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THE DEVELOPMENT OF THE PROCESS OF CONVERGENCE IN AGRICULTURAL LAND UTILIZATION

Land policy in Ukraine is one of the most important aspect in the context of the social and economic policy development, food security of the state, a multifunctional development of rural areas, where the land as a strategic resource, plays a crucial role. Under such circumstances it is necessary to choose the optimal strategy, aimed forming of competitive land utilization, that serves as the point of agriculture growth and is its main investment resource.

The main objective of research is to substantiate the competitive strategies of land utilization development as a condition of the growth of its socio-economic and environmental efficiency, enhance innovation and investment processes. The purpose of the study is a generalization and deepening of theoretical and methodological principles and development of recommendations regarding the formation of the competitive strategies of land utilization development.

The essence of the phenomenon of convergence of agricultural land utilization is grounded. Antagonistic pairs in agricultural land use are analyzed. It is proved that the strategic diagnosis of the elements of land use system lets them to be adapted to outer environment. The necessity of interaction between bodies of state authority and bodies of local authorities is explained.

To reach effectiveness in land utilization objective information on the basis of reliable planning-cartographical materials should be analyzed.

The information model of land utilization is to consider faithful data concerning determination of priority directions of activity provided rational land resources utilization and land resources conservation.

The methodological bases of research are fundamental statements of modern economic theory, up-to-date scientific achievements in the sphere of the agricultural economics on the whole and land utilization in particular. To achieve this purpose such methods as: morphological analysis, abstract, scientific summary were used.

Practical value of this research is that gained results and recommendations can be used by land arrangement and land evaluation organizations, agencies

of executive power and institutions of local governing and other physical and legal entities.

Keywords: *convergence, agricultural land use, institutional environment, innovative model of development, formal and informal institutions, modernization of agricultural production.*

Lazareva E.V. Rozwój procesu konwergencji w użytkowanie gruntów rolnych

Artykuł ukazuje istotę zjawiska konwergencji użytkowania gruntów rolnych. Analizowano antagonistyczne pary w użytkowania gruntów rolnych. Jest udowodnione, że strategiczna diagnoza elementów systemu użytkowania gruntów umożliwi ich dostosowanie się do środowiska zewnętrznego. Określono potrzebę współpracy między organami państwowymi i samorządami.

Słowa kluczowe: *konwergencja, użytkowania gruntów rolnych, środowisko instytucjonalne, innowacyjny model rozwoju, instytucje formalne i nieformalne.*

Лазарєва О.В. Розвиток процесу конвергенції у сільськогосподарському землекористуванні

В статті обґрунтовано сутність феномену конвергенції сільськогосподарського землекористування. Проаналізовані антагоністичні пари в сільськогосподарському землекористуванні. Доведено, що стратегічна діагностика елементів системи землекористування дозволить їх адаптувати до зовнішнього середовища. Висвітлено необхідність взаємодії органів державної влади та місцевого самоврядування.

Ключові слова: *конвергенція, сільськогосподарське землекористування, інституціональне середовище, інноваційна модель розвитку, формальні та неформальні інститути, модернізація сільськогосподарського виробництва.*

Лазарева Е.В. Развитие процесса конвергенции в сельскохозяйственном землепользовании

В статье раскрыта сущность феномена конвергенции сельскохозяйственного землепользования. Проанализированы антагонистические пары в сельскохозяйственном землепользовании. Обосновано, что стратегическая диагностика элементов системы землепользования позволит их адаптировать к внешней среде. Охарактеризована необходимость взаимодействия органов государственной власти и местного самоуправлений.

Ключевые слова: *конвергенция, сельскохозяйственное землепользование, институциональная среда, инновационная модель развития, формальные и неформальные институты, модернизация сельскохозяйственного производства.*

Introduction

In the national practice of agricultural land utilization management the terms "system", "system approach" which is defined as a set of interrelated elements of the phenomenon or process, combined into a single unit, that are capable to perform a specified function are often applied. The value of the system approach is that it helps to achieve the ultimate effect of land utilization excluding the situation of negative influences on it.

The first step in the direction of management on the basis of a system approach is the necessity to obtain reliable information about all the possible direct and indirect, close and distant in time consequences of management decisions connected with land use concerning the state of land use efficiency, soil fertility, environmental defense etc.

Analysis of recent research

In addition, the effectiveness of a systematic approach is determined with rather characteristic of relations between the elements of the system than the degree of their integration. Pursuant to this, Mamikonov A.G. [1] notes that "the element that has not at least one connection with others is not a part of the system". The point is that the effect of a systematic approach arises only on the basis of a principle of combination of two or more elements of the same nature.

Statement of research objectives

However if traditional methods of decision-making can be applied to manage uncomplicated objects, because the consequences can be local, the management of agricultural land use, which differs in great complexity as it is closely linked with the biosphere with incomplete and inaccurate consideration of the factors of production and the environment, in the first place, land resources, can lead to unprecedented social, economic and ecological crisis. First signs of it are revealed already today, when with the crop capacity is twice lower than in developed countries of Europe and the world there is a clear downward trend in the natural fertility of the soil. Major part of the soil is under the influence of pollution of toxic for soil substances: lead, mercury, uranium, potassium, beryllium, chromium, nickel and cobalt. In addition, soil is contaminated with such ballast substances of fertilizers as fluorine, arsenic, cadmium, zinc and others.

Results

In this case the point is about such a phenomenon as convergence that will bring nearer and combine elements of the systems of different nature, subordinating them to execute a general purpose designated by agent of management. The examples of this are the following antagonistic couples which are controversially accepted by the scientific community, practices of agricultural industry etc.:

- the use and protection of land;
- governmental regulation and market;
- the quantity and quality of natural resources, including land ones, manufactured agricultural products;
- the right of private property of land and the right to use;
- accretion of monopolization (agricultural holding companies) in agricultural land use and development of small and medium-sized enterprises (farm enterprises, LLC, agricultural cooperatives, individual households etc.);
- public and private interests;
- domestic and foreign markets;
- formal and informal institutions concerning land use and land protection;
- integration into the European Union and the international community etc.

The researches of above-mentioned pairs help to answer the question what the methodology of rational agricultural land utilization that would combine incongruous elements should be. Author scientific research led to the conclusion, the essence of which is as follows: since land utilization is an open system that exchanges energy and information with the environment (macroenvironment, mediated environment, internal environment), it has the ability to logical ordering, based on knowledge of internal characteristics of systems, laws of their development that direct the research to disclosure of complex relationships and possible consequences of management decisions.

Depending on the nature of the system elements of different origins their strategic diagnostics will let adapt elements of land use to the external environment.

This approach ensures a coordinated interaction concerning normalization of the system of crop rotation with respect to qualitative parameters of the soil, which will provide planned return on cost of cultivation of major crops, protection of the soil from erosion, quality of products and others, which will correspond to the principle of the priority of ecology over economy.

Consideration of the factors of water-air and temperature conditions, solar radiation, the territory and its relief, vegetation, slope direction is an essential organizational condition to establish the structure of land, system of development of agricultural sectors, land regulation. There is no doubt that the factor of the territory, which is the main condition that determines not only the degree of industrialization of agricultural production, organization and productivity of labour, but also can lead to danger of emergence of degradational processes of technological and natural origins in land utilization etc.

However, despite the importance of implementing of the convergent method of utilization, it is still not a complete theory with strict rules that would be

based on the single fundamental principles, apparatus and methodology.

Considering the above-mentioned information, the system of agricultural land use management should be directed to:

- significant philosophical and scientific support of efficient agricultural land use;

- target complex programs of social, economic and ecological development of the regions and local councils;

- economic mechanisms that ensure interest in stabilizing processes of management of nature, including land utilization;

- the ability to predict the consequences of management decisions and on this basis to take appropriate corrective actions based on the emerged situation;

- strategic planning, which ensures consensus of highly efficient utilization of agricultural lands with simultaneous preservation and reproduction of soil fertility, prevention of soil degradation (erosion, deflation, pollution etc.), attaining of optimum land structure, that ensure preservation of biodiversity and landscapes;

- strengthening of the responsibility of state and local authorities and businesses on the land for the violation of the law concerning land utilization regime;

- organizational mechanisms that include a set of measures for efficient land utilization: land reclamation organization of the territory, optimization of the structure of land and sowing areas; obtaining of the frequency of allocation of crops in the same field; relaxation of the humus mineralization processes; minimum tillage (zero tillage); improvement of irrigation systems designs and technologies of irrigation; development and application of the complex of agrotechnical measures that ensure increase of the productivity of land utilization; creation of information and advisory service on management of soil fertility and irrigation; reasonable correlation between applying organic and mineral fertilizers; the introduction of long-term lease of land (land units) based on land consolidation; usage of permanent monitoring of the state of land and the availability of funding etc.

The above-mentioned information confirms that the convergence of the two antipodes “use-protection” puts trust in the cardinal solution of environmental protection, social and economic problems. In addition one should focus on control and inspection functions of state and local authorities aimed at the process of implementing the strategy of efficient agricultural land utilization.

One remarks that the overall efficiency of the system of management of agricultural land utilization is largely dependent on the governmental controlling influence on the economy of the land utilization. The more complete convergent processes will be in the context of market and state regulation, i.e. a combina-

tion of market processes and state regulation, the more effective the level of economy will be as a whole. In this regard, Soroka M.P. rightly noted that "it is not possible to influence economic unite administratively, one should influence their interests" [2, p. 204].

In addition convergence should be considered as the interaction of business and state regulation as a real opportunity of the transition to effective management. In a strategic context high recognition of the role of the state is not an end in itself of the influence on agents of management, but "in case of highly organized market system the work of state authorities should be improved" [3, p. 8], for the effective use of land resources, satisfaction of social needs etc.

Recently, more and more society shows reliance for development of such institution as self-government, the essence of which is that every village, town or other administrative and territorial entity will choose their power, give their tasks for implementation, handle the progress of economic, social and ecological processes, and generally have a positive effect on the economy of Ukraine.

To improve the efficiency of this institution, it will be vested with broad power, involving public organizations and associations, including regional associations of enterprises, public associations of consumers, chambers of commerce, associations of commercial banks etc., to participate in management and regulation.

The tendency of strengthening the interconnection between market mechanisms and economic role of the state is not only particularly necessary, but fits the current stage of development of agricultural land utilization adequately, that is an effective base of increasing the efficiency of land use, protection of economic competition, increasing the labour productivity .

In a strategic context convergence of market economy and state regulation is a theoretical and methodological basis of social and economic progress for achievement of specific goals by any economic agent on earth.

The process of convergence should be focused on finding ways that ensure harmonization of land use and the state of natural environment. The implementation of this strategic plan can be realized, first of all, due to optimization of the structure of land. Thus, it is proved with researches of L.Y. Nowakowski, M.A. Oleschenko [4, p. 127], that 70% of the arable land of the total area is sufficient to ensure scientifically sound rates of the present population consumption with a glance of export suggestions and capabilities of global food market. The rest of the arable land should be utilized in the alkaline system that will preserve and reproduce the fertility of the soil, stabilize agricultural landscapes, preserve biodiversity, which is closely correlated to factors such as stability and efficiency. However, there are other aspects of the problems of researching the efficiency of agricultural land utilization. Only on soils with deficit-free humus balance the

condition of agricultural production of food, which contains all the nutrition elements - minerals, vitamins, amino acids and fatty amino acids, which determine the health of people, animals and birds that can radically change the destiny of man - can be reached. It should be noted that scientists researching soil, see only part of it - as part of fertility. However this is not quite right, because the soil is the basis of life of biodiversity. The soil is a complex system.

An important practical step towards harmonization of quantitative and qualitative parameters of land utilization, application of an innovative model of development is a practical experience in the field of study of soil, agriculture, medicine, and land management, oriented on preservation of the wealth of land fund, preservation and reproduction of natural fertility of the soil. Concerning the latter, it "becomes an essential tool for managing interrelations between society and nature, which fully affects the components of agricultural landscapes, determines the form of land use and correlation of land, is the frame of the future agricultural landscapes, i.e. placing of road networks, irrigation network elements, hydraulic facilities, forest belts etc. The uniqueness of the land-utilization system is manifested in the fact that it reveals the content of utilization of each plot of land.

I. e. the point is that the area of agricultural land, including arable land, is not a significant factor of influence on the economic development of land utilization. Expansion of arable land does not give rise to placing all the listed crops that are cultivated in the region or a particular area on them.

Restrictions of the free choice of placement of various crops on the appropriate territory are to a large extent determined not only with a specialization of economy, but also a form of relief, agronomic characteristics of soil, water and air regime of soil etc. Thus, with deep crop pattern adaptation to soil and landscape factors one can reach the conditions:

- properly utilization of the potential of the soil;
- prevention of water erosion and soil deflation processes;
- ensuring of high-quality agricultural products.

With regard to the principle of convergence of agrobiological characteristics of crops and the environment of their placement, ensuring the viability of market competitive environment, one can judge it from payback index concerning expenses of the cultivation of major crops in certain groups of soils. This seems to be especially important because land evaluation score determines the cost recovery for growing crops. If cost recovery for growing crops in Ukrainian conditions on certain soils is below 1.35, than in practical terms this is a direct evidence of unprofitability of growing crops. If Payback's value is more than 1.35 it indicates a good level of efficiency of crops on certain land.

In this case, the need for: detailed diagnosis of the qualitative characteristics of the soil, identification and assessment of the influence on crop capacity, and most importantly the effectiveness of their production, that is a key condition in a market economy - is increasing. Properly "area of arable land - its quality" profile is required for the efficient management of agricultural land utilization.

This information timely received by the agent of management is an important methodological basis in the implementation of management activity concerning reaching the objectives of social and economic and social development of agricultural land utilization. It is mandatory for any specific relations of vital activity of society.

Unfortunately, one considers it is necessary to mention the completely undesirable fact that the information about accounting the quality of land ends in 1996, due to lack of funds for this type of work.

For these reasons, the basis of soil quality is outdated data of large-scale soil research done in 1957-1961, adjusted to data correction till 1992. A substantive aspect of these materials does not meet the needs of the time nowadays. Changes within all the previous period are not reflected in them, that make difficulties for implementation of the strategy of state land policy by management service.

Organizing the above-mentioned information, the whole range of social, economic and ecological problems in the agricultural land utilization, which should be taken into account in the process of management decision-making, the following priority actions should be implemented:

- reduction of the amount of land, which are subject to cultivation;
- ensuring non-deficit balance of humus in the soil with its subsequent accumulation;
- organizing the State Service of soil conservation at the National Security Council of Ukraine and information and advisory services on the management of soil fertility in the regions and in the field;
- continuation of inspection of the qualitative state of the soil;
- development of the projects of land-utilization system of all the economic agents on earth based on contour and reclamation organization of territory;
- implementation of the complex of measures on conservation of highly degradationed and unproductive agricultural land;
- reinterpretation of the importance of production of organic agricultural products, which would ensure high standards of quality of life;
- ensuring the organization of creating irrigated cultured pastures in the steppe zone of Ukraine;
- designing of the plans of ecological corridors, regenerative areas and buf-

fer zones, which will be allocated on farmland in the structure of ecological network as the main condition of the organization of conservation of biological and landscape diversity.

One notes that these actions can be implemented with the active support of the state, its and investment and structural policy. This objectivity cannot be ignored.

In Ukraine, the land issue can be resolved effectively provided the solution of other important issues (economic, logistical and social), because land relations exist in the system of agrarian relations in interaction and intersupport. This is especially important now, when the social and economic state in the country worsened and there is a shortage of initial capital for organization of business on the ground.

The destruction of the previous system of logistical support in the absence of market infrastructure complicated difficulties of a village even more, resulting in a defamation of land reform, establishment of new forms of economy. I.e. the point is that it is impossible to radically solve the land issue without creating standard conditions for the development of the agricultural sector as a whole.

These statements are the methodological basis of relationships of cause and effect between future land utilization and objective reasons that accompany the entire course of land reforms.

Under present-day conditions formation of a flexible system of land ownership and land utilization in the country is not possible without the development of land market and land lease because creating a system of land utilization based on a combination of small and large-scale production needs entering free sale of land and its rent into force. However this activity can be successful provided implementation of measures, directed at regulating the land shares market, ensuring the proper utilization of agricultural land.

The aspect of principle is that while solving the issue of land ownership it is important to find a "golden mean" in which the rights of landowners are not broken – on the one hand and the interests of other agents of society concerning preservation of the proper environment for them are followed – on the other.

Thus, one can confidently talk about convergence, which is an attribute of innovative development of land utilization, combining the action of two fundamentally different land user groups - land owners and land users with characteristic norms and rules of conduct in society. Convergence is considered as one of the most pressing issue, which can solve many problems existing in land relations.

Nowadays, during the "experiment" that began with the support of central state authorities and local authorities in Ukraine more than 20 agricultural hold-

ing companies, based on long-term leases of land shares of the size from 100 to 300 or more thousand hectares were established. In addition, it should be emphasized that in Ukraine as of the end of 2013 175 farm enterprises which used 3468.9 thousand hectares of farmland were established [5], i.e. at the average each household owned 19 830 hectares of land.

In such scenarios the expression, that ensuring success in life and well-being of the family depends primarily on the person, is brought to nothing. However real life practice is different - the success and well-being in the countryside is defined by one person of the agricultural holding company. The essence of such stating of the issue is that agricultural holding companies, equipped with modern facilities without involving rural population, accomplish a complete cycle of agricultural working: from sowing to care and harvesting, using only the work of several operators of technical means. I.e. it becomes apparent that the large-scale land utilization has more economic sense than social one.

Usually, agriculture is priority of development in agricultural holding companies, because livestock industry, especially breeding cattle, is characterized by a prolonged payback period.

At the same time, the development of farms is based on rational combination of elements of two branches - livestock raising and crop production. Tracing the indexes of economic activity of agricultural holding companies, one can conclude that the holding companies do not collect more grain than the farms.

However, convergence of already usual institutions (formal and informal) plays even greater role. Realizing the transformation processes in land utilization based on private ownership of land and property, the country has not achieved great results, qualitative indicators in agricultural production has not been reached, indexes of standards of quality of life has not improved. Ukraine, with its favorable geographical position, fertile land, being “one of the smartest nations in the world” [6, p. 257], unfortunately does not take the top spot in the global economy (excluding exports of raw materials), does not ensure an adequate level of welfare and social protection of citizens in terms of a democratic development.

All the attempts to make an economic breakthrough were found utopian and are illustrated, first of all, by immaturity of the processes of institutionalization of land and industrial relations, “the absence of radical changes in the system of political, legal, economic and social relations adjusted for stereotypes of human behavior according to market conditions, taking into account the traditions, culture, mentality, ethical standards and values etc.” [7, p. 5-6], i.e., the point is about creating an institutional mechanism for achieving terms of

interconnection between formal and informal institutions that methodologically would be united with a common goal concerning reaching the goal.

This approach lets within the existing institutional environment consider the development of land utilization as a decisive factor of economic growth.

It should be noted that an important direction of convergent designing of innovative model of agricultural land utilization is the integration of Ukraine into the European Union and the international community, focused on the coordination of "mutual efforts and realization of concerted actions in different spheres of life... to accelerate the processes of equalization of quality of life, and to favor achieving free movement of goods, capital and people across the border" [8, p. 269].

Conclusions

This is favoured with the Association Agreement between Ukraine and the European Union, adopted on September 16, 2014 № 1678-VII, which ensures a unique opportunity to live in the legal framework in a free democratic state. Its ratification lets commence the all-round formation of a country based on European standards and values. Association is a challenge to modernization, creating of free trade zone between Ukraine and the European Union, which will open both markets, where most of the duties will be repealed or minimized.

It is important to mention that 4.5 million euros are necessary for the modernization of agricultural production. Assessing wide opportunities of the association for both markets one pays attention that the association is a tool of social and economic development, which lets with creating of economic, social and humanitarian, environmental and other interrelations ... solve common interests of stakeholders.

Thus, solution of the issues of convergence, directed at the process of management and regulation of economic activity on earth is a factor of the formation of high-technology economy of agricultural land utilization, stimulation of the innovative development model and information support.

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