JEL Classification: C89 **DOI**: https://doi.org/10.31521/modecon.V44(2024)-15

Kushniruk Viktor, PhD in Economics, Associate Professor, Associate Professor of the Hotel and Restaurant Affairs and Business Organization, Mykolaiv National Agrarian University, Mykolaiv, Ukraine

ORCID ID: 0000-0002-4368-8912
e-mail: kushnirukvs@mnau.edu.ua

Onopriichuk Denis, graduate of the Faculty of Management, Mykolaiv National Agrarian University, Mykolaiv, Ukraine

ORCID ID: 0000-0003-0098-0435
e-mail: 26denisonop@gmail.com

Tkachuk Anastasia, postgraduate student, Mykolaiv National Agrarian University, Mykolaiv, Ukraine

ORCID ID: 0000-0003-3797-4303
e-mail: nastena1997_tkachuk@ukr.net

Prospects Of Agribusiness Development in Mykolaiv Oblast

Abstract. Introduction*. The study deals with the analytical assessment of the impact that the full-scale russian invasion on the territory of Ukraine has on the agribusiness of the Mykolaiv Oblast. The object of the study was the actual statistical and forecast data on sown areas, gross harvest, etc.*

Purpose. *The main goal is to analyze the current state of agribusiness in Mykolaiv Oblast and the prospects of its development.*

Results. *The importance of agriculture for ensuring the country's food security was highlighted. In the face of full-scale invasion, enterprises face many challenges. It was noted that the introduction of innovative technologies is crucial for achieving maximum productivity of production. The value of agricultural products of the Mykolaiv Oblast was analyzed and a significant advantage of crop production over livestock production was noted. The analysis of the dynamics of the costs of agricultural products and the forecast of the costs for the next 3 years were carried out. The sown areas of agricultural crops, the value of agricultural products per hectare and the availability of agricultural machinery in the enterprises were calculated. Using the actual yield data of cereals and legumes, the planned yield was calculated according to the average progressive indicator. Correlation-regression analysis of the influence of factors on productivity in Mykolaiv Oblast, namely gross yield, applied mineral and organic fertilizers, applied pesticides and average prices of grain and leguminous crops was carried out. A correlation matrix was constructed, according to which we observe a close relationship between the yield of grain and legumes with the gross harvest (r = 0.939) and applied mineral fertilizers (r = 0.873), a moderate relationship with applied pesticides (r = 0.781) and applied organic fertilizers (r = 0.687).*

Conclusions*. . It has been proved that the full-scale russian invasion on the territory of Ukraine had a significant impact on the agro-business of the Mykolaiv Oblast. It is necessary to apply a comprehensive approach to the development of agribusiness, since this region has great prospects for rapid growth.*

Keywords *agribusiness; Mykolaiv Oblast; agricultural products; yield; grain and leguminous crops.*

УДК 338.432.5(477.73)

Кушнірук В. С, канд. екон. наук, доцент, доцент кафедри готельно-ресторанної справи та організації бізнесу, Миколаївський національний аграрний університет, м. Миколаїв, Україна

Онопрійчук Д. О., здобувач вищої освіти факультету менеджменту, Миколаївський національний аграрний університет, м. Миколаїв, Україна

Ткачук А. В., аспірант, Миколаївський національний аграрний університет, м. Миколаїв, Україна

Перспективи розвитку агробізнесу в Миколаївській області

Анотація. *У статті проведено аналітичну оцінку впливу повномасштабного вторгнення російської федерації на територію України на агробізнес Миколаївської області. Об'єктом дослідження стали фактичні статистичні та прогнозовані дані щодо посівних площ, валового збору урожайності та інших.*

Метою дослідження є аналіз поточного стану агробізнесу Миколаївської області та перспектив його розвитку.

Авторами обґрунтовано важливість сільського господарства для забезпечення продовольчої безпеки країни. Визначено, що впровадження інноваційних технологій є вирішальним при досягненні максимальної продуктивності

[1]**Стаття надійшла до редакції**: 21.04.2024
Received: 21 April 2024

виробництва. В умовах повномасштабного вторгнення підприємства стикаються з багатьма викликами. Проаналізовано вартість виробленої продукції сільського господарства Миколаївської області та зафіксовано значну перевагу галузі рослинництва над тваринництвом. Проведено аналіз динаміки вартості виробленої продукції сільського господарства та прогнозування вартості на найближчі 3 роки. Розраховано посівні площі під сільськогосподарські культури, вартість продукції сільського господарства на 1 га, наявність сільськогосподарської техніки у підприємствах. За допомогою фактичних даних урожайності зернових та зернобобових культур розраховано планову урожайність за середньопрогресивним показником. Проведено кореляційно-регресійний аналіз впливу факторів на урожайність у Миколаївській області, а саме валового збору, внесених мінеральних та органічних добрив, застосованих пестицидів, середніх цін на зернові та зернобобові культури. Побудовано кореляційну матрицю, за якою спостерігаємо тісний зв'язок урожайності зернових та зернобобових культур з валовим збором (r = 0,939) та з внесеними мінеральними добривами (r = 0,873), помірний зв'язок з застосованими пестицидами (r = 0,781) та внесеними органічними добривами (r = 0,687).

Доведено, що повномасштабне вторгнення російської федерації на територію України значно вплинуло на агробізнес Миколаївської області. Необхідно застосовувати комплексний підхід до розвитку агробізнесу, оскільки даний регіон має великі перспективи для швидкого зростання.

***Ключові слова**: агробізнес; Миколаївська область; сільськогосподарська продукція; урожайність; зернові та зернобобові культури.*

***JEL Classification:** C89*

Formulation of the problem. In the modern economic environment of Ukraine, agribusiness always occupies a key position in the national economy, as the issues of organizing production and ensuring food security of our country remain relevant.

It is not surprising that Ukraine is one of the main exporters of agricultural products to the EU countries, which is explained by the fact that our country has good development prospects, favorable climatic conditions and high agricultural potential, with large land resources that allow for effective development of agricultural production. Despite the full-scale russian invasion on the territory of Ukraine, the unstable international agricultural market and difficult economic conditions, Ukrainian agribusiness is confidently developing and opening new markets.

Further development of Ukrainian agribusiness depends on the ability to effectively solve such issues as improving logistics, developing the infrastructure of the agricultural market, ensuring full harmonization of Ukrainian agricultural products with the international market environment, and compliance with requirements for quality and safety of raw materials.

Analysis of recent research and publications. The development of agribusiness is studied by many foreign and domestic scientists. Shmatkovska, T. [12] considers the risks of agribusiness, namely the loss of resource potential of the agricultural sector and the difficulty of selling agricultural products. Various aspects of agribusiness functioning are considered Soetriono, S. [14], Mykytiuk, V. [5], Buka, S., Tkachuk, V., Kondratiuk, V., Tonkha, O., Slobodyanyuk, N. [1], Shevchenko, A., Petrenko, O. [11], Shyshkin, V. [13].

Formulation of research goals. The purpose of the work is to analyze the state of agribusiness and its development prospects. In accordance with the stated goal of the article, the following objectives were set: to consider the state of modern agribusiness in the conditions of an unstable market environment and assess further prospects for its development; to analyze the main problems hindering the development of the agro-industrial sector of the state; to examine the role of state agrarian policy in the development of domestic agribusiness; to develop recommendations on innovative prospects for the development of the agricultural sector of Ukraine.

In order to achieve the objectives of the study, recommendations on innovative prospects for the development of agribusiness were developed using the example of the agro-industrial sector of the Mykolaiv Oblast.

Outline of the main research material. At the present stage of development of market relations, agriculture is one of the most promising and rapidly developing branches of the national economy.

Agriculture is a branch of material production, which is important for providing the population with food and industry with raw materials. Therefore, the development of agriculture appears as an important factor in the formation of all sectors of the economy [2].

Sahachko, Yu., Smihunova, O., Podolska, O. [9] suggest that investment support for the technological growth of the agro-food sector can be of crucial importance for this, as it allows to achieve high productivity, competitiveness and sustainable development of this industry, which in turn will contribute to ensuring the country's food security, raising the standard of living of the population and reducing the outflow of labor abroad.

Agribusinesses today face a number of challenges, such as fluctuating input prices, climate change, market competition, and regulatory constraints [7].

It is worth noting that the most difficult task of an agricultural producer is the choice of the right standards and planned indicators for evaluating efficiency [9]. It is emphasized that when measuring efficiency it is necessary to consider each component separately. The most common relative indicator of process quality is the comparison of planned and actual indicators.

Nowadays agro-industrial enterprises make a great contribution to ensuring food security of Ukraine and development of export opportunities of agro-industry,

and they are the most competitive organizational forms of agro-industrial production [15].

In today's conditions of globalization, individual enterprises cannot compete with large and highly efficient agricultural enterprises. Therefore, there is a need for the formation of an agricultural holding, which is quite natural all over the world [3].

It should be noted that at present the agribusiness should increase the use of innovations in agriculture, since such inhibiting economic factors as an outdated material and technical base, high cost of energy resources, incomplete structure of business processes, as well as a high risk due to the unstable situation in the country may have negative consequences in the future.

The leading role in the process of increasing the investment attractiveness of the agricultural sector of Ukraine belongs to the state, which has access to the necessary state budget and extra-budgetary funds and is able to identify promising objects and investment directions on the scale of the whole country [4].

The agricultural products of the Mykolaiv Oblast are analyzed (Table 1). It is worth noting that according to the statistics of the Mykolaiv Oblast in 2016 farms of all categories produced agricultural products at constant prices for 19778,0 million UAH, which is 3,23% of all agricultural products in Ukraine, for 29066,9 million UAH in 2021 (4,08%) and for 16334,4 million UAH in 2022 (3,06%)...

Table 1 **Distribution of agricultural products in the Mykolaiv region for 2020-2022, million UAH**

Indicators	Years			2022 in % to 2020
	2020	2021	2022	
Agricultural products	19778,0	29063,9	16334,4	82,6
crop production	17081,3	26598,9	14419,5	84,4
in enterprises	11690,0	18706,7	10292,1	88,0
in households	5391,3	7892,2	4127,4	76,6
livestock production	2696,7	2465,0	1914,9	71,0
in enterprises	444,4	385,9	436,7	98,3
in households	2252,3	2079,1	1478,2	65,6

Source: by the authors using statistical data

Moreover, considering crop production and livestock production separately, we observe a significant advantage of crop production over livestock production: in 2020, crop production accounted for 86,4% of all agricultural products, while livestock production accounted for 13,6%. In 2021, we observe an increase in the share of crop production and, as a result, a decrease in the share of animal production by 5.2 p.p. (the share of crop production was 91,5%, animal production – 8,5%). In 2022, due to the full-scale russian invasion on the territory of Ukraine, crop production decreased by 45,8% compared to 2021, livestock production also showed a decrease, but at a lower rate (by 22,3%). In this regard, in the structure of agricultural products the plant industry lost 3,2 p.p. and reached a mark of 88,3%. Accordingly, the specific weight of the animal industry in the structure increased by 3,2 percent. p. and reached 11,7%. Analyzing the production of agricultural products in enterprises and households, we can see that 71,4% of the plant products are produced in enterprises, and during the studied period there is a slight increase of this indicator (by 1,9 p.p. in 2021 and by 1,0 p.p. in 2022). Looking at animal products, we see the opposite situation, in which 77,2% is accounted for by households, and we observe an increase in the specific weight of this category by 0,8 p.p. in 2021 (from 83,5% to 84,3%) and a decrease of 7,2 p.p. in 2022 (from 84,3% to 77,2%). If we take a closer look at the structure of agricultural products, let's note that in 2020, 64,6% of all products were produced by enterprises and 35,4% by households. In 2022 there will be slight changes due to the impossibility of conducting personal agriculture as a result of the full-scale invasion and the insufficiency of material and technical resources, the absence of sales markets, and the complexity of production. For this reason, the share of enterprises in the production of agricultural products increased by 3,3% in comparison with 2020.

In Fig. 1 the dynamics of costs of agricultural products produced in farms of all categories for 2010-2022 is shown. According to the given data we do not observe the instability of production in Mykolaiv Oblast. It was noted that in the period under study the maximum value of production of agricultural products was in 2021 (29063,9 million UAH), then in 2022 it was the minimum value (16334,14 million UAH). Analyzing the growth rates, we can see that production decreased in 2012 (by 17,0%), in 2014 (by 6,6%), in 2017 (by 9,0%), in 2020 (by 23,9%), and in 2022 (by 43,8%). This instability is due to factors such as

climatic and external factors. First of all, we can observe a significant decrease in production in 2014 due to the russian military aggression, in 2020 due to the spread of the COVID-19 pandemic, and in 2022 due to the full-scale invasion. Using the built-in functions of Microsoft Excel, the forecast of the cost of agricultural products for 2023-2025 was made. According to the given data, with a confidence interval at the level of 95%, the increase in the value of manufactured goods in the Mykolaiv Oblast in 2023 and 2024 is predicted (by 15,8% and 45,9%, respectively), and the lower and upper confidence limits in 2023 are from 11205,6 mln UAH to 26619,4 mln UAH, and in 2024 – from 19642,5 mln UAH to 35534,4 mln UAH. In 2025 the decrease in production is predicted to be 38,7%, with confidence limits from 8737,1 million UAH to 25096,8 million UAH.

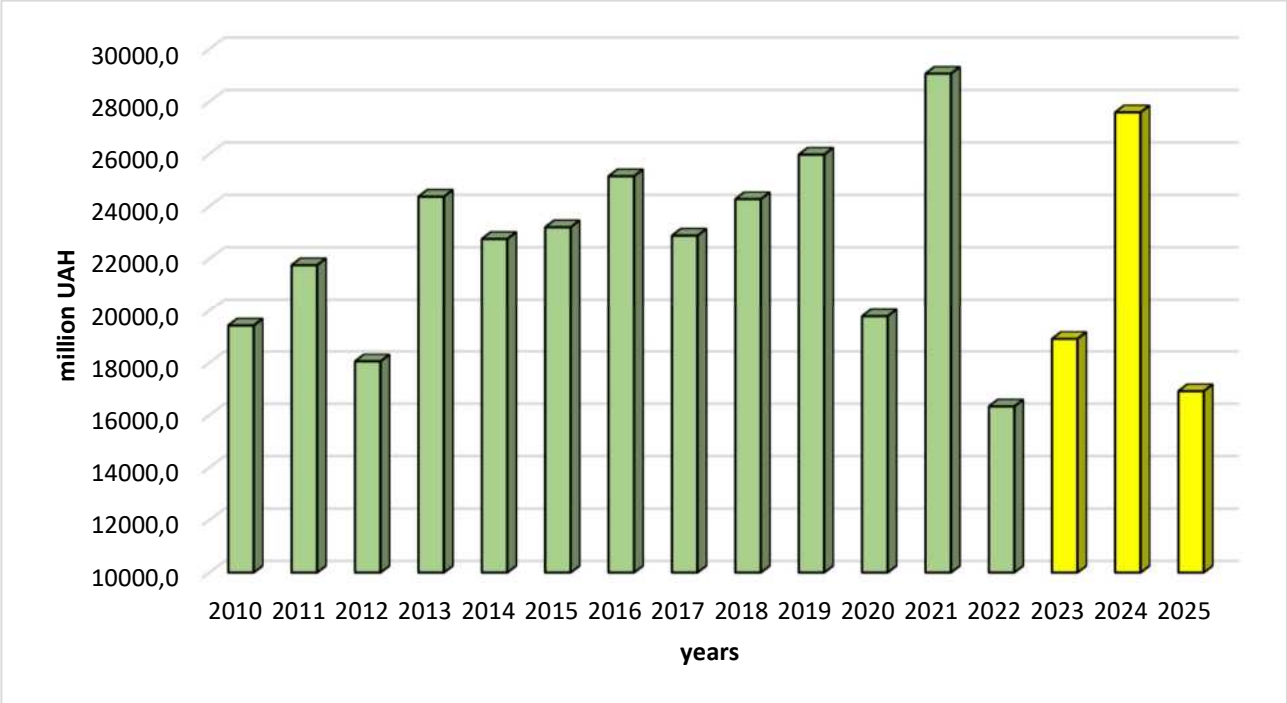

Figure 1 – **Dynamics of costs of agricultural products produced by farms of all categories in Mykolaiv Oblast for 2010-2022 and forecasts for 2023-2025**

Source: calculated by the authors using statistical data

The distribution of the agricultural production of the enterprises of the Mykolaiv Oblast was carried out per 100 hectares of agricultural land (Table 2). We can see that in 2021 the production of plant products will decrease by 36,9% or 612,8 million UAH (from 1689,4 million UAH to 1066,2 million UAH), while the production of animal products will increase by 29,9% or 10,4 million UAH (from 34,8 million UAH to 45,2 million UAH).

Table2 **Distribution of agricultural products in the Mykolaiv Oblast per hectare for 2020-2021, million UAH**

Indicators	Years		Absolute deviation	Relative deviation
	2020	2021		
Agricultural products	1724,2	1111,4	-612,8	64,5
crop production	1689,4	1066,2	-623,2	63,1
livestock production	34,8	45,2	10,4	129,9

Source: calculated by the authors using statistical data

The main problem hindering the renewal of technical equipment and fixed assets in agriculture is the limited financial resources available to farmers for improving the material and technical base. Important aspects of effective management of the main means of agricultural enterprises are such as:

- timely adaptation to market changes;
- development of strategic development plans;
- analysis and cost control;
- a balanced approach to saving and using resources [6].

The available equipment in enterprises is analyzed for 2018-2019, since the information is gathered every five years (Table 3). The purpose of collecting this data is to analyze the technical availability of agricultural production in the region. It can be seen that the largest absolute deviation is observed for such equipment as seeders (an increase of 268 pcs), tractors (an increase of 257 pcs), trucks, trucks, station wagons and harrows (an increase of 139 pcs each). In general, in 2019 the number of agricultural machines in Mykolaiv Oblast increased by 885 pcs or 3,6% (from 24274 pcs to 25159 pcs). The largest percentage growth is observed in the group of milking and dairy machines (by 30,9%) and sowing machines (by 6,6%). In the structure of agricultural machinery, the largest specific weight is occupied by harrows (35,9%), tractors (25,5%) and seeders (17,2%).

Table 3 **Availability of agricultural machinery in the farms of the Mykolaiv Oblast, pcs**

Indicators	Years		Structure, 2019	Absolute deviation	Relative deviation
	2018	2019			
Tractors	6164	6421	25,5	257	104,2
Lorries, trucks, estate cars	3006	3145	12,5	139	104,6
Grain combine harvesters	1299	1332	5,3	33	102,5
Seeders	4061	4329	17,2	268	106,6
Harrows	8887	9026	35,9	139	101,6
Ripper-binders	802	834	3,3	32	104,0
Milking and dairy equipment	55	72	0,3	17	130,9

Source: calculated by the authors using statistical data

Considering the sown areas of agricultural crops for 2020-2022 in the Mykolaiv Oblast (Table 4), we can see that the sown areas of grain and leguminous crops increased by 7,5% in 2021 and decreased by 23,4% in 2022; industrial crops decreased in 2021-2022 by 3,9% and 10,0%, respectively; potatoes, vegetables and cucurbits crops increased by 1,2% in 2021 and decreased by 34,8% in 2022; fodder crops decreased in 2021-2022 by 1,9% and 27,9%, respectively.

Table 4 **Sown areas of agricultural crops in enterprises of the Mykolaiv Oblast**

Indicators	Years					
	2020		2021		2022	
	thousands hectares	%	thousands hectares	%	thousands hectares	%
Grain and leguminous crops	883,6	56,5	949,5	59,1	727,5	55,9
Industrial crops	593,3	37,9	570,0	35,4	512,8	39,4
Potatoes, vegetables and cucurbits crops	40,9	2,6	41,4	2,6	27,0	2,1
Fodder crops	47,1	3,0	46,2	2,9	33,3	2,6

Source: calculated by the authors using statistical data

There are no significant changes in the structure of sown areas: during the period under study, the share of cereals and leguminous crops decreased by 0,6 p.p., potatoes, vegetables and cucurbits – by 0,5 p.p, as a result, the specific weight of industrial crops increased by 1,5%. It is worth mentioning that the specific weight of the sown area of agricultural crops in the Mykolaiv region in 2020-2022 will be 5,6% of the total sown area of Ukraine.

The planned yield of grain and leguminous crops will be calculated according to the average progressive indicator. This is an indicator that means the average level of productivity that can be achieved using modern agricultural technologies, high quality seeds, fertilizers, etc. and is calculated according to the

formula:

$$Y_{plan.} = \frac{Y_{w.av.} + Y_{max}}{2}, \quad (1)$$

де Yplan. – planned yield,

Yc. зв. – weighted average yield,

Ymax – maximum yield.

According to the initial data (Table 5) the grain and legume cultivation area tends to increase until 2021, but in 2022 it decreases significantly..

Table 5. **Source data for calculating the planned yield of grain and leguminous crops in the Mykolaiv Oblast**

Years	Sown area, thousands hectares	Gross harvest, thousands tonnes	Yield, centners per hectare
2018	867,8	2673,4	30,8
2019	890,2	3137,9	35,3
2020	880,7	2362,1	26,8
2021	950,5	3925,5	41,3
2022	705,2	2133,7	30,3
Total	4294,4	14232,6	X

Source: calculated by the authors using statistical data

When analyzing the gross yield of grain and leguminous crops, significant fluctuations are observed: an increase of 17,4% in 2019, a decrease of 24,7% in 2020 (due to the pandemic), a rapid recovery in 2021 (an increase of 66,2%) and a decrease of 46,6% in 2022, which is associated with the full-scale russian invasion on the territory of Ukraine and the occupation of a certain territory of the Mykolaiv Oblast. The yield of grain and leguminous crops has a similar trend, which is characterized by significant fluctuations during the period under study.

The planned yield of grain and leguminous crops is equal to:

$$Y_{plan.} = \frac{\left(\frac{14232,6}{4294,4} * 10\right) + 4\ ,3}{2} = 37,2\ centners\ per\ hectare \quad (2)$$

-

The planned yield is calculated according to the average progressive indicator (Fig. 2). According to these calculations, it is planned to increase the yield by 6,9 centners per hectare in the next reporting year.

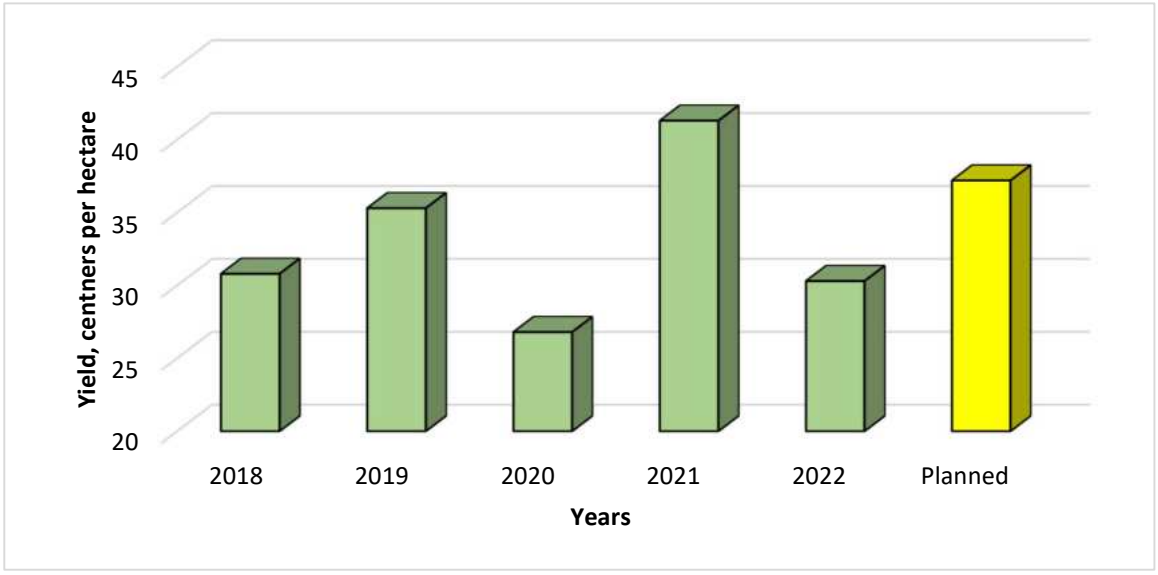

Figure 2 – **The yield of grain and legume crops in the Mykolaiv Oblast for 2018-2022 and the calculated planned yield**

Source: calculated by the authors

The correlation analysis of the influence of the factors on the productivity in the Mykolaiv region is carried out. The indicators influencing the yield of grain crops are given below:

Y – yield of grain and leguminous crops;

X1 – sown area of grain and legumes;

X2 – gross harvest of cereals and legumes;

X3 – applied mineral fertilizers;

X4 – applied organic fertilizers;

X5 – applied pesticides;

X6 – average prices of grain and legumes.

Correlation analysis, with the help of the Microsoft Excel analysis package, was used to study the mutual influence of the factors and to construct a matrix of pairwise correlations (Table 6)

.

Table 6 **Matrix of correlation coefficients of factors influencing the yield of grain and legumes in Mykolaiv Oblast**

	Y	X_1	X_2	X_3	X_4	X_5	X_6
Y	1						
X_1	0,53960	1					
X_2	0,93911	0,79604	1				
X_3	0,87271	0,88197	0,98734	1			
X_4	0,68674	-0,24142	0,39515	0,24444	1		
X_5	0,78089	0,94729	0,94799	0,98648	0,08220	1	
X_6	0,64370	-0,29696	0,34154	0,18813	0,99834	0,02461	1

Source:……

According to the analysis (Table 7) we observe a close relationship between the yield of grain and leguminous crops and gross harvest (r = 0,939) and applied mineral fertilizers (r = 0,873), a moderate relationship with applied pesticides (r = 0,781) and applied organic fertilizers (r = 0,687).

Table 7 **Indicators having the greatest impact on the yield of cereals and legumes in Mykolaiv Oblast**

Indicator	Equation	R^2	r
X_1	$y = 5,4881 + 0,0323\ X_1$	0,29117	0,53960
X_2	$y = 12,3480 + 0,0073\ X_1$	0,88193	0,93911
X_3	$y = 5,6850 + 0,1804\ X_1$	0,76163	0,87271
X_4	$y = 17,8000 + 0,0900\ X_1$	0,47162	0,68674
X_5	$y = -19,1193 + 88,5491\ X_1$	0,60979	0,78089
X_6	$y = 1,2006 + 0,0542\ X_1$	0,41435	0,64370

Source: constructed by the author

It seems that today there is an opportunity for farms to unite in cooperatives. However, large agricultural enterprises no longer need additional cooperation, since they have ensured the sale of their products or have generally developed all areas, ensuring a stable level of profitability of the cooperative. Only after a decline in production or a crisis will there be an increase in cooperation, as a result of which several more agricultural giants may be formed [8].

Conclusions. Thus, having conducted a detailed analysis of the current state of the agrarian sector of the economy of the Mykolaiv region, we can conclude that currently there are good opportunities for the introduction of innovative technologies. Thanks to their use it is possible to improve the economic efficiency of production and, as a result, to increase the profits of agricultural enterprises, which will be a stabilizing factor for the economy of Ukraine thanks to the increase of tax revenues to the state budget.

References:

1. Buka, S., Tkachuk, V., Kondratiuk, V., Tonkha, O. & Slobodyanyuk, N. (2023). Prospects for agribusiness in Ukraine over the next 5 years. International Journal of Environmental Studies, 80(2), 291-298. https://doi.org/10.1080/00207233.2022.2157630.
2. Kushniruk, V. & Donets, T. (2020, February 12-13). Agribusiness and its main results of activity in the Mykolaiv region. [Conference presentation abstract]. Entrepreneurship in the agricultural sphere: global challenges and effective management, ZNU, Zaporizhzhia, Ukraine. 153-156. https://dspace.mnau.edu.ua/jspui/handle/123456789/15598.

3. Kushniruk, V. & Romanova, A. (2021, March 19-20). Development of agricultural holding companies in Ukraine. [Conference presentation abstract]. Development of international economic cooperation: mechanisms and strategies, UNU, Uzhgorod, Ukraine. 81-84. https://dspace.mnau.edu.ua/jspui/handle/123456789/15606.
4. Lyotkina, T., & Kushniruk, V. (2022, May 26). Problems of investment attractiveness of the agricultural sector of Ukraine and proposals for their solution. [Conference presentation abstract]. Innovative and investment development of the agricultural sector is the key to the country's food security, Mykolaiv National Agrarian University, Mykolaiv, Ukraine. 106–109. https://dspace.mnau.edu.ua/jspui/bitstream/123456789/14085/1/106-109.pdf.
5. Mykytiuk, V., Palamarchuk, T. & Rusak, O. (2019). Analysis and prospects of agribusiness development: regional aspect. Scientific Horizons, 3(76), 30-37. https://doi.org10.33249/2663-2144-2019-76-3-30-37.
6. Oliinyk, T., Onopriichuk, D., & Pshenychnyi, I. (2024). Efficiency of Management of Private Assets of Agricultural Enterprises. Modern Economics, 43(2024), 73-81. DOI: https://doi.org/10.31521/modecon.V43(2024)-10.
7. Onopriichuk, D. (2024, January 15). Optimizing the financial results of agricultural enterprises in the context of ensuring food security. [Conference presentation abstract]. The future is audit, Kryvyi Rih National University, Kryvyi Rih, Ukraine. 334-336. https://dspace.mnau.edu.ua/jspui/bitstream/123456789/17092/1/334-336.pdf.
8. Onopriichuk, D., Cherven, I. (2023). Development of dairy cooperatives in the world. Modern Economics, 39(2023), 125-130. https://doi.org/10.31521/modecon.V39(2023)-19.
9. Prokopenko, O., Shmorgun, L., Kushniruk, V., Prokopenko, M., Slatvinska, M. & Huliaieva, L. (2020). Business process efficiency in a digital economy. International Journal of Management, 11(3), 122-132. https://dspace.mnau.edu.ua/jspui/handle/123456789/14256.
10. Sahachko, Yu., Smihunova, O. & Podolska, O. (2023). Prospects for the formation of investment support for the technological growth of the agricultural sector of the Ukrainian economy in the post-war period. Ukrainian Black Sea Region Agrarian Science, 27(3), 62-70. https://doi.org/10.56407/bs.agrarian/3.2023.62.
11. Shevchenko, A. & Petrenko, O. (2020). Current state of micro and small agribusiness in Ukraine. International Scientific E-Journal, 146-160. https://doi.org/10.22004/ag.econ.302974.
12. Shmatkovska, T., Agres, O., Luchechko, Y., Korobchuk, L., Naumenko, N., Voichuk, M. & Dziamulych, M. (2023). Realities and prospects of managing the development of agricultural business in Ukraine. Scientific Papers Series "Management, Economic Engineering in Agriculture and Rural Development", 23(4), 777-783. https://managementjournal.usamv.ro/pdf/vol.23_4/Art77.pdf.