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## PROSPECTS FOR DEVELOPMENT OF AGRICULTURAL LANDS MARKET IN UKRAINE

*The article considers the features of establishment and functioning of the agricultural lands market in Ukraine and defines the prospects for its further development. Economical, organizational and ecological factors of land use are determined.*

*Keywords: agrarian lands market; organic agriculture; land lease market.*

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## ПЕРСПЕКТИВИ РОЗВИТКУ РИНКУ ЗЕМЕЛЬ СІЛЬСЬКОГОСПОДАРСЬКОГО ПРИЗНАЧЕННЯ В УКРАЇНІ

*У статті розглянуто особливості функціонування і становлення ринку сільськогосподарських земель та визначено перспективи його подальшого розвитку в Україні. Визначено економічні, організаційні та екологічні чинники вдосконалення ринку землі та землекористування.*

*Ключові слова: аграрний ринок землі, органічне сільське господарство, ринок оренди землі.*

*Рис. 2. Літ. 17.*

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## ПЕРСПЕКТИВЫ РАЗВИТИЯ РЫНКА ЗЕМЛИ СЕЛЬСКОХОЗЯЙСТВЕННОГО НАЗНАЧЕНИЯ В УКРАИНЕ

*В статье исследованы особенности функционирования и становления рынка сельскохозяйственных земель и определено перспективы его последующего развития в Украине. Обоснованы экономические, организационные и экологические факторы усовершенствования рынка земли и землепользования.*

*Ключевые слова: аграрный рынок земли, органическое сельское хозяйство, рынок аренды земли.*

### **Problem definition and its relation to important scientific or practical issues.**

Economic policy in Ukraine has some goals such as food security, competitiveness at international agricultural markets, providing processing and light industry with raw materials and full employment of resources, especially labor force. There are main classical factors of agrarian production: labor, capital and agricultural land. Supply of resources and efficiency of their use determine gross domestic product and national income of agrarian economy.

National market includes all types of available markets with different economic purposes of trade objects. Land has exceptional importance for the organization of agricultural industry, which is an universal condition of material production, the subject of labor and means of production. As for the land use in agriculture, there are the so-called land relations that according to the land law mean relations between business entities about the land use as the main means of production. The basis for this relationship is land ownership, which exists in the form of land tenure, land use, and disposal. The current stage of national agrarian reform is focused on the issues of agricultural land market.

**Analysis of recent researches and publications.** Land market is characterized by the limited amount of land suitable for agricultural production, which differentiates rent and price. This scientific issue has been discussed since W. Petty (1690), A. Smith (1776), D. Ricardo (1817), K. Marx (1894), A. Marshall (1890), E.G. Dolan and D.E. Lindsay (1994) up to now (A. Zielinska, 2012). Domestic scholars O.V. Shkilov et al. (2009), M. Fedorov (2009), A.M. Tretiak (2010), V.P. Galushko et al. (2012), M.M. Rudoi (2012) and others studies the formation of land relations in the post-reform period, the preservation and improvement of soil fertility, establishing economic rent of natural resources, development of scientifically based directions of agrarian policy.

**Unsolved aspects of the problem.** However, current studies of these issues are caused by the necessity to improve land use in accordance with the world standards of organic food production and raw materials for industries. There are debates about the unsolved question of reasonableness of buying and selling agricultural lands in Ukraine.

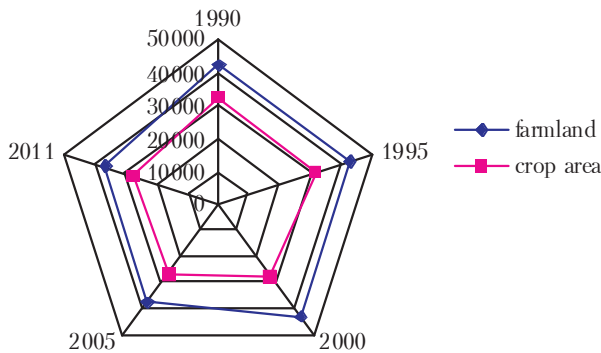
**Aim of the research.** Defining the characteristics of functioning and installation of the agricultural land market in Ukraine and the prospects for its further development.

**The main results of research.** According to A. Smith (1776), labor determines the value not only of the part of the price added to wages, but also the parts added to rents and profits. From the study of D. Ricardo (1817), rent is the part of the product of land which is paid to the landowner for the use of "primary and enduring forces of soil". The representative of classical economic thought K. Marx (1894) explained rent as part of the added value that is assigned to land owner as a result of the monopoly on the ground, regardless the intended use of land: for agriculture, construction or other purposes.

A representative of the neoclassical economic theory, A. Marshall (1890) treats term "rent" as a payment for the use of a certain estate and uses it for the analysis of income in terms of individual entrepreneur. If the research is transferred from an individual to society, the rent takes on new meaning and applies to the income derived from natural resources. Economic theory studies the concept of economic rent as a payment, which falls to the lot of a factor of production and exceeds its alternative cost. When it comes to the free market, rent is influenced by competition. From this point of view, economists E.G. Dolan and D.E. Lindsay (1994) emphasized the importance of rent-seeking policy by government intervention in the economy. An example is the payment of subsidies, the introduction of tariffs, import quotas and so on.

Numerous factors affect the value of land rents. There are the main: the demand for land, soil quality, climate, distance from market, environmental factors etc. Microeconomics determines land rents as the price equilibrium between demand and supply at the land market (Rudoi, 2012). The next step of our research is determining the characteristics of agricultural land market in Ukraine. According to the statistics of the State Agency of Land Resources, Land Fund of Ukraine has the following structure: 71% of agricultural land, of which 68.9% is farmland, 17.6% is covered with forests and other forest-covered area, 1.7% of open wetlands, 1.7% open land without vegetation or with little vegetation (stony places, sand, ravines) and 6% of the area covered by surface water (State Agency of Land Resources in Ukraine, 2012). Consequently, land resources of Ukraine have high agricultural potential.

The analysis found that the agricultural land market in Ukraine is characterized by insufficient use of available farmlands by both businesses and individual farms. If in 1990 the difference between available land and crop area was 9.6 mln. ha, in 1995 – 10.9 mln. ha, in 2000 – 14.6 mln. ha, in 2005 – 11.3 mln. ha, than in 2011 – 8.8 mln. ha respectively. It should be noted that the area of land occupied by pure fallow did not exceed 3.2 mln. ha in 2000 and not less than 1.2 mln. ha in 2011. Thus, in the agricultural sector of Ukraine demand for agricultural land exceeds supply (Figure 1). From the perspective of the market equilibrium, the situation at the land market is called non-productive use of land resources. The reasons for the imbalance should be considered the low level of production expenses on the rental land that is caused by high excess of bank interest rate and higher profit rate in other economic sectors than the average profit in agricultural production.



Source: Developed by Statistical Yearbooks of Agriculture in Ukraine (1990–2011).

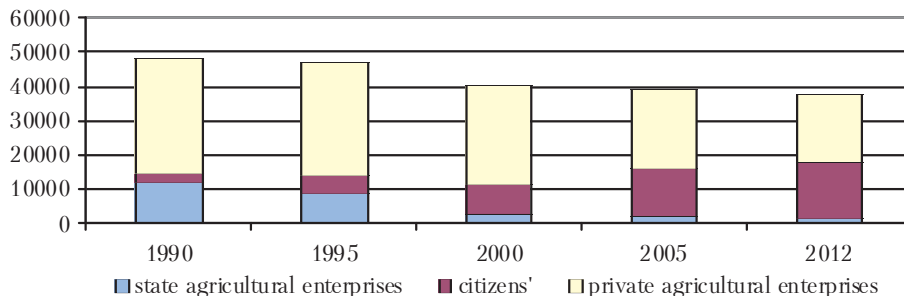
Figure 1. **Production supply and demand for farmland in Ukraine for 1990–2011, ths. ha**

On the example of microeconomic modeling of total production, average and marginal product of variable factor "land resources" we performed the analysis of gross crop production in comparative prices in 2010 and defined the relation between marginal and average revenue. Average revenue (AR) is calculated as the ratio of total revenue (TR) to product quantity (Q). Marginal revenue is the ratio of total revenue growth ( $\Delta TR$ ) to product quantity growth ( $\Delta Q$ ). The marginal product of factor "land" has reached its highest level with an increase of the gross crop production from 26044 to 26952 mln. UAH (at comparative prices of 2010). In relation to the average product there is a stable trend and the mentioned index ranges from 3.41 to 5.8 ths. This means that there is 4.5 ths of gross output per 1 ha of farmland on average. As the line MR is above the AR, the marginal productivity of land resources is not observed.

The calculated model allows predicting the potential output of crop production under the following conditions: 1) agricultural land is at a constant level, which in 2011 amounted to 36483.3 thousand ha; 2) technologies remain without fundamental changes, characterize the short-term period and are determined by the average level for 2000–2011, which is 4.69 ths UAH per ha; 3) different levels of plowed farmland are predicted; 4) tax system and measures of state regulation remain constant; 5) global market conditions of plant growing do not do impact the national market of Ukraine; 6) climate conditions are within acceptable limits of the average tempera-

ture and precipitation. Thus, the derived model can be used as a tool of macroeconomic planning and taken into account when predicting the gross crop production.

Agrarian economy transformation to market conditions is characterized by changes in the structure of sown areas due to structural changes in the forms of land ownership. The total land area of the state farms in 1990 was 11774.0 ths ha and gradually reduced in the process of denationalization and privatization to 2179.0 ths ha in 2000, 1444.9 ths ha in 2005 and 1189.8 ths ha in 2012 (Figure 2). Thus, the restructuring of land relations in Ukraine in the period of 1990–2012 contributed to the establishment of private and other non-state forms of ownership.



Source: Developed by Statistical Yearbooks of Agriculture in Ukraine (1990–2011).

**Figure 2. Total land area of agricultural enterprises and citizens in Ukraine, 1990–2012, ths ha**

The well-known Ukrainian agrarian economists O.V. Shkilov et al. (2009), A.M. Tretiak (2010), M. Fedorov (2009), V.P. Galushko et al. (2012) and others are for the necessity of state regulation of land relations. The land market should be based on the transfer of state lease for a fixed fee and sale with very strict conditions for efficient use and conservation of its fertility (O.V. Shkilov et al., 2009).

Organic agriculture is a current trend which is based on the following principles. The principle of health, which means that healthy soils produce healthy crops and foster the health of animals and people. It maintains physical, mental, social and ecological well-being. The principle of ecology indicates that production is to be based on ecological processes and recycling. The principle of fairness is built on relations that join the environment protection and fulfilling people life needs. The last principle is the care about the health and well-being of current and future generations and the environment in such processes as management, development and technology choices in organic agriculture (IFOAM, 2012).

Organic agriculture is a production system that includes the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions. There has been an FAO-accredited international organization since 1997. The main goal is to control quality of foods, so The Organic Guarantee System (OGS) unites the organic world through a common system of standards, verification and market identity.

#### **Conclusions of this research and prospectives for further research in this direction.**

This research has established the main features of agrarian land market in Ukraine. Farmland supply in 2011 was 36483.3 ths ha, real productive demand was 27670 ths

ha. Unequilibrium means low demand on the land market and non-productive use of land resources. Market situation defines price level of land rent. The main subjects are private enterprises and householders. There is the objective necessity for state regulation. Future land relations in agrarian economy have several directions, the fairest is having land in public property with strict state control.

There are important ways of improvement of land resources: the introduction of organic farming, restoring science-based crop rotation with green manures, expansion of areas under perennial herbs and bare fallow, making sufficient quantities of organic fertilizers, clarifying the rules for fertilization according to the analysis of soil quality, expansion of irrigated areas and drained lands in accordance with natural and economic areas, introduction of biodynamic farming, binding and effective state control over the management of environmentally important land.

As for economic and organization factors of lands market developing it is necessary to use specialization of production, cooperation between different producers through collective forms of property, restoring of agricultural integration, diversification types of activity in agricultural production based on a combination of sectors and industries. Agrarian entrepreneurship gives additional employment, sustainable development of rural areas, additional value-added in agricultural branch of economy, income and welfare increase for the Ukrainians.

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