

EFFICIENCY OF AGRICULTURAL ENTERPRISES OF THE ZHYTOMYR REGION ON THE EXISTING LAND-RESOURCE POTENTIAL

I. Karas, cand. of agric. sc., associate professor of the department of geodesy and land management, Zhytomyr national agroecological university

T. Kotkova, cand. of agric. sc., associate professor of the department of geodesy and land management, Zhytomyr national agroecological university
E-mail: iraver@ukr.net

Abstract. *Ukraine belongs to agricultural states and has high percent of plowed land. The same tendency is typical for Zhytomyr region, on territory of which more than 350 thousand hectares of highly fertile soils are allocated. However, high land plowing and the favorable raw material base do not always indicate the high economic development of agriculture of the administrative-territorial formation. The task of our research was to analyze the development of crop and livestock production, their share in the structure of agricultural products, as well as the level of population provision by these products in Zhytomyr region.*

The establishment of the efficiency of the land resources use in the studied region was carried out by statistical analysis.

Crop production in Zhytomyr region is represented mainly by the following crops: cereals and legumes, potatoes, vegetable crops, sugar beet, fruit and berry crops. The livestock sector has a dairy-meat direction. Among the agricultural products in the field crop production, the largest share belongs to potatoes and other vegetable crops (24,2%), and in the field of animal husbandry – to milk production (14,7%). The indices of crop and livestock production in households are somewhat higher (116.9 and 101,0%) than in agricultural enterprises (100,6% and 97,1%). The use of land resources by farms in Zhytomyr region is quite effective. This is evidenced by the agricultural product index, which is 105,2% compared to the previous year and the average indicator for Ukraine in 2017 (97,3%).

Keywords: *land resources, efficiency, index of agricultural products, economy, rating, crop production, livestock production*

Relevance of research.

Land is an indispensable natural resource, which is the object of human and environmental social and economic ties, as well as a basis for the production of agricultural products. Priority of agricultural lands is determined by the Constitution of Ukraine [p. 87, 5].

Complete satisfaction of the population's needs in food products, light industry sectors in agricultural raw materials requires increased production of agricultural products on the basis of rational and efficient use of land. The practice of managing in market conditions shows that the result and efficiency of agricultural enterprises activities of various scales and forms of ownership primarily depends on the effective use of land [p. 263, 3].

As a result of the irrational use of land resources, there is a disturbance in the balance between available land resources and economic efficiency of land use. The consequence of such an imbalance is the incomplete provision of the population by agricultural products in spite of presence of highly fertile soils [p. 127, 1; p. 89, 118, 5].

Analysis of recent research and publications.

Ukraine belongs to agricultural states and has rather high plowing of agricultural land. However, this indicator is heterogeneous both in Ukraine and in Zhytomyr region, and directly depends on the administrative-territorial unit provision by land resources. It is known that Zhytomyr region is characterized by the presence of highly fertile soils (gray forest, dark gray podzolized soils and podzolized chernozems, typical chernozems, meadow and chernozem-meadow soils, etc.), the total area of which is over

350 thousand hectares. However, high land plowing does not always indicate the high economic development of agriculture [p. 128, 1].

The efficiency of land use in agriculture is evidenced by the following indicators: the index of basic agricultural products, crop and livestock production per person. These issues require separate study and detalization in accordance with different forms of management on the territory of Zhytomyr region.

The aim of the study. The advantageous physical-geographical and economic-geographical position of Zhytomyr region contributes to the compact population settling and economic development of the territory. An effective combination of favorable soil and climatic conditions with the presence of a mineral-raw material base contributes to the development of multi-sectoral agriculture [p. 87, 5].

The analysis of crop and livestock branches development in the region, their share in the structure of agricultural products, as well as the level of population provision of the region and justifies the efficiency of management in the territory of Zhytomyr region for the available land and resource potential. Determining the level of region's development by indicators of agricultural production indicates the economic efficiency of the use land resources of the region as households and agricultural enterprises.

Materials and methods of research.

The Statistical Yearbooks of Zhytomyr Region and Ukraine published by State Statistics Service served as material for conducting researches. To process the results in order to further their generalization, the analysis was used as one of the theoretical methods of research.

Research results and their discussion.

Zhytomyr region is located in the north-west part of Ukraine, the territory of which is 2982,7 thousand hectares. The total area of agricultural land is 1510,3 thousand hectares or 50.6%. Among the agricultural lands, the largest area belongs to arable lands – 1111,2 thousand hectares [p. 74, 2].

On the territory of the region there are 1103,0 agro-industrial formations. According to research results, indices of agricultural products produced by households and agricultural enterprises of Zhytomyr region are different in dynamics over the years. Thus, in 2013, the gross crop production by agricultural enterprises amounted to 115,4% compared to the previous year, by households – 99,8%. In 2017, the farms provided Zhytomyr region by crop production on 116,9%, large agricultural enterprises – on 100,6%. In general, there has been a certain

trend towards changes in crop production indices over the last five years. Although the efficiency of farms production in the region in total remained almost the same during years of research, however, in 2015 there was a significant decline of gross crop production both by agricultural enterprises (80,7%) and households (96,1%) (table 1).

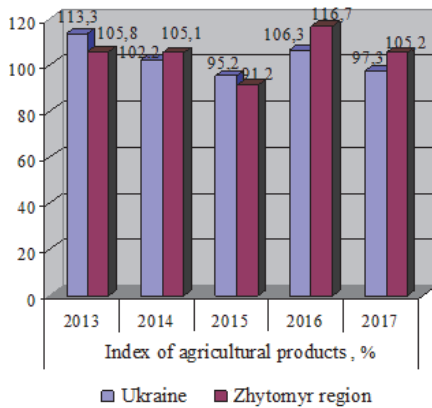
As for livestock production indexes, they remained stable from 2013 to 2017. Also, there was no significant difference between the productivity of livestock producers in the private sector (97,2–102,3%) and agricultural enterprises (96,9–107,6%).

Land fund of Zhytomyr region in 2017 was 2982,7 thousand hectares. Agricultural lands occupied 1510,1 thousand hectares, including 1112,0 thousand hectares of arable lands. The area of Zhytomyr region agricultural enterprises, that are producers of crop and livestock products, covers 533,3 thousand hectares. Despite the fact that the plow of land is not the same from region to

1. Indices of agricultural products produced by farms of Zhytomyr region (2013-2017)*

	2013	2014	2015	2016	2017
Agricultural products					
Farms in total	105,8	105,1	91,2	116,7	105,2
Including					
agricultural enterprises	113,4	110,3	82,8	127,1	100,2
households	100,5	101,0	98,5	109,1	109,4
Crop products					
Farms in total	108,4	109,2	86,8	123,9	107,3
Including					
agricultural enterprises	115,4	112,3	80,7	130,2	100,6
households	99,8	105,0	96,1	116,0	116,9
Livestock products					
Farms in total	101,2	97,1	100,8	103,1	100,3
Including					
agricultural enterprises	101,1	96,9	99,6	107,6	97,1
households	101,3	97,2	101,0	102,3	101,0

* percentage to the previous year [p. 74, 6].



Index of agricultural products of Zhytomyr region in comparison with the average indicator in Ukraine, % to the previous year (2013–2017) [p. 73, 7].

region due to the prevailing soils on the territory of administrative-territorial units, in general, this indicator in Zhytomyr region is quite high and constitutes 50,6%. Totally, the specialization of agricultural enterprises is directed on production economically attractive export-oriented crops (soybeans,

corn for grain, sunflower, rape, winter grain crops), as well as meat, milk, eggs, etc.

Regarding the structure of agricultural production in Zhytomyr region, the share of plant growing in the last five years has increased significantly, from 65,9% in 2013 to 70,6% in 2017. Over the same period the livestock production decreased by 4,7%. The share of the main groups of crops in the total crop production was also irregular in terms of years. Thus, in 2013, grain and leguminous crops were 26,9%, technical – 12,3%, potatoes and other vegetables – 21,7%, feedstuffs – 2,8%, fruit and berries – 2,4% (table 2).

In 2017, the share of grain and legumes in the structure of crop production decreased to 21,1%, technical and vegetable crops, including potatoes, increased to 20,4% and 24,2% respectively. The production of fruit and berry crops decreased to 1,7%. The weight of such a crop as potatoes in the structure of crop production increased gradually over the last five years (table 2).

As for livestock products, Zhytomyr region firstly specializes in milk production.

2. The structure of agricultural products of Zhytomyr region, % (2013–2017)*

	2013	2014	2015	2016	2017
Agricultural products	100,0	100,0	100,0	100,0	100,0
Crop products	65,9	68,4	65,1	69,2	70,6
Cereals and legumes	26,9	23,2	19,2	23,9	21,1
Technical cultures	12,3	18,3	18,3	17,9	20,4
Potatoes, vegetables and melons	21,7	20,8	22,4	22,3	24,2
Fruit and berry crops	2,4	2,2	2,6	2,0	1,7
Fodder crops	2,8	3,8	2,4	2,5	2,8
Other products	0,2	0,1	0,2	0,6	0,4
Livestock products	34,1	31,6	34,9	30,8	29,4
Livestock breeding	10,3	8,9	10,3	9,7	9,0
Milk	17,9	16,8	18,2	15,2	14,7
Eggs	3,1	3,2	3,4	3,3	3,2
Other products	2,8	2,7	3,0	2,6	2,5

* [p. 74, 6].

3. Production of agricultural products per person on the territory of Zhytomyr region, kg (2013–2017)*

	2013	2014	2015	2016	2017
Cereals and legumes	1666	1515	1166	1683	1620
Sugar beet	335	508	485	488	590
Potatoes	1052	1036	940	1058	1334
Vegetable cultures	178	190	217	239	240
Fruit and berry crops	35	35	41	34	33
Meat	43	41	43	43	43
Milk	472	468	462	456	443
Eggs, pcs.	444	477	471	532	557

* [p. 75, 6].

The second position takes animal husbandry, the third – eggs production. Observing the production of these main components, one can note the tendency to reduce their share both in production of agricultural products and in the years of research (table 2).

Observing the production of agricultural products per person, it can be noted that provision of population with crop and livestock products in Zhytomyr region during the years of research was different. In the case of grain and legume crops production over the past five years it has decreased, and sugar beet production, by contrast, has almost doubled (table 3).

According to our research, today it is observed the increasing of the role of potatoes. For example, in 2017, the provision of population by this product was 1334,0 kg per person, which is 26,8% more than in 2013. The same tendency is observed also for vegetable growing. As for livestock

products over the period under investigation, only egg production increased significantly (by 25,4%) while meat and milk remained on the same level (table 3).

Zhytomyr region today occupies leading positions in production of basic agricultural products. Particularly, in the potatoes cultivation the region occupies second rank, other vegetable crops – the fifth. Not enough high results are observed in grain crops production – among other regions of Ukraine Zhytomyr region occupies only the 20th place. The reason for this is the low proportion of grain and legumes in the structure of the crop area of the region and, accordingly, in the structure of agricultural products (table 4).

Zhytomyr region occupies the fifth, tenth and eighth position in production of meat, milk and eggs, respectively (table 4). In general, the provision of the region with the main types of agricultural products is quite

4. The rating of Zhytomyr region among the regions of Ukraine in crop and livestock production in 2017*

Agricultural products	Cereals and legumes	Sugar beet	Potatoes	Vegetables	Fruit and berries	Meat	Milk	Eggs
Rating position	20	12	2	5	12	5	10	8

* [p. 1, 4].

good. As a result, the share of Zhytomyr region in the gross production of Ukraine of such products as potatoes, vegetable crops, meat and eggs is significant.

Conclusions and prospects of research.

Consequently, according to the results of our studies, it can be concluded that the use of land resources by agricultural enterprises in Zhytomyr region is quite effective. This is evidenced by the agricultural production index of the region, which in 2017 amounted to 105,2% compared to the previous year. The average index in Ukraine was 97,3%. Also, this year, Zhytomyr region with high growth rates of agricultural production, has occupied the fourth position among another regions of our state. Crop production in Zhytomyr region is represented mainly by the following crops: cereals and legumes, potatoes, vegetable crops, sugar beet, fruit and berry crops. The livestock sector has a dairy-meat direction. Among the agricultural products in the sector of crop growing the largest share belongs to potatoes and other vegetable crops (24,2%), and in the field of animal husbandry – to milk production (14,7%). Accordingly, providing the population of the region by these products is the best but for cereals and legumes the situation is not the same. The share of sown areas for these crops both in households and agricultural enterprises is insignificant, and therefore the rating of Zhytomyr region for the production of gross output is low (20th place). Also, our studies have shown that the indices of crop and livestock production in households are higher (116,9 and 101,0%) than in agricultural enterprises (100,6% and 97,1%).

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I. Ф. Карась, Т. М. Коткова

ЕФЕКТИВНІСТЬ ДІЯЛЬНОСТІ СІЛЬСЬКОГОСПОДАРСЬКИХ ПІДПРИЄМСТВ ЖИТОМИРСЬКОЇ ОБЛАСТІ ЗА НАЯВНОСТІ ЗЕМЕЛЬНО-РЕСУРСНОГО ПОТЕНЦІАЛУ

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Анотація. Україна належить до сільськогосподарських держав та має достатньо високу розорюваність угідь. Така сама тенденція характерна і для Житомирської області, на території якої виділяють понад 350 тис. га високородючих ґрунтів. Проте висока розорюваність угідь та наявність сприятливої сировинної бази не завжди свідчить про високий економічний розвиток сільського господарства на території адміністративно-територіального утворення. Завданням наших досліджень був аналіз розвитку рослинництва

та тваринництва, їх частка у структурі сільськогосподарської продукції, а також рівень забезпечення нею населення Житомирської області.

Встановлення ефективності використання земельних ресурсів досліджуваного регіону здійснювали методом статистичного аналізу.

Рослинництво Житомирської області представлено переважно такими сільськогосподарськими культурами: зернові та зернобобові, картопля, овочеві культури, цукровий буряк, плодово-ягідні культури. Галузь тваринництва має молочно-м'ясний напрям. Серед сільськогосподарської продукції області у галузі рослинництва найбільша частка належить картоплі та іншим овочевим культурам (24,2%), а у галузі тваринництва – виробництву молока (14,7%). Індекси продукції рослинництва і тваринництва у господарствах населення є дещо вищими (116,9 та 101,0%), ніж у сільськогосподарських підприємств (100,6% та 97,1%). Використання земельних ресурсів господарствами Житомирської області є достатньо ефективним. Про це свідчить індекс сільськогосподарської продукції регіону, який становить 105,2% у порівнянні з попереднім роком та середнім показником по Україні за 2017 рік (97,3%).

Ключові слова: земельні ресурси, ефективність, індекс сільськогосподарської продукції, господарство, рейтинг, продукція рослинництва, продукція тваринництва

И. Ф. Карась, Т. М. Коткова
ЭФФЕКТИВНОСТЬ ДЕЯТЕЛЬНОСТИ
СЕЛЬСКОХОЗЯЙСТВЕННЫХ ПРЕДПРИЯТИЙ
ЖИТОМИРСКОЙ ОБЛАСТИ ПРИ НАЛИЧИИ
ЗЕМЕЛЬНО-РЕСУРСНОГО ПОТЕНЦИАЛА

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Аннотація. Украина относится к сельскохозяйственным государствам и имеет достаточно высокую степень использова-

ния угодий. Такая же тенденция характерна и для Житомирской области, на территории которой выделяют более чем 350 тыс. га высокоплодородных почв. Но высокая степень использования угодий и наличие оптимальной ресурсной базы не всегда свидетельствуют о высоком экономическом развитии сельского хозяйства на территории административно-территориального объединения. Задачей наших исследований был анализ развития растениеводства и животноводства, их доля в структуре сельскохозяйственной продукции, а также уровень обеспечения ею населения Житомирской области.

Установление эффективности использования земельных ресурсов изучаемого региона проводили методом статистического анализа.

Растениеводство Житомирской области представлено преимущественно такими культурами: зерновые и зернобобовые, картофель, овощи, сахарная свекла, плодово-ягодные культуры. Отрасль животноводства имеет молочно-мясное направление. Среди сельскохозяйственной продукции области в отрасли растениеводства наибольшая часть принадлежит картофелю и другим овощным культурам (24,2%), а в отрасли животноводства – производству молока (14,7%). Индексы продукции растениеводства и животноводства в хозяйствах населения немного выше (116,9 и 101,0%), чем у сельскохозяйственных предприятий (100,6% и 97,1%). Использование земельных ресурсов хозяйствами Житомирской области достаточно эффективно. Об этом свидетельствует индекс сельскохозяйственной продукции региона, который составляет 105,2% по отношению к предыдущему году и среднему показателю по Украине за 2017 год (97,3%).

Ключевые слова: земельные ресурсы, эффективность, индекс сельскохозяйственной продукции, хозяйство, рейтинг, продукция растениеводства, продукция животноводства