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REGULARITIES AND TRENDS OF THE OF THE LIVESTOCK INDUSTRY CURRENT STATE IN THE ZHYTOMYR REGION

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Abstract. An important condition for the provision of the country's food security is the production of sufficient quantities of food ensuring its proper quality. The current state of development of the livestock industry, as the main supplier of the population with meat, milk and other products both in Ukraine and at the regional level does not meet its potential capabilities. The purpose of the study was to investigate the trends and patterns of the current state of the livestock industry at the regional level and to find the main ways of its development. The study used general scientific and economic-statistical methods, namely: series of dynamics, analysis and synthesis, comparison. Analysis of the current trends in the livestock industry at the regional level as well as some of its indicators in general for Ukraine was carried out. Changes and dynamics of the average annual available number of livestock and poultry by groups of animals are revealed. It was found that the positive changes in the number of animals led to an increase in meat production, including lamb and goat, and poultry. However, this did not increase the production of beef, pork, milk and honey. The structure of meat production does not fully correspond to the natural and economic area of the animal husbandry. The influence of changes in the dynamics of the level of productivity of farm animals on the gross output of products, especially in the branches of pig breeding, sheep breeding, beekeeping, is estimated. According to the results of the research, the level of production of the main types of livestock products per capita has increased, but does not yet fully meet the physiological norms of consumption of these products. Feed evaluation in animal husbandry allowed measuring the efficiency of their use in terms of nutrients per 1 conventional head and unit of production by its types. An assessment of the economic efficiency of the industry is carried out according to the main indicators that summarise it. In the structure of production costs, the largest part is occupied by direct material costs. It was found that only the production of milk and chicken eggs was profitable. The study suggests the main approaches to the development of the livestock industry in the future

Keywords: market transformation, strategic orientation, trends in the livestock industry development, productivity



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INTRODUCTION

The market transformation of Ukraine's agriculture, its radical restructuring and purposeful state agrarian policy are aimed at ensuring that the agri-food sector provides economic growth for the national economy, raising social living standards, sustainable development and improving environmental security. Recently, the positive changes have been observed only in poultry and beekeeping industries [1], which do not solve the problem of balanced, systemic development of agriculture in the long term. Therefore, comprehensive scientific and innovative support of the economic stabilisation to achieve the strategic goals of radical agrarian transformations acquires special importance in the sectoral dimension.

Among the branches of agricultural production, animal husbandry plays a unique role of catalyst for the success of market transformations; it is a model embodiment of the paradigm of interaction of economic, social and ecological systems. On the one hand, the industry is relatively risky, technologically complex, resource- and labour-intensive, dependent on external conditions, demanding the qualifications and human qualities of its employees. However, on the other hand, animal husbandry has historically been a traditional branch of agriculture in Ukraine. It is an important source of income for peasants, an inviolable component of rural life, a means of strengthening the rural community, and a source of indispensable and essential food. Thus, the prospects of animal husbandry in Ukraine must correspond to its natural and economic potential, historical traditions, social role and ecological purpose.

The development animal husbandry in Ukraine is inextricably linked with the objectively necessary renewal and modernisation of the industry, which requires the following; creation and widespread introduction of new, highly productive animal breeds; resourcesaving and environmentally friendly technologies for keeping and feeding livestock and poultry; automated and computerised processes; the use of the latest biotechnological and physicochemical methods and processes aimed at improving product quality [2; 3].

The innovative vector for the development of an effective organisational and economic management mechanism in the livestock industry provides fundamental changes in intersectoral and sectoral economic relations. This implies the strengthening of state regulation and the use of such economic levers as pricing, lending, taxation, insurance, improving property relations, introducing a risk management system and modern marketing technologies, stimulating support for the development of agricultural cooperation and vertical integration [4-6].

There is an urgent need to develop and implement an adequate policy focused on the safe interaction of livestock and the environment at the national and regional levels. Such a policy should prevent overburdening the industry on ecosystems, land and water

resources in the context of intensifying its development. Numerous studies of Ukrainian and foreign scientists were aimed at the current state of development of the livestock industry, taking into account its specifics, productivity, diversity of global, industry, regional, technological and organisational features. In particular, Ukrainian scientists have studied the directions for the development of the agricultural sector of the economy, taking into account the investment support of the livestock industry in Ukraine [7-9]. The leading role in the development of the livestock industry in the near future is assigned to state regulation of its economy [10-13]. Ways to intensify modernisation shifts aimed at the revival of animal husbandry are, first of all, their socioeconomic component [14-17]. Further development of the livestock industry in the future is impossible without an empirical study of the influence of the main factors of its productivity in general and by animal species in particular [18-20].

Realising the potential of the livestock sector in climate change mitigation requires the promotion of research and development of new effective mechanisms for the introduction, dissemination and transfer of technologies to limit greenhouse gas emissions. This includes better mechanisms for monitoring, accounting and control of emissions in livestock production [10; 21; 22]. The reinforcement of the strategic orientation of Ukrainian livestock industry and intensification of its development to the level of compliance with the existing capabilities and the subsequent transition to competitive development is highlighted in this study. The above is aimed primarily at ensuring food security both in the country and at the regional level in particular.

The *purpose* of the study is to assess the productivity of livestock farming, its efficiency and the main reasons for its change with the further development of the industry in the long term, taking into account a set of factors. The key tasks include: analysis of the dynamics of the average annual number of livestock and poultry; the volume of livestock production; the level of livestock production per capita; level of animal feeding; analysis of the structure of the production cost of livestock products, and level of its profitability.

MATERIALS AND METHODS

In the process of organising and conducting research on the patterns and trends of the current state of the livestock industry in Zhytomyr region, the following general and special economic methods were widely used: economic analysis, which was implemented through a set of research techniques that constitute this method. The most important element of the methodology of economic analysis were techniques and methods of analysis, which were used at different stages for: primary processing of collected information, study of the state and patterns of development of the livestock industry,

determining the impact of factors on business results. A separate subsystem of general (synthetic) and analytical indicators was developed for each research task, based on the principle of their sufficiency for the corresponding depth of analytical research. At the same time, the relationships between indicators, algorithms for their calculation and levels of values were established.

Indicators of extensive and intensive development and changes, natural and cost, absolute and relative, were distinguished throughout the analysis. The set of indicators was determined by the nature of the study of causal relationships. During the study of economic efficiency of livestock production, qualitative and quantitative methods of economic analysis (analysis, synthesis, induction, deduction, average and relative values, time series, graphical techniques, etc.) were used to determine the size, scale, trends, and dynamics of development of the livestock industry [23].

At the first stage of the study, current trends in the state of development of the livestock industry were investigated. Using the time series and their indicators, the average annual livestock and poultry population, its absolute and relative deviation for the last three years were determined. Since changes in livestock and poultry directly affect the volume of production, it was considered necessary to study changes in the dynamics of production by type; including meat (in slaughter weight) of cattle, pork, lamb and goat, rabbit, poultry, milk, wool, chicken eggs, honey. It was expedient to study the structure of meat production of all kinds during the analysed period. In addition to the impact of changes in livestock and poultry on production volumes, a significant determining factor was the level of its productivity. The analysis of the latter was carried out through a system of indicators, namely: the average annual milk yield

per cow, the average annual shearing of wool from one sheep, the yield of offspring per 100 females by livestock, honey per 1 bee colony. The assessment of the state of the livestock industry was carried out through the level of production of meat (in slaughter weight), milk, eggs per person in the dynamics. The influence of changes in the level of cattle nutrition on the payback of feed products was studied using scientific methods of induction and deduction in general and by the main types of livestock products.

To increase the sustainable development of the livestock industry, the economic efficiency of its production is important. Among the main performance indicators is the structure of production costs, which was determined by the following cost items: direct material costs, including feed; other products; fuels and lubricants; fuel and electricity; spare parts, materials for repair; salary expenses; other direct costs, including contributions to social activities; amortisation; overhead costs, including services of third parties. The summarising indicator of livestock production in agricultural enterprises was estimated by types of products: cattle for meat, pigs for meat, sheep and goats for meat, poultry for meat, milk, and chicken eggs.

The information base of the analytical study was the statistical reporting of business entities of various business categories.

RESULTS AND DISCUSSION

Assessment of the state of livestock production

Current trends in the development of the livestock industry in the Zhytomyr region are defined primarily by the presence of livestock and poultry in farms of all business categories. The dynamics of the available livestock and poultry are given in Table 1.

Table 1 . Dynamics of average annual number of livestock and poult	y in the Jarms of	
Zhytomyr region, thousand animal units		

Consume of antimals		Years	2016 to 2018		
Groups of animals	2016	2017	2018	+,-	%
Bovine cattle	184.1	183.0	189.4	5.3	102.9
 in particular Dairy cows 	109.3	109.4	111.5	2.2	105.3
Pigs	137.0	118.2	146.6	9.6	107.0
Sheep and goats	27.0	23.9	27.5	0.5	101.9
Poultry of all types (adult and young), including fattening chickens	6961.1	7398.5	7491.7	530.6	107.6
Number of bee families	191.6	193.4	193.9	2.3	101.2

Source: calculated by the author based on [24]

The data in Table 1 show that, in general, there was a slight increase in the total number of animals during the analysed period. Thus, the number of animal units in 2018 amounted to 189.4 thousand units, which

is 5.3 thousand more, or 2.9%, compared to 2016. The number of dairy cows increased by 2.2 thousand units, or 5.3%; pigs – by 9.6 thousand units, or 7.0%; poultry – by 530.6 thousand units, or 7.6%. An increase in the

number of bee colonies was 2.3 thousand, or 1.2%, and at the end of 2018 there were 193.9 thousand bee colonies. Positive changes in the number of livestock and poultry were reflected in the livestock production (Table 2).

As can be seen from Table 2, the production of meat in the slaughter weight in general in the farms of Zhytomyr region increased in 2018 by 1.3 thousand tonnes, or 2.4%, as compared to 2016. At the same time, during the analysed period there was a decrease in production of pork by 1000 tonnes, beef and veal by 300 tonnes. In the farms of the region in 2018 there was

a significant decrease in milk production and amounts to 553.3 thousand tonnes, which was 13.3 thousand tonnes less than in 2016 amounted to 97.7% of the base year. Positive trends have taken place in the field of poultry farming. Thus, the increase in the production of chicken eggs in 2018 was 33.9 million units, or 5.1%, as compared to 2016. Despite a significant increase in the number of bee colonies (1.3 thousand), honey production during the period of study decreased by 240 tonnes. The structure of meat production of all species for the analysed period is shown in Fig. 1.

Table 2. Dynamics of livestock production in agricultural enterprises of Zhytomyr region **Years** 2016 to 2018 **Groups of animals** 2016 2017 2018 +,-Meat (slaughter weight), total, ths t. 53.3 53.3 54.6 1.3 102.4 -0.3 98.1 beef (in particular veal) 15.6 15.8 15.3 24.2 25.0 -1.0 96.2 26.0 pork • lamb and goat meat 0.2 0.3 0.5 0.5 166.7 • rabbit meat 0.9 1.1 1.3 0.4 144.5 9.7 poultry 8.7 10.2 1.5 177.3 547.7 97.7 Milk, ths. t. 566.6 553.3 -13.327 27 Wool, t. 28 100.0 Chicken eggs (mln. pcs.) 661.9 688.1 695.8 105.1 33.9 8074 7952 7834 -240 97.0 Honey, t.

Source: calculated by the author based on [24]

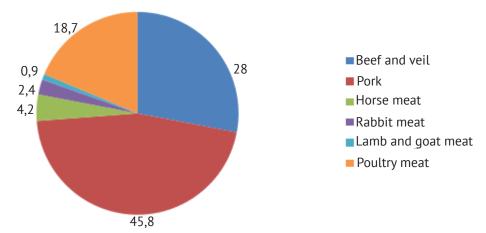


Figure 1. Structure of meat production by types in 2018, %

Source: calculated by the author based on [24]

The largest share in the structure of meat production in 2018 was pork – 45.8%, and beef and veal – 28.0%, poultry – 18.7%, horse meat – 4.2%, rabbit meat – 2.4%, lamb and goat meat – 0.9%. That is, the structure of meat production does not fully correspond to the natural and economic area of the livestock industry. The development of the livestock industry should be typical

for this region, first of all. The change in livestock production is largely influenced by changes in livestock and poultry productivity (Table 3). According to the results of the study of the dynamics of productivity of farm animals, as one of the factors of production intensity, the level of productivity by groups of animals has increased slightly, but far from the potential capabilities. Thus, in

2018, the average annual milk yield per cow increased by 20 kg., compared to 2016 and was 5087 kg., which is 0.4%. A significant decline in productivity occurred in the

pig industry. In 2018, the yield of offspring per 100 sows was 1046 piglets, which is 520 units, or 66.8%, less than in 2016.

Table 3. Dynamics of productivity of farm animals						
		Years	2016 to 2018			
Productivity indicators	2016	2017	2018	+,-	%	
Average annual milk yield per cow, kg.	5067	4977	5087	20	100.4	
Average annual shearing of wool from one sheep, kg.	1.8	1.9	1.7	0.1	94.5	
Offspring yield, per 100 females, units1:						
• calves	70	67	76	6	108.6	
piglets (from main sows)	1566	668	1046	-520.0	66.8	
 lambs and goats (from ewes) 	81	104	77	-4.0	95.1	
Received honey per 1 bee colony, kg.	42.1	40.5	40.4	-1.7	96.0	

Source: calculated by the author based on [24]

Note: 1 – in enterprises

During the analysed period there was a decline in productivity of sheep and beekeeping. The level of development of the livestock industry is largely

characterised by such indicators as the production of the enterprises per capita (Table 4).

Table 4. Production of livestock products per capita in agricultural enterprises of Zhytomyr region, kg.

Turn of mus dustion		Years		2016	to 2018
Type of production	2016	2017	2018	+,-	%
Meat (in slaughter weight)	42.8	43.1	44.5	1.7	104.0
Milk	455.5	443.2	451.4	-4.1	99.1
Eggs	532	557	568	36	106.8

Source: calculated by the author based on [24]

According to the findings of the study, in 2018, as compared to 2016, the level of production of the main types of livestock products increased. Thus, the production of meat of all kinds in the slaughter weight in 2018 per capita was 44.5 kg., which is 4% more than in 2016. Milk – 451.4 kg., or 0.9% less, eggs – 568, or 6.8% more, respectively. At the same time, the achieved level of production does not yet fully meet the physiological norms of consumption of livestock products. Consumption of all types of meat has been almost halved, only the production of milk and eggs exceeds the minimum and rational norms, which is positive.

The keystone for the development of the livestock industry is the level of provision of livestock and poultry with high-quality and nutrient-balanced feed. The analysis of feed consumption in animal husbandry in agricultural enterprises of Zhytomyr region is presented in Table 5. According to Table 5, consumption of feed per capita tended to increase during the studied period. Thus, in 2018, feed costs amounted to 36.97 centners against 35.92 cwt. of feed units, 2.9% higher than in 2016. Judging by these indicators, it can be concluded that the level of livestock and poultry nutrition at the present stage does not meet necessary requirements.

Table 5. Consumption of feed at the animal husbandry in agricultural enterprises of Zhytomyr region

In diantana		Years	2016 to 2018		
Indicators	2016	2017	2018	+,-	%
Feed costs per conventional animal unit, cwt., f.u.	35.92	33.10	36.97	1.05	102.9
Concentrated feed consumption, ths. t., f.u.	122.5	115.9	162.3	39.8	132.5
Feed consumption, total, ths. t., f.u.	269.1	243.9	254.1	-15.0	94.4

Source: calculated by the author based on [24]

In total, the feed consumption throughout the study period decreased by 15 thousand tonnes of feed units and amount to 254.1 thousand tonnes in 2018, against 269.1 ths. t., or a decrease of 5.6%. However, there is a significant increase in the consumption of concentrated feed. In 2018, its consumption amounted to 162.5 thousand tonnes, or 32.5% more than in 2016.

This significant increase in concentrated feed consumption is due to an increase in the share in the structure of pork production – 45.8%.

One of the main indicators of the efficiency of livestock production and rational use of feed is its consumption in terms of feed units per unit of the corresponding industry product (Table 6).

Table 6. Dynamics of feed consumption for the production of 1 centner of products in the enterprises of the Zhytomyr region, cwt, f.u.

To a found of the		Years		2016 t	o 2018
Type of production	2016	2017	2018	+,-	%
Gain in beef,	16.1	15.05	14.87	-1.23	92.4
• using concentrated feed	4.89	5.11	7.09	3.01	161.6
Gain in pork,	4.36	4.45	4.28	-0.08	89.2
• using concentrated feed	4.21	4.09	3.55	-0.66	84.3
Milk,	1.14	1.03	0.98	-0.16	8.6
 using concentrated feed 	0.39	0.39	0.58	0.19	148.7

Source: calculated by the author based on [24]

The level of feed consumption in 2018 for the production of beef decreased by 1.23 centners of feed units; the increase in pork – by 0.08 cwt. f.u.; milk – by 0.16 cwt. f.u., or respectively, by 7.6%, 10.8%, 14.1% against 2016. At the same time, there is a significant increase in the consumption of concentrated feed in the production of beef and milk, which is 61.6% and 48.7%, respectively. This gives grounds to state the use of feeds that are not balanced in nutrients, in particular

digestible protein and microelements.

Efficiency of livestock production

To increase the sustainable development of the livestock industry, the economic efficiency of its products, both main and secondary, is of great importance. One of the main performance indicators of livestock production efficiency is its prime cost. Analysis of the structure of production costs is presented in Table 7.

Table 7. The structure of the livestock production costs at the enterprises of Zhytomyr region

3			•	,	, ,	
	Years					4- 1
Indicators	2017 2018		Deviation, (+,-)			
marcators	mln. UAH	%	mln. UAH	%	mln. UAH	%
Direct material costs	751.4	65.2	833.9	65.9	82.5	0.7
• in particular feed	599.9	52.0	665.1	52.6	65.2	0.6
 of which purchased 	97.9	8.5	209.7	16.6	111.8	8.1
 other products 	7.7	0.7	7.3	0.6	-0.4	-0.1
 fuels and lubricants 	47.1	4.1	57.3	4.5	10.2	0.4
 fuel and energy 	1.1	0.1	1.4	0.1	0.3	-
electricity	26.7	2.3	32.9	2.6	6.2	0.3
 spare parts, materials for repair 	44.4	3.8	41.1	3.2	-3.3	-0.6
 salary expenses 	128.3	11.1	142.0	11.2	13.7	0.1
 other direct costs 	106.0	9.2	135.5	10.7	29.5	1.5
• in particular contributions to social activities	28.4	2.5	31.7	2.5	3.3	-

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		Ye		4- 1		
Indicators	20	17	20:	18	Deviation	on, (+,-)
marcators	mln. UAH	%	mln. UAH	%	mln. UAH	%
 depreciation 	48.0	4.2	61.6	4.9	13.6	0.7
Total expenditures	167.7	14.5	154.0	12.2	-13.7	-2.3
 of which services of third parties 	81.8	7.1	26.2	2.1	-55.6	-5.0
Total production costs	1153.4	100.0	1265.4	100	112.0	Χ

Source: calculated by the author based on [24]

Enterprises of all categories do not always use progressive forms of organising the procurement and storage of high-quality feed by sex and age groups of livestock and poultry. It is especially inappropriate to use modern technologies for preparing feed for feeding during a calendar year. Analysis of the structure of the production cost of livestock production in 2018 shows that production costs in the industry increased by UAH 112.0 million, or 9.7%, as compared to 2017. In the structure of production cost the largest share is occupied by direct material costs, 65.9%, among them feed – 52.6%, of which purchased – 16.6%. Labour costs account for

11.2%, other direct costs – 10.7%, overhead costs – 12.2%.

Changes in the structure of production costs show that during the analysed period, direct material costs have increased by 0.7%, including feed by 0.6%, of which purchased by 8.1%, other direct costs increased by 1.5%. Costs were reduced by such items as overhead costs – by 2.3%; spare parts, materials for repair – by 0.6%. The summarising indicator of economic efficiency of livestock production is the achieved level of profitability (loss ratio). The dynamics of the level of profitability of the main types of livestock products are given in the Table 8.

Table 8. Dynamics of the level of livestock production profitability in agricultural enterprises of Zhytomyr region, %

		, , ,			
Two as of www durate			Years		
Types of products	2014	2015	2016	2017	2018
Cattle for meat	-40.0	-18.8	-29.1	32.6	-25.4
Pigs for meat	-2.2	18.2	-0.4	12.1	-4.2
Sheep and goats for meat	-34.9	-48.5	-48.5	-77.9	-65.1
Poultry for meat	-19.6	-2.5	-10.3	-16.6	-7.3
Milk	17.8	12.4	12.0	24.2	13.7
Chicken eggs	16.7	27.4	30.6	0.5	22.1

Source: calculated by the author based on [20]

This table shows that in 2018 only the production of milk and chicken eggs was profitable, the level of profitability of which was 13.7% and 22.1% respectively. The loss rate of beef was 25.4%, pork – 4.2%, lamb and goat meat – 65.1%, and poultry – 7.3%. At the same time, in 2017, the production of beef and pork was profitable, with a profitability rate of 32.6% and 12.1% respectively.

The study of patterns and trends of the current state of the livestock industry in Ukraine indicates its deterioration. Thus, as of January 2020, the number of cattle in Ukraine was 3.4 million, which is 5.7% less than on the same date in 2019. "The dairy herd was 1.82 million animals in total, which is 5% less (96.9 thousand) than in 2018. In particular, the number of cattle in

agricultural enterprises in 2019 decreased to 1.05 million animal units (-7.5% compared to 2018), in particular the number of dairy cattle decreased to 388 thousand animal units, which is 6.4 % less than in 2018" [1]. A similar situation has developed in households, where in 2019 the number of cattle decreased by 4.7% compared to 2018 and was 2.09 million, of which cows – 1.39 million, or 4.6% (6.5 thousand units) less than in 2018 [20].

The above negative trends and patterns of the livestock industry are inherent in the farms of Zhytomyr region. Thus, as of September 1, 2019, at the farms of all categories the number of cattle decreased by 5.6%, including cows – by 4.5%, sheep and goats – by 2.3%, poultry – by 14, 2%. The number of sheep and goats kept at enterprises decreased by 18%, poultry – by 14.2%,

cattle – by 1.6%, including cows – by 4.3%. At the same time, the number of pigs increased by 16.7%. The number of pigs in households increased by 7.0%, sheep and goats – by 0.8%, poultry – by 0.4%. On the other hand, the number of cattle decreased by 7.2%, including cows – by 4.6% [20].

The results of the above study suggest that the state of the livestock industry in Ukraine in general and in Zhytomyr region in particular, has reached a critical point, which in turn threatens the food security of the country.

CONCLUSIONS

1. Positive changes for the analysed period in the dynamics of livestock and poultry were reflected in the volume of livestock production. The production of meat in the slaughter weight in general in the farms of Zhytomyr region in 2018 increased by 1.3 thousand tonnes,

- or 2.4%, as compared to 2016. At the same time, there was a decrease in production volumes by 1000 tonnes, beef by 300 tonnes, and milk by 13.3 thousand tonnes.
- 2. The decrease in the production of certain types of livestock products was significantly influenced by the decrease in the level of livestock productivity in the following industries: sheep by 5.5%, pig by 33.2%, due to a decrease in the level of feeding.
- 3. Only the production of milk and chicken eggs was profitable in 2018, the level of profitability of which was 13.7% and 22.1% respectively. The profitability of beef was 25.4%, pork– 4.2%, and sheep and goat meat 65.1%.
- 4. One of the reserves to increase the livestock production, increase the productivity of livestock and poultry is the rational use of feed, balanced in their nutrition and compliance with feeding standards by species, sex and age groups of livestock and poultry.

REFERENCES

- [1] Official site of the State Statistics Service of Ukraine. (n.d.). Retrieved from http://www.ukrstat.gov.ua.
- [2] Mikityuk, V., & Rusak, O. (2012). Agricultural entrepreneurship: Trends and problems of development. *Innovative Economics*, 9, 18-21.
- [3] Mikityuk, V. (2012). Ways of revival of the livestock industry: The main determinants. *Economics of Agro-Industrial Complex*, 11, 29-35.
- [4] Capytanec, Y. (2010). Features of state regulation of the agrarian economy in market conditions. Retrieved from http://www.nbuv.gov.ua/portal/Soc_Gum/inek/2010_4/169.pdf.
- [5] Zinovchuk, V. (2012). Organizational and legal principles of agricultural cooperation in Ukraine. *Bulletin of ZNAEU*, 2, 3-12.
- [6] Zinovchuk, N., Zinovchuk, V., & Skidan, O. (Eds.). (2011). *Organic agriculture and its development in terms of cooperation*. Zhytomyr: Ruta.
- [7] Mesel-Veselyak, V.Ya., & Fedorov, M.M. (2016). Strategic directions of development of the agrarian sector of the economy of Ukraine. *Economics of Agro-Industrial Complex*, 6, 37-49.
- [8] Ishchenko, S., Skrypniuk, K., Pyrogov, D., & Tkach, T. (2020). Strategy for the development of agricultural enterprises, investment support in the field of animal husbandry in Ukraine. *SHS Web of Conferences*, 73, article number 01009. doi: 10.1051/shsconf/20207301009.
- [9] Ivchenkova, O.Y., & Pumpkin, O.A. (2018). Current state and perspective directions of agriculture development in Ukraine. *Bulletin of Economic Science of Ukraine*, 2, 89-95.
- [10] Lupenko, Yu., & Mesel-Veselyak, V. (Eds.). (2012). Strategic directions of agricultural development of Ukraine for the period up to 2020. Kyiv: NSC "IAE".
- [11] Sitkovskaya, A.O. (2019). Problems of agricultural production development in Ukraine. Agrosvit, 1-2, 10-14.
- [12] Maslyuk, I.O. (2019). Directions of intensification of modernization shifts in agricultural production of Ukraine. *The Current State of Research and Technology in Industry*, 4(10), 92-100.
- [13] Marius, L.N., Shipandeni, M.N.T., & Togarepi, C. (2021). Review on the status of goat production, marketing, challenges and opportunities in Namibia. *Tropical Animal Health and Production*, 53(1), article number 30.
- [14] Lavruk, O.V. (2018). The revival of animal husbandry and its role in the development of agricultural enterprises. *Agrosvit*, 17, 36-41.
- [15] Kovalev, D.V. (2019). Socio-economic component and directions of revival of sheep breeding in Kherson region. *Agrosvit*, 23, 42-48.
- [16] Liu, M., Huang, J., Dries, L., Hayjman, W., & Zhu, X. (2020). How does land tenure reform affect livestock? An empirical study for Inner Mongolia, China. *Chinese Economic Review*, 60, article number 101110.
- [17] Hashem, N.M., González-Bulnes, A., & Rodriguez-Morales, A.J. (2020). Animal welfare and livestock supply chain sustainability under the COVID-19 outbreak: An overview. *Frontiers in Veterinary Science*, 7, article number 582528.
- [18] Abed, R., & Acosta, A. (2018). Estimation of total factor productivity of cattle: The approach of the Malmvist index. *African Journal of Agrarian and Resource Economics*, 13(4), 297-306.

- [19] Xia, F., Hou, L., Jin, S., & Li, D. (2020). Land size and productivity in the livestock sector: Evidence of China's livestock areas. *Australian Journal of Agricultural and Resource Economics*, 64(3), 867-888.
- [20] Acosta, A., & Luis, A. (2019). What causes a change in the general factors of livestock productivity? Permanent and temporary analysis of efficiency. *Global Food Security*, 21, 1-12.
- [21] Uddin, M.E., & Kebreab, E. (2020). Review: Impact of food and climate change on pastoral industries. *Frontiers in Sustainable Food Systems*, 4, article number 543403.
- [22] aan den Toorn, S.I., Worrell, E., & van den Broek, M.A. (2020). Meat, dairy, and more: Analysis of material, energy, and greenhouse gas flows of the meat and dairy supply chains in the EU28 for 2016. *Journal of Industrial Ecology*, 24(3), 601-614.
- [23] Mikityuk, V.M., Palamarchuk, T.M., & Rusak, O.P. (Ed.). (2018). Fundamentals of economic analysis. Zhytomyr: Ruta.
- [24] Agriculture of Zhytomyr region. (2019). *Stat. worldview*. Zhytomyr: Main Department of Statistics in Zhytomyr Region. Retrieved from http://www.zt.ukrstat.gov.ua/.

ЗАКОНОМІРНОСТІ ТА ТЕНДЕНЦІЇ СУЧАСНОГО СТАНУ ГАЛУЗІ ТВАРИННИЦТВА В ЖИТОМИРСЬКІЙ ОБЛАСТІ

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Анотація. Важливою умовою забезпечення продовольчої безпеки країни є виробництво достатньої кількості продуктів харчування та забезпечення належної їх якості. Сучасний стан розвитку галузі тваринництва, як основного постачальника у забезпеченні населення м'ясом, молоком та іншими продуктами як в Україні, так і на регіональному рівні не відповідає її потенційним можливостям. Метою дослідження є вивчення тенденцій і закономірностей сучасного стану галузі тваринництва на рівні регіону та пошук основних шляхів її розвитку. Методами і прийомами дослідження стали загальнонаукові та економіко-статистичні методи, а саме: ряди динаміки, аналізу та синтезу, порівняння. Здійснено оцінку сучасних тенденцій розвитку галузі тваринництва на регіональному рівні, а також окремих її показників загалом в Україні. Виявлено зміни та їх тенденції динаміки наявного середньорічного поголів'я худоби і птиці за групами тварин. Встановлено, що позитивні зміни в поголів'ї тварин обумовили збільшення обсягів виробництва м'яса, зокрема баранини та козлятини, птиці. Однак, це не сприяло підвищенню обсягів виробництва м'яса великої рогатої худоби, свинини, молока, меду. Структура виробництва м'яса не повною мірою відповідає природно-економічній зоні ведення галузі тваринництва. Оцінено вплив зміни динаміки рівня продуктивності сільськогосподарських тварин на валовий вихід продукції, особливо в галузях свинарства, вівчарства, бджільництві. За результатами дослідження виявлено, що рівень виробництва основних видів продукції тваринництва з розрахунку на одну особу підвищився, але ще не повною мірою відповідає фізіологічним нормам споживання даної продукції. Оцінка кормів у тваринництві дала можливість визначити рівень ефективності їх використання за поживними речовинами в перерахунку на 1 умовну голову та одиницю продукції за її видами. Здійснено оцінку економічної ефективності галузі за основними узагальнюючими її показниками. У структурі виробничої собівартості найбільшу частину займають прямі матеріальні витрати. Встановлено, що рентабельним було лише виробництво молока, яєць курячих. У статті запропоновано основні шляхи розвитку галузі тваринництва на перспективу

Ключові слова: ринкова трансформація, стратегічна орієнтація, тенденції розвитку галузі тваринництва, продуктивність