

---

***Oleksiy Sidorenko,***  
*PhD student of the Department of Economic Theory,*  
*National University of Life and Environmental Sciences of Ukraine*

## **MARKETING AND NEW TECHNOLOGY USING BIOMASS**

The efficiency of the biomass supply chain is of crucial importance for the formation of a marketing policy for the interaction of agricultural enterprises in the production of biofuels from biomass. Biofuels obtained from biomass can play one of the decisive roles in solving the issues of energy security and climate change caused by emissions from the use of fossil fuels. In this work, we have considered the study of biomass supply chains. The goals of the article were as follows: to familiarize with the typical main types of activities in biomass supply chains, to classify recent research in the problematic field of biomass supply chains based on various criteria, to provide a critical review of current research and to propose new possible directions for the development of marketing policies for agricultural enterprises. A graphic model of the biomass supply chain is proposed and the main activities in it are described. The classification of biomass supply chain management measures by levels of depth of processing has been carried out. The main goals in biomass supply chains are highlighted. The content of tasks at different levels of decision-making in the biomass supply chain is determined. A review of studies of models of biomass supply chains for processing into biofuels was carried out. The main objectives in biomass supply chains are highlighted as minimization of costs, maximization of total revenue, maximization of net present value and provision of multipurpose use. The content of tasks at different levels of decision-making in the supply chain of biomass for biofuel production is defined. At the strategic level, tasks are formulated regarding storage, pre-processing; at the tactical level - planning, control, transportation, harvest planning, storage methods; at the operational level - planning, transportation management. Models of biomass supply chains for biofuel production are being studied. Tactical and operational levels of decision-making are not sufficiently studied. The vast majority of studies cover only individual activities, entities and related references, and very few studies address the complex modeling of biomass supply chains. Also, the study of modeling supply chains for several types of biomass and its different parts at the same time is not enough research. Further research should take into account the shortcomings listed above. [1].

Marketing of partnership relations of processing enterprises of the agrarian Work on the creation and introduction of new products into production has acquired a systematic character in modern conditions and has become a mandatory condition for maintaining the competitiveness of the enterprise and achieving commercial success. As part of the sales

function, such sub-functions as organization of product movement, sales and promotion, coordination of work with intermediaries, organization of logistics and service, coordination of price policy in distribution channels are considered. The sub-function of the organization of the movement of goods and the sale of products involves the study and selection of methods of transferring goods from the producer to the consumer, including such elements as transportation, warehousing and conclusion of agreements. The formation of the product policy concerns, first of all, regional and foreign markets and consists in the selection of the product range and methods of its sale, which ensure the achievement of the company's sales and profit goals. The service is the provision of a set of services to support the equipment sold by the company in working condition throughout the entire period of its operation. The provision of service services has become a prerequisite for successful activity for companies that produce household appliances for long-term use or industrial purposes in many industrialized countries. Pricing is one of the most important elements of marketing activity. Forming an effective pricing policy means setting such prices for goods that would ensure obtaining the planned level of profit at the same time as achieving long-term goals for market development and sales expansion. The implementation of the management and control function means the implementation of the sub-functions of planning, information and communication support of the marketing unit, and control as the final stage of marketing management. As a rule, marketing entities do not undertake the entire set of functions. Many companies do not have sufficient financial resources, cannot cover the entire range of related goods and services, cover large and geographically dispersed markets, and provide a diverse assortment that attracts consumers. Even very large companies transfer part of the work on the performance of certain marketing functions to independent participants of commercial activity. Marketing as an economic phenomenon and a combination of a management structure and a market mechanism has undergone several stages of development, each of which has an appropriate name and is characterized by certain features in accordance with the factors that shaped this era. Efficient use of energy is one of the integral indicators of economic development, science and socio-cultural development of the nation. By this indicator, Ukraine is among those countries where stagnation of the existing situation can provoke a serious economic crisis with the ensuing large-scale social upheaval. The development of the Ukrainian economy depends to a large extent on the solution of the problem of energy supply. Insufficient volume of their own energy forces the Ukrainian authorities to decide on their significant imports. In the face of declining global hydrocarbon reserves and rising prices, it is not enough to solve energy problems through imports alone [2].

Today, the world is trying to solve the problem of energy through new approaches, which are based on: first, improving the technological process in terms of energy intensity of production; second, the development of energy conservation; third, the expansion of energy production through renewable sources. In economically developed countries, the share of renewable energy is increasing [3]. The economic mechanism of energy conservation should

be clearly stimulating, using the cost savings achieved by improving the energy efficiency of agricultural production. Turning to the evaluation of the efficiency of functioning of the energy saving mechanism of the enterprise, we propose to use a comprehensive indicator of integral efficiency. In the broad sense of efficiency means the ratio of results and costs [4].

They differentiate between different types of efficiency according to management, and this equally applies to energy efficiency at the micro level. The effect alone does not sufficiently characterize the effectiveness of human activity from a public point of view. For a more complete description of it, it is important to know what the costs have been, that is, what has cost the result not only to the individual entity, but also to society as a whole [5]. The same costs can have different effects and, on the contrary, the same effect can be achieved with different costs. The purpose of social production is to obtain greater effect with the least labor, material and monetary costs. That is why it is necessary to compare the result with those costs by which it is received, that is, attribute the effect (result) to the costs, compare one absolute value - the effect (result) with another absolute value - the cost. This comparison gives a relative value - efficiency [6,7].

Problems, such as optimization of relations between social groups and within them, including market relations, creating convincing motivation for participants and their system of comprehensive protection (primarily social), the formation of an effective organizational structure and coordination system in all links and more. These problems are the limiting factors of bioeconomic development. [8].

### References

1. Abuselidze, G., Ostapchuk, A., Talavyrya, M., (2022). Theoretical and methodological aspects of attracting speculative capital on the exchange market, American Institute of Physics Conf. Proc., 2656, 020005. DOI: 10.1063/5.0106277
2. Skrypnyk A., Klymenko N., Talavyria M., Goray A., Namiasenko Y. Bioenergetic potential assessment of the agricultural sector of the Ukrainian economy. International Journal of Energy Sector Management. 2019.4. Lewandowski I. Bioeconomy: Shaping the Transition to a Sustainable, Biobased Economy. University of Hehenheim, Stuttgart. – 243 p.
3. Bio-based economy in Europe: State of play and future potential – Part 2 [Електронний ресурс] Режим доступу URL: <https://ec.europa.eu/research/consultations/bioeconomy/bio-based-economy-for-europe-part2.pdf>
4. The European Association for Bioindustries. Resetting the ambition for biotechnology in the EU. URL: <https://www.europabio.org/cross-sector/publications>.
5. Tetiana Kolesnyk, Oksana Samborska, Mykola Talavyria and Liudmyla Nikolenko (2018). Ensuring the sustainable development of the Ukrainian agrarian sector in conditions of globalization. Problems and Perspectives in Management, 16(3), 245-258. URL: <https://businessperspectives.org/journals/problems-and-perspectives-in-management/issue->

289/ensuring-the-sustainable-development-of-the-ukrainian-agrarian-sector-in-conditions-of-globalization

6. Vasyl Zalizko, Mykola Talaviryia, Paper prepared for presentation for the 167nd EAAE Seminar European Agriculture and the Transition to Bioeconomy September 24-25, 2018, Institute of Soil Science and Plant Cultivation – State Research Institute Pulawy, Poland.

7. Development of the oil and fat industry as strategically important for the development of the economy of Ukraine, 2021, No. 1(26) (2021): Geopolitics of Ukraine: history and modernity. M.P. Talaviryia, V. Polokhovich, I. Vashchenko. Prospects for the development of closed-loop bioeconomy in Ukraine, 2021, Geopolitics of Ukraine: history and modernity. Collection of scientific papers. Uzhgorod National University. Issue 4 (29), 2021p.40-47), 4M. Talaviryia, M. Gazuda, L. Gazuda.

8. The use of technological innovation in bio-based industries to foster growth in the bioeconomy: a South African perspective. URL: <https://www.tandfonline.com>

**НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ БІОРЕСУРСІВ  
І ПРИРОДОКОРИСТУВАННЯ УКРАЇНИ  
КАФЕДРА ЕКОНОМІЧНОЇ ТЕОРІЇ**

**МАТЕРІАЛИ ДОПОВІДЕЙ  
МІЖНАРОДНОЇ НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ**

**РОЗВИТОК БІОЕНЕРГЕТИЧНОГО  
ПОТЕНЦІАЛУ В СІЛЬСЬКОМУ  
ГОСПОДАРСТВІ**

**07 - 08 березня 2025 р.**

**м. Київ**

УДК 620.9:63

**Розвиток біоенергетичного потенціалу в сільському господарстві: матеріали доповідей Міжнародної науково-практичної конференції (м. Київ., 07-08 березня 2025 р.). – К.: Видавництво «Наукова столиця», 2025 – 172 с.**

Відповідальний за випуск д. е. н., професор **М. П. Талавира**

**Відповідальність за достовірність матеріалів несуть автори.**

© Національний університет біоресурсів і  
природокористування України, 2025