

THE PROBLEMS OF SPATIAL ORDERING AND TAXATION OF AGRICULTURAL LANDS

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Abstract. The problem of rationalizing the use of agricultural land is increasingly complicated in Ukraine. Today it has various aspects, the most important of which are technological, economic, organizational and environmental. That is why the level of use of land in Ukraine is now so critical that further land degradation potential in agriculture can have disastrous consequences.

The objective of this paper is to study the economic effects of agricultural land use on example of Kyiv city. It is revealed that the problem of rational use and protection of agricultural land in Ukraine is deteriorating year by year. In today's conditions, this manifests itself in various directions, among which, in our opinion, the deterioration of the ecological state as a result of irrational use.

On examples of land plots of the Kyiv city, the procedure for calculating the normative monetary valuation of agricultural land as one of the main instruments for accompanying capital transactions has been considered. The information on the weak and strong sides of the objects of evaluation is shown, which allows to evaluate the effectiveness of its functioning, current, past and future costs and incomes, as well as development prospects, which as a result serves as the basis for making effective management decisions on the valuation object.

According to the research results, which consists in changing the agricultural land purpose in Kyiv city, it was ascertained that the normative monetary valuation of these lands will increase over 6 billion UAH.

Keywords: land management, land and real estate valuation, disturbed land, normative monetary valuation, cadastre.

Introduction

Land management at the current stage of land reform requires finding new approaches and technical solutions for the organization and improvement of land in modern conditions. A number of outstanding issues to the interests collision point of landowners, land users and the state indicates the absence of effective mechanisms for the spatial redistribution and improvement of land.

Special attention should be paid to the possibilities and prospects of land exchange among the main tasks of modern land management. The question of spatial

ordering is described in the works (De Moor 2015; Hartvigsen 2014, 2015; Thomas 2006, 2012; Vitikainen 2004) and others.

1. The normative monetary valuation

In the basis of the normative monetary valuation of the settlement lands is the rental income arising from its location in the nation-wide, regional and local production and settlement systems, the arrangement of its territory and the quality of land, taking into account the natural and climatic, engineering and geological conditions, the ecological status and functional use of land.

The normative monetary valuation of the land plot square meter in a settlement is determined by the formula (Cabinet of Ministers of Ukraine 1995):

$$E_m = \frac{C \times R_p}{R_c} \times C_f \times C_l, \quad (1)$$

where E_m – is the monetary valuation of one square meter of a land plot (UAH); C – is the costs for development and arrangement of the territory per square meter (UAH); R_p – is the profit rate, 6%; R_c – is the capitalization rate, 3%; C_f – is the coefficient characterizing the functional use of land; C_l – coefficient characterizing the location of a land plot.

Monetary valuation of agricultural land in the territory of settlements was carried out in accordance with the Procedure for the monetary valuation of agricultural land and settlements, approved by the order of the State Committee of Ukraine for Land Resources, State Committee for Construction of Ukraine, Ministry of Agriculture and Food of Ukraine and Ukrainian Academy of Agrarian Sciences January 27, 2006 No18/15/21/11 and registered with the Ministry of Justice of Ukraine on April 5, 2006 under No. 388/12262 (Ukrainian Academy of Agrarian Sciences 2006).

The basis for determining the monetary valuation of these lands is rent income, which is created in the production of cereals, which is calculated from the economic valuation of land, held in 1988. The value of monetary valuation is the product of the annual rental income size and the capitalization period, which is set to 33 years.

A monetary valuation of one hectare of agricultural land in the settlement was carried out for a separate land plot (point 2.4 of the Procedure for the monetary valuation of agricultural land and settlements (Ukrainian Academy of Agrarian Sciences 2006)) and separately for arable land, lands under perennial plantations, natural hayfields and pastures.

Taxonomic units of the monetary valuation of land are the agro-industrial groups of soils.

Monetary valuation of one hectare of land for a certain agro-industrial group of soils (Gagr) within the settlement is calculated according to the formula (Cabinet of Ministers of Ukraine 1995):

$$V_{agr} = \frac{V \times B_{agr}}{B}, \quad (2)$$

where V – is the monetary valuation of a hectare of relevant agricultural land in the territory of the basic agricultural enterprise (farm); B – is the lands quality class (bonitet) average score for basic farm land; B_{agr} – is the bonitet score of this agro-group.

The problem of rational use and protection of agricultural land in Ukraine only worsen with each passing year. Under current conditions, this manifests itself in various directions, among which, in our opinion, the deterioration of the ecological state as a result of irrational use.

It is known that land economic valuation is a component of land-evaluation procedure. In determining the land economic valuation the gross income which is directly related to the ecological state of the corresponding land plot is considered.

Within the Kyiv city, there are 17 agricultural enterprises, in which there are 2214.6296 hectares of agricultural land by form No. 6-zem(land), including: arable land – 835.11 ha, perennial plantations – 358.7343 ha, hayfields – 999.234 ha, pastures – 21.5513 ha.

Significant areas of agricultural land are counted in the arrays of low-rise manor development areas (almost 40% of the total area). These are homestead plots of citizens and plots granted for the conduct of personal farming, the area of which is 2220.5640 ha, of which 1985.8640 ha of gardens.

The land plots provided for gardening and dacha (cottage) construction (collective and individual) are located in 9 administrative districts of the city, in which there are about 17% of the total area of agricultural land – 949.5385 ha, of which 942.7385 ha of gardens.

Let's consider the calculations of normative monetary valuation of lands under agricultural land in Kyiv city to determine the efficiency of land use within a settlement (Kyiv City Council 2007).

So the calculation gave the following indicators:

- normative monetary valuation of one hectare of arable land is 15293.77 UAH;
- normative monetary valuation of one hectare of arable land in greenhouses is 71551.79 UAH;
- normative monetary valuation of one hectare under perennial plantations is 76112.79 UAH;
- normative monetary valuation of one hectare under natural pastures is 5968.30 UAH.

2. The purpose of land plot

According to the experience of many countries, including those, which are close to Ukraine by a common past, land plots of agricultural purpose are defined as unproductive or degraded, and can be used for other purposes of the territorial community, including for construction.

It is necessary to carefully and reasonably approach to the change in the purpose of such lands when using unproductive and degraded lands

for urban development needs. Under the current legislation, the basis for determining the purpose of the land plot is its belonging to the corresponding category of land. Article 18 of the Land Code stipulates that the lands of Ukraine include all lands within its territory, including islands and the lands occupied by water bodies, which are divided into categories for the main purpose.

The land legislation of Ukraine gives first priority to agricultural lands. Article 23 of the Land Code of Ukraine states that land suitable for agriculture should be provided primarily for agricultural use, the other lands that are not related to agricultural production can be provided for other needs of the relevant territorial community. In the maelstrom of economic transformations and considering the rapid development of land relations among business entities, which own agricultural land on private ownership, quite often there is an urgent need to use the land plot that belongs to them, for a different purpose than is determined by the title documents. In today's conditions, the land plots located within settlements or near major cities in some cases are more suitable for urban development needs, including for commercial purposes, than for agricultural purposes. Similar situations occur hourly, that gives rise to the issue of change of the land plots special purpose. The procedure for changing the purpose of agricultural land is governed by the Land Code of Ukraine, the Law of Ukraine "On Land Protection", the Law of Ukraine "On Land Management".

Land protection and the efficiency of its use is the main task of establishing purpose of land. It should be noted that in accordance with Article 35 of the Land Code of Ukraine land plots for gardening can be used for the following purposes:

- initiation of perennial fruit plantations;
- growing of crops;
- erection of necessary houses, outbuildings;
- other purposes.

Other purposes, in the interpretation of this article, in some cases, allow making unreasonable manipulative decisions.

Changing the purpose of land plot is carried out on the owner initiative in the manner provided in (Verkhovna Rada of Ukraine 2002). Having made the decision to change the purpose of land plot, the owner provides an application (petition) to the village, settlement, city council, if the land is located within the settlement, or to the district state administration, if the land plot is located outside the settlement.

Condition assessment of the agricultural land is carried out on one of two criteria:

- qualitative indices of soil condition (including agrochemical analysis);
- monetary valuation of agricultural land.

According to the land legislation norms (Verkhovna Rada of Ukraine 2002), degraded land includes land plots whose surface is disturbed by an earthquake, landslides, karst formation, floods, mining, etc., as well as land with eroded soils, waterlogged, with high acidity or salinity, contaminated with chemicals and others. The low-productivity lands include agricultural lands, the soils of which are characterized by negative natural properties, low fertility, and their economic use is economically ineffective.

Determining the quality of land on the basis of monetary valuation is described in paragraph 1.5 of the Procedure for the Monetary Valuation of Agricultural Land and Settlements (Ukrainian Academy of Agrarian Sciences 2006). It is a question of the fact that in the worst lands where differential rent income is not created (with a zero or negative valuation index), the monetary valuation of land is determined by the absolute rental income amount – 1.6 centners of grain per hectare.

Therefore, the belonging of a site of agricultural lands to degraded and low-productivity lands, in accordance with the indicators specified in the Procedure for Conservation of Land, can be characterized by a reliable indicator of the change in the purpose of the land.

For verification and an urgent example, let's consider the normative monetary valuation indicators of agricultural lands of agricultural enterprises within the Kyiv city, which are reflected in the technical documentation. Indicators of normative monetary valuation allowed us to allocate land plots of agricultural purpose, which are fall under the lands of inferior quality, according to the above criteria, and can be used for more necessary rational needs of the territorial community of the city (Fig. 1).

Let's make a comparison according to the current norms for agricultural land, the normative monetary valuation of which is less than 10 thousand UAH per hectare. It has been established that indicators of land unfavorable for future use include Ag LLC "New Ukraine", Ag LLC Agro-industrial complex "Khotivsky", Ag LLC "Tarasivka", Combine "Shpivkivske", LLC "Agriculture Trebuhovske", LLC "Buzivske" and LLC "Agrofirma Kryukovshchina".

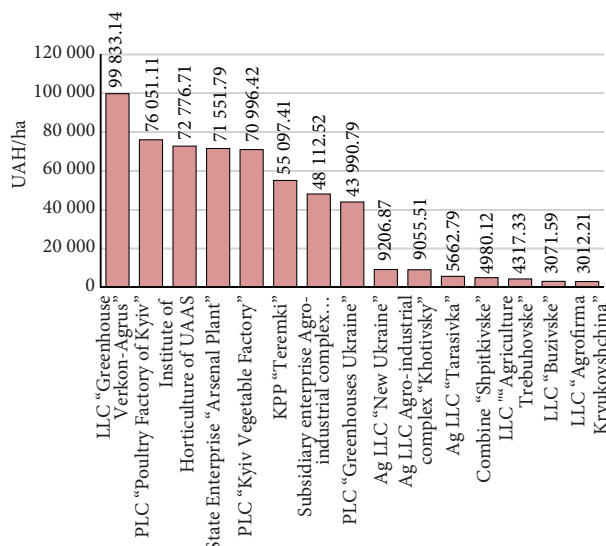


Fig. 1. Indicators of agricultural enterprises in Kyiv city

The total area of agricultural land within the city limits, the intended purpose of which can be changed for the development of infrastructure projects, based on the needs of the city's community is 1447.56 hectares.

The optimization economic efficiency of land for agricultural use within the Kyiv city can be illustrated by increasing the indicators of the normative monetary assessment of land, which can be used to meet the needs of urban development. A study to compare the indicators of the normative monetary valuation of agricultural land of inferior quality within the Kyiv city with a valuation of similar land plots, given that their use in the land category of residential and public buildings (Fig. 2) is carried out.

So, summarizing the indicators of changing the purpose of agricultural land in Kyiv, we can state that the normative monetary valuation of these lands will increase to more than six billion UAH.

Based on the results of the studies and calculations, it is proposed to involve the proposed approach for the determination of agricultural lands, the intended purpose of which can be changed for more pressing problems of the city communities. In addition, it should be noted, that this study should become an obligatory mechanism for regional and city bodies of land resources. It should be included as an essential component in land monitoring and protection programs and serve as an indexer for the study of the current state and monitoring of agricultural lands, not only when the purpose is changed, but also in cases of possible transformation, especially in determining objective measures to support the primary state of fertility.

Let's consider another case, in our opinion, an irrational approach to the taxation of agricultural land (Malashevskiy, Palamar 2016). It is known that one of the most well-known classifications of property is its division into immovable and movable. In this study we will focus on the problems of identifying real estate objects, their characteristics and issues arising in practice. For comparison, let's consider the land for residential and public buildings, as well as agricultural land for gardening.

The first is an independent category of land among the lands of Ukraine. It appeared instead of the land of settlements. In accordance with the prevailing land legislation, these lands were also characterized by an independent legal regime. The current Land Code of Ukraine (Verkhovna Rada of Ukraine 2002), allocating these lands into an independent category, devotes Chapter 6 to them, which includes only 5 articles.

According to Art. 38 of the Land Code of Ukraine (Verkhovna Rada of Ukraine 2002), the land of residential and public buildings includes land plots within settlements, which are used to house residential buildings, public buildings and structures, and other public facilities. In determining the concept of these lands, the legislator takes as a basis two criteria: their location – within settlements and the special purpose – use for building accommodation.

Plots for gardening – land, the main purpose of which is the initiation and cultivating of a garden (tree and shrubbery planting).

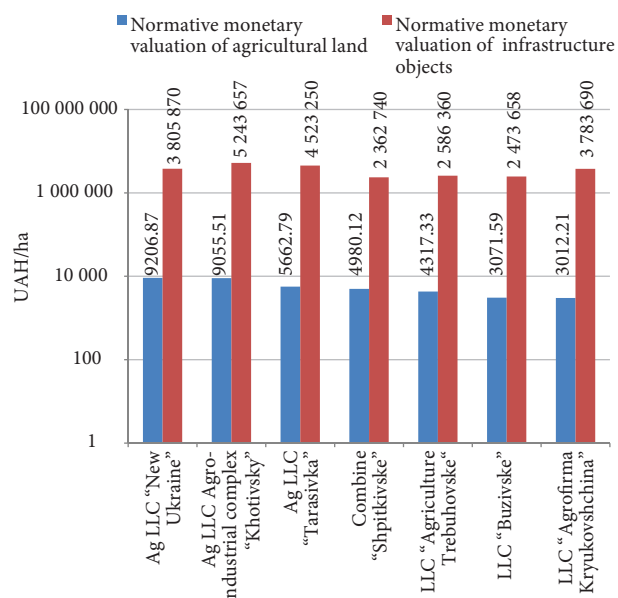


Fig. 2. Economic efficiency analysis of optimization of inferior quality agricultural land use in Kyiv city

However, part of the land granted to citizens for gardening can be used for construction and maintenance of a dwelling house and outbuildings needed for a seasonal residence of a citizen and his family members, as well as for storing household equipment, grown produce etc. Note that the garden house can not be used to register the permanent residence of its owner, because, as a rule, land plots for gardening are provided outside settlements and do not have an address. It should also be noted, that the use by a citizen of land plot, which was granted to him for gardening, only for erecting a residential houses and outbuildings is a violation of the special purpose of such a land plot. Initiation and growing perennial fruit plantations is the main qualifying feature of the special purpose and purposeful use of land plots provided for gardening. It should be noted that the agricultural land areas in the massifs of citizen's household plots and plots provided for gardening and cottage building are not clearly defined in kind (on site). Owners and users of these land plots, both legally and illegally, build various buildings and structures, since there are no significant obstacles to the development of these lands. These plots are also provided by the city's engineering and transport infrastructure. Therefore, in perspective it is advisable to transfer these lands to built-up lands,

the normative monetary valuation of which will significantly increase in comparison with agricultural land. Normative monetary assessment of agricultural land within the lands of the settlement, for which there are no soil survey materials, is carried out by means of preliminary creation of rough (schematic) drawings of soils of these areas by using soil maps of adjacent territories, topographic maps and expert route survey of settlements to compare the data obtained in-situ. Soil contours from the maps of adjacent territories, taking into account the relief, are extrapolated to rough (schematic) drawings of soils, and the areas of agro-industrial groups of soils are determined. Thus, drawings of the soil cover of all other agricultural enterprises, institutions and organizations have been prepared.

Let's consider an isolated case of different calculation of identical objects. According to the automated system "Cadastre" (Fig. 3), the land plots with houses for which the calculation is carried out are located on the same street of one massif of the city.

Let's carry out a comparative calculation of the normative monetary estimate and determine the land tax of the plots, which are investigated in Table 1.

In order to formulate the state tax policy, it is necessary to bring these objects in conformity, in

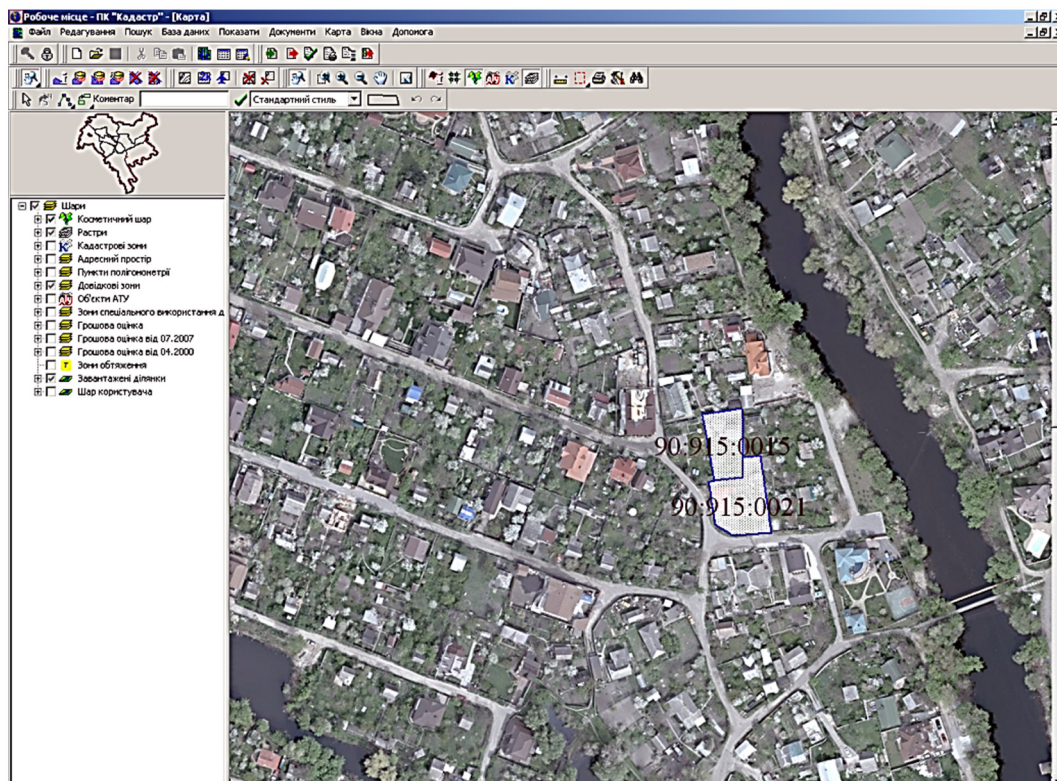




Fig. 3. Location of land plots

Table 1. Calculation of normative monetary valuation of land plots

Objects of evaluation		
	Fig. 4	Fig. 5
Area	607	1000
Special purpose	1.2 for gardening	1.8 for the construction and maintenance of a residential building, commercial buildings and structures
Normative monetary valuation	$607 \times 693.32 \times 1.00 \times 0.96 \times 1.249 \times 1.433 = 723\ 106.53$	$1000 \times 18.321098 \times 0.96 \times 1.249 \times 1.20 = 27\ 459.66$
Land tax	Land tax for housing is 3% of the land tax, which is 1% of the normative monetary value and is 216.93 UAH/year.	The land tax rate for land plots, the normative monetary valuation of which is carried out, provided for the needs of agricultural production, water and forestry, occupied by industrial, cultural, household, and other buildings and structures – 0.03, land tax will be 8.23 UAH/year.

particular, which will enable balance and increase revenues to the budget from payment for land to a certain extent. When reforming the conceptual principles in the search for new sources of increasing revenues to the local budget, there is an objective need for a more detailed examination of the legislatively fixed methodology for resolving the relevant issues by local governments. Elimination of existing contradictions in the field of legislation, clarification of the conceptual apparatus, in particular, is a necessary condition for the development of an effective mechanism for the quality management of local land resources.

The character of the control system in the field of use and protection of lands of Kyiv city is due to the capital status of the city, the large socio-economic potential and the associated continuous growth of the land cost. The increase in the profitability of land resources, the increase in revenues to the city budget from the use of land, the organization of environmentally safe land use determine the main directions for improving the management system of land use.

Conclusions

In today’s difficult conditions of intensive and chaotic development of urban land, a study on the rational use and taxation of agricultural lands within the

settlements was conducted. Based on the calculations results the social and economic efficiency of changing the purpose of economically unprofitable agricultural lands for further use and solving urgent needs of territorial communities has been proved.

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