

FORMATION OF INDEPENDENT OBSERVATIONS OF SOIL SCIENCE TEACHING IN AGRICULTURAL TECHNICAL SCHOOLS

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Abstract. *In the article, analyses are presented on how to conduct independent work of soil scientists at a correct and high-quality level in the training of highly qualified soil scientists in technical schools, and recommendations based on the instructions for independent observation work are given.*

Keywords: *independent observation, soil section, genetic layers, experiment, humus, accumulator, reconnaissance.*

At present, special importance is attached to the formation of young people, who are the builders of society, as spiritually rich, morally mature, intellectually developed, highly educated and mature individuals.

One of the urgent problems of education in the teaching of soil science is the formation of the student's cognitive independence. It is of the utmost importance that students move from mastering the knowledge they have acquired to independent learning activities, taking into account the unique characteristics and capabilities of each student.

In the teaching of soil science, conducting scientific research and independent observations of students as a continuation of educational work creates great opportunities for them to receive systematic education and to develop their creative abilities.

Extracurricular independent educational activities for teaching soil science are diverse and, like other subjects, they are divided into three groups:

1. individual training;
2. group training;
3. public training.

Individual classes are conducted individually with some students who are interested in soil science.

Such activities include reading scientific and popular books on soil science, studying the creative work of famous soil science specialists, studying the types of the soil of the place where one lives, determining the genetic layers by making a cross section of the soil, and clarifying the description of the layers. From plant science, they do works such as autumn plowing of cotton fields, preparation of land and seed for planting, planting, working between rows of cotton, measures to fully harvest the seed, uniting, and determining how many plants to leave per meter for the thickness of cotton bushes per hectare, and working between rows of cotton.

Conducting independent observations forms students' interest in learning, deepens their knowledge, increases their activity and teaches them to work independently. Most importantly, they develop skills and competences.

Independent individual observations are carried out in the educational field of the technical school or in the farm fields.

The content, purpose, procedure and results of observation are always recorded in a special diary. For example, cuttings in the soil are carried out in the following order. 1. Choosing a place for the soil section. Usually, it is carried out in farm fields. First, reconnaissance work is performed. Then, a section of soil is placed on the designated area. The soil cross-section is placed until the seepage water comes out if the agricultural soil cover is in the hydromorphic zone, and until the soil parent rock if it is in the automorphic zone. Cutting is performed on the basis of existing accepted general guidelines.

2. At the next stage, the following are performed and they are formalized and recorded:

- Determination of upper layer **A**;
- Determination of the passing layer **B**;
- Determination of subsoil parent rock layers **C**;
- depending on the development of soil formation processes, each layer can be divided into several layers, i.e. observation of dividing **A** layer into **A₀** - the forest understory layer; **A₁** - humus accumulator layer; **A₂** - wash or eluvial layer;
- Monitoring of **A** and **B** layer aggregate-soil thickness.
- describing the mother rock - **C** layer and determining its type.

It is important for the student's activity, assigning specific tasks to them, and the teacher's supervision of their implementation for the complete completion of individual work outside of class.

It is important for students to read books and journals in this field and to make full use of current scientific and technical achievements in the effective implementation of the above-mentioned extracurricular activities. In addition, independent observation of the analysis based on the comparison of the data in this regard with the data of foreign literature and recording in the work book will give high results and will be the basis for future work.

At the end of the study, students formalize the results obtained. This process is performed at the expense of the cameral period. The obtained information is summarized and relevant conclusions are formalized. They prepare presentations on research results.

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