

# The Formation of Effective Usage of Land Resources in Accounting, Analysis and Management of Agricultural Enterprises in the Market Conditions

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## Abstract:

The article is dedicated to the study of the need to intensify the state influences upon the efficiency of land resources usage. The technology of the rational land resources usage is advanced by way of reducing straw as organic fertilizer under direct contribution in the ground that provides spare facilities, raises the level to the efficiency of production, influences upon increasing of the fertility of the ground. Offences such as unauthorized seizure and misuse of land, removal of a fertile layer without permission, pollution of land, non-implementation of land reclamation cause significant damage to the state and owners of land, which leads to irreversible loss of land, quality and fertility. Excessive use of agricultural land is often the result of the gradual deterioration of soil fertility. The reasons for such cases are the loss of lumpy-granular soil structure, its water permeability, as well as other environmental impacts. There are cases of degradation of soil cover due to anthropogenic pollution. A rather large, and sometimes global, danger to the natural environment is caused by constant pollution of national chernozems by radionuclides, pathogens of diseases. Under these circumstances, issues that require immediate research include the issue of land conservation and rational use for the purpose of sustainable domestic land use.

**Keywords:** accounting, activity, analysis, enterprise, fixed assets, land resources, management, marketing, production.

**JEL Classification:** M 11, M 31, M 41, P 17, Q 13.

## Introduction

The purpose of the study is to substantiate the theoretical and methodological provisions and practical approaches to improve the existing technologies of rational and efficient use of land resources by agricultural enterprises. The theoretical and methodological bases of the research were the scientific developments in the field of management of the use of land resources by agricultural enterprises. Questions of the search for ways to improve the existing technologies of rational and efficient use of land resources, their accounting, analysis and management of agricultural enterprises in the market conditions were researched in the works of such scientists as V. Ambrosov, D. Babmindra, M. Bohyra, G. Cherevko, M. Demyanenko, S. Demyanenko, D. Dobriak, O. Dorosh, M. Fedorov, P. Gaydutsky, V. Goralchuk, O. Gutorov, V. Mesel-Veselyak, L. Mikhailova, M. Mikhailov, O. Nazarenko, L. Novakovsky, P. Sabluk, A. Sokhnych, A. Tretyak, V. Vyun, V. Yurchishin and others.

Scientists argue that effective counteraction to violations of land legislation and non-adherence to the rules of rational land use is a key guarantee of preserving the useful properties of the land for future generations, ensuring high quality of the environment and living conditions for people. The issue of rational and efficient use of land resources by

agricultural enterprises is constantly relevant. After all, the attraction of land resources into agricultural circulation, outdated material and technical base, low quality of machinery, imperfect technologies of cultivating land, non-compliance with established environmental requirements for land use became the result of the spread of erosion, the rapid decline of soil fertility. The current system of land use is in critical condition.

## 1. Background

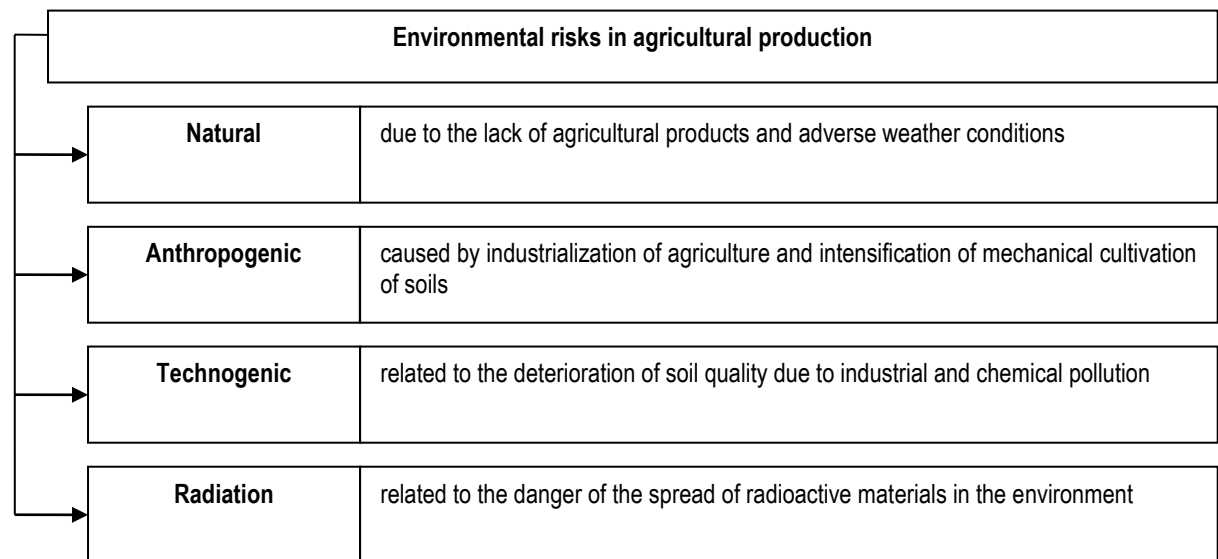
The ecological and economic state of agriculture is determined by two factors: natural (climate, meteorological conditions, relief) and anthropogenic (human economic activity, machines and mechanisms, melioration, agrotechnics of growing crops), in which disharmony they pass into negative.

It was established that the ecological status of agricultural lands, considered "... as a deciding factor for obtaining high-quality agricultural raw materials, feed and products, is unsatisfactory due to the intensive nature of their economic use and anthropogenic and man-made loading of progressive erosion, increased acidity, overflow, radiation pollution and development other negative processes» [10, p. 46].

Traditional technologies of agrarian production are aimed at increasing gross collections and neglecting the quality of the crop and the safety of its further use.

Research has established that agricultural production is characterized by a high degree of environmental risk (Fig. 1) [14, p. 423].

**Figure 1.** Ecological risks in agricultural production



**Source:** *generalized by source [14].*

As a result of the land reform, conditions have emerged that make it urgent to solve the problem of environmentally safe and efficient use of land resources. After all, the number of subjects of land use has increased, organizational and legal forms of management have expanded, which in turn prevents the implementation of qualitative control over land use.

It would seem that the transfer of land to private property should increase the owner's interest in using it effectively. But on the contrary, the owners are not particularly interested in the observance of all principles of environmental standards. The reason is the difficult financial situation of agricultural enterprises, resulting in a reduction in the cost of reproduction of soil fertility.

The fact is that a significant proportion of productive land resources are leased. Although the contract officially fixed the tenants' responsibilities for the implementation of a system of measures relating specifically to the protection of land (protection of land from erosion, overgrown with shrubs, reclamation), but the owner of the land parcel is not able to affect the condition of soil reproduction [12, p. 111].

## 2. Research design

At present, the important and topical issue is the observance by the domestic owners of their commitments on the introduction of mineral and organic fertilizers during the period of use of land resources. It is known that the formation of the level and quality of the crop yields have both natural soil fertility and the amount, ratio and timing of the use of fertilizers (especially nitrogen, phosphorus, potassium, calcium, magnesium and certain trace elements), plant protection products, technology collection of products.

Soil is the most important component of ecosystems, and its fertility due to efficient use depends, first of all, on the content and composition of humus, the amount, the flow and transformation of organic matter. For example, in the early 80's of the twentieth century humus losses were offset by applying up to 6 tons of organic fertilizers per hectare. However, at the beginning of the 21st century, the reduction of organic fertilizer rates led to an increase in the humus deficit almost fivefold, and its annual loss amounts to 600-700 kg/ha. Therefore, the most effective is the control of the introduction of fertilizers for agricultural crops in agricultural enterprises, since, in most cases, landowners do not foresee costs for the restoration of soil fertility.

A rather interesting reason is not the attempt by land users to maximize profits, but the lack of funding sources. Confirmation of the given situation is insufficient, and even quite low level of use by agricultural enterprises of mineral and organic fertilizers (Table 1).

**Table 1.** Fertilizing of agricultural crops in agricultural enterprises of the Sumy region, Ukraine

Indicator	Years														2017 to 2000, %
	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Total sown area, ths. ha	889,5	696,4	650,1	702,6	799,1	785,9	798,5	862,5	891,6	905,6	888,7	910,6	916,2	927,3	104,2
<b>Mineral fertilizers</b>															
Entered in nutrients, ths quintals	136,1	159,1	211,0	322,6	525,2	6,7	501,9	672,9	707,5	823,2	866,4	996,9	1133,7	1177,3	8 times
Fertilized area under crop, ths. ha	248,6	257,5	291,4	417,2	600,0	55,5	541,7	665,2	731,7	803,9	790,6	822,2	844,5	854,2	3 times
The share of fertilized area, %	28	37	45	59	75	58	68	77	82	89	89	90	92,2	93,1	3 times
Made in nutritious substances per 1 ha sown area, kg	15	23	33	46	66	56	63	78	79	91	97	109	124	127	8 times
fertilized area, kg	55	62	72	77	88	96	93	101	97	102	110	121	134	140	2,5 times
<b>Organic fertilizers</b>															
Entered, ths. tons	1447,6	924,3	939,5	872,8	716,6	669,4	432,7	460,6	369,0	384,5	385,4	420,8	441,1	449,2	31,0
Fertilized area, ths. ha	57,2	44,2	51,6	49,0	39,8	32,8	24,2	27,7	14,6	17,7	18,5	14,0	14,4	14,7	25,7
The share of fertilized area, %	6	6	8	7	5	4	3	3	2	2	2	2	1,6	1,7	28,3
Added on 1 ha sown area, tons	1,6	1,3	1,4	1,2	0,9	0,9	0,5	0,5	0,4	0,4	0,4	0,5	0,5	0,5	31,3
fertilized area, tons	25,3	20,9	18,2	17,8	18,0	20,4	17,8	16,5	25,2	21,7	20,8	30,1	30,7	30,9	122,1

**Source:** calculated according to the data of the Main Department of Statistics in the Sumy region, consolidated forms of reporting of agricultural enterprises of the Sumy region and by source [1].

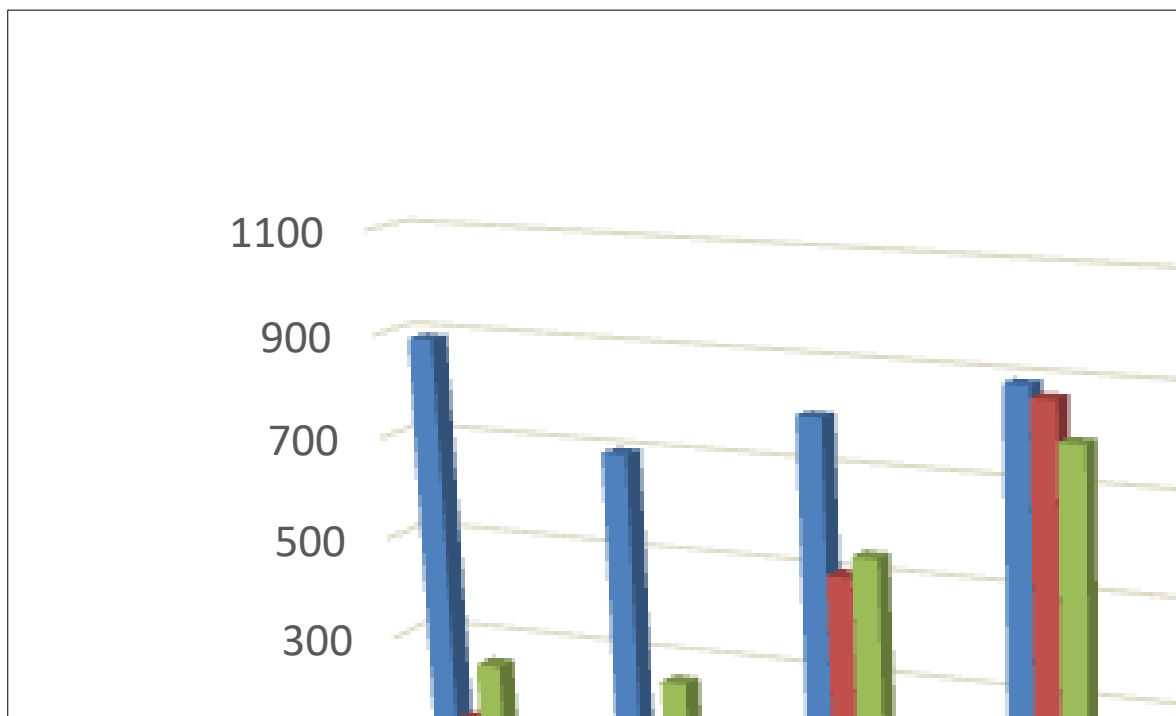
Agricultural enterprises of Sumy region in 2017 brought mineral fertilizers to 93,1% of the sown area. From the calculation per hectare of sown area, 127 kg of mineral fertilizers were added in terms of 100% of nutrients.

In the general dynamics of fertilizer application for agricultural crops in agricultural enterprises, there is a tendency to gradually increase their use.

Although mineral fertilizers are the most effective and effective means of improving crop yields, the current situation cannot be considered satisfactory. After all, their widespread use leads to intense destruction of the humus layer, namely changes in its natural microbiological composition and mineralization, which in turn leads to a non-recurrent deterioration in the quality of cultivated land.

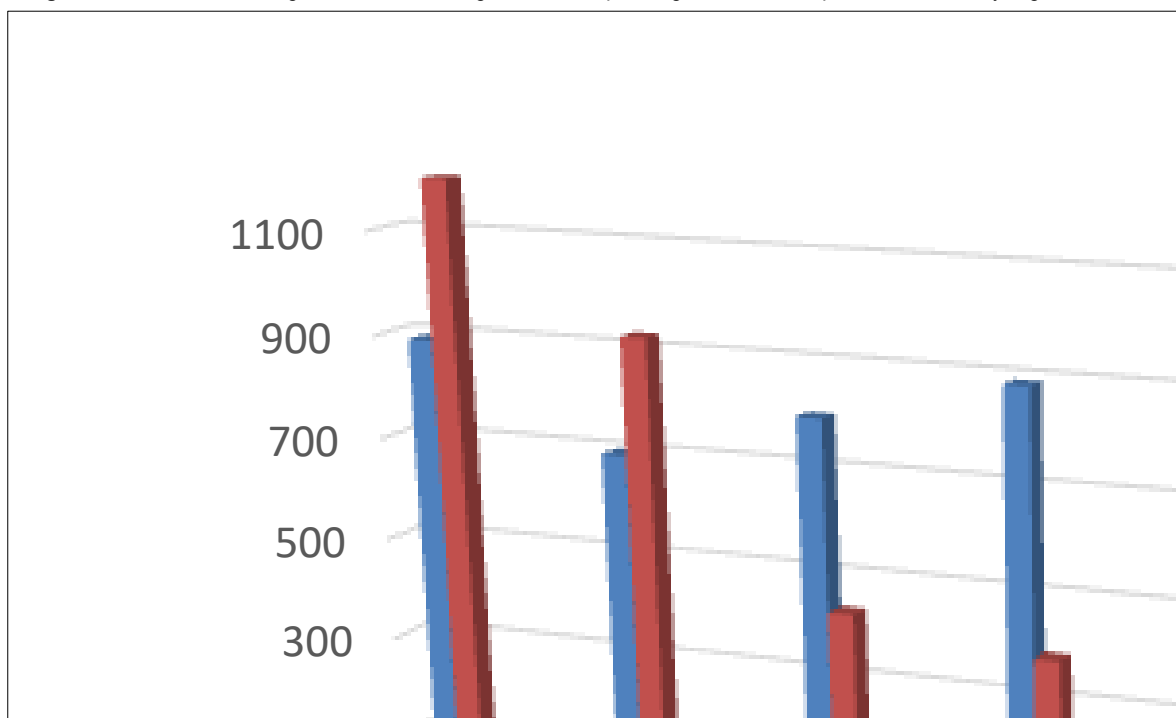
Let's illustrate the initial data in the form of diagrams for the introduction of mineral fertilizers for agricultural crops (Fig. 2) and the introduction of organic fertilizers for agricultural crops (Fig. 3) in agricultural enterprises of Sumy region.

**Figure 2.** Incorporation of mineral fertilizers for agricultural crops at agricultural enterprises of Sumy region, Ukraine



**Source:** calculated according to the data of the Main Department of Statistics in the Sumy region, consolidated forms of reporting of agricultural enterprises of the Sumy region and by source [1].

**Figure 3.** Introduction of organic fertilizers to agricultural crops in agricultural enterprises of the Sumy region, Ukraine



**Source:** calculated according to the data of the Main Department of Statistics in the Sumy region, consolidated forms of reporting of agricultural enterprises of the Sumy region and by source [1].

The leading role in suspending tendency to reduce the humus content in the soil and gradually achieve its balance belongs to organic fertilizers. In practice, agriculture widely uses organic fertilizers – such as litter manure hnoyivka, compost from manure, bird droppings, secondary plant products, green manure, straw, peat, sludge ponds, various organic-mineral mixes and more.

Fertilizer system must meet the optimal ratio of nutrients with regard to the requirements of a particular culture and presence in soil nutrients.

According to the FAO [6, p. 14], entering into a ground of 1 kg of fertilizer (N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O) increases the yield of wheat by an average of 7,3 kg of rice – 8,6 kg, maize – 8,8 kg respectively. Assessing the impact of various factors on the yield of crops yielded the following results: fertilizers – 41%, herbicides – 15-20%, rich soil – 15%, hybrid seeds – 8%, soil irrigation – 5%, other factors – 11-16%.

According to V. Minyeyeva "...the struggle for environmental safety must be considered as one of the most important challenges facing specialists in various fields of national economy" [5].

In 2010, studied farms Sumy region, show about 69% mineral fertilizer material that they are made, accounted for nitrogen. It is known that disturbances in fertilization technology, and their poor quality can cause a decrease in soil fertility, so that it will influence the quality of agricultural products. Quite disappointing domestic enterprises are state of organic fertilizers, particularly when only 3% of the acreage in 2017 were made. According to the research, in a ratio of 1 ha acreage major crop species accounted for 0,5 tons of organics. If we compare this figure, it is the same for 1990, it amounted to 8,8 tons, which is significantly lower, particularly at 94,3%. The reason for the low use of organic fertilizers – reduction in livestock farms.

In the world of organic agricultural production is becoming increasingly popular, with the trend towards an increase in acreage and number of farms (farms) are observed in all regions (Table 2).

**Table 2.** The development of organic agriculture in some countries for 2012-2017

Country	Indicator	Years					2017 to 2012,%	
		2012	2013	2014	2015	2016		2017
Australia	Organic land area, thous. ha	561,61	558,62	551,06	553,57	571,58	620,76	110,5
	Number of organic farms	2177	2177	1707	1999	2075	1998	91,8
	The share of organic land in total area, %	20,75	21,12	20,99	21,25	21,94	24,0	115,7
Argentina	Organic land area, thous. ha	3637,5	3281,2	3062,0	3073,4	3011,8	3385,8	93,1
	Number of organic farms	1446	1018	1018	1074	1148	1157	80,0
	The share of organic land in total area, %	2,59	2,34	2,06	2,07	2,03	2,28	88,0
UK	Organic land area, thous. ha	590,01	558,72	521,48	495,93	490,21	497,74	84,4
	Number of organic farms	4281	3918	3526	3434	3402	3479	81,3
	The share of organic land in total area, %	3,43	3,25	3,03	2,88	2,85	2,90	84,5
USA	Organic land area, thous. ha	2178,5	2178,5	1554,5	2029,3	2031,3	2031,3	93,2
	Number of organic farms	12880	12880	13282	14871	14217	14217	110,4
	The share of organic land in total area, %	0,64	0,64	0,46	0,59	0,59	0,59	92,2
Ukraine	Organic land area, thous. ha	272,85	343,4	400,76	410,55	381,17	289,0	105,9
	Number of organic farms	164	175	182	210	294	304	185,4
	The share of organic land in total area, %	0,66	0,95	0,97	0,99	0,89	0,68	103,0

**Source:** calculated according to the *Organic World* [8].

Period 2012-2017. Magnifying characterized popularity of organic farming among small land. Meanwhile, in countries such as Australia and Argentina, typical of organic farms have large land holdings. This category includes Ukraine, where in 2010 the average size of households was 1,903 hectares, but the share of organic land to the total area of our country than the current level in the world.

Despite the popularity of organic farming systems, we note that among the scientific community there is no agreement in the superiority of one system or another.

Therefore, none of the options that lead to a certain system of "clean" farming for all cases where agricultural products are grown despite climatic and natural conditions, economic and financial support for households, and without gradual transition that takes time development of technology in the economy and technology growing crops, can not be.

### 3. Results

One way to improve the situation may be growing green manure. Because of high yields of green mass of green manure to the soil per 1 ha receives nitrogen, phosphorus and potassium. The benefits of growing sideral crops is obvious (to improve the water regime of soil, reducing its acidity, etc.) and thus costs low.

However, this type of fertilizer is somewhat difficult to adjust the humus content of the planned harvest. This can be explained by the fact that now grown green manure as all other cultures, and it is associated with a specific list of

technologically necessary work (preparing the soil for sowing, planting, fertilization, seed costs, etc.). Generally, all the green mass of plants plowed because it is the primary carrier of nitrogen and unchallenged substance. Thus, when the humification ratio of 0,15 to 1 ha can be formed in the first two years of 3,6 / ha humus.

Option replenish humus soil through manure application we considered possible, but not essential in the modern world. Without the state support for livestock industry in the near future to increase the production of manure is impossible.

The actual is the use of organic residues straw to replenish soil organic matter. After all, this sideline products traditionally used for the needs of the livestock industry (mainly in bedding). Some of the straw is used for fodder. This large volumes of harvested straw in the fields remained unused.

First, the question was raised: how and thereby may provide a rational application of fertilizers in the soil, which in turn increases the efficiency of land use? Because of rising prices constantly rising cost of fertilizer, which makes agricultural producers to make them smaller. Currently, the average price of 1 ton of fertilizer active ingredient than 9,1 thousand. UAH., Whereas in 2017 it was 3,3 thousand. UAH.

So the answer is as follows: a large amount of fertilizer can replace organic, including the leaders manure. There is a limit: the production of by-products of livestock depends on the number of livestock animals. But this industry, most domestic enterprises are declining. It is necessary to look for another alternative solution.

Straw also used as fertilizer directly by introducing organic residues in the soil after harvesting crops. Therefore plowing straw and stubble is a means of maintaining soil fertility. However, due to irresponsible attitude towards land protection, carried out mass firing of this valuable fertilizer.

The calculations of efficiency of alternative use of organic residues chopped straw after harvesting of grain and leaving it on the field as organic fertilizer (Table 3).

Per 1 ton of straw the efficacy of its use in making direct it into the ground, which was determined equivalent to the cost of fertilizers.

**Table 3.** The efficiency of organic residues chopped straw as organic fertilizer directly making it to the ground

Indexes	Units of measurement	The calculation results
Cost obtained from 1 ton of straw nutrients	USD.	55,0
It is planned to obtain fertilizers from 1 ton of straw		
Only NPK:		
- nitrogen	kg	5
- phosphorus	kg	2
- potassium	kg	10
Total NPK	kg	17
The price of 1 kg NPK	USD.	11,0
The total cost of fertilizers obtained	USD.	187,0
Saving	USD.	132
The level of efficiency of straw as organic fertilizer	%	240 (2,4 times)

**Source:** *calculated by authors.*

The results of these calculations can be argued that the proposed use and in particular making 1 ton of chopped straw directly into the soil to produce organic fertilizer saves money in the amount of 88,8 USD and increases production efficiency, particularly cereals, by 5%, and therefore a positive impact on the efficiency of land use in general.

As already noted, ground cover is a major area of valuable natural resources, so it is necessary to strengthen the protection against the negative impact of erosion, pollution and other forms of degradation.

Within Sumy region, allocated 70 types of soil, which in turn, texture and other characteristics divided into 250 soil differences. The reason for this variety and diversity of soil is primarily the presence in the region two main soil-climatic zones – Polesie, steppe and clearly defined transition zone between them.

In the soil surface Polesie area dominated by sod-podzol soils of light texture on water-glacial deposits (10.2% of the patients arable land), and the forest-steppe – typical black soil humus and their deep slaborodovani discontinuation (56%), ashed at weakened rocks and their discontinuation (22.3%).

The most fertile soil typical black areas include medium and deep heavyhumus content 3,5-5,0% of humus horizon depth of 100-120 cm, on a scale that growth class with 54 evaluation points. By soils with low fertility include sand sod-podzolic humus content of 1% and a depth of humus horizon 18-20 cm, estimate they have 9 points.

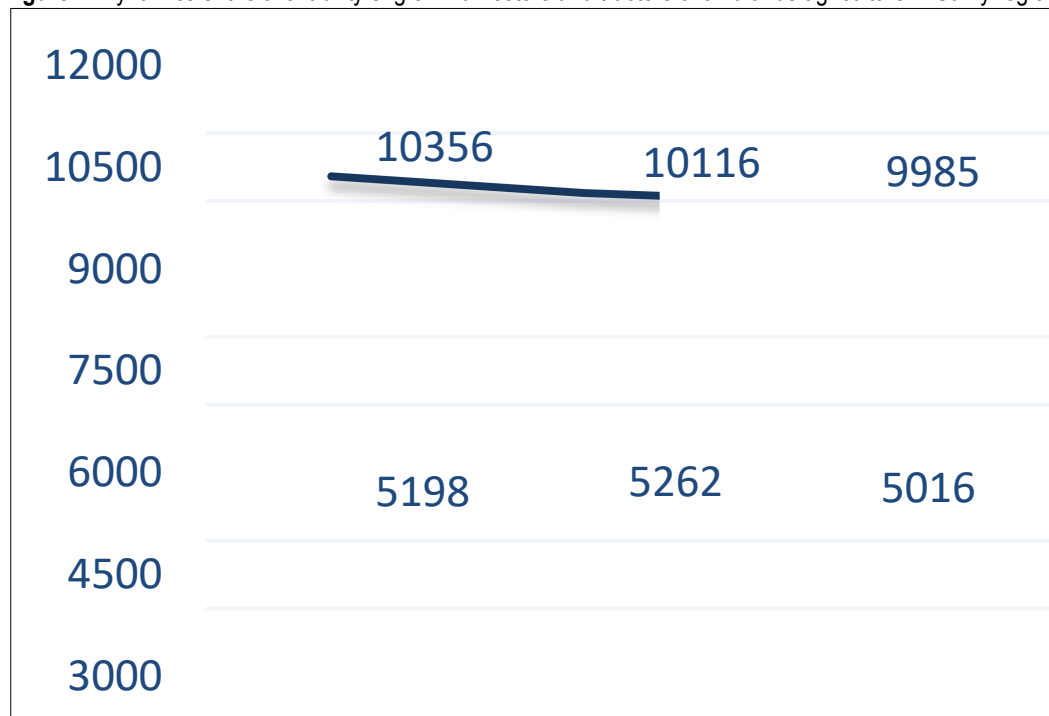
Average score soil area growth class is 39, the average for Ukraine – 41. One of the main indicators of soil fertility is the content of humus. According to the content of the earth farmland divided into groups, which areas are: 2% – 184 thousand. ha (16%); 2-3% – 215 thousand. ha (19%); 3-4% – 343 thousand. ha (30%); 4-5% – 345 thousand. ha (30%).

Thus, natural factors for agricultural production are visible. But one of the main problems is that there is no protection of land resources in the reduction of nutrients in the soil, water erosion of soil and inadequate reclamation of disturbed lands.

One reason for the low rate of this type of work is the lack of funding. In order to address the issue of reclamation should be proper allocation of funds from the state budget. It should be noted that the owners of the units need to monitor changes in the structure of sown areas through strict control over the implementation of all obligations of the tenant relating to the preservation of land fertility usage.

Reduced acreage, primarily due to the acute shortage of agricultural equipment (Figure 2).

**Figure 2.** Dynamics of the availability of grain harvesters and tractors of all brands agriculture in Sumy region



**Source:** calculated according to the data of the Main Department of Statistics in the Sumy region, consolidated forms of reporting of agricultural enterprises of the Sumy region and by source [1].

Extensive farming is the main cause of erosion, deflation dehumification, wetlands and other forms of land degradation and landscapes. Most new land users have the appropriate experience and skills of agricultural activities and often appropriate education [13, p 10].

The consequences of the imperfect use of equipment during work on the production of crops may be root layer of soil compaction, slow growth and development of plant roots, reducing yield by 20-30%, violation lumpy, granular soil structure, reducing their permeability. Therefore, the use of modern techniques and technologies that provide a reduction in the number of passes agricultural field and preventing the deterioration of physical and chemical properties of soils.

Modern technologies of agricultural production must ensure the fullest use of land resources as possible to reduce costs per unit of human energy yield and reduce the negative impact of crops on the environment.

Ancient Chinese farmers have come up with such an accurate statement: "mediocrities grow weeds, crop gets smart and wise cherishes earth" [11, p. 19].

The issue of effective land usage is that agricultural enterprises need to be addressed with regard to political, economic and social constituents of land relations. Indeed, depending on the conditions and results of the use of land is changing the standard of living of citizens, the future prosperity of society.

In world practice, the state's role in the efficient use of land resources and improving the quality of agricultural land is significant. In the European Union, the farmer gets 242 euros annually per 1 hectare, provided that the criteria of environmental land use is met [14, p. 425].

The problem of land management and registration in Ukraine is made actual due to formation of the agricultural land market. The low level of land records management today does not provide accurate and reliable information for external and internal users.

The system of accounting and analytical support of the agrarian sector includes a set of information, analytical, consulting, control, and forecasting means, which are focused on the main goal – to increase the effective development of business entities in the agrarian sector.

Complex system of accounting and analytical support leads to the expansion of functional tasks in the following areas: 1) monitoring (constant analysis and assessment of the achieved level of the effective use of agricultural land); 2) development of sectoral programs, projects for the restoration of land, rural areas and assistance in their practical implementation; 3) consulting support for management processes; 4) organizational, regulatory, audit, image and other assistance in attracting investments necessary to increase the efficient land use in the agrarian sector of the economy.

Today, the total agricultural land in Ukraine is 42 million hectares. More than 50% of the total area is at temporary disposal of economic partnerships, private agricultural enterprises, agricultural cooperatives, etc. The level of efficient use of agricultural land by agrarian enterprises shows that in recent years, the agrarian sector has positive growth dynamics by most economic indicators, from the level of productivity of the main crops to the final financial performance of the industry. In 2017, the level of agrarian enterprises profitability amounted to 31,6%, while the average indicator for the Ukrainian economy is 7,4%. The share of profitable agricultural enterprises in recent years also turned out to be higher than the average for the country's economy – 88,4% (Table 4).

**Table 4.** Indicators of land use efficiency in the agrarian sector of Ukraine for the period 2013–2017

Indicat or	2013	2014	2015	2016	2017	2013 to 2017, %
Number of agrarian business entities	47,656	49,848	46,012	46,744	45,045	94,5
Total share in the economy, %	13,0	12,6	13,5	13,6	14,7	–
Agricultural area, thousand hectares	41536,3	41525,8	41511,7	42726,4	42726,4	102,8
Agricultural area of an agricultural enterprise, thousand hectares	20499,3	20665,5	20437,2	20548,9	20746,9	101,2
Gross value added, UAH mln	113245	132354	161145	239806	277197	2,4 times
Gross product, UAH mln (all categories of enterprises)	223254,8	252859,0	251427,2	239467,3	254640,5	114,0
Net profit, UAH mln	26787,2	14984,5	21481,3	102849,1	90160,4	3,4 times
Average net profit per 1 agricultural enterprise, UAH mln	562,1	300,6	466,8	2200,3	2000,1	3,6 times
Share of profit-making agricultural enterprises, %	78,2	79,8	84,1	88,4	87,7	–
Average share of profit-making enterprises in the economy, total, %	63,0	65,0	65,5	73,3	73,0	–
Net profit per 1 hectare of agricultural land, UAH thous.	1306,7	725,1	1051,1	5005,1	4345,7	3,3 times
Level of agricultural enterprises performance, %	21,7	11,3	20,6	41,7	31,6	–
Level of enterprises performance on the average in the economy, %	5,0	3,9	–4,1	1,0	7,4	–

**Source:** State Statistics Service of Ukraine.

The status of accounting in agricultural business entities indicates that land management in farms reduces to the definition and analysis of the dynamics of individual natural indicators of the agricultural land efficient use, in particular: yields of agricultural crops, coefficients of return (payback) of mineral fertilizers and costs for improving quality parameters of agricultural lands. The system of cost indicators, in particular those of value-oriented land management, remains out of sight at the present stage.

Based on the above, one should highlight the main problems that result in significant limitation of the accounting and analytical support towards full information provision of value agrarian management, namely: incompleteness of the land reform and the lack of transparent and clear mechanisms for the agricultural land value, which hinders the systematic assessment of the agrarian business value; low level of the concepts and tools of value-oriented management among the top management of agrarian entities; imperfect financial reporting in Ukraine in the context of displaying information about the status, availability and valuation of agricultural lands in the report on financial condition, which leads to a low level of analytical work in agribusinesses, lack of experts in planning, economic and analytical support of agrarian management [4].

Cost assessment of agricultural land remains the main problem of accounting and analytical support for land management. Establishing a full-fledged land market will promote prosperity through improved wealth status and long-term investment. In addition to the fact that the land market is a prerequisite for investments that contribute to increasing labor productivity and increasing farm incomes, investors' interest in agricultural land is increasing. According to scientists, land ownership rights increase productivity, consumer spending and land users' incomes.

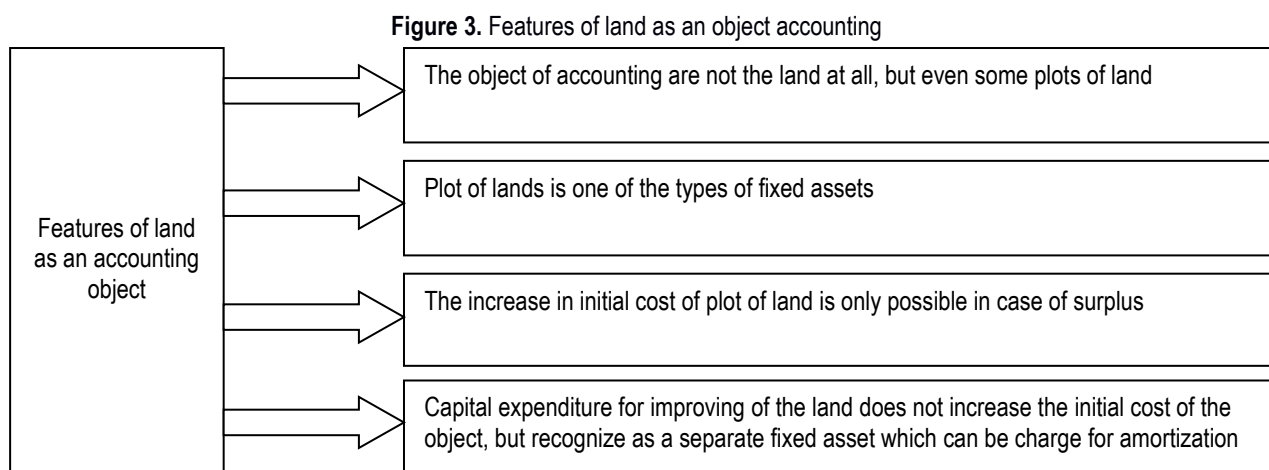


The basic law, which forms the legal framework in land relations in Ukraine, is the Constitution of Ukraine. Article 14 of the Constitution establishes that the land is the main national wealth, which is under the special protection of the state. Land ownership is guaranteed. Thus, the Constitution of Ukraine enshrines the main constitutional provisions concerning land, which are the basis for sectoral land legislation. The main legal acts regulating land accounting are the Regulations (Standards) of Accounting, which are developed by the Methodological Council for Accounting at the state level.

Accounting as a powerful information system can increase the land management efficiency at the state, region, community, and enterprise level. Solving these problems can only be provided through the recognition of the land as a specific asset and object of accounting, the implementation of legislative norms and the introduction of effective accounting and information provision of land relations. Adequate land registration at an enterprise should be carried out for multi-vector reflection of the land potential of an enterprise, which is important for its mission in attracting investments, obtaining loans, etc.

According to regulations (standards) of accounting of Ukraine, the land owned by the enterprise relates to fixed assets. As a part of the fixed assets of Ukrainian enterprises, the land appeared after the entry into force of Regulations (Standards) of Accounting 7 "Fixed assets" and IAS 16 "Fixed assets", where it was classified into two separate elements: land and capital expenditures for land improvement [5].

The Ukrainian legislation made a significant emphasis on the legal consolidation of land ownership, however, it did not ensure proper accounting of using agricultural land. This, in turn, has created significant problems for agricultural business. After analyzing the status of the legal regulation of agricultural land accounting in accordance with Ukrainian and international legal norms, the basic normative documents should be distinguished (Figure 3).



**Source:** *generalized by source [5].*

Based on the experience of developed countries, most scientists consider land reform as a part of Ukraine's transition to a civilized market economy. It will allow to form a transparent market of agricultural land, which will provide an opportunity to realize the constitutional rights of land owners and improve the welfare of rural residents; stop the shadow movement of agricultural land and put it in the legal framework; improve lending and investment climate in the sector; to protect soil and civilized land usage.

Land is the fundamental national wealth that is under special state protection. In agriculture, land is the most important economic resources, which is essential for the production process. Organizing accounting of land in enterprises should consider the main features of the land as an object of accounting. A very important issue, which appears to land accounting and land relations is improvement of the regulatory framework of the areas of accounting, which would have to be clear, understandable and accessible, especially for farmers practicing. However, neither International Standards of Accounting and Reporting, not domestic accounting standards does not have clear legislative regulation of land account with a different purpose, as well as rights to use them, refer them to the balance of businesses and organizations of different ownership. Today there are two ways of creating effective accounting methodology that would allow to attract agricultural land for economic exchange and provided coverage of priority capital value of land of companies of agricultural sector: amendments to IFRS; to develop its own industry standard [9].

Despite the fact that Ukraine has a moratorium on sale of agricultural land, which once again extended, this time to January 2018, the land, like any other economic asset should be reliably estimated. Land valuation is reflected in the accounting not only for the immediate implementation of civil law contracts connected with land in a market sector (purchase and sale, lease, inheritance, admission to the share capital, compulsory withdrawal), but when time calculating of land tax, in determining the total value of the property – buildings on land, in the case of formation of investment policy and restructuring of agricultural enterprises, if economic justification for effective and efficient use of

land, for insurance real estate and more. That is why monetary evaluation should be the final stage of the complex technical and economic measures to assess the assets of the company, which will allow a sufficient degree of probability to set the price of land of a certain quality. Estimated value of the land today is determined by a prescribed method of valuation of land subject coefficients of functional use. This evaluation estimated by experts of land evaluation.

## Conclusions

Thus, the implementation set priorities to achieve development will enable efficient use of land resources, and in particular to increase their investment attractiveness; in ecological plane – to ensure environmental safety of society and social – to improve social standards.

The Ukrainian legislation has made a significant emphasis on the issue of legal consolidation of land ownership, but the level of land registration in Ukraine is low due to imperfect regulatory framework, which causes inadequate reflection of business operations in accounting and reduces the ability to reflect the entire information required for external and internal users. Depending on the way of acquiring property rights and the use, it is expedient to consider land resources in the modern accounting system of Ukraine as: the basic asset as a property; the intangible asset for use rights; the object of lease relations; the investment property. To increase analytic property and information reliability to the synthetic accounts used for land registration, it is expedient to open additional subaccounts of the second, third and fourth levels. To increase the investment attractiveness of land resources, it is necessary, firstly, to form the main promising investment objectives that would specify the strategic and tactical actions of owners and land users in attracting investment, and secondly, to build an effective management system at agricultural enterprises. This will facilitate the expansion and prosperity, as well as attracting investors and providing increased opportunities and investment inflows.

Improvement of information and analytical support for agricultural development is to create an effective system of formation, processing and transmission (receipt) of accounting and analytical data of the accounting for the timely adoption of effective decisions at all levels of the development of the agricultural sector. A specific object of accounting is agricultural land and land relations arising in the course of its use. Information base that exists today is not completely perfect and not worked; not developed primary documents reflecting the peculiarities of accounting of land, of their assessment and subsequent display on the accounts. Features of agricultural land requires to classifying them as a separate group of fixed assets and the development of specific methods of accounting and evaluation of assets and rights to use them. To ensure this requirement, it is advisable to carry out their quantitative and qualitative display by accounting regulation of agricultural land through the introduction of a separate national industry standard of accounting.

## References:

1. Agriculture of Sumy Area. Statistical Collection, 2017. <http://sumy.ukrstat.gov.ua/>.
2. Bogira M. Land use in market conditions: ecological and economic aspect. Monograph. Lviv National Agrarian University, 2008.
3. Boklag V. "The state measure how to improve the use and protection of land planted by protective forest belt". *Baltic Journal of Economic Studies* (2016): 2-14.
4. Bordyuzha A. "Improvement of land information system of agricultural lands in Ukraine". *Balanced natural resources Journal*, no.1 (2014): 151-161.
5. Bryk G., Cic'ka N., Poverlyak T. "Theoretical and practical aspects of accounting agricultural land". *Economic Processes Management: International Scientific E- Journal*, no. 1 (2017), [http://epm.fem.sumdu.edu.ua/download/2017\\_1/epm2017\\_1\\_4.pdf](http://epm.fem.sumdu.edu.ua/download/2017_1/epm2017_1_4.pdf)
6. Gutorov O., Land resource potential and problems of its rational use, (Kharkiv National Agrarian University named by V.V. Dokuchaev, 2002), 70.
7. Mineev V. Chemization of agriculture and the natural environment. Agropromizdat, 1990.
8. Organic World. Global organic farming statistics and news. The World of Organic Agriculture 2019. <https://www.organic-world.net/yearbook/yearbook-2019/pdf.html>.
9. Ruslan F. Brukhanskyi et al., "Effective land management in Ukraine using accounting and analytical support", *Problems and Perspectives in Management*, no.16 (2018), doi:10.21511/ppm.16(2).2018.22.
10. Shuvar I. "Increase in productivity of Ukrainian fields". *Agrobusiness today* (2011): 14-46.
11. Sitnik K. and V. Bagnyuk. State of Soils and the Future of Humanity. Bulletin of the National Academy of Agrarian Sciences of Ukraine, 2008.
12. Tregobchuk V., Reproduction and effective use of resource potential of agro-industrial complex (theoretical and applied aspects), (Institute of Economics of the National Academy of Agrarian Sciences of Ukraine, 2003), 259.
13. Tretiak A., Drugak V., and Osadcha I. "Strategy of Agrarian-Land Policy of Ukraine in the Contemporary World Food Crisis". *Land Management Bulletin* (2008): 5-4.
14. Voronovskaya O. "Ecological-economic analysis of the agricultural land use". *Land management and cadastre. Collection of scientific works* (2009): 17-421.