

UDC 631.162

DOI: 10.31891/2307-5740-2021-294-3-24

INNA DVORNYK

ORCID ID: 0000-0002-9501-117X

e-mail: i.dvornyk@ukr.net

VIKTORIYA STADNYK

ORCID ID: 0000-0003-3154-3983

e-mail: vika\_stadnyk@ukr.net

Separated Subdivision of National University of Life and Environmental Sciences of Ukraine  
«Nizhyn Agrotechnical Institute»

## ANALYSIS OF PROFITABILITY OF AGRICULTURAL ENTERPRISES AS AN INDICATOR OF ECONOMIC EFFICIENCY

*Agriculture in Ukraine is a promising branch of the national economy, as it has the main factors of production - land and labor. Most agricultural products produce medium-sized agricultural enterprises, most often farms. Profitability is an indicator that means not only reimbursement of costs associated with the production and sale of products, but also profit. It is determined that the economic efficiency of agricultural enterprises is directly influenced by the organizational and legal form of management, size, direction of specialization, cost of production, resource supply. Profitable is the production of such agricultural products: sunflower, milk, potatoes, cereals and leguminous crops. In order to increase the efficiency of the functioning of agricultural enterprises, it is proposed to: provide preferential long-term lending to agricultural producers; to stimulate the efficiency of state-owned enterprises; take measures to prevent excessive concentration of land resources in the ownership of individual enterprises.*

*Keywords: profitability, efficiency, enterprise, agriculture, financial result.*

ДВОРНИК І. В.,

СТАДНИК В. П.

Відокремленого підрозділу Національного університету біоресурсів і природокористування України  
«Ніжинський агротехнічний інститут»

## АНАЛІЗ ПРИБУТКОВОСТІ СІЛЬСЬКОГОСПОДАРСЬКИХ ПІДПРИЄМСТВ ЯК ПОКАЗНИКА ЕКОНОМІЧНОЇ ЕФЕКТИВНОСТІ

*Сільське господарство в Україні є перспективною галуззю національної економіки, оскільки володіє основними факторами виробництва – земля та праця. Найбільше сільськогосподарської продукції виробляють середні за розмірами сільськогосподарські підприємства, найчастіше фермерські господарства. Рентабельність діяльності – показник, що означає не лише відшкодування витрат, пов'язаних з виробництвом та реалізацією продукції, але й отримання прибутку. Визначено, що на економічну ефективність діяльності сільськогосподарських підприємств безпосередньо впливає організаційно-правова форма господарювання, розміри, напрям спеціалізації, собівартість продукції, ресурсне забезпечення. Прибутковим є виробництво підприємствами такої сільськогосподарської продукції: соняшник, молоко, картопля, зернові та зернобобові культури. Збитковим є виробництво м'яса овець та кіз, ВРХ, буряків цукрових фабричних, винограду. Аналіз рентабельності сільськогосподарського виробництва в підприємствах різних організаційно-правових форм господарювання засвідчив, що найвищого рівня досягли приватні підприємства (43,8%), а найнижчого – державні (13,4%). Відзначається, що у рослинництві в собівартості продукції частка витрат на оплату послуг сторонніх організацій – 8,8%, що є достатньо високим значенням, тобто сільськогосподарські підприємства не забезпечені основними виробничими фондами. Це пов'язуємо з високими цінами на сільськогосподарську техніку та ставками за кредити. З метою підвищення ефективності функціонування сільськогосподарських підприємств запропоновано: забезпечити пільгове довгострокове кредитування сільгоспвиробників; стимулювати ефективність діяльності державних підприємств; вжити заходів для недопущення надмірної концентрації земельних ресурсів у власності окремих підприємств.*

*Ключові слова: рентабельність, ефективність, підприємство, сільське господарство, фінансовий результат.*

### Problem statement in general form and its connection with important scientific or practical tasks

The agricultural sector occupies an important place in the economy of Ukraine. Products made by agricultural producers, provides the population with food, serves as a raw material base for industry. More than 60% of the gross agricultural products are imported into industrial processing, which is carried out by about 30 light and food industries. Therefore, the efficiency of the industry always remains an urgent issue.

### Analysis of recent researches and publications

A large number of scientific works devoted to the effectiveness of the functioning of agricultural enterprises in Ukraine is the object of research I.M. Boychuk, O.A. Koval, Y.O. Lupenko L.L. Melnyk, O.G. Shpykulyak, V.Y. Mesel-Veselyak, O.V. Shanin, and several other scientists.

### Highlighting previously unresolved parts of the common problem that the article is dedicated to

Despite the considerable amount of research towards the effectiveness of the functioning of agricultural enterprises, deeper economic justification requires the analysis of the financial and economic effectiveness of their activities and ways to increase the efficiency of agricultural enterprises in Ukraine.

### Formulation of the objectives of the article

The purpose of the research is to analyze the financial and economic effectiveness of agricultural enterprises in Ukraine.

### Presentation of the main material

Financial and economic efficiency is an important comprehensive indicator of the activities of an agricultural enterprise, the functioning of which is accompanied by continuous turnover of funds in the form of resource expenditures and income generation, their distribution and use.

At the time of writing, the following methods of research were used: bibliographic (in the processing of scientific publications on the development of the agricultural sector and agrarian transformations in the countryside), the method of comparative analysis (when comparing the results of activities), the method of a systematic approach (to justify the main directions of development of the agricultural sector).

The results of the industry are characterized by the volume of products produced (Table 1).

Table 1

#### Agricultural products by categories of farms

	Years					Relative deviation, %	
	2010	2015	2016	2017	2018		2019
Farms of all categories							
agricultural products Economy	467474,7	596832,8	634433,1	620475,6	671294,0	680982,4	145,67
Products Crop	329646,3	453016,9	494461,9	480157,0	529347,3	538705,6	163,42
Products Livestock	137828,4	143815,9	139971,2	140318,6	141946,3	142276,8	103,23
Enterprise							
agricultural products Economy	256806,0	367738,8	403244,7	391015,8	437998,6	449806,3	175,15
Products Crop	200914,6	299369,3	336588,1	323724,3	367688,1	376789,7	187,54
Products Livestock	55891,4	68369,5	66656,6	67291,3	70310,3	73016,6	130,64
Including farms Economy							
agricultural products Economy	34145,9	55009,4	64306,1	63277,2	73181,7	79053,0	231,52
Products Crop	31863,8	52312,9	61528,1	60491,7	70214,1	75809,2	237,92
Products Livestock	2282,1	2696,5	2778,0	2785,3	2967,6	3243,8	142,14
Households							
agricultural products Economy	210668,7	229094,0	231188,4	229459,8	233295,4	231176,1	109,73
Products Crop	128731,7	153647,6	157873,8	156432,3	161659,4	161915,9	125,7868
Products Livestock	81937,0	75446,4	73314,6	73027,3	71636,0	69260,2	84,53

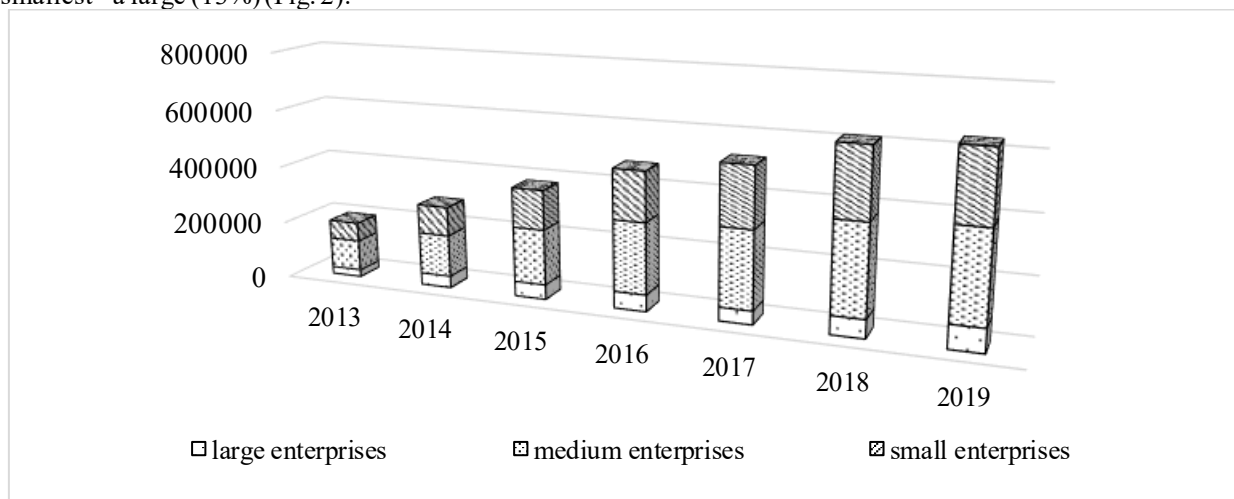
(in constant prices in 2016; mln UAH) [5]

Thus, the analysis of agricultural products by categories of farms showed that in general there is its positive dynamics (145.67%), in particular crop production 163.42%, livestock - 103.23%. Most agricultural products are produced by enterprises - 66% (farms 11.6%), respectively, households - 34%.

Enterprises produce 69.94% of crop production and 51.32% of livestock products. It is worth noting that the dynamics of livestock products in households has a negative tendency. During the study period, it decreased by 15.47%.

Farms are able to provide highly efficient production of agricultural products, but they cannot do without financial assistance, as it is done in other countries. In particular, in the United States, where large agricultural enterprises make up 20%, and farms - 80% and, despite the advantages in all areas of large agricultural enterprises, western countries and the United States contribute to the development of farms for many reasons.

The largest share of agricultural production in Ukraine accounts for the average entrepreneurship (49%), the smallest - a large (13%) (Fig. 2).



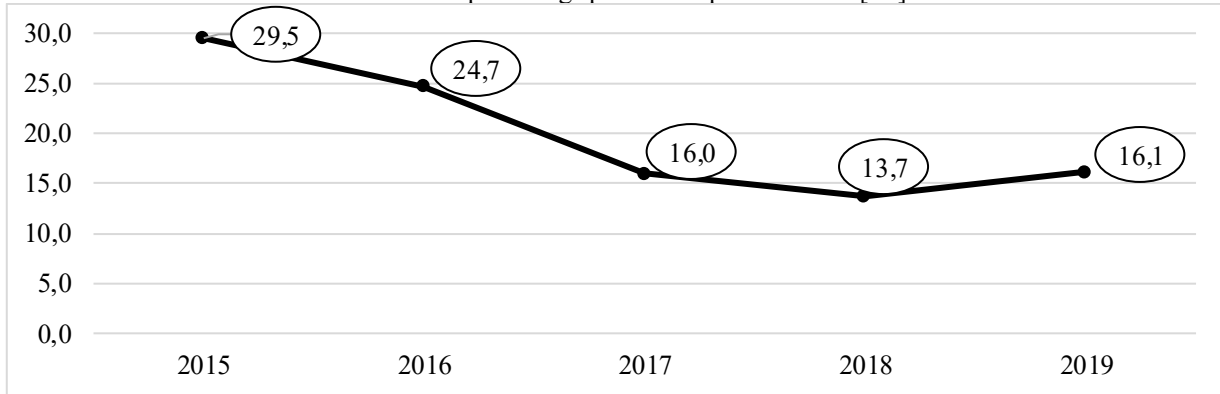
Rice. 2. Dynamics and structure of the volume of products (goods, services) produced by large, medium and small enterprises in the field of agriculture in 2013-2019, million UAH [5]

An indicator of the result of the agricultural enterprise is net profit (loss). Analysis of statistical materials showed that in general agricultural activity is profitable. In particular, in 2019, the industry received profits in the amount of UAH 93,255.4 million. The analysis of the amount of net profit (loss) of enterprises by type of economic activity in 2019 showed that the agricultural, forestry and fisheries industry has one of the best indicators, inferior to industry (UAH 133,701.6 million) and wholesale and retail trade (UAH 108,561.5 million).

Analysis of the results of agricultural enterprises showed that in 2019 the share of enterprises that received profits - 83%, in turn, the share of unprofitable - 17%. It is worth noting that the share of the latter is growing every year, in 2016 there were 11.6% [10].

Profitability indicators in agriculture are calculated in order to study the economic results of agricultural enterprises. When it comes to the profitability of the enterprise, it means that it not only reimburses the costs associated with the production and sale of products, but also receives a certain profit. And this contributes to the further development of both a separate enterprise and the economy as a whole and improving the well-being of citizens.

In 2019, the level of profitability of agricultural enterprises amounted to 16.1% (Fig. 3). The analysis of the dynamics of the indicator showed its rapid drop, compared to 2015 by 45.42% or 13.4 percentage points; however, there has been an increase of 17.52% or 2.4 percentage points compared to 2018 [10].



Rice. 3. Dynamics of profitability of agricultural enterprises during 2015-2019, %

Table 2 shows the level of profitability of agricultural production [10].

Table 2

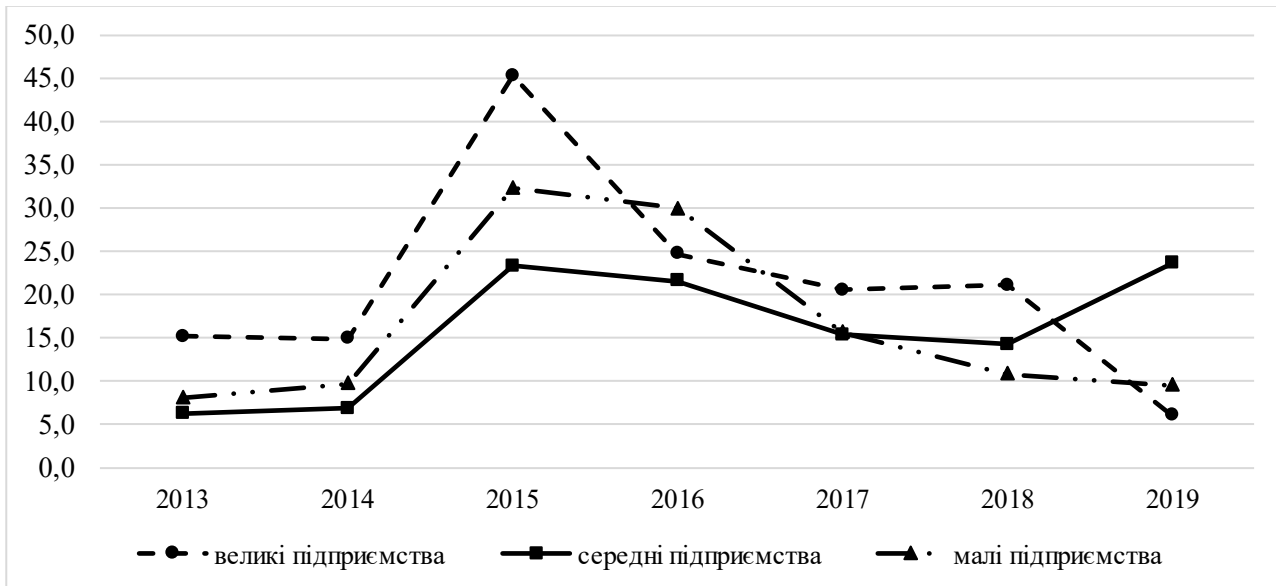
The level of profitability of agricultural products in enterprises

Agricultural culture	Years			Deviations of 2019 from 2017,+/-
	2017	2018	2019	
Cereal and leguminous crops	25,0	24,7	11,8	-13,2
Sunflower	41,3	32,5	23,5	-17,8
Sugar factory beets	12,4	-11,4	-15,4	-27,8
Vegetable crops	9,9	13,3	2,8	-7,1
Potato	10,0	6,8	15,4	5,4
Fruit and berry crops	35,4	6,4	6,2	-29,2
Grapes	51,6	22,6	-7,2	-58,8
Milk	26,9	16,1	20,6	-6,3
Cattle for meat	3,4	-17,7	-27,1	-30,5
Pigs for meat	3,5	6,9	4,7	1,2
Sheep and goats for meat	-39,6	-16,6	-39,7	-0,1
Poultry for meat	7,0	5,7	-3,7	-10,7
Poultry eggs	-9,0	5,4	-23,5	-14,5

Thus, the analysis of the level of profitability of agricultural production showed that sunflower had the highest rates in 2019 (23.5%), but during 2017-2019 there was a negative dynamic, the indicator decreased by 17.8 percentage points. The level of profitability of milk production in 2019 amounted to 20.6%, but this value is 6.3 percentage points less than in 2017. The level of profitability of potato production in 2019 is 15.4%, and in 2017 26.9%, that is, there is a positive dynamic. The level of profitability of grain and leguminous crops in 2019 amounted to 11.8%, which is 13.2 percentage points less than in 2017.

The production of sheep and goat meat is unprofitable, the profitability level was minus -39.7%, while the value of the indicator in dynamics is almost unchanged. Does not bring profits the production of cattle meat (-27.1%). It should be noted that this indicator of the level of profitability, compared to 2017, decreased by 30.5 percentage points. The production of poultry eggs in 2019 had a profitability level of minus -23.5%, worsening the indicator of 2017 by 14.5 percentage points. The level of profitability of sugar factory beet production in 2019 was minus -15.4%, although in 2017 the industry had a profitable nature of activity (12.4%). Similar is the production of grapes: in 2019, the level of profitability was minus -7.2%, and in 2017 the figure was 51.6%.

The analysis of profitability of agricultural enterprises in their size showed the differentiation of indicators (Fig. 4).



Rice. 4. Dynamics of profitability of all activities of agricultural enterprises, %

During 2013-2014. the situation was stable, large enterprises had the highest rates. In 2015, there was a significant jump in the level of profitability in all categories of enterprises, more than 3 times. At the same time, the profitability of large enterprises amounted to 45%, medium - 33%, small - 23%. Then there was the negative dynamics. In 2019, the highest profitability rates were medium-sized enterprises – 24%, while small enterprises – 9%, and large enterprises – 6%. That is, medium-sized enterprises began to function more efficiently. This is due to their easier adaptation to changes in the market of goods and resources [10].

Table 3

**Level of profitability of agricultural production in agricultural enterprises by organizational and legal forms of management, %**

Years	Business associations	Private enterprises	Agricultural production cooperatives (APC)	State-owned enterprises	Other enterprises
The level of profitability of all activities					
2000	8,7	15,9	8,3	3,1	-12,3
2011	25,9	33,5	15,3	2,8	21,3
2015	44,9	49,7	43,0	14,9	36,4
2019	34,9	43,8	42,3	13,4	41,4
Level of profitability of crop production					
2000	29,3	35,6	28,7	44,3	20,6
2011	30,3	40,5	30,0	25,7	16,0
2015	49,8	54,5	56,1	21,7	42,9
2019	42,7	48,8	55,9	19,3	44,4
The level of profitability of livestock					
2000	-32,7	-29,0	-39,0	-36,2	-30,4
2011	16,4	4,8	-8,6	-16,1	17,1
2015	25,0	13,3	11,3	-12,1	18,3
2019	7,6	5,6	3,4	-13,2	36,3

The results of the analysis of the level of profitability of agricultural production in agricultural enterprises according to organizational and legal forms of management (Table 3) show that private enterprises (43.8%), APC (42.8%), and other enterprises (41.4%), and the lowest – state enterprises (13.4%), achieved the highest level of profitability in 2019. The factor of private property, of course, should not be underestimated.

Crop production was the most profitable in private enterprises (48.8%) and APC (55.9%), and the lowest level of profitability was observed in state-owned agricultural enterprises (19.3%). Livestock products were unprofitable in state-owned enterprises (-13.2%), and other enterprises (36.8%) reached the highest level of profitability [8].

The level of profitability is directly influenced by the cost of production, which is a calculated indicator and determined by enterprises [7]. Table 4 presents the cost structure of agricultural products, including crop production and livestock [10].

The analysis of the structure of costs for the production of agricultural products (works, services) in 2019 showed that the largest share is direct material costs – 57.8%, while in crop production – 52.7% (in particular, mineral fertilizers (18.6%), seeds and planting material (10%), fuel and lubricants (9.9%), in animal husbandry – 75.6% (in particular, feed 57.5%).

Table 4

**Structure of costs of enterprises for the production of products (works, services) agriculture in 2019**

Types of expenses	Agricultural products (works, services)		Products (works, services) of crop production		Products (works, services) of animal husbandry	
	million UAH	in % to total	million UAH	in % to total	million UAH	in % to total
Direct material costs – total	228 980,5	57,8	162 394,0	52,7	66 586,5	75,6
<i>including</i>						
seeds and planting material	30 955,0	7,8	30 955,0	10,0	X	X
Feed	50 684,4	12,8	X	X	50 684,4	57,5
of them purchased	22 301,1	5,6	X	X	22 301,1	25,3
other agricultural products	7 034,5	1,8	3 233,1	1,0	3 801,4	4,3
mineral fertilizers	57 278,7	14,5	57 278,7	18,6	X	X
fuel and lubricants	32 392,7	8,2	30 660,0	9,9	1 732,7	2,0
Electricity	3 905,4	1,0	1 786,3	0,6	2 119,1	2,4
fuel and energy	2 366,1	0,6	1 281,6	0,4	1 084,5	1,2
spare parts, repair and building materials for repair	19 297,3	4,9	15 756,5	5,1	3 540,8	4,0
Direct labor costs	25 228,8	6,4	17 819,4	5,8	7 409,4	8,4
Other direct costs – total	83 493,3	21,0	75 709,4	24,5	7 783,9	8,8
<i>including</i>						
deductions for social events	5 538,3	1,4	3 931,6	1,3	1 606,7	1,8
rent for:						
land shares (shares)	39 248,4	9,9	39 248,4	12,7	X	X
property shares	468,4	0,1	464,1	0,2	4,3	0,0
Depreciation	26 464,8	6,7	22 197,4	7,2	4 267,4	4,8
General production costs – total	58 686,3	14,8	52 311,9	17,0	6 374,4	7,2
<i>of them</i>						
payment for services third-party organizations	30 142,6	7,6	27 133,9	8,8	3 008,7	3,4
Cost - Total	396 388,9	100,0	308 234,7	100,0	88 154,2	100,0

Direct labor costs in the structure of costs for the production of products (works, services) of agriculture amounted to 6.4%: in crop production - 5.8%, in animal husbandry - 8.4%.

Other direct expenditures amounted to 21%: in crop production - 24.5%, in animal husbandry - 8.8%. In crop production in this part of costs, the largest percentage has rent for land shares – 9.9%, which significantly affects the total cost and cost of production, and as a result - on profitability. An interesting fact remains the low profitability of state-owned enterprises, given the fact that they operate on farmland.

General production costs (account 91 "General production costs"), written off for production costs (account 23 "Production"), are included in the cost of production. In 2019, they amounted to 14.8%, in particular in crop production - 17%, in animal husbandry - 7.2%. It is noted that the share of costs for the services of third-party organizations in crop production is 8.8%, which is quite high. This is due to the fact that agricultural enterprises are not fully equipped with the main production funds and cannot independently serve their own production process. This is associated with high prices for agricultural machinery and rates for loans.

#### **Conclusions from this study and prospects for further exploration in this area**

Thus, agriculture in Ukraine is a promising branch of the national economy, as it has the main factors of production - land (70% of the entire territory of the country is occupied by agricultural land) and labor (30.59% of the population lives in rural areas). However, to increase the efficiency of the functioning of agricultural enterprises, a number of measures must be taken:

- to strengthen control by the state over the use and protection of land;
- take measures to prevent excessive concentration of land resources in the ownership of individual enterprises;
- to activate state insurance of agricultural activities;
- to provide preferential long-term lending to agricultural producers;
- to stimulate the efficiency of state-owned enterprises in order to ensure the food security of the country;
- to ensure state control over purchase prices for agricultural products in order to protect producers;
- to introduce tax benefits for producers who carry out measures for the protection of land resources;
- to ensure increasing the competitiveness of agricultural products;
- use progressive forms of organization of production and remuneration;
- to improve the conditions and standard of living of the rural population.

Therefore, it should be emphasized that the economic efficiency of agricultural enterprises is directly influenced by the organizational and legal form of management, size, direction of specialization, cost of production, resource supply. Profitability of production of the main types of agricultural products requires a detailed study of the situation of the world food market for domestic agricultural exports.

---

**References**

1. Boychuk I. M. (2016). *Ekonomika pidpriemstva: pidruchnyk*. K.: Kondor –Vydavnytstvo. 378 p.
2. Derzhavna sluzhba statystyky. URL: <http://www.ukrstat.gov.ua/>
3. Koval O. A. (2014). Rentabelnist yak pokaznyk ekonomichnoi efektyvnosti diyalnosti silskohospodarskykh pidpryyemstv. *Ekonomika. Upravlinnya. Innovatsii*. Vyp. 1 (11); P. 66–76.
4. Melnyk L.L. (2010). Prybutkovist ta riven rentabelnosti ahramykh pidpryyemstv. *Visnyk Dnipropetrovskoho derzhavnoho ahramoho universytetu. Ekonomika*. №1. P. 156-161.
5. Lupenko Yu.O., Shpikuliak O.H., Mesel-Veseliak V.Ya. etc. (2019). *Perspektyvni formy orhanizatsii hospodarskoi diyalnosti na seli: naukova dopovid*. K.: NNTS «IAE». 114 p.
6. *Silske hospodarstvo Ukrainy za 2019 rik: statystychnyy shchorichnyk*. URL: <http://www.ukrstat.gov.ua/>
7. Shanin O.V. (2014). Efektyvnist funktsionuvannya silskohospodarskykh ahramykh formuvan riznykh orhanizatsiyno-pravovykh form v Ukraini. *Ekonomichnyi analiz*. T. 18 (3). P. 81-90.

Paper received : 24.01.2021

Printed : 10.03.2021