

MOTIVATION OF THE AGRICULTURAL ENTERPRISES AS A DETERMINING FACTOR OF FORMATION OF THE LAND USE SYSTEM

Setting of the problem. Since the official announcement of the land reform in Ukraine has passed two decades, however changes in this sphere are quite ambiguous and ineffective.

Analysis of recent research and publications. Among modern scientific researchers of land as a factor of production problems of land relations should be noted V.O. Bilyk, P.I. Haidutsky, G.D. Huculak [1], V.K. Zbarsky [3], M.V. Kalinchyk, I.I. Lukinov, V.J. Mesel-Veselyak, M.I. Malik [6], I.R. Mikhasyuk, O.N. Onishchenko, N.I. Titova, A.M. Tretyak, M.N. Fedorov and others.

Appreciating the contribution of domestic authors in the development of the theoretical principles on ways to transform agriculture in highly developed industry based on sustainable use of land, it should be noted that at present there is an objective need for further in-depth study of the problem of taking into account regional peculiarities.

Problem. The aim of the research is the scientific study of practical principles of effective land use by agricultural enterprises in market conditions. To achieve this goal the following objectives were:

- examine the dynamics of changes in land use of agricultural enterprises;
- determine the level of economic efficiency of land resources in agricultural enterprises;
- analyze the main trends in the development of agricultural production in agricultural enterprises in Lviv region.

Object is a process taking place in the system of land tenure among agricultural enterprises in Lviv region today.

Purpose of the study – a set of theoretical, methodological and practical aspects of the development of land relations and an efficient use of land in agriculture in the region.

The main material of research. One of the necessary conditions for the release of our country from the economic crisis as soon as possible is transforming agriculture into a modern high-performance industry capable of providing various sectors of the national economy with raw materials and people with good quality and cheap food.

Today there are reasonable grounds to affirm the positive trend of increasing agricultural production in Ukraine that resulted in almost the final completion of the structure of production and its organization in the process of land and agrarian reform.

No exception is agriculture in Lviv region. Thus, the total gross output in all types of area manufacturers has increased from 7585.0 million hrn. in 2007 to 8753.4 million hrn. in 2012 or 15.4% [8]. At the same time it should be noted that this growth is due solely because of agricultural enterprises and farms, where the volume of agricultural production increased by 1487.6 million or 2.3 times, indicating that the efficiency improvements of land as assets and items of work in agricultural production (volume of gross output per 100 hectares of agricultural land in the period 2007-2012 increased by 120.6 %).

The analysis of the data shows that during the period under study in land use of agricultural enterprises and farms have been some changes that have increased the acreage of agricultural land use in this category of producers by 10.6 thousand ha or 4.5% (Table 1).

Table 1
Dynamics of the area of agricultural land in agricultural enterprises and farms for years 2007-2012

Index	On the end of year:						2012 to 2007, %
	2007	2008	2009	2010	2011	2012	
Enterprises and farmers							
Number of land users	1932	1926	1910	1839	1821	1855	96.0
The area of agricultural land, thousands of ha	233.6	240.3	245.6	236.1	230.4	244.2	104.5
The average area of agricultural land at 1 farm, ha	121	125	129	128	127	132	109.1
Enterprises							
Number of land users	696	694	674	615	591	615	88.4
The area of agricultural land, thousands of ha	172.9	178.2	192.1	185.6	180.9	199.5	115.4
The average area of agricultural land at 1 farm, ha	248	257	285	302	306	324	130.6

Farmers							
Number of land users	1236	1232	1236	1224	1230	1240	100.3
The area of agricultural land, thousands of ha	60.7	62.1	53.5	50.5	49.6	44.7	73.6
The average area of agricultural land at 1 farm, ha	49	50	43	41	40	36	73.5

Source: compiled by the author based on [8]

Growing demand for fixed asset and the objects of labour of the branch may indicate activation of entrepreneurship in agricultural production, Lviv region.

However, the upward trend is not observed in all districts of region. In 8 administrative districts land area has been reduced on 17.2 thousands ha (Fig. 1).

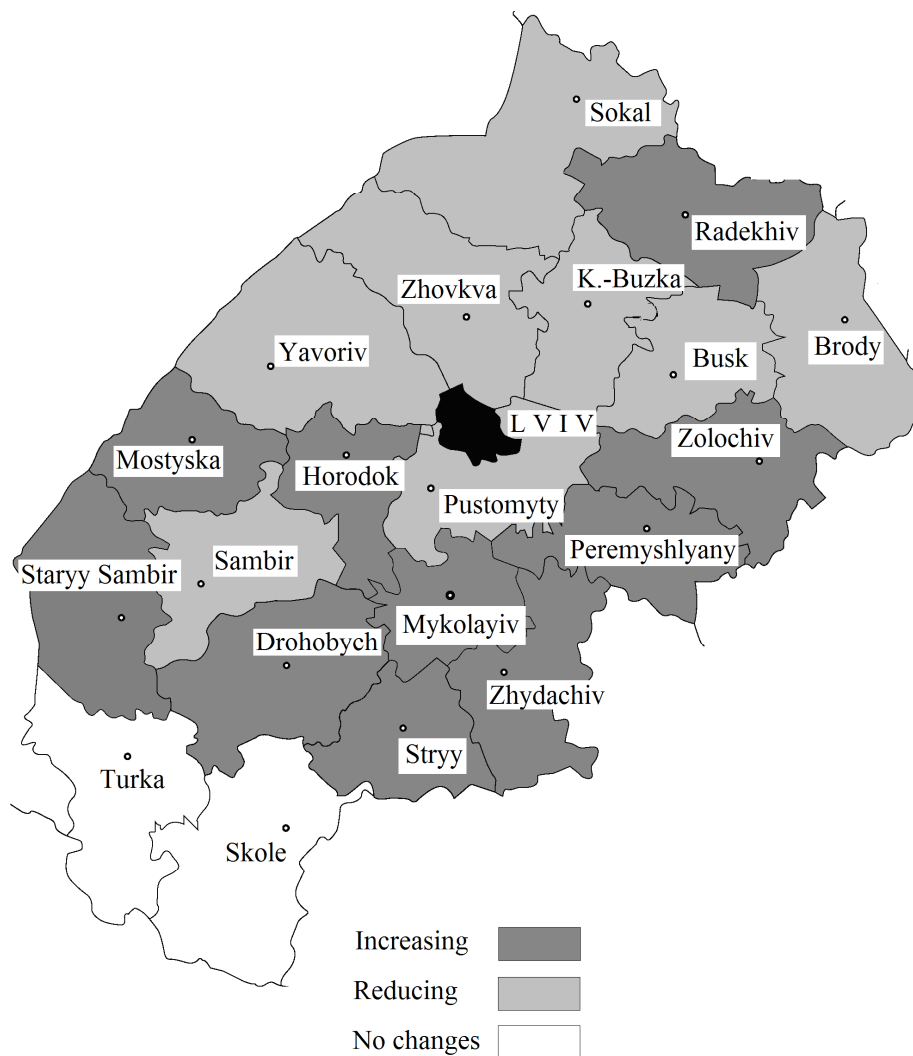


Fig. 1. Graphic representation of changes in the area of agricultural land in farms and agricultural enterprises in Lviv region for the years 2007-2012.

Source: compiled by the author based on [8].

Graphic material allows asserting the existence of certain dependence in behaviour of agricultural producers from the location of the administrative districts.

As we see, the differences in the behaviour of agricultural producers should be explained in some way.

However, the motivation (or lack thereof) to increase the area of agricultural land can have profound reasons and complex structure relationships.

The desire to explain a set of features by introducing a deep, generalized characteristics of the phenomenon that largely determine its structure can be realized with means of factor analysis.

Calculations carried out on the basis of statistical data for 2007 on the volume of production of major agricultural commodities in agricultural enterprises and farms helped to identify two independent factors (the

first of which is associated with grains and legumes, winter rape and meat, second – with potatoes and vegetables).

Table 2

The matrix of factor loadings for 2007 (agricultural enterprises and farms)

Type of agricultural production	Factor 1	Factor 2
Cereals and legumes	0,907	0,023
Winter rape	0,864	-0,178
Potatoes	-0,125	0,855
Vegetables	0,122	0,914
Meat of all kinds of live weight	0,822	-0,071
Milk	0,558	0,181

Source: compiled by the author based on [8]

From the analysis of the values of factor weights we can see that a negative value to factor 1 is observed in all districts where the areas of agricultural land have been increased (Table 3). However, in districts, where the areas of agricultural land have been decreased, the relationship with the factor 1 in the majority is positive (Table 4).

Table 3

The value of factor weights for 2007 (areas in which there was an increase in the area of agricultural land in 2012 compared to 2007)

District	Factor 1	Factor 2
Horodok	-0,230	-0,635
Drohobych	-0,789	-0,505
Zhydachiv	-0,168	-0,206
Zolochiv	-0,586	3,359
Mykolayiv	-0,035	1,157
Mostyska	-0,645	-0,215
Peremyshlyany	-0,955	-0,621
Radekhiv	-0,371	-0,555
Staryy Sambir	-1,057	-0,482
Stryy	-0,230	0,350

Source: compiled by the author based on [8]

Table 4

The value of factor weights for 2007 (areas in which decreased the area of agricultural land in 2012 compared to 2007)

District	Factor 1	Factor 2
Brody	0,459	0,491
Busk	0,164	-0,090
Zhovkva	1,912	-0,686
K.-Buzka	-0,940	-0,435
Pustomyty	2,085	-0,551
Sambir	-0,018	-0,660
Sokal	1,968	0,809
Yavoriv	-0,564	-0,528

Source: compiled by the author based on [8]

The results based on data for 2012 give a reason to believe that in recent years there have been some structural changes in agricultural production among agricultural enterprises and farms. Unlike 2007 in 2012 already seeing three factors that more fully describe the trends in agricultural production.

The first factor is related to the production of cereals, legumes and milk, the second – to rape and potatoes, the third – to meat (Table 5).

Table 5

The matrix of factor loadings for 2012 (agricultural enterprises and farms)

Type of agricultural production	Factor 1	Factor 2	Factor 3
Cereals and legumes	0,777	0,153	-0,058
Winter rape	0,312	0,812	0,004
Potatoes	-0,237	0,829	-0,014
Vegetables	0,527	0,143	0,599
Meat of all kinds of live weight	-0,178	-0,078	0,888
Milk	0,844	-0,161	-0,009

Source: compiled by the author based on [8]

As for the values of factor weights in 2012, there are already less reason to talk about the significant differences between the groups of agricultural producers, though, in our opinion, among the districts that increased areas of agricultural lands, there was a close connection with the production of meat.

The calculation results listed in Tables 6 and 7, in our opinion, confirm the assumption about the existence of certain features that distinguish studied groups. For example, if a group of farms decreased agricultural land in its use (group-1), a negative correlation with the second factor (rape and potatoes) was observed in 50% of cases, whereas in the other group (group-2) – 80%, if the group-1 are closely related (positive correlation) with the third factor (meat in live weight) only 25% but in group-2 – 50%.

Table 6

The value of factor weights for 2012 (areas in which decreased the area of agricultural land in 2012 compared to 2007)

District	Factor 1	Factor 2	Factor 3
Brody	1,622	-0,675	-0,226
Busk	-0,045	0,032	-0,393
Zhovkva	0,643	0,106	-0,630
K.-Buzka	-0,528	-0,269	-0,954
Pustomyty	-0,132	0,157	1,843
Sambir	-0,056	1,030	-0,141
Sokal	2,570	-0,291	-0,210
Yavoriv	-1,086	-0,760	0,092

Source: compiled by the author based on [8]

Table 7

The value of factor weights for 2012 (areas in which there was an increase in the area of agricultural land in 2012 compared to 2007)

District	Factor 1	Factor 2	Factor 3
Horodok	-0,591	-0,312	-0,817
Drohobych	-0,459	-0,849	-0,997
Zhydachiv	1,333	1,220	0,982
Zolochiv	-0,934	3,277	-0,554
Mykolayiv	0,182	-0,242	0,490
Mostyska	-0,958	-0,597	0,427
Peremyshlyany	-0,182	-0,009	0,310
Radekhiv	0,353	-0,328	-0,978
Staryy Sambir	-1,037	-0,866	-0,863
Stryy	-0,694	-0,626	2,620

Source: compiled by the author based on [8]

This may indicate objectively existing conditions that led to the increasing of areas of agricultural lands in group-2, including the growing importance of meat production.

Conclusions and further research. Research of state of agricultural production in agricultural enterprises in Lviv region provides sufficient grounds to confirm the existence of positive developments in the branch. Thus, in the period from 2007 to 2012 there was provided annually increase gross agricultural output by an average of almost 270 million hrn. or 18.1%, and the volume of gross agricultural output per 100 hectares of land increased from 487 to 1075 thousand hrn.

Because the production of any type of product requires using of certain resources obvious is the fact of growing areas of agricultural land in enterprises and farms of Lviv region (10.6 hectares or 4.5%). However, changes in the areas of agriculture land in administrative districts showed regularity in need for land resources

Studies have shown that, except separate cases, the districts of region are geographically grouped into two groups, in one of which areas of agricultural land reduced (northern region), the second – increased (southern region).

Clear is the fact that in a market economy the demand for the factor of production is forming on the basis of interest. Thus, we assumed existing motivation among the two groups of farmers for use land resources.

In the group of farms where there was enlargement of agricultural land we can see a strong trend to increasing production of meat in live weight.

Thus, based on the results of the study can be said about the positive trends in the development of livestock industry in the near future (especially meat production), which may indicate a gradual improvement of livestock, which for the past 20 years found itself in a very difficult state.

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Lysiuk O.V. MOTIVATION OF THE AGRICULTURAL ENTERPRISES AS A DETERMINING FACTOR OF FORMATION OF THE LAND USE SYSTEM

Purpose. The purpose of research is the scientific substantiation of practical bases of an effective utilization of land resources with the agricultural enterprises.

Methodology of research. A theoretical and methodological basis of research is the dialectic method of knowledge and system approach to study of the economic phenomena and processes, and also fundamental rules of the economic theory and scientific jobs of the domestic and foreign scientists on a problem of use of land resources.

In the study was used such scientific methods as analysis and synthesis, historical and logical methods (description of the current state of regional agriculture and identifying key trends in the system of land use of agricultural enterprises, multivariate factor analysis of agricultural production in administrative districts), scientific hypothesis (existence dependencies between motivation farms to increase use of land and structure of agricultural production).

Findings. The study of the dynamics of changes in land use of agricultural enterprises, scope and structure of agricultural production among this category of producers give grounds to affirm the existence of a relationship between the structure of agricultural production and the demand for lands.

Thus, in the farms of administrative districts of group-2 was observed growth in output of livestock products compared with group-1 at 62.0 points and a decrease in crop production by 26.8 points. Furthermore, the growth rate of total agricultural production on 100 hectares of land in group-2 exceeded the similar rate in group-1 to 13.4 points, confirming a high probability of the existence of the hypothesis of a link between the demand for lands and the structure of agricultural production.

Originality. Application of a factor analysis method at research of processes which occur in system of land use of the agrarian enterprises.

Practical value. The proposed technique of research opens new opportunities for in-depth analysis of the processes that occur in agricultural production, taking into account the relationship between market conditions as a factor that determines the output of a particular type of production, and demand for primary resource of branch and on this basis to develop effective government programs to support the agricultural sector and ensure its sustainable development.

Key words: land use, factor analysis, motivation, efficiency, agrarian reform.