

O. Ya. Shandrivska, M.M. Basiuk

ORCID ID: 0000-0002-4335-2423, 0009-0008-7750-5214

Lviv Polytechnic National University

Department of Business Economics and Investments

ANALYSIS OF THE HONEY MARKET IN UKRAINE AND THE USA

<https://doi.org/10.23939/smeu2025.02.373>

© Shandrivska O. Y., Basiuk M. M., 2025

The specifics of the situation on the Ukrainian honey market and the US honey market are identified. The key features and factors influencing the development of these markets are identified in order to optimise their export strategies. The article analyses the volumes of honey production and consumption in Ukraine and the USA and identifies the specifics of export-import activities of honey producers in the studied honey markets. The capacity and shares of the leading enterprises in the honey market in Ukraine and the USA in 2022-2023 are calculated based on the parameter of revenue from honey sales. An assessment of the concentration of the honey markets of Ukraine and the United States is carried out using index methods of evaluation. Based on the results of the assessment, strategic directions for the development of the honey markets of Ukraine and the USA are proposed.

Keywords: beekeeping market, market conditions, imports, exports, market share, market concentration, comparison

Problem Formulation

The study of the Ukrainian honey market is important given the significant role of beekeeping in the country's agriculture and the prospects for Ukrainian producers to enter international markets. Ukraine is one of the largest honey producers in the world and a leading exporter of this product in Europe, but at the same time it faces a number of challenges. The latter are related to the instability of the value for the end consumer, insufficient government support for the industry, the need to confirm the quality of honey and high competition in international markets, and sharp fluctuations in demand for honey during the war. The potential for development of the beekeeping industry in Ukraine remains high due to favourable climatic conditions, availability of honey plants and traditional experience in honey production. However, low profitability of production for small and medium-sized beekeepers, difficulties in selling products on the domestic honey market and unresolved issues with honey export regulation have a negative impact on the industry.

The US honey market is characterised by high demand for natural products. However, there is significant competition from imported honey. In Ukraine, on the other hand, honey is a traditional product, and the country is one of the largest exporters of honey in the world.

The study of the specifics of the honey market development in Ukraine and the United States is important for both science and practice. From a scientific point of view, when studying the specifics of honey markets, it is important to analyse the economic, environmental and social factors that affect the industry. This includes studying global and national trends in honey consumption, analysing price fluctuations, and researching factors that promote or hinder the competitiveness of honey on the global stage. The research results can contribute to the development of new economic models and strategies to support the sustainable development of beekeeping.

Analysis of recent publications on the subject.

The problems of functioning and development of the honey market are the subject of research by many scientists. In [28], N. L. García investigated the current situation on the world honey market. The specifics of the formation of the world honey market and the role of Ukraine in it are presented in [2] by V. Dankevych, E. Dankevych, P. Pyvovar; in [16] by I. Svynous, N. Prysiashniuk, Y. Fedoruk, etc. Identification of the role of the Ukrainian honey market in the world honey market was also carried out by V. B. Dukhnytskyi, B. V. Dukhnytskyi [5], who noted the crucial importance of households in shaping the supply of honey in Ukraine both to meet domestic needs and for export.

Ideas for the development of the beekeeping industry in Ukraine were proposed in the works of O. Makarchuk, T. Kuts [29]; V. I. Polishchuk, O. V. Perestiuk, O. V. Polishchuk [14]. In [17], I. V. Svynous, N. M. Prysyazhnyuk, Y. V. Fedoruk, et al. presented the author's vision of the essence of the beekeeping market in Ukraine. In [4], O. I. Drebot and M. Y. Vysochenska analysed the ecological and economic foundations of the balanced development of beekeeping in Ukraine. Authors A. S. Chmil in [21; 22], M. Y. Shulgan in [20] presented the results of a study of the export potential of the Ukrainian honey market, where, among other things, they proposed components of the export strategy for the development of the Ukrainian beekeeping industry. In [9], the authors L. I. Mykhailova and V. L. Hrytsenko consider the organisational and economic principles of the functioning of the beekeeping market in Ukraine. In [11], T. V. Mirzoeva, T. Ilkiv studied the risks and outlined the prospects for the development of beekeeping in Ukraine. In [1], G. Veselovska, I. Gaidaienko, and I. Zhyhailo studied the quality and safety control of beekeeping products.

Y. Nehoda and M. Guz in [2] presented the results of a study of the specifics of the functioning of the Ukrainian organic market in the context of economic instability. The authors drew attention to the need to find ways to create the basis for competition and ensure the competitiveness of organic products. Scientists O. Nykolyuk, P. Pyvovar, A. Chmil et al. in [30]; T. V. Kuts, O. Makarchuk in [7]; N. Lutsiv, G. Zholynska, L. Senyk in [8] presented the results of the analysis of problems and prospects of the honey market functioning in the conditions of war in Ukraine. The authors found that the war led to a reduction in honey production and caused logistical problems that affect the level of exports and stockpiling. However, the assessment of the levels of concentration of the honey market in Ukraine and the United States requires a separate study, which determines the relevance of this research.

Formulation of the article's aims and objectives.

The purpose of the study is to identify the specifics of the honey markets of Ukraine and the United States and to carry out their comparative analysis, to identify the key features, trends and factors that affect the development of these markets in order to optimise their export strategies. The objectives of the study are as follows:

- to analyse the volumes of honey production and consumption in Ukraine and the USA and to compare them based on the results of the study in 2019-2023;
- to analyse the state of foreign economic activity in the sale of honey in Ukraine and the USA in 2019-2023;
- to calculate the shares of leading companies in the honey market in Ukraine and the USA in 2022-2023 based on the parameter of revenue from honey sales;
- to assess the concentration of the honey markets of Ukraine and the USA using index methods of assessment; based on the results of the assessment, to propose.

Research methodology

To achieve the research goal, a set of scientific methods was used to ensure the conceptual integrity of the study. The problem-oriented method was used to identify the main problems of economic development of the Ukrainian and American honey markets and to determine the factors that affect these markets. The

analysis of statistical data was used to study the volume of honey production per capita in Ukraine and the United States. The Herfindahl-Hirschman index, Linda index, and Gini index were used to assess the severity of competition in the honey market in Ukraine and the United States in 2022-2023.

The import-export coverage ratio (IECR) in the honey market is determined by the following formula:

$$IECR = \frac{E}{I}, \quad (1)$$

I – costs of honey imports, thousand USD; E – income from honey exports, thousand USD.

The following formula was developed to determine the GDP (E):

$$GDP(E) = \frac{(E + I)}{Q}, \quad (2)$$

where Q – is the nominal gross domestic product of Ukraine or the nominal gross domestic product of the United States of America (GDP), thousand USD.

The export quota (EQ) on the Ukrainian and US honey markets is determined by the following formula:

$$EQ = \frac{E}{Q} \quad (3)$$

The import dependence (ID) of Ukraine and the USA is calculated using the formula:

$$ID = \frac{I}{Q}, \quad (4)$$

Foreign trade turnover (FTT) is determined by the following formula:

$$FTT = E + I. \quad (5)$$

The trade balance (TB) is calculated using the following formula:

$$TB = E - I, \quad (6)$$

where E – is the volume of honey exports, thousand USD; I – volume of honey imports, thousand USD.

The capacity of the Ukrainian honey market and the capacity of the US honey market are determined by the formula:

$$C = B + I - E. \quad (7)$$

The initial parameters for estimating the capacity of the Ukrainian honey market were selected using the results of an expert assessment of the honey market [Mykola Hornich], as well as the Statista information resource []; for estimating the capacity of the US honey market - using the Statista information resource [];

To assess the level of concentration of the honey market, the Herfindahl-Hirschman index was calculated:

$$HHI = \sum_{i=1}^N F_i^2, \quad (8)$$

where F_i – is the market share of the i-th enterprise in the honey market, %; n – is the number of enterprises for which the indicator is calculated, units; $i = 1, \dots, n$.

If the value of the Herfindahl-Hirschman index is below 1000, there is a slight concentration of the honey market, 1000-1800 - medium concentration of the honey market, and over 1800 - high concentration of the honey market.

The market concentration index for the honey market was calculated using the formula:

$$MCI = \sum_{i=1}^N F_i, \quad (9)$$

to determine the number of companies that dominate the honey market, the Linda index was calculated. This index is needed to identify the leading companies in this market and to track the emergence of monopolists. The Linda index is calculated using the formula:

$$IL = \frac{1}{c-1} \times \sum_{m=1}^{c-1} l_m \quad (10)$$

$$l_m = \frac{\frac{1}{m} \sum_{i=1}^m q_i}{\frac{1}{c-m} \sum_{i=m+1}^{c-m} q_i}, \quad (11)$$

where c – is the number of the largest enterprises (from 2 to N), units; m – is the number of the largest enterprises out of “ c ” large enterprises, units; l_m – is the ratio of the average share of m large (out of “ c ” large) enterprises to the average share of the remaining ($c - m$) enterprises.

The index is calculated until $L_{m+1} > L_m$, which is called ‘breaking the continuity of the L indicator’, i.e. until a small share of the enterprise in the honey market appears in the calculation.

To determine the degree of unevenness of income of enterprises in the honey market, the Gini index is calculated, which reflects the degree of deviation of the actual distribution of income of honey market producers from the value of the uniformity of the distribution of shares. The closer the value of the Gini index is to 1, the more uneven is the distribution of income of enterprises in this sector. The Gini index is determined by the formula:

$$G = 1 - 2 \sum x_i \times \text{Sum}(y_i) + \sum x_i \times y_i \quad (12)$$

where x_i – is the share of the i -th enterprise in the number of enterprises; y_i – the share of income of the i -th enterprise in the honey market.

The average annual value of the US dollar in 2022-2023 is taken from the information website of the Ministry of Finance of Ukraine [20].

Presentation of the main results and their justification.

The Ukrainian honey market is characterised by dynamic development and significant export potential. In 2023, Ukraine ranked 4th among the top five global honey exporters (55.4 thousand tonnes). It was followed by China (152.6 thousand tonnes), India (98.7 thousand tonnes) and Argentina (68.9 thousand tonnes). Brazil took the fifth place (28.5 thousand tonnes). Ukrainian honey is distinguished by its naturalness, environmental friendliness and rich taste. These properties make it in demand among consumers around the world, including in the US, which confirms the high quality and competitiveness of Ukrainian honey. For example, in June-July 2024, more than 250 tonnes of Ukrainian honey from Odesa region were exported to the United States. The Ukrainian products were thoroughly inspected and received the necessary documents from the specialists of the Southern MDU of the State Service of Ukraine for Food Safety and Consumer Protection at the state border.

The United States is recognised as the world's largest importer of honey. The US meets 25 % of its honey needs through domestic production. In 2022, its imports reached 300 thousand tonnes and continue to grow. The structure of honey imports to the US does not include honey from China, as its imports are banned.

A comparative analysis of honey production in Ukraine and the USA is presented in Table 1.

Table 1

Comparative analysis of honey production per capita in Ukraine and the USA

№	Year	2019	2020	2021	2022	2023	2023/ 2019
Ukraine							
1	Production volume, thousand tonnes	110,00	91,00	69,90	63,00	58,00	0,83
2	Population, million people	37,29	41,59	41,17	35,0	33,20	0,89
3	Production per capita, kg/person	1,87	1,64	1,70	1,80	1,75	0,94
USA							
4	Production volume, thousand tonnes	68,00	66,95	57,60	56,80	63,04	0,93
5	Population, million people	328,00	331,45	335,89	333,29	335,50	1,02
6	Production per capita, kg/person	0,21	0,20	0,17	0,17	0,19	0,90
7	The ratio of production per capita in Ukraine and the USA	8,90	8,20	10,00	10,59	9,21	-

Source: calculated by the authors on the basis of [9; 20; 23].

The dynamics of honey production in Ukraine and the United States in 2023 compared to 2019 indicates a decline to 0.83 and 0.93, respectively. In Ukraine, the decline in honey production was caused by the outbreak of war in 2022. The ratio of honey production in Ukraine and the United States per capita in 2019-2023 was 8.90÷9.21, respectively.

The highest per capita honey production in the United States in 2019-2023 was recorded at 0.21 kg per person in 2019, The lowest per capita honey production in 2019-2023 was recorded in Ukraine in 2020 (or 1.64 kg/person); in the USA - in 2021-2022 - at the level of 0.17 kg/person. The above indicates a higher production potential of the honey market in Ukraine compared to the US honey market and a higher propensity of Ukrainian producers to export the product. An analysis of the results of export-import activity in the honey market in Ukraine and the United States is presented in Table 2.

Table 2

**Analysis of the results of export-import activity
in the sale of honey in Ukraine and the USA, thousand USD**

Year	Import costs	Export revenues	IECR	TB	FTT	GDP	E	EQ	ID
Ukraine									
2019	58	101096	1743,03	101038	101154	3974564000	0,6577796	0,6574024	0,0003772
2020	272	138748	510,1	138476	139020	4194102000	0,8935481	0,8917998	0,0017483
2021	137	143582	1048,04	143445	143719	5459574000	0,7194223	0,7187365	0,0006858
2022	440	136982	311,32	136542	137422	5191028000	0,8483363	0,8456201	0,0027162
2023	122	121513	996,01	121391	121635	6537825000	0,6804375	0,679755	0,0006825
USA									
2019	430080	23309	0,054	-406771	453389	21427700000	0,000021	0,000001	0,00002
2020	441408	25801	0,5844	-415607	467209	20289987000	0,000023	0,0000013	0,000022
2021	666567	28493	0,0427	-638074	695060	22940000000	0,00003	0,00000124	0,000029
2022	794277	32092	0,0404	-762185	826369	25460000000	0,000032	0,0000012	0,000031
2023	584680	27071	0,463	-557609	611751	26900000000	0,000023	0,000001	0,000022

Source: calculated by the authors on the basis of [9; 20; 23].

In the United States, in 2019–2023, there was an increase in the cost of honey imports (or 1.22 times) and an increase in the rate of growth of income from honey exports (or 1.61 times). In Ukraine, in 2023, the growth of honey import costs (or 2.103 times compared to 2019) exceeded the growth rate of honey export revenues, which in 2023 amounted to 1.202 times compared to 2019. The import-export coverage ratio in 2019 in Ukraine was 1743.03, which indicates a significant excess of export revenues over honey import

costs. The trade balance in Ukraine in 2023 amounted to 121391 thousand USD. In contrast to this indicator in the United States in 2023, where the trade balance was (–557609) thousand USD. The trade balance was (–557609) thousand US dollars. In the period from 2019–2023, the volume of trade turnover of the United States and the volume of trade turnover of Ukraine increased by: in the United States – by 158362 thousand USD; in Ukraine – by 4848 thousand USD. In the USA – by USD 158362 thousand; in Ukraine – by USD 20481 thousand. There is an opposite trend in the USA and Ukraine in terms of the ratio of volumes and structure of export-import activity.

The procedure for calculating the capacity of the honey market in Ukraine and the United States in 2019–2023 according to formula (7) is shown in Table 3.

Table 3

Analysis of the honey market capacity in Ukraine and the USA in 2019–2023, thousand

Year	2019	2020	2021	2022	2023	2023/ 2019
Ukraine						
Production	198000	242970	240456	330120	365400	1,85
Import	58	272	137	440	122	2,10
Export	101096	138748	143582	136982	121513	1,20
Capacity	96962	104494	97011	193578	244009	2,51
USA						
Production	312250	30950	335870	377250	349200	1,12
Import	430080	441408	666567	794277	584680	1,36
Export	23309	25801	28493	32092	27071	1,16
Capacity	719021	446557	973944	1139435	906809	1,26

Source: calculated according to [9; 20; 23].

The highest value of the Ukrainian honey market capacity in 2019–2023 was recorded in 2023 (or 244009 thousand USD); the lowest value was recorded in 2019 (or 96962 thousand USD). In 2019–2023, the growth rate of the honey market in Ukraine was 2.51.

The highest capacity of the US honey market (2019–2023) was recorded in 2022 (or 1139435 thousand USD); the lowest value of the US market capacity was recorded in 2020 – at 446557 thousand USD. The growth rate of the US honey market in 2019–2023 was 1.26.

The procedure for calculating the market share of the five leading companies in the honey market in Ukraine and in the US honey market is shown in Table 4.

Table 4

Procedure for calculating the market share of leading companies in the honey market in Ukraine and the USA in 2022–2023, USD million

Enterprise	Net revenue from sales of products	Honey market share	Net revenue from sales of products	Honey market share
	2022	%	2023	
1	2	3	4	5
Ukraine				
Ukrainian Bee LLC	17,17	8,83	12,55	5,16
Askania-Pack LLC	12,6	6,6	14,31	5,86
Medovyi Krai LLC	8,83	4,56	9,96	4,11
Agro East Trade LLC	5,7	2,94	3,8	1,55
Bartnik LLC	5,3	2,71	5,0	2,04
Other	143,9	74,36	198,31	81,28
Capacity	193,5	100	244, 0	100

1	2	3	4	5
For reference:				
Average annual dollar exchange rate, UAH/USD	32,34	–	36,57	–
USA				
Enterprise	2022	%	2023	%
Barkman Honey LLC	22,4	1,96	22,1	2,45
Dutch Gold Honey	21,3	1,86	21,4	2,35
Desert Creek Honey	3,1	0,27	3,1	0,3
Hopewell-Honey	2,3	0,22	2,3	0,25
Bee Healthy Honey Shop	1,9	0,17	2,2	0,24
Other	1088,4	95,52	855,7	94,41
Market capacity	1139,4	100	906,8	100

Source: calculated according to [9, 20, 23].

In 2022, the top two producers of the Ukrainian honey market were Ukrainian Bee LLC and Ascania Pack, with the highest net sales revenue of USD 12.6 million and USD 1.5 million, respectively. USD and 17.17 mln. USD, respectively. In 2023, the top two producers of honey in Ukraine were Ascania Pack LLC and Ukrainian Bee LLC with revenues of USD 12.40 million and USD 12.55 million, respectively. USD and 12.55 million, respectively. USD respectively. It is noted that most honey producing companies in Ukraine have faced the problem of a drop in net income. The largest drop in net income in 2023 compared to 2022 was experienced by Ukrainian Bee LLC (or by USD 4.62 million). In 2023, Ascania-Pack LLC and Medovyi Krai LLC showed an increase in revenues by USD 1.71 million and USD 1.13 million, respectively, compared to 2022. USD 1.71 million and USD 1.13 million USD, respectively.

The procedure for calculating the Herfindahl-Hirschman index on the example of the honey market in Ukraine is shown in Table 5.

Table 5

**Procedure for calculating the Herfindahl-Hirschman index
on the example of the honey market in Ukraine for the period 2022–2023**

№	Enterprise	Market share, %			
		2022		2023	
		S_i	S_i^2	S_i	S_i^2
1	Ukrainian Bee LLC	8,83	77,96	5,16	26,62
2	Askania-Pack LLC	6,6	43,56	5,86	34,33
3	Medovyi Krai LLC	4,56	20,79	4,11	16,89
4	Agro East Trade LLC	2,94	8,64	1,55	2,4
5	Bartnik LLC	2,71	7,34	2,04	4,16
Herfindahl-Hirschman Index		–	158,3102	–	84,42
Market Concentration Index ₃		19,99	–	15,13	–
Market Concentration Index ₅		25,64	–	18,72	–

Source: Authors' own research.

In 2022–2023 (Table 5), the Herfindahl-Hirschman index (honey market in Ukraine) was 158.3102 and 84.42, respectively (<1000); the market concentration index for the five leaders was 25.64 % and 18.72 %, respectively, which indicates high competition in the Ukrainian honey market. The procedure for calculating the Herfindahl-Hirschman index on the example of the US honey market for the period 2022–2023 is shown in Table 6.

Table 6

**The procedure for calculating the Herfindahl-Hirschman index
on the example of the US honey market for the period 2022–2023**

USA					
№	Enterprise	Market share, %			
		2022		2023	
		S_i	S_i^2	S_i	S_i^2
1	Barkman Honey LLC	1,96	3,8416	2,45	6,0025
2	Dutch Gold Honey	1,86	3,4596	2,35	5,5225
3	Desert Creek Honey	0,27	0,0729	0,3	0,09
4	Hopewell-Honey	0,22	0,0484	0,25	0,0625
5	Bee Healthy Honey Shop	0,17	0,0289	0,24	0,0576
Herfindahl-Hirschman Index		–	7,4514	–	11,7351
Market Concentration Index ₃		4,09	–	5,1	–
Market Concentration Index ₅		4,48	–	5,59	–

Source: Authors' own research.

In 2022–2023 (Table 5), the Herfindahl-Hirschman index (US honey market) was 7.4514 and 11.7351, respectively, <1000; the market concentration index for the five leaders was 4.48 % and 5.59 %, respectively, indicating high competition in the US honey market.

To determine the number of companies that dominate the honey market in Ukraine and the USA (the limits of oligopoly), the Linda index was calculated and presented in Tables 7 and 8.

Table 7

Results of calculating the Linda index (Ukrainian honey market) for 2022-2023, %

Linda Index	2022	2023	Deviation, percentage
For two enterprises, IL2	136,1957	87,73266	–48,46304
For three enterprises, IL3	164,4707	119,1265	–45,3442
For four enterprises, IL4	206,8565	217,4151	10,5586
For five enterprises, IL5	176,2954	159,8646	–16,4308

Source: Authors' own research.

Thus, in 2022, the four largest companies in the honey market – Ukrainian Bee LLC (with a market share of 12.53 %), Askania-Pack LLC (with a market share of 9.2 %), Medovyi Krai LLC (with a market share of 6.44 %) and Bartnik LLC (with a market share of 3.86 %) – formed the “core” of the Ukrainian honey market.

Table 8

Results of the Linda index calculation (US honey market) for 2022–2023, %

Linda Index	2022	2023	Deviation, percentage
For two enterprises, IL2	105,3763	104,2553	–1,121
For three enterprises, IL3	445,7225	492,4528	46,7303
For four enterprises, IL4	549,8339	602,0585	52,2246
For five enterprises, IL5	496,9757	488,5638	–8,4119

Source: Authors' own research.

Thus, in 2022, the four largest companies in the honey market – Barkman Honey LLC (with a market share of 1.96 %), Dutch Gold Honey (with a market share of 1.86 %), Desert Creek Honey (with a market share of 0.27 %), and Hopewell-Honey (with a market share of 0.22 %) – formed the “core” of the US honey market.

The analysis of the changes in the Gini Index for the purposes of assessing the honey market in the USA and Ukraine is presented in Table 9.

Table 9

Results of the Ginnie Index assessment on the example of the honey market in 2022–2023

Ginnie Index	2022	2023	Percentage
Ukraine	0,256	0,260	0,004
USA	0,476	0,456	0,002

Source: Authors' own research.

According to the results of the Gini index assessment for the honey market in Ukraine (2022), the value of market concentration is 0.256, unlike in the United States (2022), where the Gini index reaches 0.476. This suggests that the Ukrainian honey market is characterised by a more even distribution of income among producers than the US honey market.

Despite the unfavourable economic situation on the Ukrainian honey market as a result of the war, there is still a trend of steady demand for Ukrainian honey in Europe, as evidenced by the introduction of trade preferences from partner countries. To improve the state of the Ukrainian honey market, the following strategic areas of development have been proposed:

- introducing modern beekeeping and honey processing technologies to ensure high quality standards for the needs of domestic and foreign markets;
- strengthening the competitive advantages of enterprises;
- improving the human resource management system through additional motivation during the war.

Thus, the strategic directions for the development of the honey market in Ukraine can ensure sustainable growth of the industry, increase the competitiveness of products in the global honey market and meet the needs of end consumers for a high-quality natural product.

Based on the results of the analysis of indicators of the economic situation in the US honey market, the following strategic directions of development for this market are proposed. First, the most important factor is the development of export opportunities for US honey in international markets, especially to countries with high demand for natural products. Attention should be paid to supporting beekeeping in the US through investments in training programmes, increased financial assistance and research, which will ensure the stability of honey supplies. For the US, an important attribute is the need to be resilient to climate change. Developing strategies to adapt beekeeping to climate change, including the selection of weather-resistant bee and plant varieties, is an important step in ensuring the stability and increased production of honey. Thus, these strategic directions can help ensure the sustainability of the US honey market and meet the needs of consumers for high-quality natural products.

Conclusions

A comparative analysis of the Ukrainian and US honey markets has revealed key differences that define the specifics of each market. Both countries have significant potential in honey production. Ukraine, with its diversity and quality of products, demonstrates steady export growth, which demonstrates the competitiveness of Ukrainian honey in the international arena. The United States, being one of the largest consumers of honey in the world, depends on imported products, although it has a high level of honey quality in the global honey market.

The honey market in Ukraine has its own unique features, which are shaped by various factors. There are more than 400,000 apiaries in the country, and honey production is evenly distributed across the country. The honey market is characterised by significant growth potential for domestic consumption and exports, provided that producers develop an effective marketing strategy.

The US honey market is regulated by a number of quality and safety standards, which impose certain requirements on honey producers. Compliance with these standards is a costly and complex process, especially for small farmers. This creates barriers to entry for new entrants to the honey market and may limit their competitiveness.

Comparison of the results of the study of the Ukrainian honey market and the US honey market allowed us to identify trends, transformation of consumer demand and specifics of the competitive environment, which, subject to the introduction of technological innovations, can become the basis for the formation of effective strategies for the development of the industry.

Prospects for further research.

Further research needs to cover several key areas. It is important to analyse consumer demand, including the study of changes in consumer preferences and trends in the honey market of the countries under study. This will help identify demographic factors that influence honey consumption, as well as the demand for different types of honey.

Technological innovations play an important role in the development of the industry. Analysing new technologies in honey production, such as process automation and the use of drones to monitor bee colonies, will help improve production efficiency. The following areas of research are needed to help producers develop marketing strategies: studying the effectiveness of different approaches to promoting honey on domestic and international markets, which will be useful for improving the efficiency of producers' business operations.

Список використаних джерел

1. Веселовська Г.В., Гайдаєнко І.І., Жигайло І.В. та ін. (2020). Контроль якості та безпеки продукції бджільництва. *Аграрна наука та харчова промисловість*, 6, 5–11 (дата звернення: 10 грудня 2024).
2. Данкевич В., Данкевич Є., Пивовар П. (2018). Формування кон'юнктури світового ринку меду: сучасний стан і перспективи для українських експортерів. *Agricultural and Resource Economics: International Scientific E-Journal*, 4 (2), 37-54 (дата звернення: 9 грудня 2024).
3. Демчак І. М., Митченко О. О., Трофімова Г. В., Майданюк О. Е. (2020). Україна-ЄС: тенденції торгівлі агропродовольчими товарами. *Київ: НДІ "Укragропромпродуктивність"*.
4. Дребот О.І., Височанська М.Я. (2022). Еколого-економічні основи збалансованості розвитку бджільництва. *Збалансоване природокористування*, 4, 24–31. (дата звернення 9 грудня 2024).
5. Духницький В. Б., Духницький Б. В. (2022). Оцінка ролі України на світовому ринку меду, 2, 77–84. DOI: <https://doi.org/10.32317/2221-1055.202002084> (дата звернення 9 грудня 2024).
6. Зовнішня торгівля України із зазначенням основних країн-контрагентів. Державна фіскальна служба України. URL: <http://sfs.gov.ua/ms/f3> (дата звернення 9 грудня 2024).
7. Куць Т. В., Макачук О. Г. (2023). Ринок меду в Україні: особливості функціонування та проблеми в сучасних умовах, 48. DOI: <https://doi.org/10.36887/2415-8453-2023-2-48> (дата звернення 9 грудня 2024).
8. Луців Н., Жолинська Г., Сеник Л. (2022). Ринок меду. DOI: [https://doi.org/10.31617/tr.knute.2020\(36\)04](https://doi.org/10.31617/tr.knute.2020(36)04) <https://doi.org/10.36887/2415-8453-2023-2-48> (дата звернення 9 грудня 2024).
9. Михайлова Л. І., Гриценко В. Л. (2018). Організаційно-економічні засади функціонування ринку продукції бджільництва. *Економіка АПК*, 8, 35–43 (дата звернення 9 грудня 2024).
10. Міністерство фінансів України. URL: <https://bank.gov.ua/ua/markets/exchangerates>
11. Мірзоева Т. В., Ільків Т. А. (2023). Ризики та перспективи розвитку бджільництва в Україні. 56. DOI: <https://doi.org/10.32782/2524-0072/2023-56-73>
12. Негода Ю., Гузь М. (2023). Ринок органічної продукції в Україні. *Економіка та суспільство*, 54. DOI: <https://doi.org/10.32782/2524-0072/2023-54-34>
13. Опендатабот: [Веб-сайт]. URL: <https://opendatabot.ua/>.
14. Поліщук, В.І., Перестюк, О.В., Поліщук, О.В. та ін. (2018). Напрями розвитку біологічних продуктів на основі бджільництва. *Вісник ЖНАЕУ*. Т. 2(72).1, 33–42. (дата звернення 9 грудня 2024)

15. Пугачов М. І. (2017). Аграрний сектор економіки України в умовах інституційних змін. *Економіка АПК*. 5, 12–18. (дата звернення 10 грудня 2024)
16. Свиноус І. В., Присяжнюк Н. М., Федорук Ю. В., Лозінський М. В., Федорук Н. М. (2023). Сучасний стан світового ринку меду та місце України в ньому. 21. DOI: <https://doi.org/10.36059/978-966-397-336-4-40>
17. Свиноус І. В., Присяжнюк Н. М., Федорук Ю. В., Лозінський М. В., Горчанок А. В. (2023). Організаційно-економічні засади розвитку бджолярства, як складової аграрного ринку України. 21. DOI: <https://doi.org/10.32702/2306-6792.2023.21.39>
18. Свиноус І. В., Присяжнюк Н. М., Слободенюк О. І., Федорук Н. М., Покотило І. А. (2023). Світовий ринок органічного меду – виклики для України. *Ефективна економіка*. (дата звернення 10 грудня 2024).
19. Свиноус І. В., Свиноус Н. І. (2023). Розвиток кооперації як основи формування товарної пропозиції на ринку меду в Україні. Економічний аналіз. 33 (2). (дата звернення 9 грудня 2024).
20. Старостіна А. О., Біловодська О. А., Шкіря А. (2021). Особливості бізнес-середовища виробника меду на споживчому українському ринку. *Вісник Харківського національного університету імені В. Н. Каразіна*. Серія: Міжнародні відносини. Економіка. Країнознавство. Туризм. (14), 96–106. DOI: <https://doi.org/10.26565/2310-9513-2021-14-10>
21. Чміль А. С. (2019). Динаміка виробництва та експорту меду в Україні. 28 (2), 131-134. DOI: <https://doi.org/10.32782/2413-9971/2019-28-55>
22. Чміль А. С. (2020). Ресурсний потенціал галузі бджільництва Причорноморського регіону, Причорноморські економічні студії. *Причорноморський науково-дослідний інститут економіки та інновацій*. 49, 125-128. (дата звернення 9 грудня 2024).
23. Шульган М. Я. Обліково-статистичний аспект експорту меду: реалії сьогодення. 146-150. DOI: <https://doi.org/10.36059/978-966-397-336-4-40>
24. Chmil A. (2018) Formation of an export strategy for the development of beekeeping industry in Ukraine. *14th International Conference of the Association of the Economic Universities of South and Eastern Europe and the Black Sea Region (ASECU); Nitra, Slovak Republic*. 1, 2613-2622. (дата звернення: 9 грудня 2024).
25. FAOSTAT (2020): Trade. Crops and livestock products. Food and Agriculture Organization of the United Nations, *Statistical database*. (дата звернення: 9 грудня 2024).
26. FAOSTAT. URL: <http://www.fao.org/faostat/en>.
27. FiBL Statistics – European and global organic farming statistics. URL: <https://statistics.fibl.org>.
28. García, N.L.(2018) The Current Situation on the International Honey Market. *Bee World*. [Google Scholar] [CrossRef] 95, 89–94. (дата звернення 9 грудня 2024).
29. Makarchuk, O., Kuts, T.(2023) The current state and main directions of development of the beekeeping industry. *Bioeconomy and agrarian business*. 14(2), 126-137. (дата звернення 9 грудня 2024).
30. Nykolyuk, O., Pyvovar, P., Chmil, A., Bogonos, M., Topolnyskyi, P., Cheban, I. and Fellmann, T.(2021) Agricultural markets in Ukraine: current situation and market outlook until 2030, EUR 30874 EN, *Publications Office of the European Union, Luxembourg*. DOI: <https://doi.org/10.2760/669345>
31. Soylu M., Silici S. (2018). Honey consumption preferences of university students. *Journal of Human Sciences*, 15, 1, 386-399. DOI: <https://doi.org/10.14687/jhs.v15i1.5255>
32. Statista. Artificial intelligence (AI) market size worldwide from 2020 to 2030. (2024). URL: <https://www.statista.com/forecasts/1474143/global-ai-market-size>
33. Thrasyvoulou, A.; Tananaki, C.; Goras, G.; Karazafiris, E.; Dimou, M.; Liolios, V.(2018) *Kanelis, D.; Gounari, S*. Legislation of honey criteria and standards. *J. Apic. Res.* 57, 88–96. (дата звернення 10 грудня 2024).

Reference

2. Veselovska H.V., Haidaienko I.I., Zhyhailo I.V. та in. (2020). Kontrol yakosti ta bezpeky produktiv bzhilnytstva [Quality and safety control of beekeeping products]. *Ahrarna nauka ta kharchova promyslovishtva [Agrarian science and food industry]*, 6, 5–11.
3. Dankevych V., Dankevych Ye., Pyvovar P. (2018). Formuvannia koniunktury svitovoho rynku medu: suchasnyi stan i perspektyvy dlia ukrainskykh eksporteriv [Formation of the global honey market: current state and prospects for Ukrainian exporters]. *Agricultural and Resource Economics: International Scientific E-Journal*, 4(2), 37–54.

4. Demchak I. M., Mytchenok O. O., Trofimova H. V., Maidaniuk O. E. (2020). Ukraina-Yes: tendentsii torhivli ahroprodovolchymy tovaramy [Ukraine-EU: trends in trade in agri-food products]. Kyiv: NDI "Ukrhropromproduktivnist" [Research Institute "Ukragroproduktivnistivnost"]. (accessed: 9 December, 2024).
5. Drebot O.I., Vysochanska M.Ia. (2022). Ekoloho-ekonomichni osnovy zbalansovanosti rozvytku bdzhilnytstva [Ecological and economic foundations of the balanced development of beekeeping]. *Zbalansovane pryrodokorystuvannia [Balanced nature management]*. 4, 24–31. (accessed: 9 December, 2024).
6. Dukhnytskyi V. B. Dukhnytskyi B. V. (2022). Otsinka roli Ukrainy na svitovomu rynku medu [Assessment of the role of Ukraine in the global honey market], 2, 77–84. DOI: <https://doi.org/10.32317/2221-1055.202002084> (accessed: 9 December, 2024).
7. Zovnishnia torhivlia Ukrainy iz zaznachenniam osnovnykh krain–kontrahentiv. Derzhavna fiskalna sluzhba Ukrainy. Retrieved from: <http://sfs.gov.ua/ms/f3> (accessed: 9 December, 2024).
8. Kuts T. V., Makarchuk O. H. (2023). Rynok medu v Ukraini: osoblyvosti funktsionuvannia ta problemy v suchasnykh umovakh [Honey market in Ukraine: features of functioning and problems in modern conditions]. 48. DOI: <https://doi.org/10.36887/2415-8453-2023-2-48>.
9. Lutsiv N., Zholynska H., Senyk L. (2022). Rynok medu [Honey market]. DOI: [https://doi.org/10.31617/tr.knute.2020\(36\)04](https://doi.org/10.31617/tr.knute.2020(36)04).
10. Mykhailova L. I., Hrytsenko V. L. (2018). Orhanizatsiinoekonomichni zasady funktsionuvannia rynku produktiv bdzhilnytstva. *Ekonomika APK [Economy of agro-industrial complex]*. 8, 35–43. (Retrieved 9 December, 2024).
11. Ministerstvo finansiv Ukrainy. URL: <https://bank.gov.ua/ua/markets/exchangerates>.
12. Mirzoieva T. V., Ilkiv T. A. (2023). Ryzyky ta perspektyvy rozvytku bdzhilnytstva v Ukraini [Risks and prospects for the development of beekeeping in Ukraine]. 56. DOI: <https://doi.org/10.32782/2524-0072/2023-56-73>.
13. Nehoda Yu., Huz M. (2023). Rynok orhanichnoi produktiv v Ukraini [Market of organic products in Ukraine]. *Ekonomika ta suspilstvo [Economy and society]*. 54. DOI: <https://doi.org/10.32782/2524-0072/2023-54-34>.
14. Opendatobot: [Veb-sait]. URL: <https://opendatobot.ua/>.
15. Polishchuk, V.I., Perestiuk, O.V., Polishchuk, O.V. ta in. (2018). Napriamy rozvytku biolohichnykh produktiv na osnovi bdzhilnytstva [Development directions of biological products based on beekeeping]. *Visnyk ZhNAEU. T [Bulletin of ZhNAEU]*. 2(72).1, 33–42. (Retrieved 9 December, 2024).
16. Puhachov M. I. (2017). Ahrarnyi sektor ekonomiky Ukrainy v umovakh instytutitsiinykh zmin [The agricultural sector of the economy of Ukraine in the conditions of institutional changes]. *Ekonomika APK [Economy of agro-industrial complex]*. 5, 12–18. (Retrieved 9 December, 2024).
17. Svnous I. V., Prysiashniuk N. M., Fedoruk Yu. V., Lozinskyi M. V., Fedoruk N. M. (2023). Suchasnyi stan svitovoho rynku medu ta mistse Ukrainy v nomu [The current state of the global honey market and Ukraine's place in it]. 21. DOI: <https://doi.org/10.36059/978-966-397-336-4-40>
18. Svnous I. V., Prysiashniuk N. M., Fedoruk Yu. V., Lozinskyi M. V., Horchanok A. V. (2023). Orhanizatsiino-ekonomichni zasady rozvytku bdzhilnyarstva, yak skladovoi ahrarnoho rynku Ukrainy [Organizational and economic principles of the development of beekeeping as a component of the agricultural market of Ukraine.]. 21. DOI: <https://doi.org/10.32702/2306-6792.2023.21.39>
19. Svnous I. V., Prysiashniuk N.M., Slobodeniuk O. I., Fedoruk N. M., Pokotylo I. A. (2023). Svitovyi rynok orhanichnoho medu – vyklyky dlia Ukrainy [The world market of organic honey - challenges for Ukraine]. *Efektivna ekonomika [Efficient economy]*. (Retrieved 9 December, 2024).
20. Svnous I. V., Svnous N. I. (2023). Rozvytok kooperatsii yak osnovy formuvannia tovarnoi propozyitsii na rynku medu v Ukraini [The development of cooperation as a basis for the formation of a product offer on the honey market in Ukraine]. *Ekonomichniy analiz [Economic analysis]*. 33 (2). (Retrieved 10 December, 2024).
21. Starostina A. O., Bilovodska O. A., Shkiria A. (2021). Osoblyvosti biznes-seredovyscha vyrobnyka medu na spozhyvchomu ukrainskomu rynku [Peculiarities of the business environment of the honey producer on the Ukrainian consumer market]. *Visnyk Kharkivskoho natsionalnoho universytetu imeni V. N. Karazina [Bulletin of Kharkiv National University named after V. N. Karazin]*. Seriya: Mizhnarodni vidnosyny. Ekonomika. Krainoznavstvo. Turyzm.(14), 96–106. DOI: <https://doi.org/10.26565/2310-9513-2021-14-10>
22. Chmil A. S. (2019). Dynamika vyrobnytstva ta eksportu medu v Ukraini [Dynamics of production and export of honey in Ukraine]. 28 (2), 131–134. DOI: <https://doi.org/10.32782/2413-9971/2019-28-55>

23. Chmil A. S. (2020). Resursnyi potentsial haluzi bdzhilnytstva Prychornomorskoho rehionu, Prychornomorski ekonomichni studii [Resource potential of the beekeeping industry of the Black Sea Region, Black Sea Economic Studies;]. *Prychornomorskyi naukovo-doslidnyi instytut ekonomiky ta innovatsii [Black Sea Research Institute of Economics and Innovation]*. 49, 125-128. (Retrieved 10 December, 2024).
24. Shulhan M. Ya. Oblikovo-statystychnyi aspekt eksportu medu: realii sohodennia [Accounting and statistical aspects of honey export: the realities of today]. 146-150. DOI: <https://doi.org/10.36059/978-966-397-336-4-40>
25. Chmil A. (2018) Formation of an export strategy for the development of beekeeping industry in Ukraine. 14th International Conference of the Association of the Economic Universities of South and Eastern Europe and the Black Sea Region (ASECU); Nitra, Slovak Republic. 1, 2613-2622. (Retrieved 10 December, 2024).
26. FAOSTAT (2020): Trade. Crops and livestock products. Food and Agriculture Organization of the United Nations, Statistical database. (Retrieved 10 December, 2024).
27. FAOSTAT. URL: <http://www.fao.org/faostat/en>.
28. FiBL Statistics – European and global organic farming statistics. URL: <https://statistics.fibl.org>.
29. García, N.L.(2018)The Current Situation on the International Honey Market. *Bee World*. [Google Scholar] [CrossRef] 95, 89–94. (Retrieved 10 December, 2024).
30. Makarchuk, O., Kuts, T.(2023) The current state and main directions of development of the beekeeping industry. *Bioeconomy and agrarian business*.14(2), 126-137. (Retrieved 9 December, 2024).
31. Nykolyuk, O., Pyvovar, P., Chmil, A., Bogonos, M., Topolnycky, P., Cheban, I. and Fellmann, T.(2021) Agricultural markets in Ukraine: current situation and market outlook until 2030, EUR 30874 EN, Publications Office of the European Union, Luxembourg.. DOI: <https://doi.org/10.2760/669345>
32. Soylyu M., Silici S. (2018). Honey consumption preferences of university students. *Journal of Human Sciences*,15, 1, 386-399. DOI:<https://doi.org/10.14687/jhs.v15i1.5255>
33. Statista. Artificial intelligence (AI) market size worldwide from 2020 to 2030. (2024). URL:<https://www.statista.com/forecasts/1474143/global-ai-market-size>
34. Thrasyvoulou, A.; Tananaki, C.; Goras, G.; Karazafiris, E.; Dimou, M.; Liolios, V.(2018) Kanelis, D.; Gounari, S. Legislation of honey criteria and standards. *J. Apic. Res.* 57, 88–96. (Retrieved 9 December, 2024).

О. Я. Шандрівська, М. М. Басюк

Національний університету “Львівська політехніка”

ДОСЛІДЖЕННЯ РИНКУ МЕДУ В УКРАЇНІ ТА США

© Шандрівська О. Я., Басюк М. М., 2025

Метою даного дослідження є проведення компаративного аналізу ринку меду в Україні та США в частині оцінювання обсягів виробництва та рівнів споживання, динаміки обсягів експорту та імпорту, ідентифікації ринкових тенденцій та впливу нормативно-правової бази на галузь. Це дослідження має на меті визначити ключові фактори, що впливають на ринкові показники в обох країнах, та висвітлити можливості для зростання та розвитку співпраці між учасниками досліджуваних ринків.

Для досягнення мети дослідження використано низку наукових методів для забезпечення концептуальної цілісності дослідження, а саме: системний метод, методи діалектичної логіки, індукції, дедукції, порівняльного статистичного аналізу та проблемно-орієнтований метод. Для оцінки інтенсивності конкуренції на ринку меду в умовах економічної нестабільності було застосовано кількісні показники концентрації: індекс Герфіндаля-Гіршмана, індекс Лінда та індекс Джині.

Визначено особливості економічної кон'юнктури українського ринку меду та ринку меду США. Виявлено ключові особливості та фактори, що впливають на розвиток цих ринків з метою оптимізації їх експортних стратегій. У статті проаналізовано обсяги виробництва та споживання меду в Україні та США, визначено особливості експортно-імпоротної діяльності виробників меду на досліджуваних ринках меду. Проведено розрахунок часток провідних підприємств на ринку

меду в Україні та США у 2022-2023 роках за параметром доходу від обсягів реалізації меду. Проведено оцінку концентрації ринку меду України та ринку меду США за допомогою індексних методів оцінки. За результатами оцінки запропоновано стратегічні напрями розвитку ринків меду України та США.

Дослідження надає практичні рекомендації для зацікавлених сторін на обох ринках меду. Для українських виробників рекомендовано підвищити стандарти якості та брендинг, щоб проникнути на преміум-сегменти ринку меду. Для зацікавлених сторін у США вирішення питань автентичності меду та підтримка місцевих бджолярів можуть зміцнити внутрішнє виробництво. Співпраця між двома країнами може призвести до обміну знаннями та вдосконалення ринкових стратегій.

У статті наведена компарація ринків меду в Україні та США: аналізуються показники обсягів виробництва, експорту та імпорту медової продукції; оцінюється концентрація ринків меду за допомогою індексу Герфіндаля-Гіршмана, індексу концентрації, індексу Лінди та індексу Джинні. Визначаються компанії, які займають найбільшу частку досліджуваних ринків, склад ядра ринку досліджуваних країн та нерівномірності розподілу між лідерами ринку. Висновки та пропозиції, надані за результатами дослідження, рекомендовані для розширення співпраці між учасниками ринків меду обох країн та стейкхолдерам, які проявляють економічний інтерес до вивчення даного ринку.

Ключові слова: ринок бджільництва, ринкові умови, імпорт, експорт, частка ринку, концентрація ринку, компарація