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DOI: <https://doi.org/10.30525/978-9934-26-295-1-144>

BIOECONOMIC SCIENCE IN HIGHER EDUCATION INSTITUTIONS

The economy laws determine the necessity for systematic reproduction of productive forces, improvement of the entrepreneurial activity implementation mechanism and deepening of industrial relations that arise between economic entities in the process of production, distribution, exchange and consumption of public goods. Progressive socio-economic transformations are carried out under the requirements of a coherent structure existence, which elements interact on the principles of dynamic development of productive forces, coordination and effective organization of industrial relations provided their organical combination. At the same time, productive forces form the material and technical component as well as living labor, while production relations ensure the interaction of people regarding the production, distribution, exchange, consumption of products and services.

In this context, economic activity based on renewable resources occupies a prominent place, as it creates a competitive organic business environment under the requirements of socially responsible society development. The necessity for the implementation of sustainable ideas determines the need for the formation of professional competencies among students of higher educational institutions since the deepening of knowledge in bioeconomic science will allow the successful implementation of the acquired experience in practical activities. In this turn, taking into account the postulates of scientists and their controversial views on the formation of the bioeconomic concept, the achievement of programmatic results requires streamlining the applied content of bioeconomic disciplines. The most controversial point among scientists is the issue of organic production as a key direction of the bioeconomy. For example, V.V. Baidala proves that bioeconomy and organic farming go hand in hand, but they are not interdependent concepts, since bioeconomy is closely related to genetically modified organisms, which are unacceptable in organic production [1]. At the same time, F.-T. Gottwald and A. Krätzer [2] express critical opinions regarding gene technology and the development of genetically modified agricultural crops, as they believe that people intervene in complex forms of life that they do not fully understand. Instead, a number of Ukrainian scientists, in particular V. Krutyakova, T. Babynets, V. Targonya, O. Bondarenko [3], propose to consider organic farming as one of the priority areas of the bioeconomy. A.M. Proshchalykina does not distinguish between the concepts of organic or bioproduction in her writings, asserting organic agriculture as a component of bioeconomy [4].

Summarizing the opinions of scientists, it is worth recalling that with the introduction of civilizations on the man-made path of development, the usual order of life changed rapidly, which provoked the need to change the way people manage and contributed to the increase in the use of mineral fertilizers, pesticides, plant protection products, and transgenic crops. The majority of agricultural producers who are oriented to foreign markets; enterprises that produce food products for their own countries, for the sake of significant profits, still use a significant amount of dangerous chemicals at all stages of the production process, starting with the processing of primary raw materials (agricultural crops) and ending with the

addition of synthetic (artificially synthesized) impurities (often labeled by manufacturers as "identical to natural") into the final product.

It is worth noting that the technology of organic agriculture is based on the use of biological factors to increase the natural fertility of the soil, agro-ecological methods and biological means of plant protection, which creates the prerequisites for the implementation of economic activities on a bio-economic basis. Taking into account the fact that biotechnological research is the reason for the rapid development of bioeconomic science, French scientists [5] propose to divide the new, classic and old bioeconomy. According to their interpretation, the new bioeconomy begins with the in-depth study of DNA and RNA in the 1950s, which is now rapidly developing in most developed countries of the world as a result of the genetic engineering development (GMO). It is related neither to the old bioeconomy of the pre-coal period, which was formed in the days of pre-industrial or agrarian society, nor to the classical one, which allows the consumption of biomass, but without the extensive use of advanced biotechnological developments (for example, wood for heating or cooking with sourdough). Thus, the outlined point should be taken into account when forming the content of bioeconomic disciplines for students of higher educational institutions, since classical bioeconomics is the basis for the existence of organic production within the framework of bioeconomy and defines organic production as an inseparable part of bioeconomic science.

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