil preparation for an orchard, by using modern technical solutions and mechanized systems, 2) performing the soil preparation for an orchard, 3) presenting the placement of fruit plants in the orchard, 4) performing the planting of fruit plants, by using of modern technical solutions and mechanized systems.
Assessment form	<p>The assessment of the result will be carried out through tests and practical tasks. The student will be given questions on the preparation of seedlings, planting dates, methods, techniques, and will be instructed to carry out preparatory work: land melioration, preparation of holes, seedlings, and planting fruit plants.</p> <p>Program details of the result:</p> <ul style="list-style-type: none"> - soil preparation, - using of technical solutions, mechanized systems, - forms of fruit plant placement in the garden: rectangular, quadrangular, chess, horizontal (relief), distance between fruit plants, plot layout, - planting dates, preparation of seedlings, planting methods, planting techniques. <p>The achievement of the result is considered satisfactory if the student completes the tasks.</p>
Methodology and resources	<p>The training of the result is carried out through theoretical and practical classes. Practical training and assessment of the student's practical abilities will be organized in the employer's garden. It is necessary to have appropriate educational materials: methodological instructions, reference books, didactic materials, videos, tests, appropriate tools: tool sharpeners, shovels and other necessary tools and accessories.</p>

“FRUIT GARDEN CARE”	
Purpose	The goal of this topic is to develop the student knowledge about the features of inter-row and inter-plant cultivation in an orchard, caring for a young orchard, and the ability to apply the skills in practice.
"PRUNING AND SHAPING OF FRUIT TREES"	
Purpose	The goal of this topic is to develop the student knowledge about the timing of pruning and shaping fruit trees in all fruit-growing regions, the use of techniques and solutions, and the specifics of subsequent care and cultivation, and the ability to apply the skills in practice.
“FERTILIZATION AND NUTRITION”	
Purpose	The goal of this topic is to develop in the student knowledge about the types of fertilizers, methods of fertilization and nutrition, norms and deadlines, and the ability to apply them in practice.
“DISEASE AND PEST MANAGEMENT”	
Purpose	The goal of this topic is to develop the student knowledge about the types of diseases and pests of fruit trees, methods of control, and the ability to apply them in practice.
“HARVEST AND POSTHARVEST PROCESSING”	
Purpose	The goal of this topic is to develop the student knowledge of forecasting harvest dates, preparing and implementing harvests postharvest processing depending on the type of fruit, and the ability to apply them in practice.