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### **ORGANIC MARKET EXPANSION STRATEGY UKRAINE**

Statement of the problem. Since the end of the last century, rapidly increased interest community to the development of the organic production. The absence in our country an appropriate legal framework and national certification of organic production is a barrier to the development of the domestic market for organic products. The development of state consumer policy in Ukraine can be a significant mechanism for increasing public confidence in the government. Only far-sighted government policies in the agricultural sector and in the development of consumer market that can provide lift organic production.

Analysis of recent research. The issue of organic farming is now paid a lot of attention in domestic and foreign literature. Among Ukrainian scholars explore this issue in his writings Antonets A. [1] S. Antonets [2] T. Zaychuk [3] L. Sokol [6] A. Shubravskya [7] M. Shykula [8] , W. Chlapak [9] and others.

The study aims to study strategic actions to expand organic production in the concept of sustainable development.

The main material. Each year, an increase in demand for organic products has attracted market expansion and increase in the number of farms. So in 2001, Ukraine had certified 31 companies when in 2011 their number was 155. For ten years the number of farms increased by 21% (Figure 1).

Most Ukrainian organic farms located in Odessa, Kherson, Poltava, Vinnitsa, Transcarpathian, Lviv, Ternopil, Khmelnytsky. Ukrainian certified organic farming is a different size from a few acres, as in most European countries to tens of hectares of arable land and more.

However, in Ukraine there are many farmers who are willing to sell organic produce but are unable to position them in the market as organic. Some certify and sell their products abroad, some - in the domestic market, but as usual.

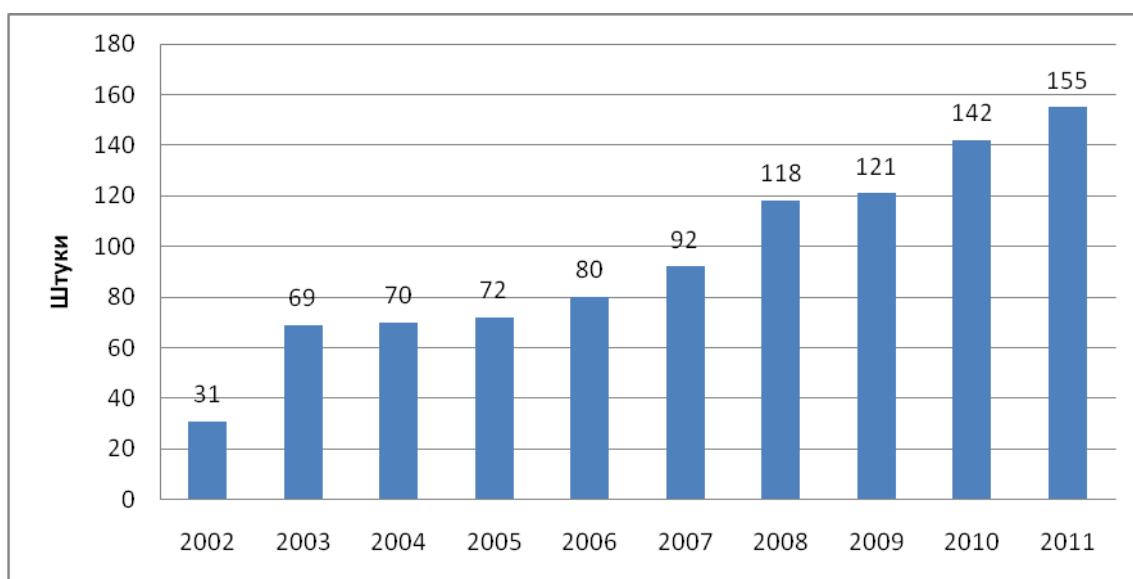


Figure. 1. Number of certified organic farms in Ukraine

We consider it appropriate to develop on the basis of international experience and taking into account the functioning of domestic agriculture series of regulations that define the details and rules of organic production: crops and livestock. In crop production, for example, is to legislate in the rotation alternating legumes, bacteria that accumulate nitrogen, and other crops that consume it for mineral nutrition, exercise breeding plants that are well adapted to the conditions of a particular region and maintain a balance of pests; systematic soil application of manure required and, if necessary, some rocks to improve soil fertility [4].

An important aspect in the development and formation of organic agriculture in Ukraine should be part of farmers in developing training programs and changes to regulations that regulate organic production. This practice is widely used in the European Union, which is natural, since in farming practice is a combination of academic achievement. Therefore they are able to make constructive proposals for adjusting measures of state support and regulate this area.

Necessary to ensure sustainable development of the agricultural sector of Ukraine through the development and support of organic production as one of the priorities of the state agricultural policy (Fig. 2).

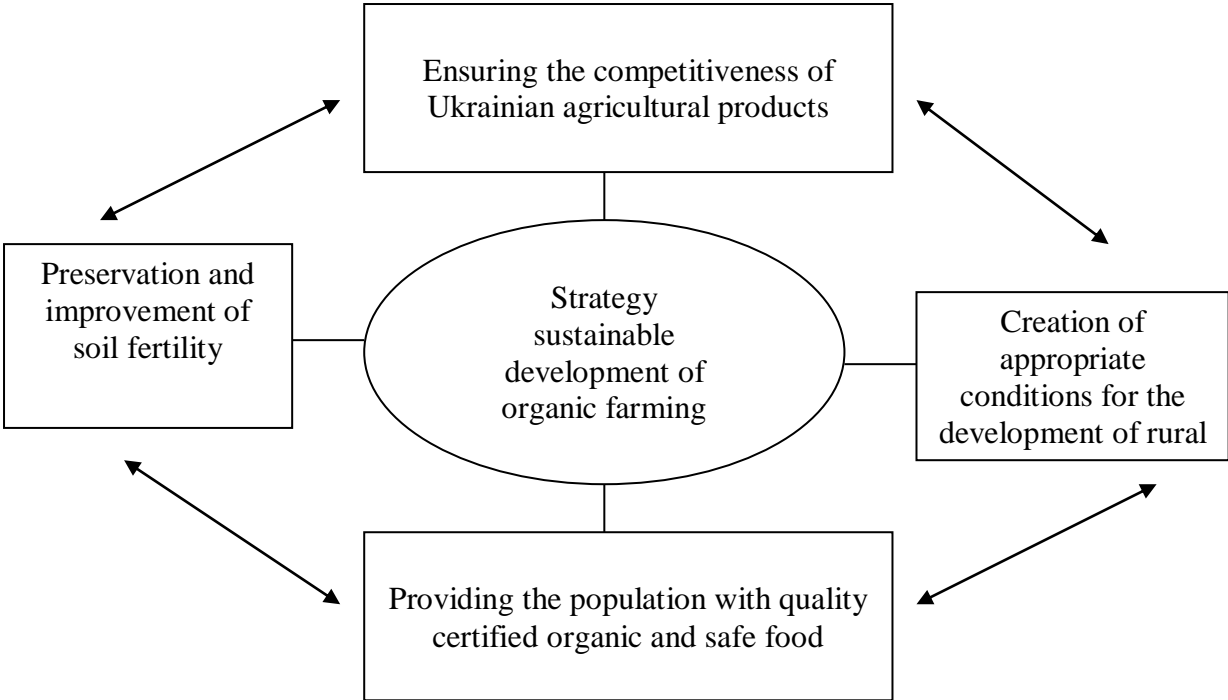


Fig.2. Proposals for sustainable development of the agricultural sector of Ukraine

Important for Ukraine to become international experience of the institutions extension whose main purpose is to facilitate the rapid and painless transition manufacturers on the principles of organic agricultural production through the provision of information to farmers, organization and conduct of education, training and so on. Indicative of this is the experience of consulting and advisory organizations of Sweden, who develop and conduct free training programs. Thus farmers who are trained, receive monetary compensation.

It should stay on the experience of the functioning of control over the production of environmentally friendly products in Norway, which also provides consulting services. Thus, the Norwegian farmer who is engaged in breeding once a year, submit to the service plan fertilizer and every five years the ground sample for analysis. If necessary control services specialists develop animal feed rations from forages that are available to the farmer.

In the Czech organizations that support ecological farming, in addition to advice and assistance to farmers, many focused on familiarizing children with environment, thus forming an environmental consciousness in the new generations. [5]

An important step in the spread of organic farming should be the government financial and advisory support. Financial support from the state we see in helping peasants and farmers during their transition to organic production. First, it is concessional medium-term (5 years) loans for the purchase of seed and young cattle that meet the requirements established for organic products, free of state examination of soil on these farms are organic content in the minerals and their chemical and radiological cleanliness, partial state reimbursement of lease payments for the lease of agricultural machinery in the first 3 years of operation of these farms and so on. To ensure that public funds were used for the intended purpose and really contributed to the development and distribution of organic products, farms must be registered as entrepreneurs, a business plan for economic development, and to engage in the manufacture of these products in compliance with all requirements of growing least 10 years (in case of violation of the legislated requirement to provide penalties).

One of the key roles in the production of organic products play an advisory and consulting organizations. The purpose their interaction with agricultural producers is to provide highly professional assistance in choosing the specialization of the economy, providing advice on marketing channels and promotion of markets for products, advice and information about organizations that carry out inspection of soil and manufactured products for the presence in them harmful to human health matters, providing advice on protecting and improving the quality of soil and so on. At the core of advisory and consultancy organizations must be based on the principle of individual approach to each sector, which is engaged in organic production, given its climatic conditions, geographic location, proximity of markets, qualified workers these farms and so on.

Development of the manufacture of organic products is impossible without the introduction of the achievements of Soviet science and consideration of international experience in this field. It is first on the protection of plants against pests, the use of biological agents that do not contain nitrates and pesticides differentiated approach to the full range of resources (natural, technological and human), the most suitable for a given region; theoretical basis for the formation of local agricultural systems based on species and genetic diversification plants within a region that operate high-performance and environmental sustainability have an external adverse factors like.

An important step towards promoting production of organic products may be state financial aid for examination and certification of peasant plots and farms in transition to organic farming principles, as well as for the certification of the first grown on the basis of output as the current financial situation of most households will not be able to pay their own expertise and certification institutions. [9]

Conclusions. Thus, for effective development of organic agriculture in Ukraine need to lay its institutional dimension, namely to develop and adopt regulations that contain provisions no less stringent than those provided by EU Directives, provide state support for agricultural producers in transition to organic production ( at least for a transition period); promote institutions that advise and monitor the activities of organic production at all stages of the production process, to create a system of state certification to teach agricultural producers the basics of organic agriculture through the introduction of advanced international experience and scientific achievements.

Prospects for further research. Therefore further development in this area need to question that facilitate the expansion of the organic market in Ukraine, release it with a new, strategic level.

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#### **В.І. Артиш Стратегія розширення органічного ринку України**

Виявлено переваги системи органічного виробництва та запропоновано пріоритетні напрями розвитку. Розглянуто передумови його формування та ефективного функціонування в Україні в умовах ринкової економіки.

Ключові слова: органічна продукція, ринок органічної продукції, органічні господарства, законодавча база, стратегія.

#### **В.И. Артыш Стратегия расширения органичного рынка Украины**

Виявлено преимущество системы органического производства и предлагаются приоритетные направления развития. Рассмотрены предпосылки его формирования та эффективного функционирования в Украине в условиях рыночной экономики.

Ключевые слова: органическая продукция, рынок органической продукции, органические предприятия, законодательная база, стратегия.

#### **V. Artych Strategy expansion of the market of organic products in Ukraine**

Discovered the benefits of organic production and suggests priority areas of development. Consider of its formation and effective functioning in Ukraine a market economy.

Keywords: organic products, the market for organic produce, organic farming, legislation, strategy.

## Areas of improvement of state regulation of fish and fish products

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Reviewed the current state of state regulation of fish and fish products and suggested directions for its improvement.

**Market fish, fish products, government regulation, legislation, directions for improvement, aquatic living resources.**

State regulation of the market environment is an important part of the efficient operation of any type of market. Ukraine has used two forms of state regulation of the market: intervention and export-import. In some cases, the state directly finances of agricultural products according to the target application regulation of the agricultural sector.

Established regulatory framework of state interference in this or that field is the key to effective action. Legislation should be favorable for the operation of enterprises, while protecting the interests of consumers. Therefore, it is necessary to determine the effectiveness of state-led in the fishing industry and identifying areas of improvement.

**Analysis of recent research and publications.** The problem of effective state regulation of food products dedicated work of many well-known scientists: U.Luzan, S. Kvasha, P. Sabluk, A. Oaks A. Mogilny and others. However, the issue of state regulation of fish and fish products is not sufficiently illuminated.

**The aim** - to evaluate the effectiveness of state regulation of fish form the main directions of improving this process.

**The main material.** State regulation of agricultural sector - a process influence its development by supplementing incentive market mechanism for obtaining sustainable results entities lucrative business and create a favorable economic environment to improve their competitive position. [1]

Fishing industry is regulated by the Code, Laws of Ukraine, Decrees of the President of Ukraine, the Verkhovna Rada of Ukraine and the Cabinet of Ministers of Ukraine, Ministry of Agrarian Policy and Food of Ukraine, the State Agency of Fisheries of Ukraine.

In regulating the market of food products and fish products is important to the development of state standards and standards of product quality and raw materials, as well as monitoring their compliance on the part of producers. In this respect, the Law of Ukraine "On the safety and quality of food" (23 December 1997) [4], which governs the relationship between the executive producers, traders and consumers of food and determine the legal order to guarantee safety and food quality produced, are distributed, imported, exported.

In Ukraine, the quality of fish sold must meet state standards GOST 7636-85. In carrying out operations in the foreign market quality fish or processed products established by the norms and standards of the International Organization for Standardization ISO. In accordance with the requirements in Ukraine since 1996, became effective international standards ISO 9000, providing methods and quality control measures and January 1998 - ISO 14000 standards, which specify the requirements of environmental safety products. Within the above-mentioned standards and under the supervision of the European Organization for Quality Control fish (ESTO) is the import and export of fish products in Ukraine.

The main legal documents regulating the relations in the market of fish and fishery products, was adopted February 6, 2003.

The Law of Ukraine "On fish, other aquatic living resources and food products from them". [4] Recent changes to the law were made July 16, 2012 This law defines the legal and organizational framework for quality and safety of fish and other aquatic resources, made are food for life and health and to prevent negative environmental impact when catching, processing, packing and moving through customs border of Ukraine.

In addition, 13 August 1999 adopted the Law "On Approval of the Procedure and conditions for use of fish and other aquatic resources of the

exclusive (maritime) economic zone of Ukraine", provides application form for obtaining permission to conduct fishing in the exclusive (maritime) economic zone of Ukraine and permit fisheries management of aquatic resources in the exclusive (maritime) economic zone of Ukraine.

To make systemic changes in the infrastructure market fish and fish products, which should create the conditions for its intensive development and improved governance in this sector fishing industry, the Cabinet of Ministers of Ukraine by its resolution of 25 December 2004, approved the "Program of development of market infrastructure Fish water resources and food products that are produced for 2005-2010 "[4].

Analysis of fisheries activities in recent years suggests that the major activities declared in the program have not been implemented in full due to poor investment and credit policy. In the implementation of the program was planned to attract 1 billion credit and investment funds. "National program for the construction of vessels fishing fleet Ukraine for 2002-2010", which was adopted on 17 January 2002, was not funded.

In 2004 the Law of Ukraine "On the National Program of Fisheries of Ukraine for the period till 2010". Due to lack of funding from the state budget and rather small investment in this sector program performed only partially - within finance. Cabinet of Ukraine 23 November 2011 adopted a "State Target Economic Program of Fisheries for 2012-2016" [4]. Unlike previous draft of this paper details spelled out planned activities and the sources attract the necessary financial resources for their implementation.

Verkhovna Rada of Ukraine July 8, 2011 adopted the Law "On fisheries and industrial fisheries" [4]. It defines the basic principles of business and state regulation in the field of fisheries, conservation and management of aquatic biological resources, the relationship between government, local government and business entities engaged in fisheries activities in inland water bodies of Ukraine, inland marine waters and territorial sea, continental shelf and exclusive (maritime) economic zone of Ukraine and the open sea. This document provides the protection

of domestic producers, improving conditions for existing capacities of newly established fish processing enterprises and other raw materials, organizing and creating new jobs and increasing the production of legal fish production to ensure food security.

On the basis of the Law of Ukraine "On fisheries, commercial fisheries and conservation of aquatic biological resources" Amendments to the regulations of the industry, including towards the growth of liability for violations of water bioresources. Also enacted the Law "On Amending the Law of Ukraine" On Fauna "[4] to strengthen measures to combat poaching." He added to the list of banned poaching tools, in particular due to ban imports elektrovudok, mononytkovyh nets.

By this time in Ukraine there was no legal act that would comprehensively defines the legal, economic, social and institutional framework of fisheries activities in the field of aquaculture. Verkhovna Rada of Ukraine on 18 September 2012. adopted the Law "On aquaculture".

Since its adoption can be expected to increase aquaculture production, improvement of genetic and species composition of aquaculture facilities, as well as increase the investment attractiveness of the industry, increasing income of the entities of aquaculture in state and local budgets. What is important is the fact that the development of the "Law on aquaculture," introduced a notion of "agricultural complex", which will include land under water, earth and waterworks, by all accrued rents will one fare rent for the fishery complex general.

Protect domestic producers from foreign goods by setting tariffs according to the Law of Ukraine "On Customs Tariff of Ukraine". All fishery products belonging to the group 3 "Fish and crustaceans, molluscs and other aquatic invertebrates", section "Livestock and livestock products." In this group set duty rates from 0 to 10% depending on the type of product.

Important regulatory document that affects the agricultural activities are the Law of Ukraine "On State Support of Agriculture of Ukraine" dated 24 June 2004. In our view, this lack of attention paid to the law of the support of the fishing industry in Ukraine. Therefore consider it necessary in the provision of subsidies to

producers of animal products included in the facilities budget subsidies fishery products. Payments should be made for the average naukovoobhruntovanoi fish productivity of water in a given region due to the special VAT regime of fish processing enterprises. According exceeded the average fishery enterprises should receive a grant of 10% of cost of 1 ton caught products. These funds will be used to improve logistics enterprises, including the purchase of refrigeration for storage of finished products, mechanization and other gear.

In summary, it should be stressed that Ukraine established the legislative framework that regulates economic activity in agriculture and fish production in particular. However, it needs to be improved in order to reconcile the requirements of the global market. Main directions of improving national legislation should include: the introduction of international standards of quality fish production and its raw materials, improve public support producers according to the requirements of "green box", strengthening stymulivnoyi features of the tax system, harmonization with international regulatory requirements of export-import operations, the introduction of a mechanism of long-term loans producers, competition, creating conditions for attracting investment in the fishing industry, strengthening the requirements for ecological-safety compliance management and production of environmentally friendly products, promoting the creation and maintenance activities on fish farming and fish, reproduction of artificial and natural water bodies as a whole ecosystem, promoting reproduction resource potential and capacity of the fishing industry in terms of fixed assets fishery enterprises, improve customs and tariff regulation based on the WTO, to promote the development of market infrastructure, encourage investment and innovation projects aimed at increasing intensification of the industry.

At the same time the government should take an active part in the creation of market infrastructure that should be reflected in the following areas of public exposure as a regulatory and legal framework for the establishment and functioning of wholesale food products, economic, administrative and organizational impact.

**Conclusions and recommendations for further research.** Thus, state regulation of fisheries should be aimed at supporting the development and competitiveness of the fishing industry, which is necessary to promote the establishment of credit cooperatives and the development of market infrastructure, organization of municipal wholesale agricultural markets, increasing the number of bases Living fish that should provide market participants to not only implement fish and fish products at the best price, but also rapid flow of its customers, reducing the cost of implementation, quality improvement, stabilization of their selling market prices.

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## COMPETITIVENESS OF SUNFLOWER PRODUCTION IN AGRICULTURAL MARKET

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*In this article the mechanism of competitive elements of sunflower production in the agricultural market of Ukraine.*

**Competitiveness, certification, standardization, brand, brand.**

Competitiveness can be seen as the ability of objects (product, company, country) occupy a niche market. It characterizes the degree of compliance with market requirements: proposal (Item) - demand for it, the company - ability to provide competitive advantages, the country - the economic and social model [1].

From the standpoint of marketing competitiveness evaluation should take into account the additional requirements of the consumer in relation to commercial areas such as the reputation of the manufacturer and seller particular, the organization of the service market, efficiency and other purchases. Each market share of each of these criteria may be different, and therefore estimation of competitiveness must perform for each market separately.

Competitiveness products - production capacity to more fully meet the needs of customers, compared to on the market similar products. Its elements are the quality, technical level, consumer characteristics, the price of goods [2].

The European model also includes the production of quality products and increase safety standards and level of technology. The challenge is that consumers receive as safer and higher quality products, and quality and safety depend on the manufacturers. This can be achieved only by changing technology and control of the finished product. Of course, new technologies require investment. But quality products cost more because such investments pay off.

**Analysis of recent research and publications.** Theoretical and practical aspects of the formation and effective functioning of the agricultural sector is the subject of research of local scientists such as V. Ambrosov, VG Andreychuk, VI Boyko, V. Loach, PI Haidutsky, OD Hudzynskyy, O. Ermakov, OV Krysalnyy, SM Kvasha, V. Bath, L. Marmul, PM Makarenko VD Panteleev, PT Sabluk, VI Topikha, IN Topikha, ON Spiers, II June V. Yurchishin, VM Yatsenko and others. But, despite the large amount of research and numerous publications, the functioning of the market of sunflower seeds and its products require more in-depth study.

**The aim** - to justify measures to manage the competitiveness of sunflower production in the agricultural market in Ukraine.

**The main material.** Important components of the mechanisms of quality and competitiveness of sunflower production is certification and standardization. They enable an objective assessment products to provide consumers proof of security to ensure control over compliance with the requirements of environmental cleanliness products and increase its competitiveness. Certification and standardization is one of

the key performance indicators of market functioning and competitiveness of sunflower seeds its products.

However, it should be noted that in Ukraine, with the assistance of the State Standard, actively developing certification organization. Given the mandatory certification of these structures are not actually creating surplus value, as opposed to domestic producers thrive and consistently receive substantial returns. This mandatory state certification, which carry mostly on commercial terms, do not contribute to filling the state budget of Ukraine.

Companies that want to succeed must learn the best international experience as a management system. In general, under this concept to understand the system of interrelated and focused on customer satisfaction processes are constantly improved through the management and leadership of staff, acting on the basis of facts and mutually beneficial relationships with suppliers.

World practice to improve quality management systems have a arsenal of instruments, among which we note: International Standards ISO 9000, Balanced Scorecard (Balanced Scorecard), 6-Sigma, structuring functions as (Quality Function Deployment), models of self-organization T. Conti, D . Klemerra, a model of excellence of the European Foundation for Quality Management (EFQM), benchmarketynh et al. Most of the proposed approaches are based on the principles of the concept of comprehensive quality management (Total Quality Management - TQM) [3].

Total Quality Management (QA) is one of the main principles of operation of processing plants, which was especially important in 90 years. In Ukraine spread TQM philosophy was to use international standards ISO 9000, which incorporated the basic experience of the international community in creating a competitive business. Widespread use of ISO 9000 in the world confirms the effectiveness of implementation of quality management systems according to the standards [4]. International Standard ISO 9000 consists of the following main points:

- Documentation requirements;
- Liability management;
- Management of resources, including personnel, information, infrastructure (working space, equipment, instruments, software), work environment;
- Output;
- Measurement, analysis and improvement.

Ukraine is a country where the certification or quality control of foodstuffs is carried out once three government departments. This Ministry of Health of Ukraine, GOST and State Service for Veterinary Medicine. Each of these departments has to issue a separate document with a different name, which almost seems based on the same research, but it is the result of a permit, conclusion, or veterinary certificate. This complicated system of certification leads to the fact that the procedure can last more than a month, for all that the product may have a duration of storage or suitability for use up to 10 days. This bill eliminates all of these.

ISO 9000 have established a single, world-recognized approach to the contractual terms of the assessment of quality systems and simultaneously regulate the relationship between producers and consumers. In other words, the standards ISO - strong customer orientation. Relationship to suppliers and consumers joined a thorough quality system certification in accordance with ISO 9000.

Main target guideline of quality systems that are based on ISO 9000 - quality assurance required to customers, and providing evidence of the ability of the enterprise to do so. Accordingly, the mechanism system and the applied methods and tools are focused on this goal. However, the ISO 9000 target guideline for economic efficiency is expressed weakly, and the timely supply of NAMA at all. But despite the fact that the system does not solve all tasks necessary to ensure competitiveness, its popularity is growing rapidly and today it occupies an important place in the market mechanism. On the same basis whether the company quality system to ISO 9000 is a certificate for the system. As a result, in many cases, the presence of the company quality system certificate was one of the basic conditions for its admission to the tendering of participation in various projects. Widespread use of quality system certificate found in the insurance business: as a certificate indicating the reliability of enterprise, it is often given preferential treatment insurance.

The popularity of the ISO 9000 certification demonstrates overall dynamics of quality systems to meet these requirements. Thus, according to the company Mobil, in 2003 the world was about 50 thousand certified quality systems. In 2005 their number increased to 100 thousand can be assumed that currently certified systems 150 thousand for the success of businesses in today's market that they have a quality system compliant with ISO 9000, and certificate it may not be a sufficient but a necessary condition. Therefore, in Ukraine already has dozens of companies that have implemented ISO 9000 and certificates for their quality system.

To improve the quality and competitiveness of domestic products and to protect consumer interests, February 23, 2004 the President of Ukraine Decree "On measures to improve the quality of domestic products." It refers to "... the implementation of government support in the implementation of quality management systems in enterprises in accordance with the standards of the International Organization for Standardization (ISO) 9000, covering quality assurance system, and 14000, which covers the management of the environment ..." and the "... holding in Ukraine of the annual European Week of quality and competition" 100 best goods of Ukraine".

—Application of Ukrainian enterprises certification in market conditions provides the following benefits:

- Provides the confidence of domestic and foreign consumers for quality products;
- Facilitates and simplifies selection of the desired products to customers;
- Ensures consumers receive objective information about the quality of products;
- Reduces the import into the country of such products;
- Prevents the flow of imported products in the country is not an appropriate level of quality;
- Stimulate quality improvement by establishing STP in her progressive requirements;
- Promotes organizational and technical level of production;
- Fosters NTP.

—Note that some differences in the production cycle of enterprises that are characteristic of APV, and displaying on quality issues. For example, processors that compete with Western firms, mostly ready to introduce elements of modern quality

management systems, compared with enterprises, agricultural producers. The latter are not ready for an active competition, quality management in these enterprises is to control the output products. Technology implementation of quality management includes several basic steps:

- Decision and its consolidation in the "Politics in quality";
- Drafting process model, ie, determining the consumer; outputs of the process (the result of the process - a document, record, precooked, lack of technology, products, etc.
- Outputs of the process (that which comes out of the process - material, alarm, report);
- Resources process (by which (whom) we transformed the entrance to the exit - equipment, personnel, facilities, clothing);
- Process control (which rules entry was converted into output - orders, procedures, laws, standards, guidelines verbal head, etc.);
- The algorithm process (described sequence of operations by which the input process resulted in yield). After a description of the procedure to determine the monitoring and measurement of process performance criteria process and clearly define responsibilities and authority for each step in the process;
- The creation of system-wide procedures - at this stage to identify and document-wide procedures - document management, records management, control of nonconforming product;
- Check-wide procedures - at this stage, a group of specially trained personnel using approved procedures and in accordance with the schedule of checks of enterprise management, namely performance tested direct the standards and external regulations, and compliance with established procedures now in a , regulations, etc.
- The audit revealed inconsistencies are fixed and the owner must remove them;
- Analysis System quality - the management is obliged through planned intervals to analyze information about the performance management system. This specialist quality should collect and provide information on the achievement of quality objectives, effectiveness of enterprise processes, audit results, improper product conducted by the improvement, and more. At this point, "helix" management system completes its first round and the company is ready to enter the certification audit, and management system, a new round of "Plan - Provides - check - act" aimed at continuous improvement of;
- Certification audit - certified management system can perform any independent certification company that has the appropriate accreditation.

Self certification process consists of the following steps:

1. Company applies for certification, which indicates the scope of certification options and enterprise standards, which the company wants to get certified. It should be noted that the certification for compliance with ISO 22000:2005 was made possible in 2007.
2. Organization that certifies, decides on the possibility of considering the certification and documentation management system.
3. Certification directs "program audit", which painted the audit process.

4. Upon approval of the application to the company auditor comes and audits under the program (see documentation and records, communicate with employees, monitor activity).

5. According to the results of the audit are recorded inconsistencies that may be significant or insignificant.

6. The company removes the detected inconsistencies and sends the report to eliminate inconsistencies in the certified body. If significant discrepancies were found, the procedure starts execution of the certificate of conformity, and if any required re-ocular visit to the company.

7. The company receives a certificate of conformity.

8. The certificate is issued for three with an annual confirmation is not less than once a year, and the company is external audits to confirm compliance management system.

There is a need to introduce certification in Ukraine in Zaporizhzhya region, in particular, systems of quality control in accordance with international standards ISO 14000 approved by the International Organization for Standardization (hereinafter - ISO). This system will ensure compliance with environmental requirements at all stages of the product life cycle (production, trade, etc.), will increase competitiveness, improve economic performance, the introduction of cleaner production and reduce investment risks. Unfortunately, today the number and rate of implementation of environmental management systems certified Ukraine lags behind developed countries and ranks 54 th in the world and 27th in Europe [5].

The low level of implementation and certification of environmental management systems and environmental certification according to European and international standards in the Zaporozhye region attributed to the following factors: lack of environmental priorities in regional economic development programs, the use of outdated standards, rules and regulations, the need to improve the current system of accreditation of certification, standardization and metrology, lack of information and educational measures to implement environmental management systems and environmental certification of products.

To solve this problem we offer: develop a legal framework for state aid implementation of environmental management systems and environmental certification of products, taking into account international best practices, improve technical regulations harmonization of standards in the field of environmental protection in the study area in accordance with international and European standards, to develop and implement effective economic mechanism to encourage domestic agricultural producers to implement environmental management systems and environmental certification, to promote popularization in Zaporizhia Oblast best practices implementation and certification of environmental management systems and environmental certification of products.

Thus, the quality of domestic sunflower products, their conformity with international standards, professional level of management that functions in the system APV, these and many other factors will be crucial in the struggle for foreign markets. Obviously, navigate the tightly balanced and integrated not only domestic but also foreign markets, seek new sales regions of sunflower production, generate long-term based contracts to improve the quality, range update, make fruitful advertising

campaign - all requiring advanced knowledge, application of new approaches, lifelong learning, effective implementation of best practices and technologies.

An important component of competitiveness - standardization of consumer products and services. Production of oil and fat industry Zaporozhye region has, for example, higher quality settings than products made abroad (less applicable plant protection products, fertilizers, various growth promoters, which are in the finished product), but not approved by the relevant WTO standards and, thus, can not be realized under the WTO on foreign markets.

Having a successful brand - is another term competitiveness of companies producing and processing sunflower seeds. Subjects sunflower seed market and its products while little attention is paid to this area of work. Branding - the use of design, character name and some combination of these elements in order to identify the products. All these details are in order to distinguish their products from similar products of competitors.

Here are some benefits of using brand Manufacturer:

- Brand promotes repeat purchases and customer loyalty offers until consumers are satisfied products of this brand;

- Brand positioning promotes products and firms in the market;

- Trademark as part of the marketing strategy used by manufacturers to enter new, efficient markets, and the production of new products to engage in specific market segments and defense products [6]. According to the introduction and development of a successful brand is achieved within 10 - 15 years;

- In practice, trade mark enables the seller to obtain additional income, making it easier for goods to consumers, reduce advertising costs, protects the manufacturer in the process of working with partners.

The brand also identifies the manufacturer company and its products among competing products, facilitates the exit of producer new products into adjacent markets. But, again, pay attention to the market segment that has been selected to implement its enterprise products, the very products that will be offered to the market and the goals of the enterprise, which it pursues the introduction of a trademark.

**Conclusions and recommendations for further research.** Consequently, the manufacturer directs its own sales policy and elects tools with which will be production and distribution of communication with consumers.

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## **УПРАВЛЕНИЕ КОНКУРЕНТОСПОСОБНОСТЬЮ ПОДСОЛНЕЧНОГО ПРОДУКЦИИ НА АГРАРНОМ РЫНКА**

**Бритвенко А.С., аспирант Бердянского  
университета менеджмента и бизнеса**

*В статье приведены элементы механизма управления конкурентоспособностью подсолнечного производства на аграрном рынке Украины.*

**Конкурентоспособность, сертификация, стандартизация, торговая марка, бренд.**

## **COMPETITIVENESS OF SUNFLOWER PRODUCTION IN AGRICULTURAL MARKET**

**Britvenko A., PhD student of Berdyansk  
University of Management and Business**

*In this article the mechanism of competitive elements of sunflower production in the agricultural market of Ukraine.*

**Competitiveness, certification, standardization, brand, brand.**

## **UDC 332.146.2.338**

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### **ORGANIZATIONAL MATTERS Postgraduate Education**

**Abstract.** Reveals the principles and methods of postgraduate education professionals reasonably organizational aspects of their learning.

**Analysis of the main research and publications.** Similar questions considered: A. Vytvytsky, P.Haydutsky, N.Demeshkant, M.Kropyvko, V. Kruchek, M.Lobas, Yu.Lupenko, P.Muzyka, S. Yushin

**Keywords:** Continuing Education, training, educational and cognitive activity.

**The purpose of research** is to develop theoretical and practical issues of organization and management of post-graduate education.

**Introduction.** In today's agricultural production sharply raises the question as to improve the work of the staff, consistent and persistent conduct personnel policy that meets the present, where the decisive criteria for nomination and moving frames are ideological and moral qualities, the results of work, ability to organize work, ability to actively signifies our strong and enforce the Constitution of Ukraine, the Verkhovna Rada of Ukraine, laws, decrees of the President of Ukraine. Cabinet of Ministers of Ukraine, decisions of the ministries and departments APC. Required drastic measures for training of personnel management of the new economic thinking, promote business style of work, changes in the methods of its implementation. Every leader and specialist must raise their theoretical level, deepen knowledge, to master the art of management, it helps effectively respond to changes that occur to practice advanced forms and methods of management, which

ultimately determines the successful implementation of economic and social policies in the country.

**The main material.** Advanced training for managers and professionals engaged in agriculture for professional programs, programs permanent and short-term seminars and directed to provide update and improve skills and knowledge required for effective problem solving profession.

For the educational process educational institutions, together with customers to develop educational and thematic programs for each stream listeners. They agreed with customers and approved in due course. Also formed the subject of final papers (essays), ensured the selection of teachers, organized thematic debates, scientific conferences, outdoor activities, etc., are accounted pedagogical work documents issued for salaries of teachers involved, prepare monthly reports on relevant training audience.

Teaching and thematic programs developed in accordance with the requirements established on a modular basis with the release of three components: general, functional and sectoral training fund to the division of time into two parts - the legal and variable.

In particular, a common component of study topics in public administration and civil service to prevent and combat corruption, agricultural and tax policy, computer science, Ukrainian language and culture of speech. For functional component provided training in the formation of personnel reserve, social and psychological aspects of the civil service, management and marketing of industrial relations in agriculture, information governance. Sectoral component is aimed at studying the issues of innovation, strategy and main directions of scientific and technological achievements in the fields of economy, business development, market development of agricultural products, agricultural services, socio-economic development of rural areas and so on.

Planning for training of civil servants and managers of state enterprises, institutions and organizations on innovation carried out according to "Plan-schedule training of civil servants."

Subjects and hours of training in innovation is determined depending on the category of students and the nature of their professional work and may be as follows:.

- innovative activities and technological progress in the field of animal biotechnology in modern cattle;
- innovation activities of mechanization of agricultural production;
- Innovation in crop production;
- legal support for the implementation of innovation;
- concept and legal framework of governance, a system of legal acts regulating public administration, their status and use of, the legal regulation of the civil service;
- governance of agriculture;
- legal support for economic reforms, the conceptual framework and the nature and regulation of agricultural land relations.

In order to implement measures Shadow Economy of Ukraine, teaching and thematic plans of state officials, managers and specialists of agricultural work in the market economy, we study the topic on legalization and fighting the shadow economy in the agricultural sector of Ukraine.

In particular, during the training of civil servants V-VII category of study subject: "Preventing and Combating Corruption under the laws of Ukraine, decrees of the President of Ukraine, amendments to them."

The educational process is directed to the use of modern scientific methodology and information technology, as adapted to the personal characteristics of the students.

Active input test listeners that on the basis of tests designed to adjust teaching and thematic training programs that would reflect learning issues, including lack of knowledge of the audience.

The final stage of the educational process training specialists are trained protecting their final papers (essays), exams, tests, interviews. The commission to

conduct final testing of students involved in knowledge discovery relevant clients - ministries, agencies, departments and organizations.

It is assumed in the teaching and thematic programs of at least one on-site training in research institutions and in industry. In particular: Institute for Potato NAAS of Ukraine National Scientific Center "Institute of Agrarian Economics' NAAS of Ukraine, Ukrainian Quality and Safety Laboratory, pilot plant production of vegetable oil and diesel fuel," Agronomic Research Station ", National Seed Inspection Laboratory (accredited international organization ISTA); lookout customs control zone 37 cargo department of Kyiv Customs, State Veterinary Laboratory, markets "Bessarabian" and "Butterfly", "Ukrgolovderzhkarantyn"; fair "Agro - 2011", National Botanical Garden. M.M.Hryshka; Agrokombinat "Pusha-Vodytsya."

Courses of training of specialists includes various kinds of activities: lectures, laboratory exercises, case discussions, scientific conferences, management and review of final papers and essays, visiting classes, taking examinations, tests, consultations, tests, participation in the Commission for the Protection of final papers, essays.

Providing students the necessary guidance materials produced lecturing staff that the team and staff training along with education.

Distributed to students following materials: Guidance training beekeepers, electronic collection of lectures for the heads of village councils, guidelines for writing final papers the students of the Faculty of state officials, "a comprehensive program of protection of apple," "comprehensive security program potato", "Program integrated protection of winter wheat ", " rape comprehensive protection program ", " Arista "guidelines for writing the final work (abstract) listeners training heads of village councils, guidelines for writing essays civil servants (V categories - VII categories of) - managers and specialists of departments of land resources of the State Agency of Land Resources of Ukraine, "the organization of office" textbook "Organizational and economic principles of energy use in agriculture" (Teach method. guide), "Innovation oriented educational activities" (Teach-method .

Guideline) "Organizational-economic mechanism of development of rural areas" guidelines for qualification certificates agricultural advisers and agricultural expert counsel, the Law of Ukraine "On Agricultural Advisory Services."

Research and teaching staff of the department of innovation in agriculture preparing students for the following materials:

- Innovation oriented agricultural production (manual).
- Innovation policy for heads of agricultural enterprises and experts on economic issues. (Manual)
- Scientific and educational guidance forms and methods of entrepreneurship in agricultural production, with the integration of innovative processes and business activities.

A number of teaching materials for students threads expert advisors, advisory services were offered and the Department of Agricultural consulting service. Such handouts positively perceived by listeners.

**Conclusions and recommendations for further research.** Conversion of agricultural production on the innovative development model in recent decades is a priority in theoretical and applied research as scientists, and scholars of near and far abroad. However, the diversity of the issues (technological, technical, organizational, economic, social), especially the development of agricultural production in different climatic and economic conditions require further in-depth development to elaborate the provisions of relevant methodological and practical recommendations.

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**Annotation.** Reveals the principles and methods of postgraduate education specialists, organizational aspects of their training.

**Keywords:** Continuing education, training, educational and cognitive activity.

### **ORGANIZATIONAL MATTERS Postgraduate Education**

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**UDK 331.56(477.53)**

**ORGANIZATIONALLY ECONOMIC PRE-CONDITIONS OF THE  
EFFECTIVE USING OF LABOUR RESOURCES IN AGRICULTURAL  
ENTERPRISES**

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*Investigational organizationally economic pre-conditions of the effective use of labour resources in the agricultural enterprises of region and grounded ways of their increase*

***Keywords: labour resources, labour productivity, efficiency, use, agricultural enterprises, payment of labour***

The agrarian sector of economy plays an extraordinarily large role in socio-economic life of Ukraine. Agriculture is vitally necessary industry of national economy of every country, as presently formed an over 80% fund of consumption due to the products of this industry. Therefore a production of agroprodovol'chei goods is the first-ever condition of existence of humanity on a planet. Practice of menage on market principles requires from agricultural enterprises all legal forms of increase of agricultural production on the basis of drawing on the newest accomplishments of scientific and technical progress and efficiency of the use of labour resources, activation of entrepreneurial activity, and others like that.

The special value is here acquired by a decision organizationally economic problems of the effective use of labour resources which arise up before agricultural enterprises in the conditions of market transformations of agroindustrial production.

**Analysis of the last researches and publications.** Research organizationally economic problems of the effective use of labour resources of agricultural enterprises constantly is in a spotlight scientists-economists, namely: D.P. Goddesses, O.A. Buguckogo, P.T. Sabluka, V.K. Gor'kavogo, O.Yu. Ermakova,

L.I. Mikhaylovoy, O.A. Grishnovoy and much other. At the same time, the row of aspects of this bagatoplanovoy problem remains studied not enough and needs deep research.

**Research purpose.** A research purpose is a ground of directions of increase of efficiency of the use of labour resources in the agricultural enterprises of region.

**Exposition of basic material.** The agrarian sector of economy of the Poltava area is characterized certain features which distinguish him from other industries of national economy and stipulate organizationally economic problems in relation to the effective use of labour resources of agricultural enterprises. To basic from them it follows to take on the modern stage of development: contrasting efficiency of functioning of different legal forms of menage; the sharp strengthening of seasonal character of agricultural production and dependence of results of menage is from natural factors; demographic changes which stipulate the decline of level of material well-being of agricultural enterprises labour resources; worsening of the state of social infrastructure of village and considerable decline of agricultural production volumes and others like that [1-2].

The most widespread criterion of estimation of efficiency of the use of labour resources in the agrarian formings is the labour productivity. Its level to a great extent determines distributing and use of labour resources of enterprises – main factor of any production, including agricultural.

The question of the labour productivity comes into the notice of many scientists-economists. After research of T. Zayac', principles of the productive use of labour resources are formed not only through the system of adjusting of rates, proportions and forms of employment but also through high end-point as a socially acceptable level of the earned income, satisfied consumer demand of population and increase of the economy growing [4].

The attained level and rates of growth of the labour productivity, as expression of its efficiency, to a great extent characterize the degree of public progress and directly influence on society on the whole. The level of development

of productive forces and perfection of public relations is represented in the increase of the labour productivity. High level of the labour productivity.

Dynamics of the labour productivity in the agricultural enterprises of Gadyackogo of district of the Poltava area it is resulted in a table. 1.

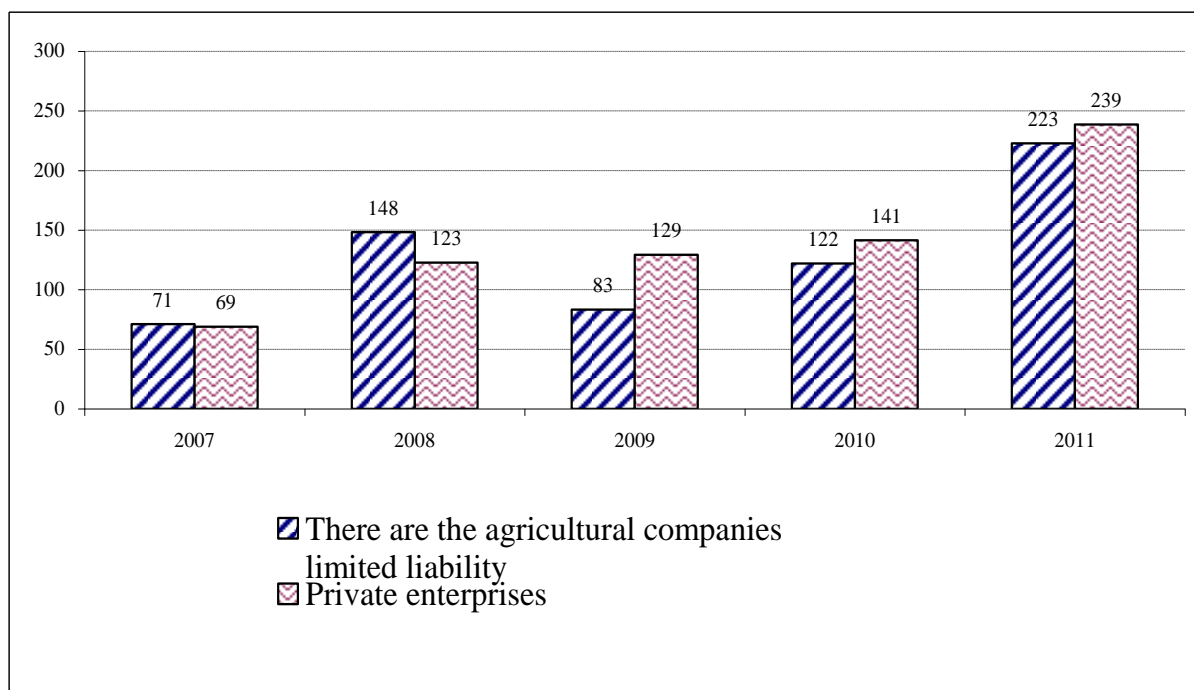
*Table 1*

**Dynamics of the labour productivity is in the agricultural enterprises of Gadyackogo of district of the Poltava area**

Indexes	2007 year	2008 year	2009 year	2010 year	2011 year	2011 year to 2007 year, %
Gross products of all, thousand of Uah	234297	389158	281919	284336	309787	132,2
including plant-growers	181628	275330	171730	178118	279246	153,7
stock-raising	52669	113828	110189	106218	30541	58,0
Quantity of workers, persons	3088	3015	3109	2445	1622	52,5
including plant-growers	1605	1555	1837	1177	1025	63,9
stock-raising	1483	1460	1272	1268	597	40,3
A cost of gross products is on a 1 average annual worker, thousand of Uah	66,8	129,1	90,7	116,3	189,8	284,0
including plant-growers	113,2	177,1	93,5	151,3	272,4	240,7
stock-raising	35,5	78,0	86,6	83,8	51,2	144,0

It is expected an author from data of accounting of agricultural enterprises of Gadyackogo of district of the Poltava area for the proper years (F50-sg the «Basic economic indicators of work of agricultural enterprises») [5].

Analysing these tables. 1 it follows notices, that in 2011 the cost of gross products in the agricultural enterprises of Gadyackogo of district of the Poltava area was increased on 32,2%, than in 2007 However much it costs to mark that the quantity of workers in 2011 made 1622 persons, that on 1466 persons less than by comparison to information in 2007. The labour for analysable period of research productivity rose in 2,8 times and in 2011 made 189,8 thousands of Uah The labour productivity in a plant-grower also rose in 2,4 times, and in a stock-raising on 44%. The conducted researches testify that the labour productivity in agricultural enterprises from 2007 year began to grow both in the agricultural companies limited liability and in private enterprises (rice. 1).



Rice. 1. A dynamics of the labour productivity is in the agricultural enterprises of Gadyackogo of district of the Poltava area, thousand of Uah

It is built an author from data of accounting of agricultural enterprises of Gadyackogo of district of the Poltava area for the proper years (F50-sg the «Basic economic indicators of work of agricultural enterprises») [5].

However from the resulted diagram expressly evidently, that this index in private enterprises is far more high, than in STOV. Yes, in 2011 the labour productivity in private enterprises made 239 thousands of Uah, that on 16 thousands of Uah anymore by comparison to STOV. It is explained diminishing of quantity of workings and increase of gross product output. Information of risunka testify that economic efficiency of agricultural production rises with growth of the labour productivity.

On this stage of development of agriculture the main way of growth of the productivity is scientific and technical progress, which shows up in the increase of mechanization of production, introduction of the newest technique and front-rank technologies, and also systems of machines which provide complex mechanization and automation of production processes. In account of economists, from the factors of scientific and technical progress the increase of the labour in the scale of all economy productivity depends on 65-70%, and other are on organizationally

economic mechanism (economic grounded concentration and specialization of production, rational organization of labour and use of labour resources, and also its financial stimulation, and others like that) [3].

It costs to mark that on efficiency of the use of labour resources of agricultural enterprises of the probed region negatively reflected low level of payment of labour; a disbalance of demand and supply of labour force is at the market of labour; a decline of social infrastructure is in rural locality; an uneffective state help and unsatisfactory informative providing is in relation to employment. Yes, average annual payment of labour 1 working in the agricultural enterprises of Gadyackogo district of the Poltava area has a tendency to the increase. Yes, in 2011 in enterprises it made 1020 Uah, that on 490 Uah, or on 92,2% anymore by comparison to information in 2007 In a plant-grower payment of labour one working increased in 2,6 times, in a stock-raising on 28% for analysable period of research.

Research results argue that it is necessary to develop and inculcate in practice of manage the modern system of stimulation of labour activity which will provide the effective use of labour resources with simultaneous growth of their competitiveness. Otherwise a situation in the sphere of payment of labour will remain critical, unsettled, and the existent size of profits workings in future will not be instrumental in the effective use of labour resources of region.

With the purpose of deep research of question of payment of labour in the agricultural enterprises of Gadyackogo of district of the Poltava area, on the basis of the use of methods of grouping and multivariable cross-correlation regressive to the analysis, found out by us influence of different factors on the level of average monthly ettlings (Y) and certainly crowd conditions of connection between them. An analysis was conducted after such factors: Kh1 is the labour (a production of gross goods is in the permanent costs of 2010) productivity on a 1 worker, thousand of Uah; Kh2 – zemlezabezpechenist' (area of s.-ã. lands on a worker), hectare.

As a result of cross-correlation regressive it is set an analysis, that a degree of crowd conditions of connection between the probed signs is high, as a coefficient of plural correlation is 0,9025. A metage simultaneous influence, predefined variation of both factors, is a coefficient of plural determinacii of  $R^2=0,8144$ . In our case a 81,4% variation of effective sign (average monthly ettlings and worker) it is predefined variation of the probed factor signs.

In the calculations of reliable limits the values of allocation of Fishera and St'yudenta maps are used with reliable probability of  $R = 0,95$  [6-7]. Reliable limit of plural coefficient of correlation of  $R_{gr} = 0,195$ , that testifies to his statistical meaningfulness. After the criterion of Fishera equalization also is statistically meaningful: calculation value – 54,86 anymore than tabular value of coefficient – 3,05.

Will check up importance of coefficients of regression by the t-criterion of St'yudenta  $T_{gr} = 1,96$ . Critical limits are resulted in addition (t-statistics). The values of t-statistics for every factor exceed the tabular value of t-criterion of St'yudenta, which is evened 2,08. It validifies influence of the selected factors on a result. Consequently, it is possible to proceed to economic interpretation of research results.

Cross-correlation regressive the model of dependence of payment of labour looks like from the transferred factors:

$$Y = 589,261 + 2,173 kh_1 + 1,976 kh_2.$$

The value of coefficients of equalization of regression is shown by the increase of variable of Y at  $X_i$  on unit in relation to middle. Parameters of the got equalization cross-correlation regressive a copula is testified, that: with the increase of the labour (productions of gross goods are in the permanent costs of 2010 on a 1 worker) on 1 thousand of Uah, zemlezabezpechenosti workers, productivity on a 1 hectare average monthly payments of labour increased on the average on 2,173 and 1,976 Uah in relation to mean values on a district.

Consequently, an ettlings occupies the special place in the mechanism of menage – as one of the most ponderable socio-economic categories, that

determines a level and quality of community development. A wage level is determined by the degree of solvent demand of workers and members of their monogynopaediums on goods and services – a high level stimulates, and low – represses their production. The low level of earnings results in the decline of motivation and labour which predetermines mass labour migration of rural population for a border and growth of shadow sector in the economy of Ukraine productivity.

**Conclusions and prospects of subsequent researches.** Thus, the higher resulted allows to assert that for the increase of efficiency of the use of labour resources of sil'skogo-spodarskikh enterprises of region it is necessary near-term tasks to define such: in the government programs of assistance employment to spare attention the regional specific of labour-market and concentrate financial resources on providing of employment in regions with an enhanceable unemployment rate; reform a labour legislation with the purpose of increase of mobility of rural population, to provide proof balance of interests of workers, employers and state; to organize and control the public organs of power introduction of new, with the scientific ground of economic efficiency, technologies of production and processing of agricultural produce; to improve work of professional technical schools on preparation of specialists in quality and by directions a labour-market needs in which.

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## ON RECORDS REFLECTION OF ECOLOGICAL INNOVATIONS IN ENVIRONMENTAL PROTECTION

Volyak L.R., graduate student \*

*The level of records reflection of environmental innovations in activity of agricultural enterprises was analyzed and the basic trends of eco-innovations efficiency were examined.*

*Environmental innovations, environmental management, environmental accounting, information management, agricultural sector.*

On the condition of development of innovation activity, the development of a country can be estimated as a whole. International experience has shown that innovations can significantly accelerate the progress of economic processes, resulting in economic and social growth. Innovation activity in agricultural production becomes an important competitive resource of the state. In the next 20 years, the countries that implement the latest developments in the priority areas of agriculture will have the benefits in the global economic competition.

In the world there has been a steady acceleration of scientific and technological development, that's why the main goal of local businesses is to implement innovations as an essential requirement of today in the formation of a high technological and organizational level of the business operation. To achieve the stated goal it is necessary to have accurate and unbiased economic information on formation and use of natural resources potential, efficient management of which is based on the use of accounting and analytical data.

**Analysis of recent researches and publications.** The problems of innovation process and development of innovation policy were handled by many scientists, among others O.Baranovsky, O.Butnik-Siversky, N.Honcharova, O.Horbachova,

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\* Thesis tutor - Doctor of Economics, Professor V.K.Savchuk.

O.Dombrovskyy, M.Koretsky, N.Lysetska, V.Muntiyan, O.Pyetuhova, O.Stepanov, L.Fedulova, I.Tsyhylyk and other scientists.

An important contribution to the study of innovation processes in the agricultural sector was made by native scholars: S.A. Volodin, M.V.Zubets, M.I. Krupka, M.Y. Kodenska, P.T. Sabluk, O.G. Shpykulyak, V.V. Yurchyshyn. In writings of the authors propositions for improvement of the effectiveness on innovative process were investigated and substantiated.

However, Ukraine still has a very low level of innovation implementation, especially in the field of environmental protection, there are no effective mechanisms for managing of environmental innovations, accounting systems of their monitoring and prospects of implementation are not proven, etc.

**Purpose of the study.** To analyze the level of accounting reflection of ecological innovations on farms, to outline the main directions in enhancement of efficiency of eco-innovations.

**Main material.** Environmental innovations are considered as changes in socio-economic development of the economic system, which, along with the positive socio-economic effect, improve the state of natural environment (NE) or minimize adverse effects on it, as well as facilitate efficient renewal of natural and resources potential of farms [4].

An innovative model of development of agricultural production involves dynamic development of all levels of agriculture in order to improve the effectiveness of production process. Studies show that agricultural products are not competitive even in the domestic market. To improve this, within the innovative model of development of the agricultural sector there are created optimal conditions for implementation of innovations, progressive development of the industry is provided, and one of the mechanisms of efficiency enhancement of business is implemented.

In the agricultural sector, introduction of innovative technologies is demanded in such priority areas as: conservation and restoration of soil fertility; creation a high-performance genotypes of plants and animals, safety methods to

protect them from pests and diseases; development of energy-efficient, ecologically safe technologies of production and processing of crops and livestock; creation of machines and equipment for complex mechanization of agribusiness while reducing the burden on the environment [9].

Following all the parameters of technology process restricts the possibility of improving of production results, which indicates the need for introduction of fundamentally new domestic and foreign technologies, which make it possible to transform agriculture into highly profitable industry. Ideally, in agricultural farms there must be organically connected into a single continuous process – production – processing – sale – waste, all that ensures effective functioning of agricultural enterprises in the current market conditions. In this case, environmental innovations will be aimed at reducing of destructive impact of industrial activity on the environment, as well as getting of ecological safety of the innovations. The introduction of resource-saving technologies provides full or partial use of secondary raw materials (waste). Environmental component of such production efficiency is defined as change in the cost of production by reducing payments for the location of waste and pollution of nature (air, waters, and soil).

As international experience shows, one of the most realistic ways to solve conflicts between economic growth and maintaining or even improving the environment is the focus on innovative environmentally sustainable development [7]. Greening of all spheres of human life is carried out along the introduction of environmental innovations. Currently, taking an effective management decisions by the leaders is not possible without taking into account of modern innovative achievements. For this reason, environmental innovations play an important role in all areas of production, especially in environmentally oriented.

Solution of the problems, caused by environmental impacts of socio-economic activity of humanity, should be promoted by diversification of energy production sources and shift to environmentally friendly types of fuels, creation of brand new technological solutions for reducing harmful emissions and recycling of industrial waste.

Environmental innovations allow to solve the contradiction with the help of purely market methods, because capital-intensive nature conservation measures, economically flawed various prohibitions and sanctions only worsen already difficult financial situation of domestic enterprises, diminishing the scope of existing market opportunities for their development. However, national practice shows [4] that with low innovation activity of enterprises the share of environmental innovations (unlike the developed countries [9]) is very small. It is due to, in particular, imperfection of encouragement mechanisms of environmentally oriented innovation activity and ecological consumption, high commercial risk. The question is raised on making of management decisions regarding production growth, increasing of its economic efficiency, competitiveness, taking into account the environmental factor. Gain in performance, competitiveness and independence of both enterprises and the state in general will be provided by the transition of manufacture on innovative low-waste, waste-free and environmentally friendly technologies. In the next few years in Ukraine, according to experts, priority investments in the development of environmentally-friendly technologies will be the investments in the field of water resources protection (almost 60% of total investments), protection of the atmosphere (about 16%) and protection of natural resources and rational use of land and conservation of protected areas (10-12%). Very promising is the use of biofuels, wind and solar power. For Ukraine, the real figures are 10-50% of the total energy produced, which will be given by alternative energy forms (biogas, wind farms, small hydrostations) as early as 2015-2020 [6].

Specificity of types of innovations in the agricultural sector is conditioned by its features. Firstly, it's involvement in the production process of natural resources, which targets innovations on the provision of environmental safety, sustainable use of natural potential. Second, innovative process in the agricultural sector is differentiated on the economic, organizational, technological, technical, etc., which are combined with a single element – the creation of new species.

Since 1990, and especially since 1991, the amount of innovations, and especially eco-innovations decreased drastically (from 1991 till 2002 the drop reached almost 80%). Only since 2003, the volumes of eco-innovations began to slowly rise, and it is against the reducing of number of enterprises that implemented innovations in general [5].

Analysis of volume reduction trends of implementation of eco-innovations in Ukraine showed that this process is due to [4,8]:

- high risk with regard to the adoption of innovations by consumers and the lack of capital protection mechanism of the company, that implements this type of innovation;

- corruptness of the state economy, when it is more advantageous to conduct "regular replacement of parts of the old equipment" than to introduce fundamentally new technologies;

- increase in cost, and therefore the prices of products, that makes it uncompetitive on the market;

- lack of funds to address urgent social and economic, and environmental problems;

- lack of effective regulation mechanisms of environment-related activity of agricultural enterprises;

- imperfection of legal basis and lack of market innovation infrastructure (futures companies, FIG with a focus on innovation potential, technoparks, technopolises, etc.)

- absurdly low (declarative) level of budgeting for SRDW and fundamental science.

An essential condition for Ukraine's entering on an equal footing in the global economic system is the transition to innovative development model. This process is complicated by the lack of proper data base of management system of a company's innovation activity, making the integrity of management process impossible in general. Neglecting of accounting and analytical support for

innovative activity is due to the immaturity of researches in the field of accounting of such activities [1].

Ensuring effective management of innovation activity at the level of accounting organization involves: 1) selection of competent management personnel, including accountants, 2) development of information models of accounting, that would allow to obtain information on investment decisions and investments on time and in full from the decisions of management about possible investments; 3) providing of integrated system management of economic facilities through combination of staff of different functional specializations in centers of management of innovation processes.

One of the biggest drawbacks of modern accounting of innovations is that there is no uniform system of accounts and accounting records for the reflection of costs, revenues and results of innovation activity. The current accounting models are not adequate to the varieties of innovative processes, and do not provide sufficient and reliable data for economic analysis in the field of environmental innovations. Due to the fact, it is necessary to develop science-based system of accounting and analysis of costs, revenues and results of innovation activity of entities. Information Systems of financial and management accounting, as well as economic analysis should create the necessary conditions for the expansion, acceleration and effectivization of the of design and implementation of various types of innovations, aimed at creation of competitive products according both national and international standards and renewal of natural resources potential.

Another disadvantage of accounting of innovations is the lack of separate internal accountancy at the majority of domestic enterprises, which would provide information in a systematic way for the management of innovation processes, particularly in the environmental area.

The main problems that hinder the innovative development of agricultural enterprises are: poor organization of management of innovation processes, lack of methodological support for planning of innovation activity and so on [10]. In addition, restraint on activity is due to imperfection of the system of information

support of innovative technology solutions, including resource conservation. For the transition of farms to level of innovative development it is necessary to improve the process of production, processing of waste and integrated use of natural raw materials on the basis of mechanism of resource conservation. It is possible through achieving of dynamic balance of its technological, economic, financial, social and environmental parameters. Implementation of such technologies requires some adapted to modern conditions functional mechanism of resource conservation. While studying the influence of innovative factors on the functionality of the mechanism of resource conservation it is necessary to use information databases, as research innovation activity, first of all, is based on it.

Information management of agricultural enterprises – is a summation of information by sources, which is subjected to the use in the process of management of environmental and economic potential of enterprises, specifically –information about the latest modern technologies of resource and energy conservation, sources of financial environmental income and expenses [1].

By the information provision of the mechanism resource conservation is meant a somehow ordered set of information that is formed and used at different stages of the process. Basis of the information provision of the mechanism of resource conservation is ecological and economic information, which characterizes industrial, environmental, financial and economic activity of control entities. Since the mechanism of resource conservation is connected with technological infusion, this fact explains the interdependence with information that may come from external and internal sources [2].

The final stage of the formation of information support is organization of the process of information processing, comprising of: formation of documentation procedure; definition of processing operations of information used in achieving the goals of resource conservation; selection of complex hardware for processing information, which is used for planning and forecasting calculations, and implementation of mechanism of resource conservation in the company [3].

Innovative development of farms, primarily, is to increase the scientific and technological level of production, to ensure efficient usage of all resources in the implementation of new equipment, technological processes and other innovations. Thus, we can name stages of the workflow formation in the process of resource conservation: a brief statement (adopting of the concept of resource conservation in the company, i.e. the set of trends process organization); detailed action program (grounding of the environmental safety program); instruction (regulation of information-analytical work with projects on resource conservation) , electronic documents – information array (creation of automated databases of activities and projects concerning resource conservation); feasibility (selection of resource conservation projects for their further implementation); report (monitoring of results of the activities and projects on resource conservation).

To improve information support of environmental and economic decision-making it is necessary to introduce a special sub-system of environmental accounting in the system of accounting policies of enterprises engaged in innovation activity. The use of environmental audit will reduce environmental and commercial risk of company at its realization of innovative project. In this case eco-audit includes an assessment of all risks, and analysis of cost and overall benefit to enterprises, as well as assessment of adverse environmental effects as a result of realization of innovative project. For its effective realization of the Environmental Program of innovative development of the region there may be determined such procedures for environmental auditing of innovation activity of the region, which stipulates grouping of sources of environmental hazards as a result of innovative projects realization. This will enable implementation of certain measures for ecologization of scientific and technology activity of an enterprise. Databases of such companies are further used as an information basis for priority rating of ecologization, which, in turn, will create conditions for the development of the insurance audit. This activity type enables assessment of effects of environment polluted by them on recipients, sometimes helps to compensate for

the loss and determine appropriate rates of insurance deposit, control the level of environmental safety of the region/enterprise.

**Conclusions and recommendations for further researches.** Ukraine's transition to the innovative model of development is an integral condition of its entering to the global economic system on an equal footing, and is complicated by the lack of appropriate data base of management system of innovative, particularly in the environmental field, processes of an enterprise, without which the implementation of functions of planning, monitoring, analysis, management, and therefore, the integrity of management process in general is impossible. Lack of proper effect of innovative enterprises is caused by imperfection of organization and methodology of accounting and environmental auditing in their interrelationship to the functions of planning, control and regulation on innovation activity of enterprise as a separate area, singled out in space due to its exceptional characteristics, and cost, associated with its implementation.

Accordingly, the system of registers and accounting records needs changes, particularly with regard to investment in environmental protection. It is necessary to develop a documentation procedure system which will include a brief statement, a detailed program of action, briefing of information and analytical work on projects aimed on management of natural and resource potential, electronic documents – information arrays (creation of automated databases of measures and projects on eco-innovations); technoeconomic feasibility (selection of innovative projects for their further implementation); reporting and control of realization of eco-innovations.

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*Проанализирован уровень отображения в учете экологических инноваций в деятельности сельскохозяйственных предприятий и рассмотрены основные направления повышения эффективности экоинноваций.*

***Экологические инновации, природопользование, экологический учет, информационное обеспечение, аграрный сектор.***

*Проаналізовано рівень відображення в обліку екологічних інновацій в діяльності сільськогосподарських підприємств і розглянуто основні напрями підвищення ефективності інновацій.*

***Екологічні інновації, природокористування, екологічний облік, інформаційне забезпечення, аграрний сектор.***

УДК 519.863:636

## ANIMAL AS OBJECT OF MODELLING

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*The article considers the state of the branch of animal husbandry in Ukraine in 1990 to 2011.,prospects of development; reasonable necessity and advantages of usage of Economics and mathematical modeling of industrial processes in the branch.*

**Key words:** *animal husbandry, indexes of production, development, modeling, feed ration, optimization, innovation ways, economics and mathematical model.*

**Relevance of research.** Animal husbandry is the leading branch of agriculture sector in Ukraine, the main purpose of which is to ensure the production of foodstuffs of animal origin in amounts that correspond to the standards of food safety. Given branch needs to influence not only from the state but also from science.

**Analysis of key publications.** Проблеми розвитку та функціонування тваринницької галузі в Україні присвячені наукові дослідження вітчизняних вчених С.П. Азізова, В.І. Аранчій, В.І. Бойка, В.Я. Месель-Веселяка, О.В. Мазуренка, І.С. Трончука, П.Т. Саблука, Н.В. Оляднічук.

Questions of Economics and mathematical modeling in economy and agriculture were engaged V.Vitlinskyu, A.Hataulin, V.Kadiyevskyu and other investigators.

**The purpose of the article** is analysis of problems of the branch of animal husbandry, reasoning directions of its further development on the basis of effective use of economics and mathematical modeling of industrial processes of branch.

**The main material.** Economic stability of the state and the material well-being to a great extent depend on the agricultural sector of Ukraine. Level of social life of the population directly depends on the providing of its food. Production of foodstuffs in the country is not at the proper level, there exists a number of problems

that need solving. In the solution of its problems the leading role belongs to animal husbandry. [1]

Over the last several years, according to the State Statistics Committee, observed deterioration of economic indicators of the branch, and the output gap. Animal husbandry is not in decline but needs support, both from the state to improve the indicators, so and from science that finds innovative ways of development. [2] According to official statistics, for 11 months of 2012, Ukraine imported import meat for 673 million dollars. The main suppliers of pork were Brazil, Germany and Poland. Chicken were imported to us from the USA, Germany and Hungary. Among the key reasons for the growing import market analyst call prices for meat inside the country. Thus, in the first half-year Ukrainian producers of beef and pork maintain a high level of prices. At the same time, the prices in some EU countries were favorable for imports of meat in Ukraine. Domestic meat production in Ukraine in 2012 didn't change a lot compared to 2011. During the first 11 months of 2012, Ukraine had exported meat to 285 million dollars.

For the present time, decreased production of wool, which was the cause of the decline of the given branch in Ukraine Although manufacturers i apply new technologies, but the number of heads of sheep every year decreases. The difference between the production of wool in 1990 i 2011. is -25,927 tons in percents to -87%. Sheep husbandry requires more in-depth study and intervention.

In the 90s meat yield was high and was on its peak. The difference between the volume of production in 1990 and 2011. is - 2214 thousand tons that in percentage was 50,87%. So, it decrease more than twice. In order to understand, in what state is the branch, consider the following diagrams. Figure 1 shows the dynamics of meat production during the last 20 years.[3]

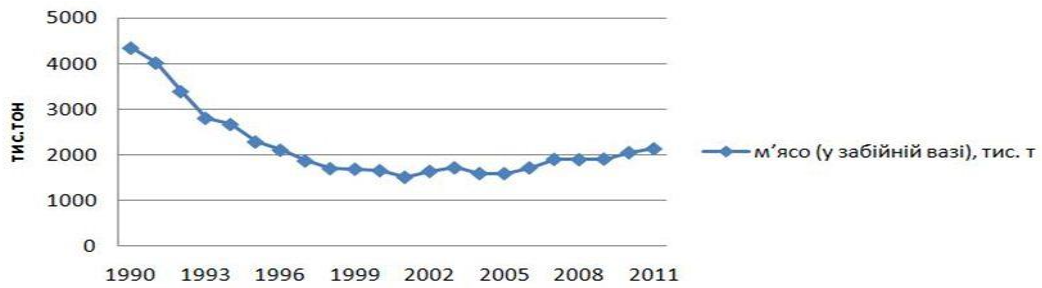


Fig.1. Dynamic of meat production (slaughter weight, thousand tons)

Almost the same situation with milk production (Fig. 2). Production of the main kinds of animal husbandry products (milk, thousand tons) [3]

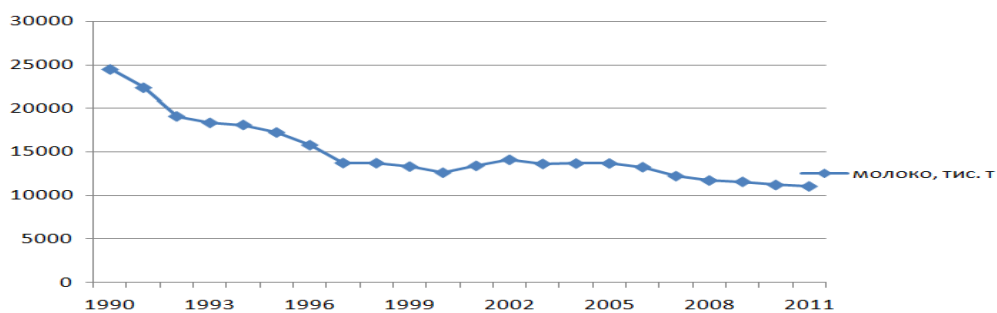


Fig.2. Dynamic of milk production, thousand tons

Ministrers of Agriculture trying to develop and implement a number of measures which in the future will provide an opportunity to support the stability of animal husbandry.[4]

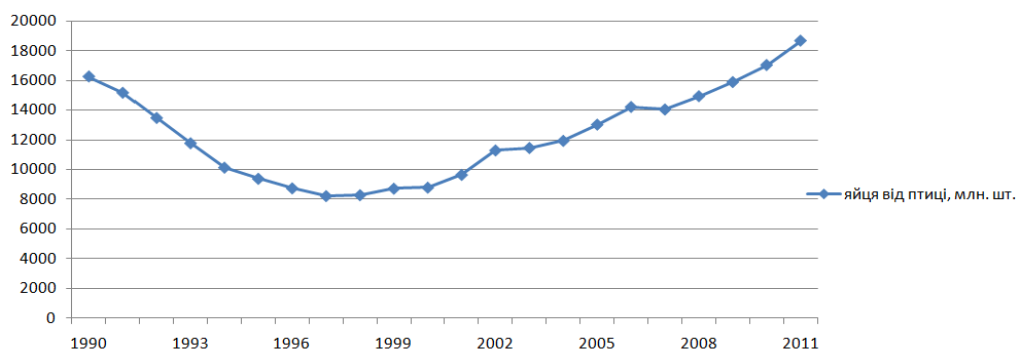


Fig.3. Dynamic of eggs production, million pieces

Egg consumption per 1 person in 2012 calculated at the level of 313 units, which is also more than last year - Fig.3. Dynamic of eggs production, million pieces. [3]

At present time, wool production decreased, which was the cause of the decline of this branch in Ukraine. Although manufacturers apply new technologies, but the number of heads of sheep every year decreases. The difference between the production of wool in 1990 i 2011. is -25,927 tons per cent to -87%. Sheep production requires more in-depth study and intervention.

One of the indicators of improving of economic activity of households is creating models oriented to minimize costs or maximize income from realization of products. After preliminary examination of the field of animal we see that the priority directions of development of animal husbandry in the future one should consider support for restructuring in animal husbandry provided through investments, activization factors of intensive reproduction through improvement of quality fodder, selection and tribal case, modern innovative technologies, training of highly qualified personnel, providing of veterinary sanitary measures. [5]

One of the main factors of providing of intensive development of animal husbandry branches is achievement of optimal ratio of industries, production specialization and concentration stock animals .[5]

Also very important is the use of modern computer technology, which allows to calculate the optimal flexible plan that differs from the plan designed by the existing traditional method of planning.

**Conclusions.** The development of animal husbandry requires not only the intervention of the state, but also the application of scientific advances - Economics and mathematical modeling. Its use makes it possible to get the best way from the point of view of an acceptable indicator of economic efficiency and gives the opportunity to follow zoo technical requirements, which also very important. Because, modeling a process in agriculture, we are dealing with live organisms. Providing food and other products of animal husbandry is of great importance, because for a balanced nutrition and increasing efficiency of population food goods should be in a wide assortment and high quality.

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### **ANIMAL AS OBJECT OF MODELLING**

*L.Galaieva, M.Grechko*

*The article reviews the state of the livestock industry in Ukraine 1990-2011. Prospects, necessity and advantages of using economic and mathematical modeling of production processes .*

**Keywords:** *animal, rates of production, development, modeling, feed ration, optimization, innovative ways, economic-mathematical model.*

## PROSPECTS OF CROP AND IMPACT OF WORLD ECONOMIC CRISIS IN AGRICULTURE UKRAINE

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*The article deals with information provision crop, the prospects of its development, the impact of economic factors, including the financial and economic crisis on agriculture Ukraine.*

**Keywords:** *information support for plant growing, field crop, grain market, demand, productivity, financial and economic crisis.*

**The relevance of research.** At all stages of agricultural development one of the main areas is crop production, and its reasoning of measures to stabilize and improve - international challenge. Plant production is an ongoing challenge all businesses of the agricultural sector and is aimed at forming food market. Effectiveness of crop is influenced by many factors, including soil and climatic, technological, biological and other, making it difficult to find additional opportunities for its improvement.

**Analysis of key publications.** Research on the problem of improving the efficiency of crop production in agricultural enterprises in terms of market reforms devoted to scientific work V.Ya.Ambrosova, V.H.Andriychuka, V.I.Boyka, P.P.Borshevskoho, P.I.Haydutskoh, AS . Danilenko, M.Ya.Dem Solovyanenko, O.U.Yermakova, I.V.Konovalova, V.I.Kryvoruchka, O.V.Krysalnoho, M.H.Lobasa, M.Y.Malika, V.V. Yurchyshyn and many other scientists.

**The aim of the article** is to analyze the information of crop and influence in it of world economic crisis..

**The main material.** Processes occurring in the grain sector is an important factor in the formation of world food supplies. Information provision of these processes plays a significant role in maintaining the competitiveness of the industry and playing real data. Since the mid 1960s, grain production in the world increased by nearly a billion tons. This trend persisted over the next 30 years. In the 90 years began reducing the growth in world consumption of cereals has been caused by several factors:

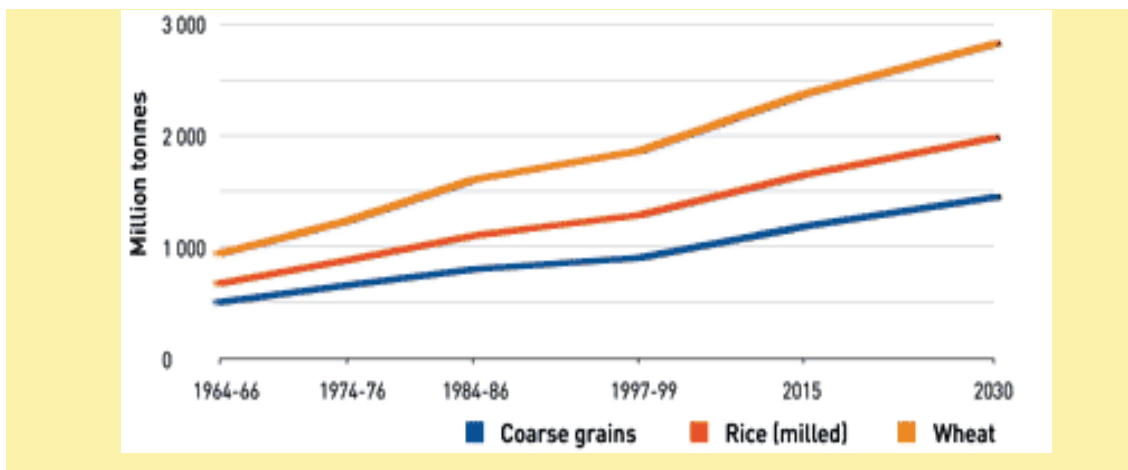
- slowdown of growth of world population;

- material providing;
- high level of consumption of big countries, especially China, which further reduces the rate of increase over the previous period.

Growth in global demand for cereals fell by 1% per year in the 1990s, compared with 1.9% in 1980 and 2.5% in 1970. This rapid decline could be the beginning of a new global food crisis. Other factors, however, were mostly temporary in nature and were associated with features of transition. Over the next 15 years, these factors gradually lost influence on the demand for cereals, which are projected to grow by 1, 4% in year 2015 [1].

In developing countries, the demand for grain is growing faster than production. Net imports of cereals in these countries rose from 39 million tons a year in the mid-1970s to 103 million tons in 2000, which increased use of cereals from 4 to 9%. By 2030, in developing countries, imports could reach 265 million. Tons of grain, or 14% of their consumption annually (Fig. 1).

Although it may seem growing significantly, it lower than expected over the next three decades than the mid-1970s. If real food prices do not rise, meaning industry and services is growing, as before, most countries can not afford to import grain to meet their needs [2].

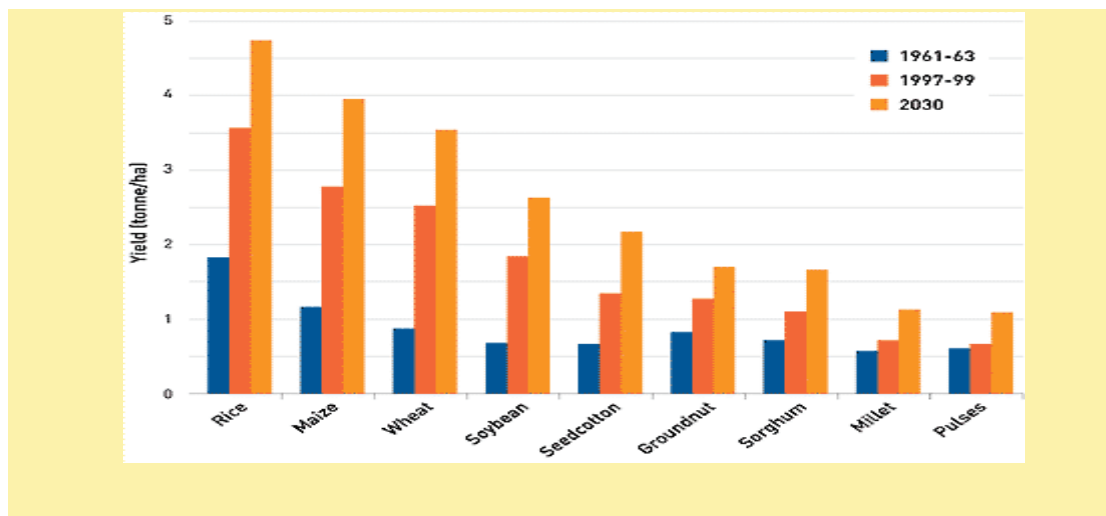


**Figure. 1. The global demand for corn from 1965 to 2030 [6]**

Grain exporters such as Australia, North America, Argentina and Uruguay, in response to an Increase in demand ranging from 1970 increased levels of exports almost doubled. Currently about half of all exports provides the EU. From a net

importer of 21 million tons per year in the mid-1970s, the EU has become a net exporter of 24 million tons per year in 2000.

One of the factors increasing the production of crops is to increase productivity. Global grain yields at Flickr grew between 1961 and 2000, averaging 2.1% per year. Thanks to the green revolution, and it grew even faster in developing countries, an average of 2.5% per year. The fastest growth rates achieved for wheat, rice and maize (Fig. 2).



**Fig. 2. Yield capacity in crops in developing countries from 1961 to 2030 [6]**

Slower growth in cereal production in the next 30 years means a corresponding decrease in yield compared to the previous period. The growth yield of wheat by n rohnzamy to slow to 1.1% per year over the next 30 years, while in rozhaynosti rice is expected to rise by only 0.9% per year. [3]

Till the financial crisis, Ukraine's agriculture began in 2008/09 marketing year with a record harvest of 53 million tons of grain were harvested in Ukraine.

Exported 25 million tons of grain and export revenues have ensured the growth investments to maintain high production next season. However, two key trends related to the financial crisis - lending and fall in most cultures, questioned these optimistic forecasts [4].

Global downturn in economic activity put lower prices for industrial resources that are sold on international markets, combined with a decline in demand for primary agricultural products. The relative change of these parameters allows better

present terms of trade - the relative prices of inputs and finished products - already hit by increasing costs of external financing.

Since 2009/2010 marketing year, an increase of grain on the domestic and foreign markets has meant that manufacturers have experienced a sharp drop in prices for their products. Size falling prices varied by type of product, confirming that grain producers of high quality felt less striking relative decline in prices. Prices continued to decline until the end of the year, until January 2010 did not stabilized. [5].

Harvest of grain and leguminous plants collected in Ukraine in 2011 amounted to 56.7 million tons of corn were harvested 22.8 million t - That is 90.6% more than the figure in 2010 (12 million t) and almost 2 times more than the record harvest of 2008 (11.5 million t) [6]. As reported by the State Statistics Committee of Ukraine, the wheat crop in 2011 was 22312 thousand tons (132,4% to 2010), barley - 9097 thousand t (107.2 percent). Production of sunflower in 2011 reached 8659 thousand tons (127,9% to 2010.) with an average yield and 18.4 kg / d and that too is an absolute record [7].

In 2012 gross yield of grain and leguminous crops amounted to 46.2 million tons, up 10.12 million tons (20-30%) less than in the previous year caused a high proportion of poor and liquefied crops with areas where the ladder is received, which was 44% of the total sown area of winter grain.

In 2013/2014 marketing year the grain harvest is projected at 53-55 million tons, which is close to record levels. This will export at least 26-27 million tons of crops.

**Conclusions.** Significant potential demand for crop production in the medium - to long-term due to a number of factors - population growth and urbanization in the world, growing demand for food products, use of agricultural products as alternative source of energy through its processing of bioethanol. The global demand for food products in recent years has shown steady growth, due from rapid growth of effective demand in developing countries. The global supply of food in recent years not kept pace with increasing demand due to the negative impact of climate conditions and political changes in global yields and limited lands suitable for agricultural

cultivation. As a result, for 10 years the world's reserves of major cereals - wheat and maize decreased by 2 times.

Regarding the impact of the economic crisis on agriculture of Ukraine are the following key trends: rise and availability of external financing, raising interest rates and restricting access to loans at high dependence on external financing rather contributed to the increase in production costs, and thus affected the profitability of the industry.

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## **PROSPECTS OF CROP AND IMPACT OF WORLD ECONOMIC CRISIS IN AGRICULTURE UKRAINE**

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*The article deals with information provision crop, the prospects of its development, the impact of economic factors, including the financial and economic crisis on agriculture Ukraine.*

**Keywords:** *information support for plant growing, field crop, grain market, demand, productivity, financial and economic crisis.*

**УДК 519.711:631.11**

**AGRICULTURAL COOPERATIVES – AN IMPORTANT COMPONENT OF  
DEVELOPMENT OF RURAL TERRITORIES**

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**The relevance of research.** Functioning agricultural market prospects and ensuring sustainable food security and increase incomes of agricultural producers depends on infrastructure conditions. Lack of effective, accessible channels for producers of agricultural products is the limiting factor in terms of redistribution of values in the pricing mechanism. It is necessary harmonization of interests of agricultural producers through the mechanism of cooperation.

Today, virtually the only prospect for improving the profitability of small forms of economic activity in rural areas is the development of agricultural service cooperation. It should be noted that this category of households account for around 60% of the gross domestic production of agricultural products, especially potatoes, fruits and berries, vegetables, milk, meat, eggs, without getting over the past 17 years, virtually no state support and without real access to food market.

**Analysis of key publications.** Positive impact on Ukraine's economy from the creation of agricultural cooperatives considered in M.P. Gryshchenko, M.I. Malik, I.V.Konovalova etc. Despite this a number of aspects of this important problem in the new economy are still poorly understood.

Methodical and theoretical basis of the study is the modern theory of the market economy. **Purpose of the article** is the scientific study and development of practical recommendations for effective development and operation of agricultural cooperatives in the agricultural sector of Ukraine.

**The main material.** Development of agricultural service cooperatives is one of the main priorities of the Ministry of Agriculture, an important component of sustainable development of rural areas of Ukraine. In rural areas, home to a third of our compatriots has more than 4.5 million. Individual farms using 6.6 million. Hectares of land and produce about 60% of gross agricultural production. Employment in these farms for the majority of its members serves as the only source of family income.

Actually in order to provide effective public support subsidiary and farmers, the Government in 2009 adopted the State Target Economic Program to support the development of agricultural service cooperatives to 2015 (Cabinet of Ministers of Ukraine № 557 from 03.06.2009.).

Measures the specified program is expected to create 2015 10.5 thousand agricultural service cooperatives - in almost every rural communities to direct their state support 7 billion. 200 million. UAH., Including nearly 6.5 billion. UAH. financed from the state budget.

In this process an important role to play, agricultural extension services, which today have experienced counselors, appropriate infrastructure and support from the state. Order of the Ministry of Agrarian Policy of 09.09.2009, № 645 for agricultural extension services entrusted advisory support for the creation and maintenance of agricultural service cooperatives, cooperative wholesale is wholesale and retail markets, promoting the benefits of cooperation in the countryside.

It should be noted that agricultural service cooperatives should be considered as a mechanism of self-organization of rural producers, as well as a kind of defense mechanism of small peasant farmers from unscrupulous intermediaries and economic dependence on them.

In addition, agricultural service cooperatives - are: increasing the efficiency of agricultural production by optimizing cost producers for the purchase of capital goods, the implementation of market research, as well as increased income from sales, expanding access to agricultural producers, especially subsistence farmers and

to agroservices; improvements to agricultural commodity sales process more efficient use of channel sales, achieving strong positions and their adaptation by agricultural service cooperatives to market economy, creating new jobs in rural areas, improve the social security of the rural population, rising living standards in rural areas.

Over the past 4 years, the number of agricultural service cooperatives in the country increased by 389 units.

According to data from the major departments of agriculture of governors as of January 1, 2013 in Ukraine there are 885 agricultural service cooperatives. During the past year, the number of agricultural service cooperatives increased by 111 units.

The largest number of cooperatives are in Zhytomyr (105), Vinnitsa (84), Ivano-Frankivsk (71), and AR of Crimea (66).

Minimum number of such cooperatives in Donetsk (10) and Khmelnytsky (11) regions.

Of the total number really engage in economic activities 626 cooperatives: from cultivation and harvesting – 118, molocharskyh – 200, Meat - 20, fruit and vegetables - 56 cereal - 31 and other services - 201.

These cooperatives, which combined 24.4 million people during 2012, paid taxes and duties amounting to more than 5 million, provided services worth over 47 million, sold more than 23 thousand tons of milk, 88 tons grains 19.2 thousand tons of fruits and vegetables.

For legal enforcement of the Law of Ukraine on November 20, 2012 № 5495-VI "On Amendments to the Law of Ukraine" On Agricultural Cooperation ", which came into effect on 19 January 2013.

**Conclusions.** One the most critical problems in Ukraine is the lack of cooperative movement in the country, which would contribute to the further development of agricultural market infrastructure has a positive effect on price fluctuations in the food market, creating a network transparent procurement and marketing of agricultural products.

The main reason for the limited cooperative development in Ukraine is imperfect economic and legislative environment in which cooperatives operate today. Therefore, we consider it necessary to amend the Law on Cooperatives in order to eliminate conflicts for farmers, to adopt a program of public price monitoring system of agricultural products and foodstuffs to the study and dissemination of operational information for efficient pricing of cooperatives, to further develop the network advisory services and counseling centers at all levels, to provide support to agricultural producers in the creation and development of agricultural market infrastructure and marketing cooperatives (cooperative learning problems, search markets, etc.), as this will increase the purchase price of products and the profitability of farms.

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## INFORMATION PROVISION OF GRAIN MARKET UKRAINE

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*The article deals with information for the grain market in the world and in Ukraine, the dynamics of grain production, and the directions for the grain market development.*

**Keywords:** *grain market, information provision, market factors grain, the infrastructure of agrarian market, productivity.*

**Relevance of research.** Natural and climatic conditions and fertile soils of Ukraine promote the cultivation of crops and allow for high quality food grains in amounts sufficient for domestic needs and formation of export potential.

Ukraine Grain farming is the most effective and strategic sector of the economy. Grain and products made from it are the basis of food security. Therefore, research on the development of the grain market is relevant.

**Analysis of key publications.** Significant contribution to the development of the problem of forming an effective grain market is the research of Russian scientists, including Skrynik O., A. Sizova, A. Myhayleva, AA Korbut, scientists from Kazakhstan - Hasenova S., A. Bisenbayeva, Y. Ghana, W. Dualeta, A. Kuryshbayeva who conducted a comprehensive study of the production and grain market in these countries and developed measures for its improvement.

The development of the grain market of Ukraine is the focus of local researchers as M. Prysiashnyuk, MD Bezuglyi, SM Kvasha, AV Rozgon, PT Sabluk, O. Nikishin, and other scientists.

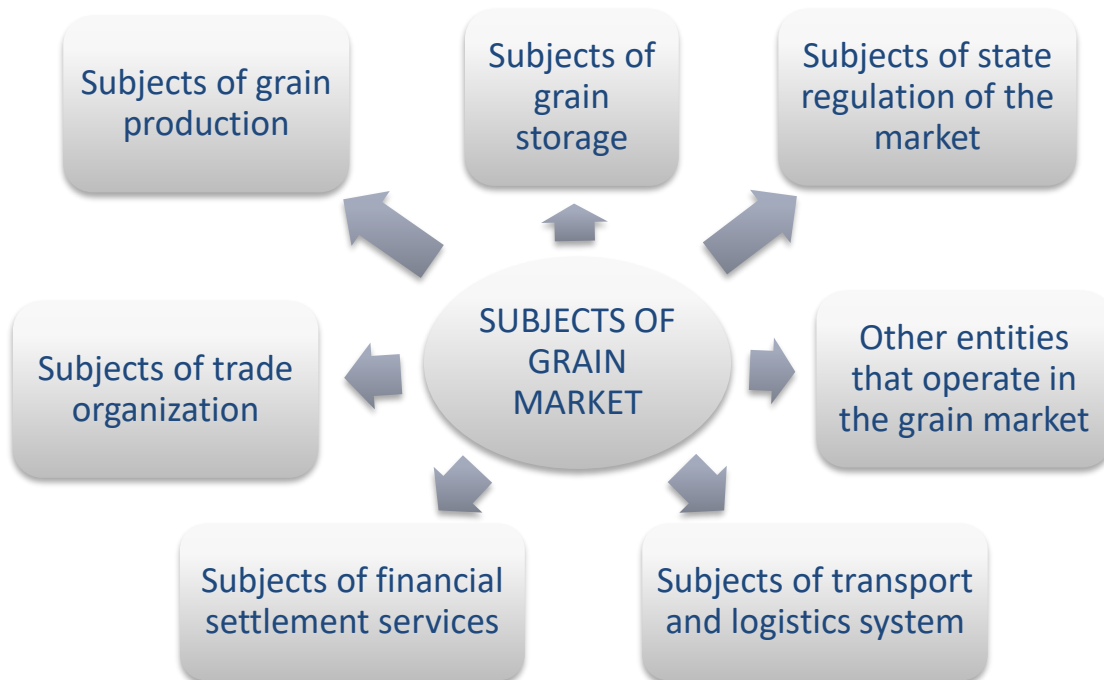
Factors pricing trends in the grain market of Ukraine at present, considered in studies of YY Luzan, O. Bodnar, A. Spiers, IV Kobouta, JS Voskobiynyk and others.

The issue of competitiveness of agricultural products in general and cereals in particular, studied the works of local scientists: VJ Mesel-Veselyaka, MJ Demyanenko, NY Golomsha and others.

**The aim of the article** is to analyze the information of the grain market of Ukraine, identifying current trends and prospects of its development

**The main material.** In today's world market prospects countries define basic resources such as drinking water, grain and oil. Ukraine has unique conditions for grain, since grain sector is the basis for most sectors of agriculture and significantly affects the welfare of the rural population and rural development. Grain industry is one of the most important in the agriculture of Ukraine, by-products of the industry of strategic importance for the country. [3]

Grain market is a system of commodity-money relations that arise between the actors in the production, storage, marketing and use of corn on the principles of free competition, free choice of directions of grain and pricing, as well as state control over its quality and storage . The subjects of the grain market are producers of grain, grain storage companies, entities pledged grain purchases and intervention operations accredited exchange and other (Fig. 1) [4].



**Figure. 1. Subjects grain market of Ukraine [4]**

Adopting in 2002 the Law of Ukraine "On Grain and Grain Market in Ukraine" state prioritized the production of grain and committed to promote sustainable development and functioning of its market.

Defined principles of state policy regulating the grain market. First of all, giving priority budget, credit and investment support to business mortgage purchases of grain and intervention operations, the internal needs of the state in food, seed, feed, grain and technical measures to increase its exports, the minimum guaranteed price for corn mortgage , avoid restrictions on movement of grain and products of its processing, monitoring the quality of grain and its preservation.

According developed by the Ministry of Agrarian Policy and Food of Ukraine and the National Academy of Agrarian Sciences of Ukraine branch of the "Grain of Ukraine - 2015" sown area of grain crops in Ukraine should be about 16 million hectares, including winter wheat - at least 6.0 million hectares , winter barley - 1.2 mln ha of winter rye - 0.3 million hectares of corn - 4.0 million hectares of spring barley -2.2 million hectares. Acreage of millet and sorghum - 0.5 million hectares, buckwheat - 0.3 million hectares [6].

Grain production in these areas, with an average yield of 43-45 kg / ha in 2015 will be about 71 million tons.

The main consumers of grain in the world is Africa and the Middle East (25% of global consumption of grain), USA (17.8%), China (17.2%), India (6.4%).

Ukraine - agrarian country with 27% of the world black soils and huge agricultural potential. Grain production - leading sector agriculture. Cereals in Ukraine occupy over 14 million hectares or 56% of total crop area. Available capacity and geographic location allows you to create batch export crops and lead an active foreign trade. [5]

Grains are mainly exported to Asia - 53% (including wheat - 8.6%, corn - barley and 33.2 - 84.3%), Africa - 22% (including wheat - 27 % corn - 31.1 and barley - 9.4%) and Europe - 20% (including wheat - 31% corn - 19.9 and barley - 5.2%) [7].

For Ukraine, the grain industry is one of the major components of agriculture and grain and its products are of strategic importance for the country, grain products satisfying about 40% of the nutritional requirements of the population of Ukraine. Dynamics of production of grain are shown in Table 1, shows that over the past eight years, grain production in Ukraine remains unstable, although a marked tendency to increase [2].

In comparison to 2003 sown area under cereals increased by 2,954 hectares, which in turn led to an increase in gross grain harvest.

Table 1

**Dynamics of production of grain in Ukraine**

Indicators	Sown area, ha	Production, thousand tonnes	Yield, kg / ha
2003	12495	20234	18,2
2004	15434	41809	28,3
2005	15005	38016	26,0
2006	14515	34258	24,1
2007	15115	29295	21,8
2008	15636	535290	34,6
2009	15837	46028	29,8
2010	15090	39271	26,9
2011	15724	56747	37,0
2012	15449	46216	31,2

Source: [2]

According to some information, the State Statistics Service of Ukraine, as of October 1, 2012. gross harvest of grain and leguminous crops in Ukraine amounted to 32,536.6 tons (bunker weight), which is 7.2 million tonnes, or 18.1% less than the same date in 2011. [1]

Reduction of grain production was mainly due to a decrease in their yield, due to adverse weather conditions during the winter (for winter) crops and vegetation.

**Conclusions.** Present grain market is characterized by lack of parity market, instability and unpredictability agricultural policy artificially control the price of grain in the face of rising prices for fertilizer, fuel, pesticides, etc.. World grain prices

have risen substantially and recorded a new level in the coming years a significant decline in world grain prices possible. Therefore, in the absence of trade restrictions favorable grain prices will stimulate an increase in its production, which is necessary both for export and to meet the needs of all internal.

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RESOURCE SAVING CONCEPT IN THE BIOECONOMY

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*The article analyzes the nature and prospects of resource saving in agriculture based on a conceptual approach to the analysis of system of resource saving components and prospects for its introduction in agricultural enterprises of Ukraine.*

Today bioeconomy replaces the idea of the information economy, as the representation of the important technological changes. Movement for bio-economy is due to the knowledge of mankind of the end of the world oil and gas reserves, and the need to preserve the natural environment. And the main subject in preservation of nature is primarily resource, combined not only with the intensification of agricultural production, but also with diversified activities and reassessment of natural resources. The use of measures of resource in bioeconomics based on the use of renewable resources and modern biotechnology which will give real possibility of a wide range of economic, social and environmental problems.

An important contribution to the solution of the investigated problem belongs to the famous Ukrainian scientists, such as O. Batur, P. Haidutsky, V.M.Geets, S. Doroguntsov, M.I.Lower, B.M. Danilishin, M.I.Kisil, M.G.Lobas, M.Y.Malik, Y. Nicolenko, M.N. Palamarchuck, B.J. Panasiuk, G.M. Pidlisetsky, V.Rossokha, M.A.Sadykov, P.T.abluk, V.M.Tregobchuk, O.N.Spiers, V.Yurchishin.

However, the main problem of the study is to develop the concept of an effective economic mechanism for resource conservation.

The purpose of this paper is to analyze the nature and prospects of resource conservation in agriculture based on a conceptual approach to the analysis of system components of resource saving and prospects for its introduction in Ukraine of agricultural enterprises.

Dominant in the twentieth century model of land separated from agricultural production areas of conservation of biological diversity. This model is no longer corresponds to the current state of affairs. According to recent research of foreign scholars [6] rural economy is recognized as the most significant effects on the environment. Rural settlements, which are now home to 14 million 159 thousand people [4], is largely dependent on the key of Life areas of wild flora and fauna. Agricultural production using environmentally favorable agronomic technologies can support the natural diversity of biological resources of the territory of a neutral or even positive effect on the crops and animals. Innovative farming, known as "organic farming", academics and caring about the environment farm owners adapt, develop and manage various types of "eco-agricultural" environments that combine the positive impact of human activities, influence of the forces of nature and improve of living environment in rural areas. Main questions of formation and development of harmonious combination of human impact on the natural environment providing economy based on the restrictions imposed on the agricultural enterprise the need to maintain nature in its original condition, economic effectiveness of the coexistence of man and nature, as well as organizational, legal and infrastructural measures necessary for the establishment and functioning of ecological agriculture. To address these issues we need to consider essence of the process of formation and strategic support for rural development of innovative environmental and economic measures. Although this issue repeatedly stressed the national level, even in Soviet times, the local environment and its preservation cases related to state-level and local community involvement in this case has little, although it is the primary beneficiary of ecological agriculture.

Given the export capacity of agriculture in Ukraine, which in 2012 exported goods on the cost of 18.2 billion dollars, more then in 2011 on 40% [4], which provided a positive trade balance, and by now is one of the most important sectors in the economy. World population is expected to grow from more than 6 billion today to over 8 billion by 2030, growing by about one third, and another 2-4

billion over the next 50 years [7]. But the demand for food will grow even faster, resulting in increasing urbanization and rising incomes, and if the mechanisms for the fight against world hunger would work, then to the current consumption will join another 800 million people which are currently undernourished (UN Millennium Project 2005) [7]. Of course, the modern system of agriculture and animal husbandry will need more land for growing crops, especially as biofuels do more contribution to the energy needs of mankind. Only in Africa, the area under cereal production is expected to increase from 102.9 million hectares in 1997 to 135.3 million hectares in 2025 [6]. World consumption of animal products is projected to grow from 303 million tons in 1993 to 654 million tons in 2020 [6].

According to the calculations of foreign scientists and the World Food [5] to provide food 9,000,000,000 people using modern techniques to bring another 1 billion hectares of natural land in agricultural production, especially in developing countries, as well as double or triple introduction of nitrogen and phosphate fertilizers, increased water consumption in half and use of pesticides three times. A major constraint is the lack of water as surface water resources of Ukraine are 1 thousand cubic meters per capita, at a rate of 1.7 thousand in Europe this figure is an average of 5 thousand cubic meters, in - 31 in the U.S. - 7.4, and in Canada - more than 94.

CAD to the Secretary of the Security Council of Ukraine Andriy Klyuyev [1], due to the deterioration of drinking water in the world, in September 2010 the Council of the UN Human Rights adopted a resolution by which the right to water and proper sanitation as fundamental human right. It was pidtverddzheno and the UN General Assembly, and in 2013 was declared the International Year of Water Cooperation.

Due to the fact that the main consumer in the world is agriculture - 70% of freshwater used by people (in Ukraine, it taken by industry), water scarcity affects more strengthening food crisis and the impact on energy development and industry around the world.

At the same time there is a problem storing and using the main resource of export of agricultural production - land so as to safely maintain its fertility as a resource that can be used by people. Saving has become critical because the world population has increased over the years and each year the demand for food products. Environmental Agriculture is sometimes called "agricultural environmental management" to be sanctioned and financed by the program for the conservation of natural resources in general and Earth - as an individual direction.

The concept of resource-saving agricultural production aimed at achieving profitability of agricultural production, high and stable production growth while preserving the environment. Resource is based on the increasing intensity of natural biological processes above and below ground. Measures such as mechanical tillage are reduced to an absolute minimum, and the use of external factors such as agrochemicals and nutrients of mineral or organic origin are applied at an optimum level in a quantity that does not interfere with biological processes. Resource characterized by three principles that are related to each other, namely:

1. Minimum mechanical damage to the soil at all stages of production.
2. Creating immutable organic soil.
3. Diversification of crop species grown in rotation or relationship.

Conventional "arable" agriculture is usually based on the processing of the soil as a major work. The most well-known tool for this operation is the plow that has become a symbol of agriculture. Tillage was last associated with increased yield, which arose from the mineralization of soil nutrients as a result of tillage. This process in the long run leads to a decrease in soil organic matter. the organic layer of soil not only provides nutrients for crops, but also, above all, is an essential element for stabilizing soil structure. Thus, most of the soil deteriorates after prolonged intensive treatment. This structural degradation leads to the formation of crusts and compaction and ultimately leads to soil erosion. Mechanization of tillage on higher working depths and speeds and the use of some tools like plows, disc harrows and rotary cultivators have particularly detrimental effects on soil structure.

Soil erosion by tillage forced us to look for an alternative and reverse the degradation of soils. The logical approach to reduce the degradation of soils - reducing interference in the processing of the soil. This led to a search for alternative tillage, and especially zero-tillage in both the U.S. and in Ukraine. Experience applying subsurface soil mass in Ukraine began in the Poltava region of 80 years efforts chief ideologist mold technology tillage Theodore blinker. Subsurface tillage as a primary tillage is carried out in Ukraine through flat, but a common technology plowing plows with shelves that do not lead to reversal of soil layers, but left on the surface remains. Subsurface tillage is used in dry areas with a high probability of wind erosion and provides no-till field soil to a depth of 30-40 cm once in five years and subsequent annual soil to a depth of 10-12 cm cultivators [2]. In Poltava Institute conducted APV them. M.I.Vavilova scientific research to technological development "Resource-saving technology during primary tillage grain corn" mold testing technology have shown that compared with plowing at 25-27 cm, reducing its depth of 14-16 cm virtually no impact on the level of grain productivity of maize (respectively 54.9 and 54.2 kg / ha). Total production cost of maize cultivation technology, the cost of 1 kg of grain during plowing or no-till cultivation at 14-16 cm below according to 3-7,8 and 2-8,3% from plowing to 25-27 cm [3]. Over the past three decades, technology has been improved and adapted to virtually all sizes of farms, soil, type of crop and climatic zones. The experience gained in this new approach, agricultural science support over the years. Ukraine still the most common way is heaps tillage farming system. But due to the rising cost of fuel and lubricants heaps system will soon be left in the past, and agriculture gradually transferred to mold, then the system of minimum tillage, then - zero tillage, and finally, the development of bio-economy, the widespread implementation of integrated crop and farming systems that are based on them.

Resource in agriculture than direct benefits of saving production costs, has several other benefits that can be attributed to positive externalities - reduce the impact of erosion, better water conservation, improved air quality due to fewer emissions chance to increase biodiversity in one or another area.

From the farmer or personal farm, using energy-saving technologies can ultimately do what is done in traditional agriculture, but with better quality results than the conventional technology. Saving resources demand their evaluation and analysis of the use of which by itself with innovative technologies that can improve the processes already building supplies and reduce the amount of resources used. During first steps, these economies will have little noticeable, but in the long run, when lands accumulate enough organic matter in the soil, will own fertilizers.

Suggested steps towards resource-saving agricultural production in terms of technology, provide higher yields and better performance than conventional agricultural practices. Also a specific area of the improved land is grazing in the field after harvest. Therefore, subject to the rules on livestock density can provide additional revenues of organic fertilizers.

Conclusions and recommendations for further research. There are three main benefits of resource conservation in agriculture:

The first is that the manufacturer will be able to make renewable soil resource by increasing organic matter.

The second advantage is to reduce the use of water resources through the retention of moisture in the layer of natural organic matter and soil structure, which will transport moisture, ensuring the withdrawal of excess depth.

The third advantage is the improvement of soil structure and root zone.

For farmers, resource farming is mainly attractive because it allows to reduce production costs, reduce time and labor, especially in peak periods, such as land preparation and planting, reduces the cost of investment and maintenance of machinery in the long run.

As with any other business, manufacturers and owners of natural resources always focus on their future. In this case, the resource is a very important process which gives a wide range of positive externalities for future generations and conserve resources in the present.

To deliver such an important purpose in society must be some services that provide services of resource-saving production and disperse knowledge about its

benefits, while collecting information about the practice of back use. These services that we believe may be advisory service. Surveys conducted in workshops to teach farmers modern techniques of cultivation of crop production based on the use of drip irrigation and wallpapers, and our own experience demonstrates the need for such an organization objectively and impartially would provide information. In the context of global development and a constant lack of resources for production (especially fuel and oil) resource is necessary to be able to produce.

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**EXTENSION SERVICES IN THE PRODUCTION AND SALE OF GRAIN IN  
AGRICULTURAL ENTERPRISES**

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*Investigated the economic efficiency of the production and sale of grain in agricultural enterprises of Zhashkivskiv district of Cherkasy region and performed the analysis of activity of agricultural extension services.*

*Key words: grain, grain market, production, sales, economic effectiveness, dissemination of agricultural knowledge, extension service.*

The problem of increasing the volume and stability of grain production is a key national agricultural policy. Overcoming this problem is a distinctly regional character, due to increasing regional responsibility for the provision of food. Artificial grain production is of strategic importance for the regulation of the national economy of Ukraine, since the success of its development, the conditions for overcoming the crisis in a number of related industries.

In order to promote sustainable development of agriculture and economic development of modern technology both in Ukraine and in the Cherkasy region in particular, should pay attention to the development of agricultural extension. Because advisory services in agriculture can help meet the needs of agricultural producers and rural population to increase knowledge and improve practical skills of managing income and improve rural welfare and rural development. Inadequate handling these issues and their methodological and practical significance determined the choice of topics for writing.

At all stages of the development of agriculture in Ukraine, priority was zernoproduktov production and study of measures for its stabilization and economic efficiency is a national objective of strategic importance. It is reflected in the scientific writings of scholars such economists as PT Sabluk, ON Spiers, VI Boyko, MG Lob, VL Volynets, O. Kalyuzhniy, V. Klochan, LM Khudoliy, VF Saiko, VI Gubenko, VM

Zhmaylova, VG Andrijchuka and others. Problems in the functioning of agricultural advisory services dedicated to working MV Gladiy, PT Sabluk, VP Sytnyk, MF Kropyvka, RJ Roots and others. However, a number of issues concerning the functioning of the grain industry and agricultural extension services remain relevant.

The purpose of the article is theoretical and methodological rationale of economic efficiency of grain farms Zhashkivskyi district, Cherkasy region, the study of agricultural extension services and elaboration of practical recommendations on the feasibility of their operation.

Economic efficiency of grain production is characterized by the ability of companies to produce the maximum amount of product required quality with minimal costs and implement it with minimal losses for the largest prices. That is, economic efficiency depends on whether products meet market requirements and consumer.

Analysis of grain production Zhashkivskyi district of Cherkasy region shows that the output of cereals and pulses has increased by 184%, sales - at 161%, yield increased by 131%, the production cost of 1 kg - 27%, total cost of 1 kg of sales - the 30% and selling price increased by 62%. There is a tendency correlation between the amount of product produced and sold, the amount of increase in the period studied period (except for 2010). In 2011, there is a relatively high yield (65.9 t / ha). There is a trend of constant growth rates, but the negative is to increase production and realizable cost of grain. Also, it should be noted that despite the increase in selling prices, it remains less than the full cost of produce sold during the years 2007-2010 and only in 2011 was a positive shift (Table 1).

Table 1

Analysis of grain production in agricultural enterprises Zhashkivskyi district of Cherkasy Oblast

Indicators	Year					2011 p. in % to 2007 p.
	2007	2008	2009	2010	2011	
Produced, thousand t	484,7	932,2	1240,4	657,2	1379,0	284,5
Sold, thousand t	374,7	548,5	1256,5	561,7	978,8	261,2
Yield, kg / ha	25,4	49,5	46,0	39,3	65,9	231,8
The production cost of 1	58,70	51,18	56,10	80,31	74,67	127,2

kg, hrv						
Total cost of 1 kg of sales, hrv	92,91	82,49	85,79	131,25	121,06	130,3
Price of 1 kg, hrv	81,64	76,00	81,84	106,8	132,53	162,3
The level of marketability,%	77,3	58,8	101,3	85,5	71,0	x

Calculated by the author based on data from Office of Agricultural Development  
Zhashkiv RSA

At the regional grain market Zhashkivskyi area there is a definite correlation between the volume of production, distribution and sale of products. This is because the pricing environment for regional grain market in recent years, largely determined by supply and demand, consisting in the market. Thus, the volume of sales increases when the output market top, and the level of market prices set by the lowest.

Analysis of the current status of cereal and pulse production in the region shows that the largest share among the areas of sales takes on such channels as "other lines of," which in 2011 was 83% of total sales; shareholders in respect of land rent and property rights granted 15% of the grain, the market, through its own stores, tents and benches sold 2% of the production, processing enterprises and the public in respect of remuneration given no more than one percent of the grain. Studies indicate that the implementation of the grain does not happen through channels formed and stable distribution. It is characterized by a dynamic and changing share of existing channels and the emergence of new ones.

Efficiency of agricultural production is a result of the various categories of farms and interaction of various organizational and economic factors, the use of aggregate inputs and various other resources.

Grain production occupies a leading position in the structure of the agricultural sector of Ukraine. But at the same time is one of the key problems of agrarian economy of the state. From the standpoint of food security of the successful development of the industry is of great economic importance. As traditionally profitable industry, grain production is one of the main sources of cash income for agricultural producers. But, as the analytical review, overall grain production, is far

from optimal grain production efficiency and market compatibility, there is a significant difference between advanced and lagging agricultural enterprises. This shows the need not only material, but also functional support agricultural development of the state. Therefore, there is a need for counseling as an effective tool implementing government agricultural policy.

Grain production in Zhashkiv area, according to the study, despite the organizational and economic complexity of the current stage of management is core of most farms, as grain production is the main source of farm income. Analyze the efficiency of grain farms Zhashkivskyi district, Cherkasy region (Table 2).

Table 2

The economic efficiency of grain farms Zhashkivskyi district of Cherkasy Oblast

Indicators	Years					2011 to 2007 (+;-)
	2007	2008	2009	2010	2011	
Yield, centner / ha	25,41	49,53	46,01	39,32	65,91	40,50
Cost of 1 centner, hrv	92,91	82,49	85,79	131,25	121,06	28,15
Price of 1 centner, hrv	81,64	76,00	81,84	106,8	132,53	50,98
Earnings (loss) per 1 centner, hrv	-11,28	-6,50	-3,94	-6,45	11,47	22,75
Earnings (loss) per 1 ha, hrv	-211,56	-188,98	-199,72	-212,81	516,22	727,78
The rate of return (loss),%	-12,1	-7,9	-4,6	-5,7	8,5	20,6

Calculated by the author based on data from Zhashkiv Office of Agricultural Development

Factor that characterizes the efficiency of grain production is profitability. With the reduced data state that the return on which accumulates the results of production and the effect of virtually all of the major factors that determine the level of economic efficiency, the trend is unstable and is characterized by loss ratio. During the period under review, the company bearing area loss and only in 2011 were the Profits and profitability reached 8.5%.

The rising cost of equipment, fuel and lubricants, fertilizers and other inputs affects the magnitude of the cost, which increased in 2011 compared to 2007, almost

2.5 times, while improving sales price for 50,98 € / kg . But the growth rates of excess cost growth. As a result, the gain of 1 kg, although not quite significantly, but increased. Out of unprofitable enterprises situation testifies to the correctness of selected areas of production and selection of successful ways to implement solutions.

The main priorities of grain farming Zhashkivskyi district of Cherkasy region is to provide high-quality grain production capacity, control negative processes taking place in the field of sales and promotions to the consumer.

In our opinion, the main objective of the strategy in the grain should be the realization of the state of certain transitional measures, effective and efficient methods, techniques and mechanisms that would ensure the transfer of the main branches of the agricultural sector to build innovative model of sustainable production, economic efficiency and competitive products. In particular, it is advisable to pay attention to factors that improve the efficiency of marketing channels for marketing, to changes in government regulation of the grain market, improve market analysis and information services, improvement goals and methods of state regulation of the grain market.

It is to address these problems faced by agricultural producers and to promote sustainable agriculture and economic development of modern technology, there is a need for the introduction and development of agricultural extension institutions.

At present, the agricultural extension system in Zhashkiv area Cherkasy Oblast is a difficult way of development. Among the reasons that hinder the development of extension services is understanding the nature of extension services, ambiguous interpretation of the Law of Ukraine "On Agricultural Advisory Services" lack of awareness of owners of business entities from the scope of advisory services.

Conclusions and recommendations for further research. In studying the development of grain production must consider specific economic relations between market players, demand, supply, price movements in domestic markets, product quality, forming a system of state regulation and market infrastructure at regional level, which requires activation studies based on natural and economic characteristics of the region. To improve the efficiency grain production and ensure its sustainability and stability relations of all subjects to the grain market: direct further development of

farm commodity-money relations based on private ownership, cooperatives, rental of property, toward the transition to resource optimization and improved performance labor deepen specialization at all levels of production, the introduction of modern technologies of production and processing of products, updated material and technical base, the formation of an effective incentive system of production through the creation of agro-industrial units, improved pricing, state grants, concessional loans, the formation of the modern market infrastructure sales products closest to the direct producers. And also need to pay attention to the development of agricultural extension, since it is an effective mechanism for implementing and disseminating best practices of agriculture. Improving this institute, you can get significant results in the development and performance of the agricultural sector of our country, including grain farming Zhashkivskyi district, Cherkasy region.

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**ECONOMIC EFFICIENCY OF GRAIN PRODUCTION AND INCREASING  
COMPETITIVENESS OF THE ENTERPRISE WITH EXTENSION SERVICE  
HELP**

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*Investigated the economic efficiency and competitiveness of grain production in agricultural enterprises of Kyiv region and performed the analysis of influence on that indicators of activity of agricultural extension services.*

*Key words: grain production, economic effectiveness, competitiveness, extension service.*

In the stabilization of the national economy priority belongs grain subcomplex has a multiplier effect on the level of development of other sectors of the economy and social sphere and most defines food security. However, despite the favorable soil and climatic and economic conditions for the development of grain production over the past twenty-three years of apparent negative trends in its development, due, above all, lack of material and resource support production and decrease the level of mechanization of production processes, which poses a real threat to development of grain production and food security.

In order to promote sustainable development of agriculture and economic development of modern technology both in Ukraine and in Kyiv region in particular, should pay attention to the development of agricultural extension. Because advisory services in agriculture can help meet the needs of agricultural producers and rural residents in raising awareness and finding sustainable, resource-efficient methods of agricultural production. Inadequate handling these issues and their methodological and practical significance determined the choice of topics for writing.

Analysis of recent research and publications. A significant contribution to science in the field of grain production, increase its cost-effectiveness and profitability have S.S.Bakay, V.I.Boyko, M.Y.Malik, P.T.Sabluk, L.M.Hudoliy, and many others. The issue of competitiveness of production estimates grain industry is important and

thoroughly studied by researchers such as V. Goncharov, NV Radchenko, Solovyev I. However, a number of issues concerning the functioning of the grain industry and agricultural extension services remain relevant.

The purpose of the study. The purpose of the article is to study ways of improving economic efficiency and competitiveness by bringing grain farm advisory services.

The main material. Economic efficiency of grain production is characterized by the ability of companies to produce the maximum amount of product required quality with minimal costs and implement it with minimal losses for the largest prices [1]. Economic efficiency depends on whether products meet market requirements and consumer.

The competition acts as a force that aligns market prices for goods. It can be in the form of intra-and inter-industry competition. Intra competition is competition between producers in more favorable conditions for the production and sale of goods within the same industry. Intersectoral competition is competition between manufacturers of products for various industries better scope of capital.

Analysis of grain production Kyiv region shows that in 2012. overall agricultural production compared to 2011. increased by 9.0%, including agricultural enterprises - 9.9% of households - by 7.2%. Index of crop production in 2012. compared to 2011. was 108.8%, including in agricultural production - 110,7% in households - 105.8%. In comparison with 2011. gross harvest of grain and leguminous crops (3187.8 tons) increased by 14.4%, due to both the expansion of harvest area (7.6 ha or 1.2%) and an increase in grain yield 1 hectare (5.9 kg or 13.1%) [6].

Agricultural enterprises produced 2812.5 thousand tons of grain, which is 12.2% more than in 2011. Individual farms - 375.3 thousand tons (34.1% more). Yields of crops compared to 2011. farms increased by 5.0 kg, or 10.5% (by 52.4 quintals per 1 ha), in households - 11.0 kg or 34.2% (by 43.2 quintals 1 ha). [6] In 2012. collected significantly better than in 2011. harvest almost all cultures grains: rye - 46.7 thousand tons (by 74.5% more), oats - 25,7 thousand tons (by 53.1%), wheat - 869,9 thousand tons (by 44.9%), barley - 339.5 thousand tons (20.0% more), corn - 1860.9 thousand tons (2.8% more) that is due primarily to a significant increase in their

productivity (except corn). Gross harvest of some crops against 2011. reduced: SC - by 51.0%, buckwheat - by 7.6% [6].

Grain production in the Kiev region, according to the study, despite the organizational and economic complexity of the current stage of management is core of most farms, as grain production is the main source of farm income. Systemic effects of competitive advantage grains of Kyiv region can be estimated on the basis of the competitiveness index, defined as the ratio between the amount of grain that is exported outside the region, and the volume of imported grains [6]:

$$I = 25016,9 / 60,6 = 412,8$$

Since we received the results greater than unity, we can state that the grains of Kyiv region is competitive. The main factors affecting the competitiveness of the grain produced in the region is level of quality, infrastructure and price. Doing accounting and measuring, control, distribution and catalytic function, the price was the most decisive factor in the production of grain. Preference price factor can be achieved by reducing the number of commercial structures on the way from producers to consumers of grain. This is the realization of grain commodity exchanges, which is an effective mechanism for the formation of a relatively high price levels. Although the Kyiv region there is only one commodity exchange, which may lead trading grain, more manufacturers wishing to obtain a fair price for their goods, are its members.

To quantify competitiveness using different methods [5]. We consider a method of calculating the integral indicator of the competitiveness of wheat three teaching and research farms NUBiP Ukraine, located within the same climatic region (Table 1).

Table 1.

The integral indicator of the potential competitiveness of wheat in 2011 \*

Index name	НДГ «Великоснітинське»			НДГ «Ворзель»			НДГ «Агростанція»		
	вага показ ника	Бал показ ника	Оцін ка	вага показн ика	Бал пок азн ика	Оцін ка	вага показ ника	Бал пока зник а	Оцінка
The effectiveness of	0,15	3	0,45	0,15	2	0,3	0,15	2	0,3
Quality planting material	0,25	2	0,5	0,25	1	0,25	0,25	3	0,75

Quality of plant protection products	0,25	3	0,75	0,25	2	0,5	0,25	1	0,25
soil fertility	0,15	3	0,45	0,15	2	0,3	0,15	2	0,3
Level Logistics	0,2	3	0,6	0,2	2	0,4	0,2	1	0,2
Performance hardware	0,15	3	0,45	0,15	3	0,45	0,15	3	0,45
The integral indicator	1	-	3,2	1		2,2	1		2,25

\* the author's calculations

When calculating consider those indicators that are basic to the stages of cultivation and harvesting. Since the effective activity of producers on these stages depends on whether they are of high quality wheat that meets the applicable standards.

The maximum integral indicator of competitiveness of wheat NDH 3.2 "Velykosnitynske " (Table 1) shows the best level of baseline characteristics on the stages of cultivation and gathering wheat. So NDH "" for these stages are the most potentially competitive enterprise. In situations where the management of each company seeks to identify the competitive advantages of the wheat and the main directions of improving its competitiveness potential must use a method for constructing "Polygon of competitiveness" (Fig. 1).

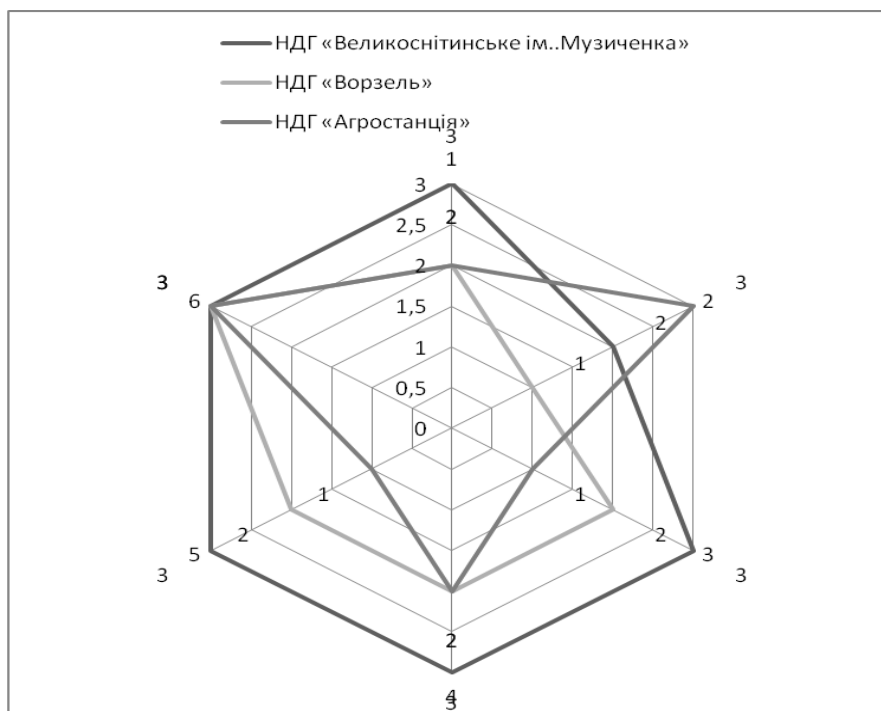


Figure. 1. Polygons potential competitiveness of wheat

The level of potential competitiveness of wheat each enterprise is, respectively:

$$S_{\text{Velykosnitynske}} = \frac{1}{2} \times \frac{\sqrt{3}}{2} \times (3 \times 3 + 2 \times 1 + 3 \times 3 + 3 \times 2 + 3 \times 2 + 3 \times 3) = 18,45$$

$$S_{\text{Vorzel}} = \frac{1}{2} \times \frac{\sqrt{3}}{2} \times (2 \times 3 + 1 \times 1 + 2 \times 3 + 2 \times 2 + 2 \times 2 + 3 \times 3) = 13,5$$

$$S_{\text{Ahrostantsiya}} = \frac{1}{2} \times \frac{\sqrt{3}}{2} \times (2 \times 3 + 3 \times 1 + 1 \times 3 + 2 \times 2 + 1 \times 2 + 3 \times 3) = 12,15$$

The largest area of the polygon 18,45 and consequently the highest level of competitiveness has the potential wheat NDH "Velykosnitynske." The level of potential competitiveness NDH "Vorzel" and NDH "Ahrostantsiya" is 13.5 and 12.5. Thanks to the built polygons (Fig. 1). Noticeable that each business has its competitive advantages and disadvantages that prevent obtaining high yields of wheat quality.

Competitive advantages NDH "Velykosnitynske" can mark quality crop protection, agro-technology efficiency, productivity tools, and soil fertility, which is owned by the company. The main drawback is the lack of quality planting material, using the company in the process of growing wheat.

We believe that the key to improving economic efficiency and competitiveness of agricultural enterprises Kyiv region will be advisory organization. In the world of the information age is information, not physical, and even financial resources is a key success factor. National consultancy market, which amounts to only 2.5 billion., Is now at the stage of active formation according to the above global rates. Today the Ukrainian market operates about 400 companies engaged in management consulting. [4] Based on the experience of development and consulting services necessary aspect of their genesis is to highlight the development and dissemination of agricultural extension. After the development of extension services in Ukraine is an important element for the further development of agriculture.

Conclusions and recommendations for further research. Enterprises of grain subcomplex operate in an unstable internal and external environment. For the sake of preserving their economic efficiency and competitiveness in the market companies must constantly adapt to changes taking place, and make adjustments in their operations. At present, the agricultural extension system in the Kiev region is on track maturity. Among

the causes that prevent the implementation of world-class advisory services are misunderstanding the nature of extension services, ambiguous interpretation of the Law of Ukraine "On Agricultural Advisory Services" in the area of proper public funding.

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WAYS TO INCREASE ECONOMIC EFFICIENCY OF DAIRY  
FARMING USING EXTENSION SERVICES

**Gerasymchuk N.A., Tairov V.**

*Investigated the economic efficiency of milk production and sale in agricultural enterprises of Lugansk region and performed the analysis of activity of agricultural extension services.*

*Key words: milk, milk market, production, sales, economic effectiveness, dissemination of agricultural knowledge, extension service.*

Lugansk region occupies last place in the ranking in terms of milk production, while in terms of population is the sixth in the rankings. Milk production has traditionally been tied to places of consumption, in terms of population density Luhansk region creates conditions for development of big companies, but still 80% of the milk produced in private households, as in most in Ukraine.

In order to promote sustainable development of agriculture in Ukraine and in the Luhansk region in particular, should pay attention to the development of extension. The experience of the United States knows that agricultural advisory services necessary for and meet the information needs of agricultural producers and rural population and improve the welfare of the rural population through the use of acquired knowledge and skills and the development of rural areas. The essence of the problem is that based on the findings of dairy Luhansk region suggest specific areas to improve the efficiency of milk production.

Analysis of recent research and publications. These problems were investigated and researched by domestic scientists. In particular, RI Trynko and PV Olhovetsky [1], S. Sheveliova [2], AP Hohulya and IP Kudinova [3] AA Kozak [4] PT Sabluk and VI Boyko [5] MV Kalinchyk and A. Odintsov [6] and others. However, it should be noted that in scientific publications above mentioned

authors are more special features of dairy farming at the national level than at the level of regions, provinces, districts and farms.

Therefore, the issue of efficiency of milk product subcomplex Luhansk region with involvement in the activities of agricultural extension services remain relevant.

The purpose of the article is theoretical and methodological rationale of economic efficiency of milk production in agricultural enterprises in Lugansk region, with the assistance of agricultural extension services and elaboration of practical recommendations on the mechanism of their effect on the operation of enterprises - producers of milk.

The critical state of agriculture in Ukraine led to steadily reduce the number of cattle in 2011, the total herd amounted to 4425.8 thousand heads, Cows - 2582.5 thousand heads., Or 17.9% and 30.8% respectively, from 1990 levels

In Lugansk region total number of cattle decreased by 699.3 thousand units, or 82.1%, including cows - to 221.8 thousand units (74.4%). In 2011, 100 residents of Luhansk region accounted for 2.2 cows in Ukraine as a whole, the figure was 6.1 cows.

During the 1990-2011 biennium cows gradually shifted to the peasant farmstead. The share of cattle farms in 2011 was 77.4% of the total dairy herd as a whole in Ukraine and 71.5% - in the Luhansk region.

Trends in dairy farming, led to reduction of the gross milk yield in the Luhansk region - 371.4 thousand tons, or 58.1%. This trend affected the change in the structure of the gross yield on the types of farms. Thus, in 1990 the agricultural enterprises in Lugansk region, was produced 18,634.1 tonnes of milk, which is more than 3 times the output of farms, then in 2011 - 2454 tons of milk is 13.1% compared to 1990 and 4.4 times less than the total milk yield in households. Since the mid 90's farms have become a major producer of milk in 2011, their share in total milk production was 81.5%.

Over the years, milk production farms were unprofitable, which is reflected in the volume of production and level of marketability of milk. It should be noted

that the transition to small-scale production in peasant courts increases the complexity of the production of 1 ton of milk, creates difficulties in carrying out the full veterinary measures to control compliance with sanitary standards and accepted process of milking the milk.

Decline of dairy farming generates low levels of raw materials for milk processing plants. In 2011, milk processing enterprises of Ukraine received 5607.4 thousand tons of milk in the student's record weight in 3.2 times less than in 1990

The trend of changes in the procurement of raw milk across the country adequately reflected in the procurement of regional milk processors. Thus, in 2011 the supply of milk were 107.7 thousand tons, including 30.7 thousand or 28.5% came from farms to households - 77.0 thousand tons, or 71.5 %.

The observed change in the dynamics of purchase prices for milk and the prices of final products in the regional market influences the distribution of proceeds from the sale of the final product, which makes the problem of normalization of relations between actors in the value of milk and milk products.

According to the analysis of regional self-sufficiency major dairy products should be noted that due to the production of regional enterprises Lugansk region is not provided to any kind of dairy products. Thus, in 2011 the domestic production of butter could be achieved only 23.4% of the total demand in case of implementation within the region, processed liquid milk - by 29.8%, dairy products, except sour cream - 3%, fresh unfermented and cottage cheese by 2.8% cream - 16% and fat cheeses - by 51.5% (Fig. 1).

Index of total self-sufficiency main types of milk in 2011 was at 4.48%, in 2010 - 7.7%, in 2009 - 6.3%, in 2008 - 5.07%, indicating a low level of development as the dairy industry and all dairy subcomplex in Luhansk region.

Against the background of low-level production of dairy processing in Luhansk consumption of dairy products for the period 2005-2011 year tends to increase (Fig. 2).

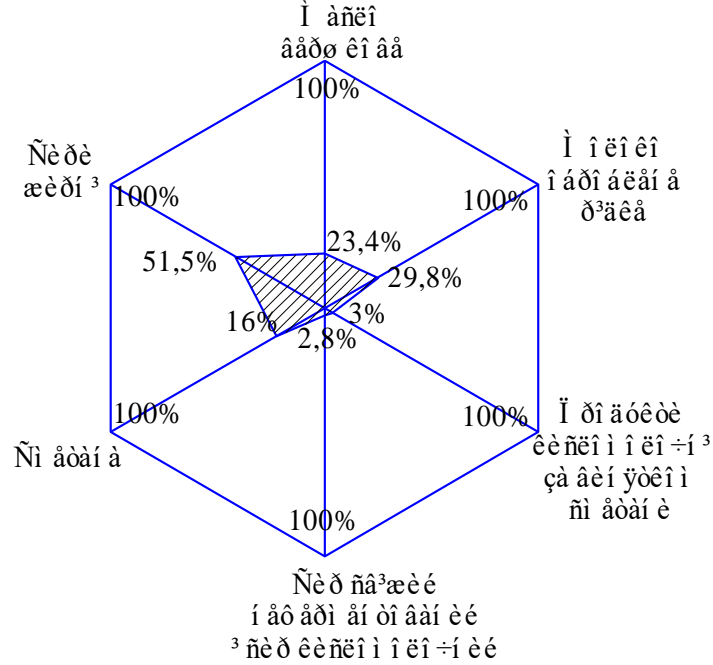


Figure. 1. The level of self-sufficiency Lugansk region main types of dairy products from the production of regional dairy processing in 2011,%

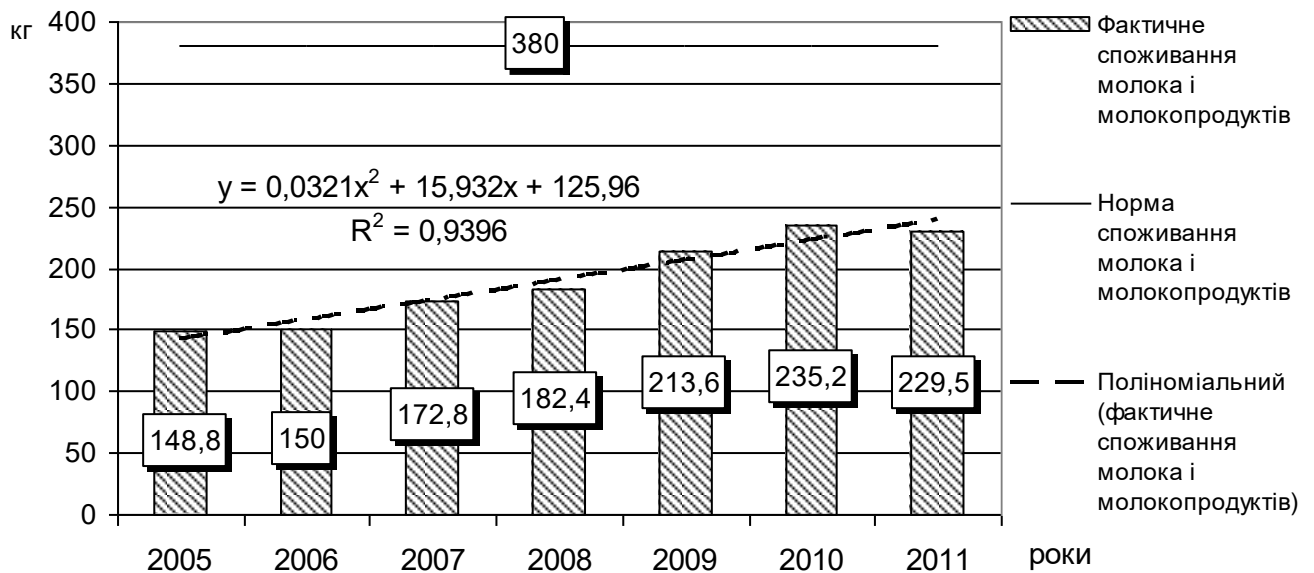


Figure. 2. Consumption of milk and milk products on average per year per person in terms of milk, kg

During the period 2005-2011 average consumption of milk was increasing in terms of milk was 86.4 kg, or 58%, average consumption increase was 14.4 kg per year. In 2011, this figure decreased by 5.7 kg or 2.4%. In general, Ukraine consumption of milk and dairy products for the period increased by 62.4 kg or 30.4% and amounted to 267.6 kg in 2011. The structure of consumption, there has been an increase in the share of consumption of dairy products.

Consumption and economic efficiency of enterprises depends on the price situation. During the period 2005-2011 biennium for the consumer market grew by 98.4%. The price situation on the market of milk and milk products also reflects the general trend of rising prices, but the change in selling price to different types of products, due to changes in consumer demand. Thus, during the 2005-2011 biennium, the price of butter as a whole grew by 42.8% for milk and dairy products - by 132.6%. The price level is a balancing element between supply and demand in the market. In Ukraine it is high time consumption is the main limiting factor in the production of milk and dairy products.

With the current low purchasing power consumption of milk and dairy products depends on the level of real income of consumers. According to statistics, in the third quarter of 2012 compared to the same period last year nominal income increased by 14.2%. Disposable income that can be used to purchase goods and services, and real disposable determined considering the price factor increased by 13.5%.

Available income per capita for the third quarter of 2012 amounted to 6618.7 USD., Up 802.3 USD. more than in the same period last year. Expenditures in the third quarter of 2012 compared to the same period last year increased by 14.7%. Increase savings amounted 37,946 mln., Consumption of milk and dairy products increased by 30.4%, the average increase in consumption - 4.6% per year. The coefficient of elasticity of consumption depending on the level of real income is 0.12, meaning that an increase in the level of real income by 1% consumption increase by 0.12%.

Over the past few years a decline in raw materials and as a result of competition in the market of milk and milk products trend of consolidation of the dairy processing. Large dairy plant (treatment capacity of 150-200 tons per day), with large industrial and financial capacity to absorb smaller, which become points of collection and primary processing of raw materials and production of traditional dairy products for the local market.

Formation and expansion in the market for milk and dairy larger producers in other regions pushes regional manufacturers to less profitable segments of the market, forcing, however, look less capacious and more costly channels. This trend may eventually lead to bankruptcy and regional milk processors absorption of representatives of other regions.

Based on the analysis, we can conclude that the stabilization of dairy subcomplex requires the development of a policy in accordance with the current market environment. The specified policy must take into account measures of state regulation aimed at supporting incomes of enterprises in accordance with the WTO to intensify the integration process for the formation of a stable and high-quality raw materials and normalization of relations participants throughout the process of the value of milk and dairy products.

The main priorities of dairy subcomplex Luhansk Oblast is increasing production of high quality milk, contain negative processes taking place in the field of sales and promotions to the consumer.

In our opinion, the main objective of the strategy of milk in should be the realization of the state of certain transitional measures, effective and efficient methods, techniques and mechanisms that would ensure the transfer of the main branches of the agricultural sector to build innovative model of sustainable production, economic efficiency and competitive products. In particular, it is advisable to pay attention to factors that improve the efficiency of marketing channels for marketing, to changes in government regulation of the milk market, improve market analysis and information services through the development of agricultural extension institutions.

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## **ROLE OF THE POLISH AGRICULTURAL EXTENSION IN THE ENVIRONMENTAL EDUCATION**

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The article presents forms and methods of environmental education agricultural extension of Poland in order to increase environmental awareness of rural population and conservation of the natural environment. Analyzed the experience of the local extension and of directions of their activity in the agricultural sector in Poland.

**Key words:** environmental education, extension, environmental awareness

### **Introduction**

Business extension services in Poland on the implementation of environmental education of producers of agricultural products is informal and effective. One of the evidence of this is adoption at every level Extension Service in 2007 agri-environmental programs for 2007-2013. Aim of this programs is to improve environment in rural areas, including: agrocenosis, rehabilitation of biodiversity, advertising balanced economic system, rational land use and protection of water preservation local species animals and varieties of cultivated plants. Participation conditions in that program motivating agrarians to environmental activities through promotional measures, monetary grants, etc. [1].

The structure of many regional extension services in Poland founded Centres of environmental education goals which are:

- organization of different educational nature protection measures to raise environmental awareness residents of rural areas;
- implementation of environmental education in the advanced training of agrarians and acquisition of professional environmental competence;

- promotion environmental activities among producers of agricultural production;
- organization of social environmental campaigns;
- organization of information measures on public European environmental standards;
- promotion of environmental investments;
- cooperation with public and local authorities with the purpose to to increase the level of professional environmental knowledge;
- publishing of training materials on environmental issues;
- - promotion of organic farming, production of high quality food products and agritourism [2].

Other words, the goal of Centers of environmental education is to spread ecological knowledge, promote environmental activities in the local population and coordination of environmental education at the regional level. Outlined goal is accomplished through advocacy environmental knowledge, collection and dissemination of environmental information and retraining of customs. Attraction highly qualified professionals as to professional activities in the centers of environmental education of well as use of research-based educational methods allows to organize various sizes of educational events (conferences, seminars, training courses and workshops) for different social, age and occupational groups population.

**Analysis of the latest research and publications.** Foreign experience of functioning and development of advisory services is widely represented in native and foreign studies, particularly in the Borowykowa O., Kalachevska L., Kozàri J., Ozsatalbae O., Wielinga H. and other authors works. Analysis of the latest publications indicates considerable attention to organization and development advisory services and its education.

**The aim of article:** examine in detail some environmental activities organized by Center for Environmental Education in Polish extension services.

**The main material.**

Activities of Center for Environmental Education in the structure of agricultural extension services in Poland possible to divide into main directions.

First of all, to study ecological paths for the local population and tourists in order to attract attention for monuments of nature particular locality and identification and, accordingly, searching ways of solving major environmental and cultural issues in local scale.

Next one, environmental education of teachers, children and young people that involves specific education and awareness programs aimed at some categories participants.

One such program is the "Field Environmental Education" to participate in which involves teachers and students of the local schools. Program provides at first holding workshops for teachers during which they perform all practical and laboratory training designed for students later. Classes are held with students on the environmental path and having interdisciplinary content, that is covering regional, social and economic aspects of environmental activities. This form of environmental education is carried out in the framework of formal education can integrate and deepen the theoretical environmental knowledge of students. Significant that these lessons take place throughout the calendar year. [2].

One more educational programs aimed at young people, is the program "Youth learns, evaluates and taking care about nature." The purpose of this program is to develop of environmental life style of young people by:

- organizing training courses teachers whose job improving the educational process, the formation of skills enhance the cognitive activity of students, enriching newest forms and methods of work with pupils;
- organization of meetings teachers and students with scientists and representatives environmental services;
- active involvement students in environmental activities, systematic holding formal and informal training to the monitoring of water, air and soil of local areas of research;

- presentation of achievements (exhibitions, debates, competitions, festivals, demonstrations, tours, etc.) [2].

Along with the above mentioned, the purpose of this program is to delivering the latest environmental scientific research and deepening knowledge about natural resources in Poland, Europe and the in the world.

The third direction of environmental centers activity is the organization of conferences, seminars, fairs, training courses, workshops, festivals and campaigns.

Among these the most notable events were a series of seminars on "Harmonization of environmental legal framework in Poland by European standards", which since 1995 are held annually together with universities and environmental agencies all levels. The main aim of the seminar - is an exchange of environmental information between theoreticians and practitioners in this field. Topics annual meetings systematically brings the Polish community with European standards in the field of air, water, waste management, protection of living natural resources, agricultural production and so on. An important result of each seminar are material published in Polish and English.

A number of seminars focused on specific social or professional group of participants in particular a seminar on "Environmental issues in the activities of local self-government. New legal aspects". This measure has a recurring in nature and is aimed at training to local government in terms of new regulations on environmental protection and sustainable development of rural areas.

The following an annual event is a seminar on "With the ecology every day" intended mainly for rural women. The aim of the event - spreading ecological knowledge in the aspect of improving hygienic conditions, promotion healthy lifestyles and providing information on the problems of women in rural areas in other states. The seminar program include fairs and medical advice. These seminars are conducted since 1995 [2].

The scale include nationwide workshops for young leaders on the topic "Know, Evaluate and take care of your nature" whose task is to prepare young people for the organization of regional environmental Centres in rural areas, as

well as an annual festival dedicated to the International Day of Environment "Children as a chance for contaminated environment", which aims to environmental education by participating in games and competitions. Topics varied in the age group and the intellectual and practical skills of children with participants [2].

Long tradition has another measure initiated and continuously coordinated with Centers of environmental education - campaign "Cleaning the world - Poland" in which thousands of people go to charitable activities garbage disposal in areas of common use (forests, rivers, lakes, streets , squares, etc.).

After all, the Polish generally ecological fair "Eco-TOR", purpose of which advertising of equipment and technologies that prevent degradation of the environment. Exhibitions and seminars within it have constant interest of participants and guests of the fair, including representatives of state and local governments, group of interested youth, schoolchildren, students, local population and foreigners. [3].

The fourth direction of activity environmental centers of local extension services are training farmers in rural sanitation and limiting pollution of agricultural origin.

This direction of activity is also carried by developing and realization of some educational programs, including:

- international program "Baltics Restrictions of pollution from agricultural sources - VAAR" based countries bordering the territory of the Baltic Sea. Goal of the program - reduction contaminants mainly compounds of nitrogen and of phosphorus from the agricultural production and limitations their vulnerability to surface and ground waters by building water treatment facilities, rational use of fertilizers, pesticides and feed, environmental education of farmers;

- Polish-Danish program "Ecological Agriculture", implemented since 1995, whose mission is to carry out agricultural practices in such a way as to minimize the negative impact on the environment;

- international program "Rural Conservation", the result of which should be to reduce pollution of the Baltic Sea by nitrogen compounds, phosphorus and organic substances [2].

**Conclusions.** So, centers of environmental education actively engaged in promotion of ecological agriculture, production of high quality food and agritourism. In this direction organized some activities, including training courses, specialized workshops and fairs, exhibitions of ecological agricultural products.

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## **РОЛЬ СЕЛЬСКОХОЗЯЙСТВЕННЫХ ИНФОРМАЦИОННО-КОНСУЛЬТАЦИОННЫХ СЛУЖБ ПОЛЬШИ В ЭКОЛОГО-ОБРАЗОВАТЕЛЬНОЙ ДЕЯТЕЛЬНОСТИ**

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В статье проанализированы формы и методы эколого-образовательной деятельности информационно-консультационных служб Польши с целью повышения экологического сознания сельского населения и сохранения природной окружающей среды. Раскрыт опыт функционирования местных информационно-консультационных служб и направления их деятельности в аграрной сфере Польши.

**Ключевые слова:** эколого-образовательная деятельность, информационно-консультационные службы, экологическое сознание

## **РОЛЬ СІЛЬСЬКОГОСПОДАРСЬКИХ ДОРАДЧИХ СЛУЖБ ПОЛЬЩІ В ЕКОЛОГО-ПРОСВІТНИЦЬКІЙ ДІЯЛЬНОСТІ**

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В статті проаналізовано форми і методи еколого-освітньої діяльності дорадчих служб Польщі з метою підвищення екологічної свідомості сільського населення та збереження стану навколишнього природного середовища. Розкрито досвід функціонування місцевих дорадчих осередків та напрями їх розвитку в аграрній галузі Польщі

**Ключові слова:** еколого-освітня діяльність, сільськогосподарські дорадчі служби, екологічна свідомість

# **EXTENSION AS ONE OF THE IMPORTANT FACTORS OF INCREASING EFFECTIVENESS OF AGRICULTURAL PRODUCTION**

**L. A. Ilkiv**

Anyone has no doubt about the importance and relevance of the existence of agricultural advisory services. Indeed, International experience confirms, that the activities of such services is a key factor in improving the efficiency and profitability of agricultural producers and sustainability of rural communities.

In the agricultural sector of economy of Ukraine advisory services are given insufficient pace. Despite the obvious utility, advisory activities do not have adequate institutional support, high qualified staff, organizational and economical mechanism of implementation. Network of extension services are not comprehensive, and their work is not systematic. In addition, a significant number of businesses are not aware of the existence of advisory structures, their possible forms and the benefits of cooperation with them.

Problems of organization and development of extension services was investigated by following researchers: O.M. Borodina, T.P. Kalna-Dubiniuk, I.T. Kischak, V.V. Klochan, I.M. Kryvoruchko, M.F. Kropyvko, I.P. Kudinova, M.I. Lobanov, P.M. Makarenko, M. Jo. Malik, L.O. Marmul, P.T. Sabluk. They paid significant attention to the definition of socio-economic nature of advisory services, the explanation of their organization, information and scientific support.

However, a comprehensive innovation activities, that are leading to dynamic changes, the organization of extension requires constant research and improvement.

The aims of the research are to identify the issues and future directions of extension as an important factor in improving the efficiency of agricultural production.

Agricultural advisory services are regarded mainly as an organized exchange of information and transfer of targeted skills in modern conditions. Today it is a large-scale activity that must be coordinated and supervised by public authorities aimed to obtain working experience, develop techniques and methodologies for its implementation. The experience of developed countries shows, that almost all of them started their agricultural extension activities through the creation of public services or services of national agricultural universities and only after a positive image of the service was formed, to accumulate sufficient information and experience with agricultural producers, they began networking private services, which carried out advisory activities on a commercial basis. Today more than 200 countries are difficult to imagine an effective rural development with information and advisory services from agricultural extension services [1].

The economic effect of the state system of agricultural extension is achieved by:

- ✓ increase of profitability of agricultural production through the provision of advisory services on profitable farming;

- ✓ stimulate small business development in rural areas and additional local revenues;
- ✓ promote employment in rural areas;
- ✓ increase of rural household incomes and the level of their purchasing power. [2]

At present, there is the problem of most efficient operation of agricultural extension services, which are formed as legal entities and operates in a different legal form and has different ownership or has departments of agriculture universities and research institutions.

Unsystematic provision of advisory services does not meet social and economic needs of society, the level of development of agricultural production and food security.

This issue originated as a result of [3]:

- ✓ incompleteness of formation of the network of agricultural extension services at the regional and district level offices in rural (village) councils;
- ✓ failure to provide state support for agricultural extension activities.

Therefore, it is quite necessary to have an effective system of state agricultural extension as an effective instrument for the state agricultural policy, innovative agricultural development and rural poverty reduction in rural areas by introducing educational activities and providing socially oriented advisory services to entities in the countryside and rural population in order to improve the knowledge and practical skills of profitable farming.

For efficient of operation the advisory services should focused on the establishment of regional databases of the scientific and technical and market information. These databases have become a reference and Information Fund, which provides scientific and technical and market information - prospective (predictive), current (operational) and retrospective (archival) and meet the following requirements of users [4].

Improving agricultural extension services in Ukraine is in the next areas: formation of a unified national concept of agricultural extension services; further adaptation of international experience on extension services according to domestic conditions, standardization of organizational and methodological points of business advisory services at the national level, a combination of funding sources of advisory services (public funding, self-financing, donor receipts from international organizations, investments, etc.), the introduction of professional training for advisory services on the basis of the higher agricultural institutions with the opening of the relevant specialty; further development and distribution of textbooks on the theory and practice of extension [5].

Development of a Network of agricultural extension services convincingly shows that extension in Ukraine is regarded as an important aspect of the process of

reforming the agricultural sector, which stimulates and directs positive changes "in the field".

Thus, the establishment of agricultural extension services in Ukraine is of great importance not only for improving the efficiency of agricultural production, the whole agricultural complex, as well as to address the many socio-economic problems of modern village. But associated with this activity should not turn into a campaign to achieve in several regions demonstration effect associated with the use of additional funding, computers and technology, creating groups to the decision in the first place, production, and no complex issues of rural development.

We consider that the main prospective directions and objectives for agricultural extension system in Ukraine, which will improve the efficiency of agricultural production are:

- Informational - to ensure maintenance and updating database information resources supplied by scientific organizations, libraries, extension services and producers;

- Consultation - a combination structure of advisory services industry and agricultural enterprises of the economic analysis, organization, management, technology and economics of production, business planning and monitoring;

- Innovation - the creation of innovations based on new knowledge, enabling consumers to increase the level of production facilitate development (commercialization) knowledge;

- Training - create a system that relied on the knowledge base and practical advice through participation in advisory activity not only personnel advisory services, but also teachers of agricultural universities and scientists;

- Education and research - the creation of alternative network of agricultural extension based on agricultural universities and researches of institutions of Ministry of Agriculture.

In our opinion, due to the following steps in the development of extension we can help to improve competitiveness and adaptation of agricultural products to the requirements and standards of the global and European market systems.

**A ROLE OF CONSULTING IS IN SOCIO-ECONOMIC  
DEVELOPMENT OF RURAL LOCALITY**

**I.P. Kudinova**

*Essence and role of extension are exposed in socio-economic development of rural locality. Measures are reflected for the decision of socio-economic problems of village.*

**Keywords:** *consulting, informatively-consultative service, rural territory.*

With the aim of assistance to steady development of agriculture and introduction of modern technologies of ménage creation is initiated in Ukraine of agricultural extension. It is related to the activity of legal and natural persons, sent to satisfaction of necessities of agricultural commodity producers and rural population in the increase of level of knowledge and improvement of practical skills of profitable ménage, improvement of welfare of rural population and development of rural locality.

**Analysis of the last researches and publications.** There were the devoted labors of such scientists the problems of development of advising, as O.M. Borodinoy, O. And. Gallic, T.P. Kalnoi-Dubinyuk, I.M. Krivoruchka, M.F. Kropivka, M.I. Lobanova but othe.

**Research purpose** - to consider essence and role of extension in socio-economic development of rural locality.

**Exposition of basic material.** Today, in the epoch of development of industry, modern technique and newest technologies, increase of metropolises and considerable concentration of human capitals, there was a requirement in optimal combination of principles of government and market control. Most village and settlement soviets are unable independently to settle socio-economic problems that arise up in rural locality, for this reason there was a necessity of combination of regulator advantages and state and functioning of network of agricultural deliberative services.

Exactly they help in realization of socio-economic transformations that is sent to harmonious development of rural territories on the whole. The question is about realization of functions of enlightener among villagers, studies of commodity producers and managers of agricultural production, assistance to the increase of role of local self-government (rural communities) in development of rural territories.

Agricultural deliberative activity in modern terms is examined, mainly, as the organized exchange by information and purposeful transmission of skills. For today it is activity that must be coordinated and controlled by public authorities with the aim of work of experience, development of methodology and methodology of her realization.

Increase of production of goods of agriculture, stimulation of the economy growing, increase of level of welfare of rural population volumes, fight against poverty, a removal of social confusions, rational use of natural resources, is basic components of development of rural locality. Development of social sphere of village is practically impossible unsupported, agricultural deliberative services can become the effective instrument of that exactly from the side of the state, as the above-mentioned components require considerable changes in society. But to obtain substantial changes in life of society, especially habitants of rural territories, it is impossible only through the acceptance of legislative acts and leading to of directives of government bodies. There is totality of elements that can assist to development of rural locality, to support him, and creation and functioning of network of agricultural deliberative services on national and regional levels are one of them(table. 1).

Basic elements must be present regardless of development of agriculture, agro industrial complex of region belongs for an aim exactly or only him social infrastructure. If some of these elements not enough, or he does not answer an existent socio-economic situation, all process of development will take place inertly or in general, his absence will prevent to the effective changes, both in development of agricultural production and in development of social sphere of village.

Table 1

**Elements that assist to development of rural territories**

Basic elements that support rural development	Elements that help development of rural locality
Informing is of politics of support of development of agriculture Base education Medical service Legal safety Availability of credits	Informatively-consultative services Additional education and in-plant training Advancement innovations have a help Support of community development
Specific for development of agriculture	Specific for development of agriculture
Developed markets of agricultural produce(what include demand on local, regional and international levels, and also marketing systems in that an agricultural commodity producer can be sure) New technologies Availability of capital goods	Maintenance, improvement and expansion of agricultural lands Organizations of commodity producers(associations, groups, cooperative stores)

Elements that help development - additional factors that strengthen processes of development give an opportunity to envisage problems and avoid them, or minimize negative effects for the separate categories of participants of this process. As we see from a table. Greater part of elements that advancement development of village gets under determination of agricultural deliberative activity in obedience to Law of Ukraine "On agricultural deliberative activity" [1].

Agricultural deliberative service in direction of decision of socio-economic problems of rural population has the opportunity to carry out next measures:

- it is development and realization of the programs from perfection of organization and increase of efficiency of activity of the personal peasant economies;
- it is development and realization of the programs on development of local territorial communities;

- it is development and realization of the programs that assist the social orientation of rural young people.

**Results of researches.** For the increase of efficiency of activity of agricultural deliberative services and decision of problems that stand before her it is necessary on questions socio-economic development of rural territories, to our opinion:

- to work out an order forming of bases given, that must be passed in a national co-ordinations center, that Ministry of agrarian politics and food (especially it touches complete and worked out innovative projects) that will provide equal access to necessary information of all agricultural deliberative services regardless of form of ménage and membership in different professional associations can play role of;

- as a basic centre of gravity in a consumption and distribution of information necessary for providing of effective development of rural territories passes to agricultural deliberative services, it is necessary to decide the question of providing of access of agricultural deliberative services to the world bases and banks given;

- taking into account, that practical construction of network of agricultural deliberative services, especially adjusting of work from socio-economic development of rural territories - on the right new, it is necessary critically to walk up to the process of preparation and retraining of shots of consultant, taking to account that and program of preparation that is used now to time does not envisage the study of questions on work with young people, decision of social problems of village and does not take into account the specific of realization of this direction of activity of services, although he is envisaged in the program of development of agricultural дорадництва through realization of whole complex of the social oriented services on the grant of that the selection of budgetary facilities is envisaged;

- it costs to be finally determined with the choice of leading channels of information and banks given transfer from the state center of extension, the role of that can successfully execute Ministry of agrarian politics and food of Ukraine, in regional, and farther - in district.

**Conclusions and prospects of further researches.** Extension for today is one of the most essential instruments of support and development of agrarian sphere of

economy of country, increase of efficiency and profitability of agricultural production, increase of level and quality of life on a village, reduction of social tension through organization of alternative types of activity and improvement of employment of villagers.

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**ACTIVE METHODS OF STUDIES ARE IN INFORMATIVELY-CONSULTATIVE SERVICE**

**I.P. Kudinova, I.M. Kozlov**

*Essence and role of active studies is exposed in deliberative activity. The types of active methods which are used by consultants during studies in informatively-consultative service.*

**Keywords:** *consulting, informatively-consultative service, studies, active methods.*

Deliberative activity in agriculture of Ukraine acquires all greater development. For today deliberative services exist in all regions of Ukraine. They differ between itself after the patterns of ownership, organizational structure, sourcing, however much they have a general task – to diffuse agricultural knowledge's and information, instrumental in introduction of the newest technologies and front-rank scientific achievements agricultural commodity producers, to give informatively consultative help in the decision of production, economic, legal and other economic problems, to promote the level of knowledge's and practical skills of conduct of profitable agricultural business, improve the level of welfare of habitants on a village and help in development of rural territories.

As known, deliberative activity consists of informative, certificate, consultative, innovative and educational subsystems. That, the question is not only about revealing to of information the agricultural commodity producers but also realization of forms and methods of administrative and educational activity.

**Analysis of the last researches and publications.** Research of problems of development informatively consultative activity, methods of studies of agricultural commodity producers, was found by reflections in scientific labors of the known scientists: O.M. Borodinoy, O. And. Gallic, T.P. Kalnoi-Dubinyuk, I.M. Krivoruchka, M.F. Kropivka, M.I. Lobanova but othe. However yet plenty of questions remains indefinite.

**Research purpose** – to consider essence of active methods of studies in deliberative activity and their kinds.

**Exposition of basic material.** Agricultural commodity producers at studies in doradnictvi appear the persons of ripe years, which studying, must do it is far more than simple to listen and fix the prepared opinions of teacher of adults. They can product information independently, to determine and discuss problems, find the ways of their decision, look after, to plan.

Therefore generally known, that employments in deliberative activity must be conducted by the active and interactive methods of studies – such methods of educational co-operation, which activate independence of ideas those, who studies, bring over them to the process of making of information, form the system of relations, create the atmosphere of understanding, do grown man students the real subjects of studies.

The methods of active studies are incarnated by the row of more specified receptions of work of consultant or expert- consultant — playing exercises, practical tasks, business games, and cerebral assaults, discussion of problems, in commands and pair and others like that. Researches of scientists testify that after passive participation in the process of studies quickly enough there is not even track. It is exactly calculated, that after a remarkably geared-up and perfectly read lecture an attentive listener is able to reproduce 25 % to information in 3 hours, and 10 % - in three days [1].

Active methods consist in bringing in to the action, creation of situation of experiencing and test which is instrumental in more deep penetration in maintenance and the best memorizing. In such context, active studies — as such, brings over adults to participating in making of cognitive information and wakes up the personal responsibility for that they do.

The most widespread active methods is an interactive lecture, situational tasks, business games, discussions, cerebral gale (attack), method of incident, planning, and round table.

It is expedient to use an interactive lecture in a group with a large quantity; effective application will be then, if to put a question participants; combining is

desired with other educational methods and use of facilities of visualization. It is useful, when not enough to time for exposition of material. Also such lecture enables to systematize knowledge for the short interval of time.

Situational tasks are successfully instrumental in forming of creative thought of listeners, used for control after formed of knowledge's and abilities of them to use in a concrete situation.

Business games are intended for the decision of any sort of contradictions. During the lead through of such game a group forms a collective idea and defends it from criticism of other groups. In the process of game created the emotional mood of players, which is instrumental in the active bringing in of listeners to the decision of the put task, is certain.

A discussion is used for an exchange, decision of problems of members of group, discussion of divergences, making decision, knowledge's from the vexed questions.

Essence of method of incident consists in producing the listeners of short information on issue as any as a situational task. For example, it is necessary to conduct an analysis and quickly to make decision. Time of decision is limited 0,5 - 1,5 m. This method activates thought. Main not plenitude of decision, but his speed. A listener can decide near-term part of task which will be also important for his studies.

A theme round table is fixed in advance in methodical development and related to working out the totals of mastering of separate themes or course on the whole. Its choice of pov"yazaniy with the most actual or developed not enough in science problems, and also with the discussion of difficult for mastering original sources.

It is necessary for the effective use of methods of active studies, that the followings terms were executed: necessities of organization were related to the necessities of every person; educational activity was correctly planned; studies are carried out by a good trainer; teachers get support from the side of guidance and each other; studies conform to acceptable to the adults principles of studies; trainers are oriented on expressly certain goals; trainers co-ordinate training strategies with the planned result; trainers use effective methods and receptions; trainings are developed

by leader skills; trainers give stimuli and rewards of moral, and financial, character; studies engulf a report and estimation.

Methods and receptions of studies, which it follows to use for application of active methods: presentation (say them that, as, why); demonstration (rotting them, as it is done — or on video, or by a rolevi game); practice (enable them to make attempt take advantage of new skills — whether on the chart of the proper process, or by rolevi games, video data which represent the proper activity); to reverse connection (after practice discuss, that they did well, and that it is possible it was, a discussion is in small groups (enable them to talk about new methods and exchange opinions in relation to possibilities them the practical use); planning of subsequent actions (let them outline on your own, that will do newly, passing this course).

**Conclusions and prospects of subsequent researches.** Active methods of studies are effective and must teach activity, to encourage to it – consequently, must avoid a situation in which participants of the organized studies are passive while must be active, work out problems and operate. Active methods in an eventual account must actually serve aspiring to the independent decision of problem, mastering of knowledge's, training of abilities and formulation of own vital position.

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**THEORETICAL ASPECTS OF SOCIAL RESPONSIBILITY OF  
AGRARIAN BUSINESS**

**O.P. Gogulya, I.P. Kudinova**

*Essence of social responsibility of agrarian business is considered. Reasons which restrain its development are selected. The terms of introduction of social responsibility are exposed on the enterprises of Ukraine.*

***Social responsibility, agrarian business, commodity producer.***

In Ukraine actuality of range of problems of social responsibility of agrarian business is caused by the row of factors, namely: by euro integration processes, by the transparent zing of home borders for foreign capitals, going of the Ukrainian producers into foreign markets, becoming of private enterprise on a village and others like that.

Conception of social responsibility in activity of agricultural producers is means for an improvement and organization of business processes, modernization of technologies, forming of business reputation of subject of ménage, increase of motivation and labor of workers, improvement of economic indicators and competitiveness of enterprises, increase of efficiency of management, minimization of risks and balanced development productivity.

**Analysis of the last researches and publications.** By research of different aspects of forming of the system of social responsibility of agrarian enterprises the devoted works of many home scientists-economists, in particular O. Vasuluka, M. Lower, V. Geyca, V. Ocekogo and other.

However, without regard to the presence of far of scientific works in this industry, the problems of social responsibility of agrarian business need their further study, including the question of development of theoretical and applied principles of forming of the modern system of social responsibility of business at the market of country on the whole.

**A research aim** is a ground of theoretical principles of essence and determination of terms of development of social responsibility of agrarian business.

**Exposition of basic material.** In scientific literature a concept "social responsibility of business" is interpreted differently. To the most widespread interpretations that have summarizing character and used mostly, it is possible to take the stated below determinations.

It is marked on the official web-site of Confederation of employers of Ukraine, that social responsibility of business is voluntarily initiative of proprietors of company or founders of organization from development and realization of the certain unprofitable measures socially directed, that have for an object quality improvement external for a company or organization of environment [1]. A basic accent in this determination is done on the aspects of voluntarily of social responsible activity of companies, her to the external orientation.

In the wide understanding interpretation of "social responsibility" is offered by Forum of social responsible business of Ukraine, in accordance with that social responsibility of business this responsible attitude of any company toward the product or service, to the consumers, workers, partners; active social position of company, that consists in a harmonious coexistence, co-operation and permanent dialogue with society, to participating in the decision of parachute social problems [2].

Deserve attention of determination of social responsibility as mental and ethical responsibility of business structures for the level of grant of services, level of quality of mine-out products; creation of harmonious environment of relations between workers, partners, consumers and society on the whole in the decision of social problems [5]. And also, as a sphere of activity of corporation, company, enterprise, firm, establishment, organization that operates on trilateral basis(employers, executive, trade union bodies) by the decision of socially meaningful problems both in business and after his limits, id est., on municipal, regional, national and sometimes and global, levels; conscientious business

practice, development of personnel of enterprise, health protection workers and safe terms of labor, guard of environment, use of technologies, and also development of society, is on a macro level, that has for an object both achievement of the greatest results and high level of competitiveness and providing of social consent and community development on the whole.

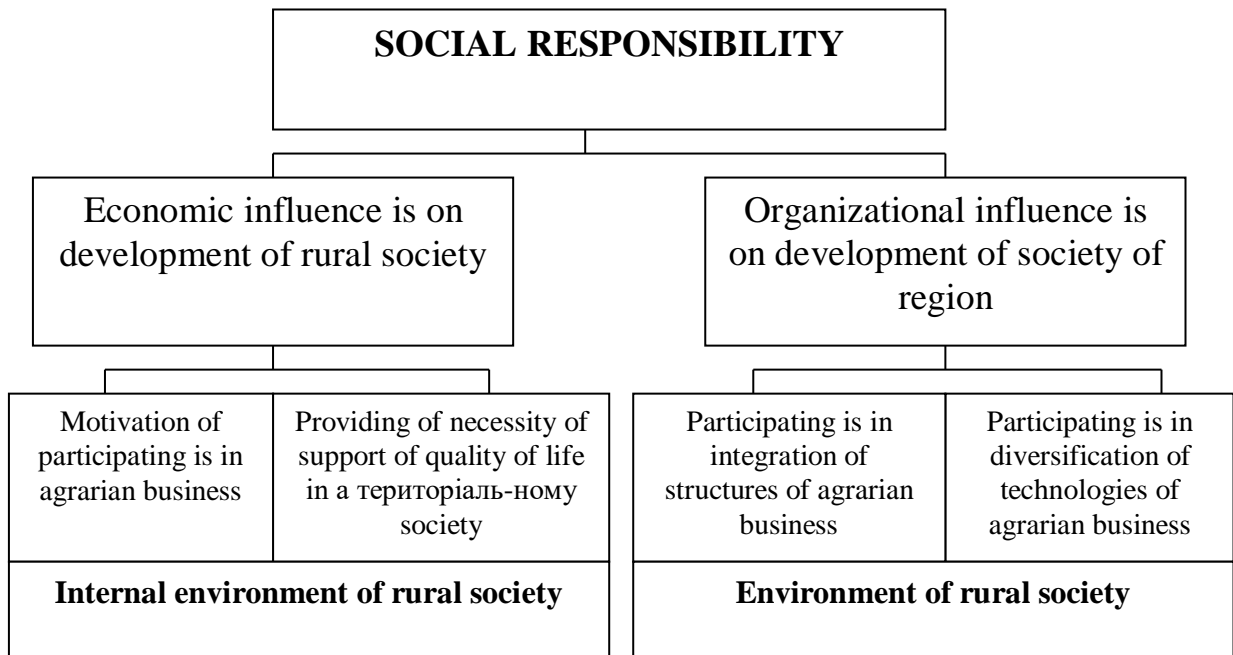
The voluntarily functioning of company, that operates as a "corporate citizen" in the direction of development of personnel, guard of environment and development of local community in the close co-operating with the state, trade-union and public organizations, understands under the system of social responsibility of business [4].

Social responsibility of business has multilevel character. The first (base level) envisages fulfilling commitment in relation to timely tax, payment of salary payment, on possibility, creation of new workplaces.

The second level of social responsibility of business envisages providing of workers the adequate terms of not only work but also life: increase of level of qualification of workers, prophylactic treatment, building of accommodation, development of social sphere and others like that. The marked type of responsibility got the conditional name "corporate responsibility".

Third, higher level of responsibility, envisages eleemosynary activity.

Forming of methodology of social responsibility of management of agribusiness in Ukraine is in plane problems of exposure of dependence between the degree of development of agribusiness and degree of socio-economic development of territorial societies. It is thus envisaged that key basis of social responsibility is existence and recreation of business activity, that depends on an effective management, ability of managers to adapt oneself to the terms of business-environment. Such interpretation grounds to form a look to the leader of agrarian enterprise as on subject and object of social responsibility. Thus, influence of social responsibility of management broadens on society of territory that confirms the presence of clear dependence between economic activity of agrarian enterprises and state of territorial society (see picture).



**Instruments of realization of social responsibility are in the mechanism of socio-economic management development of agrarian society**

Джерело: [[http:// baitas.lzuu.lt/~mazylis/julram/21/63.pdf](http://baitas.lzuu.lt/~mazylis/julram/21/63.pdf)]

Inalienable part of successful business strategy of agrarian enterprises is an observance of principles of social responsibility, due to that there is strengthening of reputation, victory in a fight against crisis situations, bringing in of consumers and maintenance of workers.

Terms are certain confederation of employers of Ukraine [4], needed for introduction and development of social responsibility on the enterprises of country, and that are actual and for the agrarian forming:

- achievement of steady development of the independent, responsible forming and organizations and providing of them long-term interests, achievement of the social world, safety, welfare of citizens, environmental, observance of human rights preservation;
- non-interference of the state and his organs in operative activity of organization, as surplus regulation deprives social responsibility of voluntarily, socially directed functioning of organization;

- a dialogue of the state, public organizations and representatives of entrepreneurial activity is from development and adjusting of social responsibility (at the key role of organizations of employers).

By the most sufficient causes that restrain development of social responsibility of agrarian business there is legislative unsettled and absence of legislative encouragement in Ukraine. In addition, realization of the social programs is accompanied by considerable financial charges size of that, usually, "it is not been in strength" to the shallow commodity producers of agricultural produce that mostly becomes reason of abandonment from the socially directed activity.

**Conclusions and prospects of further researches.** Taking into account influence of row of factors that determine strategic directions of development of most organizations, namely: intensifying of competition, perfection of administrative technologies, fight for a consumer and quality of agricultural produce, on the modern stage, in the context of decision of problems of becoming of social responsibility of business in Ukraine, it is necessary:

- to form in public consciousness understanding of maintenance, meaningfulness of social responsible business for development of the socially oriented state and democratic principles, and among businessmen - strategic value of socially responsible position for strengthening of competitiveness of organizations at the market and long-term steady development;

- to create on a macro level the effective and constantly operating system of communications of social responsible business, public organs of power, mass medias;

- to form a legislative base that will provide the personal interest of agribusiness to participating in the social programs; measures of corporate philanthropy, patronage of art;

- to create a partner network within the limits of that participants get wide possibilities for advancement of corporate reputation on regional and macroeconomic levels;

- to provide a grant to the business structures of organizationally-methodical help in planning and realization of concrete social projects and programs, realization of the corporate systems of social responsibility;

- in every way to assist work of all parties concerned in relation to introduction of long-term general social projects and programs and others like that.

The marked measures will give an opportunity to activate realization of social and ecological initiatives all participants of social responsibility: by the public organs of power, public organizations and enterprise structures.

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**Innovative directions of development of soybean**  
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The article highlights the importance of soybean, describes the current state of the production this culture in Ukraine and abroad, analyzes the dynamics of domestic production of soybeans, outlines directions for further development of soybean production, particularly with the use of innovative technologies. Key words: soybean, soybean production, soybean processing, innovative technology.

Soya - a unique feed, food, pharmaceutical and technical culture, which is one of the major strategic agriculture crop in many countries. Over the past 50 years the crops in the world increased from 23.8 to 102.4 million hectares, yield - from 16.8 to 25.5 metric center / hectare, production - from 26.9 to 263 million tones. It is grown in 91 countries. In terms of production, it ranked fourth in the world after maize, wheat and rice. In the global resources of vegetable protein from soy crop receives about 100 million tons The volume of soybean oil has been ranked among the world's oilseeds. Well-developed soybean crops biologically fixed 155-198 kg / ha of nitrogen. Due to this, soybeans at 65-80% is a need for nitrogen, a significant portion of its reserves in the soil, so that is one of the best precursors in rotation.

**Analysis of recent research and publications.** Various aspects of the production and use of soybean pay attention to many scientists, including V. Petrychenko, A. Babich, V. Timchenko, A. Pylypchenko. A. Kolesnik and others. However, the conditions today require further research in the context of innovative areas of soybean production.

**The aim** - to investigate the current status of soybean and describe the basic innovative trends of its development.

**The main material.** The structure of world production of oilseeds is 58% soybean, canola – 13, cotton – 10, peanuts - 8, sunflower - 7, palm kernel - 3 [1]. Over the past 50 years has expanded geography of soybean cultivation, the number of countries it is cultivated, increased from 48 to 91, significantly increased arable land to be allocated under this crop. Already in many countries area under soya is 18 - 50% of arable land and more. The main countries - producers are the United States - 80.7 million tons, Brazil - 57 million tons, Argentina - 32 million tons, China - 15.5 million tons, India - 9.1 million tons, Paraguay - 3.9 million tons, Canada - 9.3 million tons, Ukraine - 1.043 million tons [3]. The growth of soybean productions associated with an increase in population on the planet. So in 1960 the world's population of 2.98 billion people, in 2002 - 6.2 billion in 2011 - 7 billion people. Increasing population – is increasing consumption of food. In countries with low incomes (South America, Africa and Asia) soy is used as a cheap vegetable protein in the diet of people and have a higher income (U.S., Canada, EU countries) as a valuable raw protein in animal feed to produce animal protein [4].

Of the total gross yield of soybean processing goes 89% for food purposes - 4.5%, seeds - 3, fodder purposes - 3.1, others - 0.4%. During the processing of 1 ton of soybeans receiving 792 kg of soybean meal, soybean oil 178 kg, the loss is 30 kg, is producing nearly zero waste. From the processing of soybean crop in the world now receive 180 million tons of soybean meal and 43 million tons of soybean oil.

Ukrainian production of soybeans, although it dates back to the late 18th century, but has a tendency to expand takes only now, when the ripening varieties of soybean, modern agricultural technologies, developing processing industry, and is stable demand for both raw materials and the products of its processing [2]. In the present in soybeans Ukraine is a strategic culture in increasing of farming, soil fertility and solving the food problem. The process of its production affects the stabilization of agriculture, increase productivity, eliminate the deficit of protein, fat replenishment, inventory nitrogen soil farm economy as a whole.

Over the past decade in Ukraine is growing interest in soybeans in all soil-climatic zones, expanding soybean field is rightfully included in the crop rotation major agricultural regions. Now our country in terms of production of soybean is first in Europe, eighth - in the world. Accordingly, the culture has great potential increase of production and the formation of large export its resources in Europe. To increase the production and processing of soybean initiative of Ministry of Agriculture in December 2003 was established association "Ukrainian Association of producers and processors of soybeans." The main objective of the association - bringing soybean acreage for the period from 2003 to 2015 to 1.3 - 2.5 million hectares per year and production of soybeans annually - 2.5 - 4.0 million tons. Achieving this goal will enhance productivity and reduce the cost of livestock and poultry, increase consumption of domestic meat Ukraine, restoration and maintenance of soil fertility directly through soybean accumulation of atmospheric 80-100 kg per 1 herctar of biological nitrogen increase foreign exchange earnings, the production of biofuels.

In addition, our country has developed a program "Development of oilseeds in Ukraine in 2011-2015", which is provided by increasing the area sown to soybeans 2.0-2.5 million hectares and yield reaching 22 kg / ha, which will opportunity to receive up to 5.0 million tons of soybeans. Currently, soybeans are grown in all 25 regions of Ukraine. The five areas of forest-steppe zones: Vinnitska, Kiyvska, Poltavaska, Cherkaska and Khmelnytska and steppe - Kirovogradska are more than 60% of the soybeans, which are grown in the country. Over the 2002-2011 biennium domestic soybean crops increased from 98.2 hectares to 1129 hectares, or 11.4 times, productivity increased - from 12.7 to 20.5 kg / d, or 1.6 times (Table 1). Return soybeans, according to the growing regions, different, and reaches its maximum in the forest-steppe zone - 90 120%.

Table 1.

## Dynamics of production of soybean in Ukraine \*

Indicators	Year									
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sown area, hectares	98,2	189,6	256,3	427,1	714,	582,8	557,0	622,3	1038,0	1129,0
Gross yield, thousand tones	124,7	231,9	363,3	611,5	889,6	721,7	70,0	1042,5	1671,0	1870,0
Yield, metric centner / hetctar	12,7	12,2	14,2	14,3	12,4	12,4	14,0	16,8	16,1	20,5

\* According to the State Statistics Committee of Ukraine

Terms producers of this culture in our country is constantly expanding. Currently, it includes 5860 factories (in 2003 – 1400), at their disposal modern technology, registered 109 varieties of soybeans, compared to 53 varieties in 2003. The need to provide 162 specialized seed farms, 17 originators of sorts. Since 2003, the ever-increasing capacities of soybean, which now account for 1.7 million tons against 160 thousand tons in 2003 to 200 Processing of involved companies, of which - 59 medium and large, which can process between 15 and 200 thousand tones [5].

Positive dynamics of soybean clearly demonstrates the activity of agricultural enterprises Poltava region (Table 2).

Table 2

## Dynamics of production of soybean farms in Poltava region \*

Indicators	2008	2009	2010	2011	2012	2012 / 2008,%
Area sown, hectares	4411	8146	7910	7782,3	7249,3	164,4
Yield, metric center / hectar	20,7	21,5	20,5	15,5	28,2	136,0
Gross yield, metric centers	91301	175216	162153	120207	204054	223,5

\* According to the State Statistics Committee of Ukraine

Presented in the table 2 data indicate that soybean planted area in the study area increased in 2012 compared to 2007 - 2838.3 ha or 64.4%. Yields thus increased by 36%. For total yield, the highest it has been in 2011 - 204,054 kg. Thus, the change in the value of gross harvest of soybean affected by two factors –

change the size of acreage and yield change.

The increase in gross yield of soybean plants in the area is not only due to expansion of acreage, but also by increasing its yield, achieved a number of interrelated activities.

First, increase the yield achieved through the use of new, more productive varieties. Second, increases productivity widespread use of innovative technology intensive cultivation, which includes advances in science and experience economy, growing soybeans. It provides a set of sequential operations aimed at obtaining high yields of soybeans based on biological characteristics.

Thirdly, an important condition for increasing yields is the use of organic and mineral fertilizers. In general, essential for increasing productivity of soybean, reduce its cost and productivity growth has complete satisfaction farms in engineering, fertilizer, seed quality, crop protection chemicals. Practical experience shows that the higher the yield of soybeans, the lower the cost per 1 ha of crop, the higher the level of efficiency that is lower than the cost of 1 kg, greater weight gains at the rate of 1 centner and 1 hectare of crops, higher profitability.

Further effective development of soybean production in Ukraine will primarily organizing and conducting primary and elite seed at the appropriate level, compliance innovative technology intensive cultivation. Together this should provide most of the high yield of soybean as a guarantee of profitability of agricultural production.

The dominant trends observed in global agriculture in the last decade is to improve crop production technologies based on advances of biotechnology and precision farming. Characteristically, in the fields of Ukraine, despite the absence of legislation, the amount of usage of these technologies increase. Conductor technology innovation is primarily the large agricultural holdings that have enough money to purchase them. This enables them not only to obtain high yields, but also significantly reduce the use of employees.

Innovative technologies that can be used in the production of soy are: -

precision farming systems that improve the general level of farming in general - the achievements of biotechnology - production technology of soybean in irrigated lands of Ukraine - Technology soybean early ripening varieties with a row spacing of 15 cm using modern technology.

**Conclusions and recommendations for further research.** Summarizing the above, we can say that soy is a crucial strategic culture to agriculture and the country in general, and among the factors that impact on the subsequent development of soybean production in Ukraine is crucial innovative, knowledge-intensive technologies. They are implemented in Ukraine and provide technology improvement soybean-based advances of biotechnology and precision farming. In general, to implement a set of innovative solutions in various stages of production of this crop to improve its production.

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В статті висвітлено значення сої, охарактеризовано сучасний стан виробництва даної культури в Україні та світі, проаналізовано динаміку вітчизняного виробництва сої, окреслено напрямки подальшого розвитку виробництва сої, зокрема, з використанням інноваційних технологій.

*Ключові слова:* соя, виробництво сої, переробка сої, інноваційні технології.

В статье освещено значение сои, представлена характеристика современного состояния производства данной культуры в Украине и мире, проанализирована динамика отечественного производства сои, очерчены направления дальнейшего развития производства сои, в частности, с использованием инновационных технологий.

*Ключевые слова:* соя, производство сои, переработка сои, инновационные технологии.

# ORGANIZATION AND EFFICIENCY OF EXTENSION SERVICES

**LA Marmul, Doctor of Economics**

*The features of the organization and the state advisory. Grounded directions and measures to improve the efficiency of its implementation.*

**Advisory activities, the effectiveness, improvement and management.**

Agricultural extension, which is an important factor in the further development of rural areas and agriculture is a functional component of management and organization of the industry. Market advisory services to agriculture in Ukraine gained rapid development thanks to state target program of agricultural extension services and its financial support from the budget. Today, in all regions of Ukraine formed and are about 70 agricultural extension services in the service are involved on an ongoing basis over 2000 professional agricultural consultants and expert advisers. However, in recent years, services advisory services decreased substantially. This is due to a decrease in budget support to extension services, financial instability of small farm units which are its objects. Therefore, assessment of the problems of extension services and support measures to address them is of great scientific and practical importance.

**Analysis of recent research and publications.** Problems of organization and development of extension services researchers have investigated such as MF Bloodless, ON Borodin, O. Galich, TP Locally-Dubinyuk, IN Kryvoruchko, MF Kropyvko, RJ Spine, MI Malik, PT Sabluk. In their writings grounded socio-economic nature of advisory services, information and scientific support extension. However, it should be given due attention to improving the organization of extension with the new socio-environmental and industrial-economic factors that accompany the development of agriculture and rural areas.

**The purpose of the study.** The aim of the article is to study the organization and efficiency of the implementation of extension services in the region and support areas to improve the organization and management development extension. Research Methodology is based on the use of modern scientific methods, including: induction and deduction, analysis and synthesis, monographic, economic and statistical methods, software-based approach.

Advisory activity is particularly important in the agricultural regions of significant zemlezabezpechennosti, operation of a large number of farms and households of the population. Fully to such regions are Administrative southern region of the country, including Kherson. It should be noted that the advisory services in the area gained considerable importance and distribution. She carried Advisory Service Southern Region Main Department of Agricultural Development, a private advisory service "community" (Kherson), about 200 consultants and expert advisers.

Counselors working in 12 of the 18 administrative districts. In general, these specialists have the right to advise on the legal, economic, agronomic, accounting

and auditing, farming and crop production technology animal feed and Development velykotovarnyh farms, organization and management of agribusiness management and marketing, credit, seed and Seed, business plan development, irrigation, Hydromelioration. There are also specialists in rural development, children's and youth programs, rural tourism, agricultural tourism, organic farming, horticulture and viticulture.

Regional advisory service organization provides information and advisory support innovations and initiatives of private farms of agricultural production through the use of services (agreement) scientific and pedagogical potential SHEE "Kherson State Agrarian University" (KSAU), all available means and methods, implementation of scientific knowledge, excellence experience and information, new technological developments and inventions.

According to the Agriculture Ministry Decree number 304 of 28 April 2009 Kherson State Agrarian University is included in the list of universities to conduct training members of regional commissions and qualifications of individuals conducting advisory activities. To this end, the university was founded Institute of Continuing Education and Extension. The region of its services include Kherson, Mykolaiv and Odessa region of Ukraine.

Institute of Continuing Education and Extension KSAU annual consultations with landowners technology growing crops (270-300 searches), the efficiency of agricultural production (350-380 searches), ecological bases fish culture (75-85 requests), advising on construction technology of agriculture ( 220-340 requests), management of irrigation systems and technologies (200-220 searches).

The main areas of regional advisory services advisory services in 2011 were: consultation with the growing technology of cereals and industrial crops, horticulture, environmental bases of fisheries, management of irrigation systems and technology consulting Technology of Agriculture building.

The most common forms of advisory services were: advice, personal advice, exhibition activities, organizing and conducting of workshops (on the application of the latest achievements of science using the technologies of cereals, vegetables, fruit and industrial crops, farmers in the self-service cooperatives, on land questions) days of the field (for image formation agroecological areas of protection and improvement of soil fertility), published guidelines and practical guides and manuals, preparation of expert consultants and advisers from different disciplines. Requires the creation of websites for investment, information and advisory support agricultural enterprises, farmers and private farms, which highlights the necessary information for users.

Thanks to the work of the Kherson Regional Advisory Service significantly increased the awareness of agricultural producers was ordering information on priority indicators is forecast trends in processes, entities and phenomena agricultural market.

Actions of the regional advisory service are: training consultants and expert advisors, monitoring, analysis and market forecasting, consulting and information services to manufacturers, informing regional authorities on the state of agricultural production and market. An important practical point for the

development of cooperative extension began as a progressive organizational form of agricultural activity, which also requires distribution.

On a competitive basis was determined 5 demonstration farm cooperatives, which serve as a training and demonstration base for the development and extension of agricultural cooperation in the region, namely fruit and vegetable agricultural service (ASC) "Mr. Farmer" Kahovsky the area SOM with soil "Zernovyk" and multi- ASC "Terra B" Beryslav area, grain ASC "Skadovsky grain-service" Skadovskogo area and molocharsky ASC "Milk Dniester" Belozersky district.

Significant role in the creation of these cooperatives have played an advisory service. First, they developed business plans, providing practical assistance with registration of cooperatives as nonprofit and accompanied by a process of becoming. If not carried out advisory activities not provided advice did not develop agricultural extension, in general, as the primary information sector consulting and support the development of efficient agriculture, directly at the village level, there would be no such activity in the creation of cooperatives, associations of producers and milk deliverer, and the main thing - there would be an incentive to unite individuals and small producers.

Another example of the effectiveness and implementation of extension services in the practice of management is the development of rural tourism. Cooperative development of rural tourism "Charm Kherson" developed 7 unique tour itineraries to 4 districts. This alternative form of business contributes to both the development of rural infrastructure, environmental conservation, cultural and historical heritage, and rural employment, increase his income. Last year the tourism market derived 38 rural tourism farmsteads. Their activities are allowed to get 150 thousand rural families income.

However, the extension in the region requires significant activation and proliferation. This is evidenced made analysis of the effectiveness of advisory services and areas of implementation of supply and demand. Meanwhile, in the region there are only two extension services, are unable to reach 289 village councils, 18 districts, 632 villages. Therefore, we analyzed the activity to each rural areas for agriculture, create advisory centers in each village council and village council and, if possible, to provide funding from local budgets through user charges. Ensuring effective extension services in the region include:

- Completion of the network of agricultural extension services at the regional and district levels, with branches in rural (village) councils;
- Increase of sotsialnospyamovanyh advisory services;
- A system of distance education and agricultural extension;
- State support of agricultural extension services, in particular by funding from state and local budgets.

**Studies.** One of the best ways of effectively functioning advisory activity is simultaneous support of all its species. In particular, the District Department of Agricultural Development should refocus on providing information and advisory services. The main advantage of this type of extension services is government support, including financial, standardization and quality control, integration of the

educational network and infrastructure and human resources of agricultural universities.

**Conclusions and recommendations for further research.** In our opinion, for the improvement of extension services to simplify getting them budget funds for extension services, expand the range of services that can be provided by the budget and introduce a monitoring system needs to advisory activities, its condition, quality and efficiency, a more extensive network of advisory services in the areas of rural communities, raise awareness of agricultural producers and the public about advisory structures. By extension services should involve undergraduate students of agricultural universities during their production practices. This will provide advisory services at no cost, will increase the professionalism of bachelors and masters universities as future leading experts of agriculture and of rural areas.

## **PRICE SITUATION ON THE RAW MILK MARKET IN UKRAINE**

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*The paper describes the main trends and factors of pricing in the market of raw milk in Ukraine and the ways of its improvement in the future*

*Keywords: purchase price, raw milk, demand, supply, seasonality*

**Statement of the problem.** Economic efficiency of agricultural production depends on many factors. Some agricultural producers provide their own capabilities (organization of production, technology, resources), while others are in the plane of the macro. Under market conditions one of the most important conditions for the formation of mutually beneficial relationships between producers, processors and buyers is the price. This parameter accumulates the influence purchasing ability of customers, their preferences and needs with the capabilities of producers, quality and safety of products. The process of price formation depends on the nature of the formation supply and demand at the market, and the price level characterizes the consent of consumers to buy products and vendors to sell it.

According Pokropyvnyy S.F. and some other scientists choose of pricing and installation in accordance with it a certain level of price is the initial stage of development strategies and tactics of the companies [3, s.444].

In a globalized world economy, these issues are of particular relevance. The number of customers is increasing, stimulating the development of nutritional needs. But the demand is limited by opportunities to meet as much of the world's population lives below the poverty. The price for main components of production increasing, creating the potential for higher prices of products, which seriously affects its availability for consumption.

All these tendencies inherent in all agriculture and livestock in particular. Proof of this is the consumption of milk and meat at a level that does not meet the scientific recommendations. Addressing these issues devoted to the work of famous local scientists, including Ilchuk M.M., Kvasa S.M., Svynous I.V., Slobodyan N.Y., Shpychak O.M. and many others. But at the same time, the urgency of the problem is not decreasing, but rather increasing, especially with Ukraine's accession to the WTO.

**The main purpose** of this paper was to study the price situation on the market of raw milk, the establishment of specific features of the formation and working of its prospects.

**The main material.** For quite a long period in dairy cattle breeding in Ukraine marked some negative trends. They are particularly evident in a catastrophic decrease in the number of cows in all categories of farms. This leads to a decrease in production of raw milk, despite the increase livestock productivity. Consequently, the formation of a stable supply of raw milk becomes hard that affects the market conditions as a whole.

Andriychuk V.G. claims that pricing and price is one of the most difficult problems which overlap most economic, social and political problems of the state [2, s.426].

Price behavior is influenced by the volume of demand and supply of balance. Partly defining principle of pricing is the cost of production, but in a market economy is a transformation component pricing and changes in the level of their influence on the final result. Consumers are buying products that meet their needs and their purchasing ability. They are not interested in the cost. If the cost is high and it increases the price the buyers reduce the consumption, stop it in general or replaced with alternative products. According producers suffer from it. Otherwise, when the market existing deficit - demand exceeds supply, the consumers are willing to pay a higher price for such products to satisfy their needs. They are not interested in the level of cost. In this case, meet their own needs is at the first place. Due to the excess of price over production costs, the manufacturer receives additional income, which

increases its economic efficiency. The cost of production affects the outcome of management, not the price level.

One of the major components that form the supply on the market is the volume of production, import and available stocks. In 2011, the volume of milk production by all categories of farms was 11,086 tons, or 80,8% in comparison to 2005. This was an important reason for the rapid decline of milk resources from 13799 tons in 2005 to 11352 tons in 2011, or by 17,7%. A significant limitation of supply in the market led growth in imports to meet domestic consumers. The level of this indicator increased from 112 thousand tons in 2005 to 257 tons in 2011, or 2,3 times. There is increasing competition from domestic producers with foreign ones for a domestic market, and the growth of imported goods from abroad indicates very little capacity to resist Ukrainian enterprises in the fight for the consumer.

Limit the amount of resources to reduce the impact of milk consumption fund in 2011 to 9363 thousand tonnes, or 11,9% compared to 2005, which led to a decline in milk consumption to 204,9 kg per year per person or 53,9% to scientific recommendations.

Reducing the milk production level and its demand in the market has exacerbated the problem of shortage of raw milk. Consequently, among the processors considerably sharpened competition, which has become an important cause of increased purchase prices. As a result, the price of raw milk increased from 1126,9 UAH/t in 2005 to 3041,6 UAH/t in 2011, or almost 2,7 times (Fig. 1).

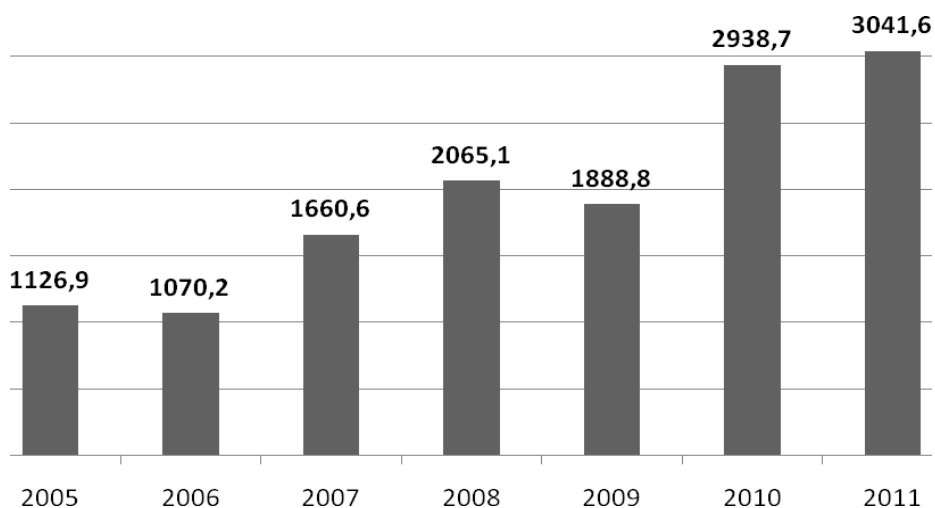


Figure 1. Prices of milk raw in Ukraine, UAH/t

As a result, milk prices nearly reached the level of world leaders in the market of milk. Thus, if during 2005-2007 the price of milk in Ukraine was lower than in the European Union and the United States, in 2008-2010 they were almost up with the level of the United States, and in 2010 even exceeded it (Fig. 2). In our opinion, raise prices for milk in the future there will not be an effective measure to ensure the profitability of agricultural producers. Since this will be an important prerequisite for the rising cost of ready products and adversely affect the competitiveness of the global market.

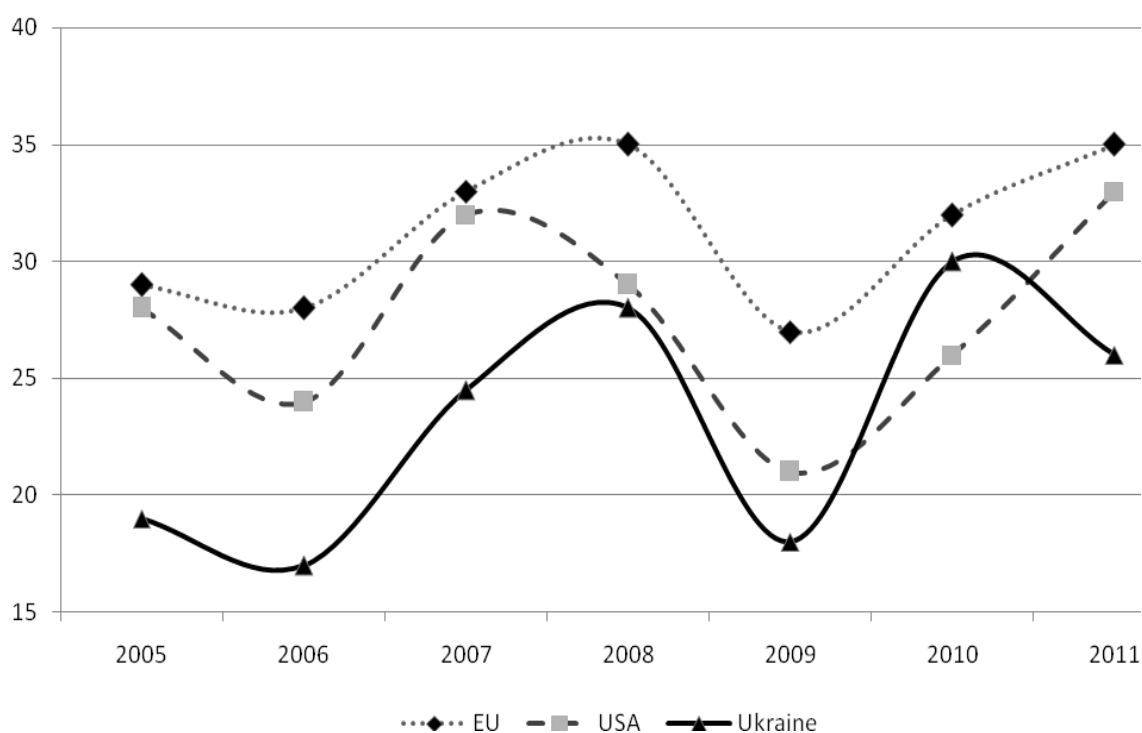


Figure 2. The purchase price for raw milk, Euro / kg\*

According to [1]

An important factors that have major impact on pricing, are significant differences in the supply of milk at different times of the year. So, in the winter there is a significant reduction in output, and in the summer - on the contrary it serious growth (Fig. 3). The increase of supply affects the price level and decrease – on the contrary. Consequently, the prises in winter period are higher than in summer by 30-40%.

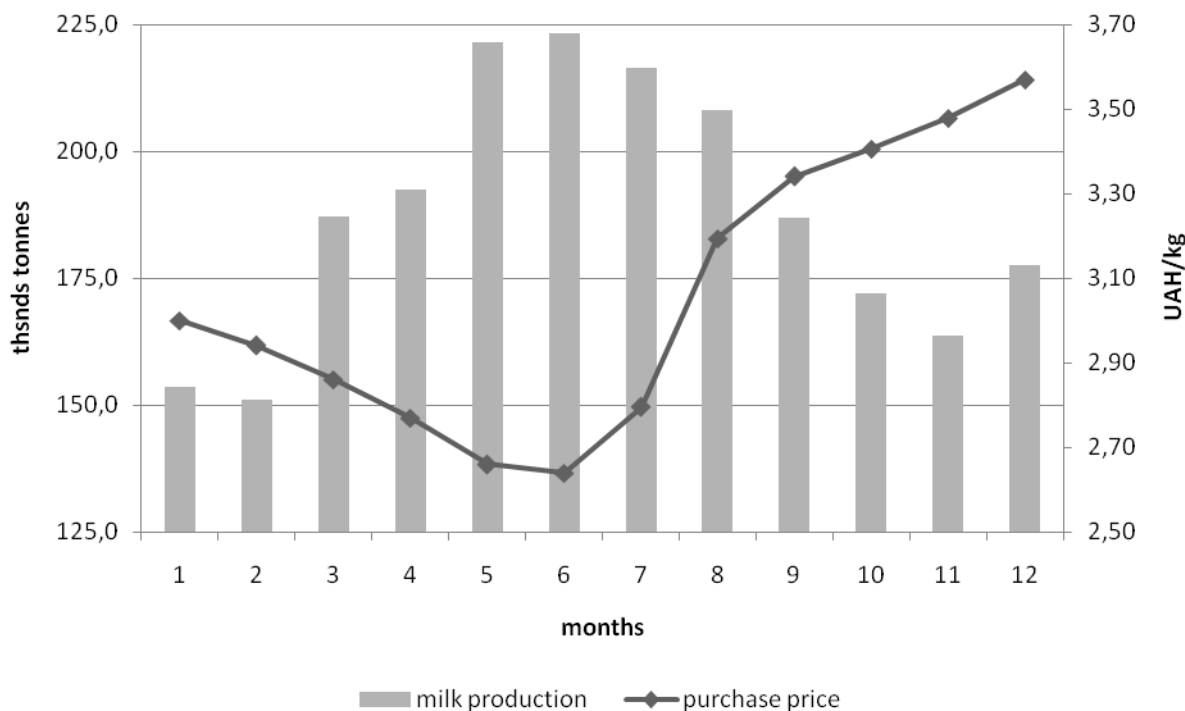


Fig.3. Monthly dynamics of milk production and purchase milk prices

An important reason for these changes may be flaws in the organization of production. Thus, due to lack of funds and facilities for the effective development a large number of farms are planning a massive calving cows in the spring and summer, when the value of livestock and their feed is reduced through the use of summer playgrounds and green mass. This allows producers to partially resolve the situation with the need for resources, but affects the level of prices for raw milk. Consequently, the profitability of dairy farming reduces. That is, solving the problems in this way producers further exacerbate the problems in the industry.

The problem of production seasonality experts provide special value and reduce its rate positive impact on the efficiency of both producers and processors [6].

**Conclusions and suggestions.** Farms in many cases are unable to influence the level of prices in the market. They are trying to organize their production so that production costs were lower than the prices paid for it in order to ensure profitability. It does not happen with all producers, because according to the State Statistics Service of Ukraine about 40% of agricultural units in 2011 were tortious.

Therefore, in order to provide income level particular attention should be paid to improvmnt the system of production, increase productivity and livestock. In

addition, Kondratiuk O.I indicates that the competitiveness of domestic products in foreign markets very important issue is the quality [4, p.59]. All this together will help to improve the economic efficiency of milk production and don't shift the problem to the end user as a result of the price increase. As dairies now pay almost the same price for raw materials as in the U.S. and the European Union, and its growth will lead to adverse consequences.

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**INFORMATION AND CONSULTING PROVIDING ROLE FOR  
INSTITUTIONAL ENVIRONMENT CREATION OF AGRARIAN SPHERE**

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*Research of theoretical, methodical and applied aspects of system functioning of information and consulting providing is implemented in the article. Also, the role and meaning of it in institutional environment creation of agrarian sphere is determined.*

*Key words: information and consulting providing, advisory services, institutions, institutional environment, agrarian sphere..*

**Statement of the problem.** Deepening of market reforms and regulatory distortions in implementing the priorities of socio-economic development of the country causing the need for further institutional changes and accordingly research of the conceptual foundations for the system development of informational and consulting providing and definition of its role in the institutional environment creation of the agrarian sector.

A significant contribution to the theoretical substantiation of the main institutional thesis of Economics was made by **J. К. Гэлбрейта, У.Росту, Д.Норта, Р.Коуза, О.Вільямсона, Дж.Б'юкенена, J.. Clarke, П.Дракера, М.Олсона** and others. Domestic institutional paradigm is formed under the influence of fundamental and applied researches of R. Kapelyushnikov, M. Tugan-Baranovsky, V. Geits, A.Chuhno, M. Danilyuk, V. Balyeyev, T. Gaiday, S. Arhiryeyev, V. Yakubenko, V.Tambovtcev, S. Kirdina, Z. Gerasymchuk, M. Koretsky, O. Shpikulyak, Y.Lopatinsky and others. In developing the conceptual foundations of organizational structure, principles, methods of information and consulting providing in agrarian sphere formation were contributed by M.Kropyvko, M. Malik, P.Sabluk, V.Sytnyk, V.Yurchyshyn, R.Shmidt, Y.Kovalenko, T.Kalna-Dubinyuk and others.

However, the theoretical aspects and applied issues of information and consulting providing of the agrarian sector as a special institution in the domestic scientific literature are considered insufficiently. At the same time, the transition to

innovative economy puts serious requirements to formate the institutional basics of formation and development of information and consulting servicing in the agrarian sector, the style and methods of implementation of those activities in modern conditions suggested the need for further research of the issues.

Accordingly, **the aim of the article** is to study theoretical-methodological and applied aspects of the development and role of the information and consultation providing system as the most important component of the institutional environment in the agrarian sector.

**Essential material exposition.** Information and consulting component is included to the number of the basic preconditions of the institutional environment formation and development in the agrarian sector. And this is natural, since the applied nature of information and advisory services is manifested through the interaction of concrete objects-institutions that are, on the one hand, agricultural producers, agricultural enterprises, private farms, family farms, agricultural companies, agricultural holdings, etc. and with other – state institutions, organizations, scientific and educational institutions, the financial and commercial patterns and other. Relations between them in the process of providing and receiving information and consulting services to develop under the influence of economic, organizational, legal, socio - psychological and other factors of macro-environment. Direct course of activities going through the implementation of economic relations between stakeholders in the context of existing in society, traditions, rules, norms, laws, mentality and worldview of people etc.

In accordance institutional environment is a particular facet of the economy, highlighted the institutional theory, which is inextricably linked with the system of production of social relations and institutions. The combination of industrial relations and institutions enriches and specifies the representation of public structure, expanding the possibilities for overcoming simplified approaches regarding the treatment of complicated socio-economic problems, provides an opportunity to reveal the depth and diversity of relationships and dependencies, which opens up to reveal the mechanisms for the implementation of the system of industrial relations, functioning and development of economy and society. However, institutions,

together, form the institutional structure of the economy, which is characterized by a certain independence. The experience of market transformations convincingly proved that focusing only on market reforms leads to an underestimation of the socio-economic, institutional transformations, which leads to a number of negative phenomena and processes. Consistent implementation of market reforms and modernization of the agrarian sector requires a deep combination of their socio-economic and institutional reforms.

Currently in Ukraine multi-structural rural economy was formed based on various forms of farming and different style of life and behaviour of the involved people. There are four basic economic structures: the collective enterprise in forms of production cooperatives, associations, state enterprises, other economic organizations; large agricultural holdings; large and small farms, private farms. The variety of sizes creates preconditions for competition between them for land, property, labor and financial resources, for markets of commodities, however, contributes to the development of cooperative relations and allows to use advantages of both large and small agricultural production.

It should be noted that in competitive conditions chances of the parties are different. And the point here is not only in the size and other obvious advantages, but also in the awareness of the parties about the situation on the agrifood markets, material and technical resources, finance, services, the level of managers' knowledge and specialists of enterprises, farmers, owners of farms in the technical-technological, organizational-administrative and other innovations. That is the multistructural nature of institutional forms of managing in agrarian sphere should be supplemented by relevant institutions of its information and consultation of innovative software.

Thus, the institutional environment of the informational system and consulting of the agrarian sphere formed by, on the one hand: agricultural producers with relevant inter-farm structural divisions, managers, specialists, direct executors of the production and economic processes; rural inhabitants; local authorities and self-government, and on the other – a set of significant number of functionally authorized institutions (legal, scientific, educational, informational, commercial, trade and procurement, financial and credit, regulatory, advisory and etc). Each of these

institutions has the appropriate purpose, the socio-economic importance and plays an integral component of this system

Particularly relevant at the present time are the issues of institutional support for the development of information and consulting activities at the grassroots level, i.e. at the level of economic entities and rural areas, which derives directly from the provisions of the State target program of village development period up to 2015, the Laws of Ukraine «About the Main principles of information society development in Ukraine on 2007-2015» and «About agricultural advisory activity», the Concept of state advisory in agricultural system formation.

The content of these documents allows to form the main principles of state support for development of information and consulting providing of the agrarian sector (table 1). Strategic object of the state support should be the implementation of the Ukrainian Constitution norms, creation of worthy conditions of life and work of the population, creation of conditions for self-realization of the person's social potential.

Table 1. Characteristics of the main state support principles of information and consulting providing development of the agrarian sector in Ukraine.

<b>Principals</b>	<b>Substantial essence</b>
The rule of Law	Any administrative decision of Executive power and local self-government concerning advisory development must conform to current legislation of Ukraine
Social expediency	Activities of the advisory should predetermined by the objective needs of social life, a priority of universal values to reflect the social interests of the society
Scientific substantiation	Practical implementation of information and consulting providing must rely on scientific concepts, sociological generalizations based on the experience of domestic and foreign practice
Consistency and coherence	Provides a clear sequence in the process of information and advisory services providing, obligatory coordination of regulatory documents to the constitutional norms
Delineation of powers	Clear definition of authority, competence and functions of Executive power and local self-government and their systematic interaction with advisory services
Professionalism and competence	Involving into information and consulting providing qualified personnel able to speak coordinators of efficient business solutions
Democracy	Creation of legal mechanisms to provide a wide participation of business in the establishment and activities of advisory, publicity and openness providing

However, today there is no practically institutional approach to small entrepreneurship develop, that develops spontaneously, at by its own expense. The

ratio of operating economic enterprises to advisory activities in rural areas is rather modest. In particular, based on results of sociological survey, 64 % of agricultural entrepreneurs do not need advisory services (economic, agronomic, zootechnical), 26 % are in need, but not willing to pay for them, and only 7 % need and are ready to pay for them. Among the owners of private farms that sell their products, the following trend was identified – 44 % need advisory services, however only 10 % can pay for them [ 1].

Strategic directions of Ukrainian agricultural development for the period till 2020 includes the creation of State agricultural advisory system and providing the development of non-state agricultural advisory services to cover by social advisory services up to 2015 – 50 %, and by 2020 – 90 % of agricultural producers and rural population of the country [2].

In the paper directed to “Development of agricultural informational – consulting (deliberative) activity” expected to form in the link area-village Council developed network of agricultural advisory services for the agricultural producers and rural population advisory services providing on implementation of the state agricultural policy, increasing knowledge and improving practical skills of making profitable agricultural and related activities, promotion of the innovative development of agriculture and rural areas, including to implement activities:

- to establish a State system of agricultural advisory using technical and scientific capacity of institutions and agencies of Ministry of agricultural policy and the Ukrainian Academy of Agrarian Sciences, to contribute to the personnel, organizational, financial, logistical support of its activity;

- to stimulate the development of the non-governmental advisory services activities, commercial agri-consulting formations and private consultants in rural areas, including through their involvement to provide socially oriented advisory services;

- to improve the quality of agricultural advisory services to provide the circulation of highly skilled staff between science, education and agricultural advisory, due to scientific and technical character of agricultural advisory activity, to

extend to agricultural advisers and agricultural experts action of the Law of Ukraine «About scientific and scientific-technical activity».

To cover by social advisory services not less than 90% of agricultural producers and rural population, increasing the number of agricultural advisers, primarily at the local level management of agricultural development to one agricultural advisor on a professional basis serves approximately 14 agricultural enterprises and 2441 households. It is planned to provide unprofitable content of infrastructure components of State system of agricultural advisory by gradually increasing the volumes of business Advisory services allocation. Additional receipts in budgets of various levels from the activity of the national system of agricultural advisory on 2012-2015 are expected of 1400,0 million UAH., 2016 the 2020's. – 5000,0 million UAH. [2, C. 100 - 105].

Table 2. Structure of expenses on agricultural Advisory activity development in Ukraine\*

Measures	Financial needs, Million UAH.			
	2012-2015	%	2016-2020	%
Develop and approve a plan of measures on realization of «the Concept of the state agricultural advisory system formation in Ukraine»	0,2	-	-	-
State system of agricultural advisory financing	562,06	97,4	1156,34	97,3
Covering the social advisory services that will be provided to the attracted non-governmental Advisory services	15,24	2,6	32,59	2,7
Total	577,29	100	1186,92	100

\*Source: calculation based on [2].

Expected economic effect from implementation of the state agricultural advisory during the implementation of this concept is to promote the development of business structures in rural areas, that lead to additional revenue in the local budgets, as well as solve the problem of rural population employment and increasing of their level of solvency.

**Conclusions.** Діяльність дорадницьких служб може стати саме цією державною інституцією, що допоможе вивести механізм реалізації державної підтримки підприємництва на науково обґрунтований сучасний рівень.

A study of the institutional evolution of economy shows that the integrity, continuity and stability of the institutional environment is provided by fundamental institutional structure that represents the institutional core of the economic system. In the context of the main directions the formation of the institutional environment in rural areas at the present stage should be: creation of full legislative base of local governments and cooperatives in rural areas and targeted organizational work on formation of relevant institutions and structures; support and infrastructure development of the rural economy – energy and gas supply, transport and information networks, social sphere. Advisory activity services may be precisely this state institution, that helps to bring the mechanism of state entrepreneurship support on the EBP modern level.

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### **Elements of innovation subsystem in the development of extension**

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*Defined and substantiated directions of the innovation process, its structure, its place in counseling and agriculture information supply.*

***Innovation, extension, information supply, transfer of technology, agriculture***

In the global community only countries that provide their food security on the basis of rational use of natural resources can take its rightful place, taking into account ecological and energy resource restrictions, with good theoretical and practical maintenance of agricultural science. Therefore, there is a question of innovative way of development of agriculture before countries, the introduction of new technologies and scientific developments in the production process. Ukraine is not an exception to the global food crisis, it is imperative to move to the intensive development of agriculture [1].

The nature of industrial relations that evolved between the research area of agriculture and agricultural production, until recently didn't stimulate the innovation of agricultural science. As a result, developers of innovative projects had little interest in cooperation with agricultural producers. Underestimating the role of innovation and scientific advances adversely affects the work of the entire agricultural sector. In the solution of this problem an important role has to play information supply of business, which has become an integral part of the further development of the industry. An innovative type of economy, including agricultural production, almost impossible without advanced information infrastructure and calls for deepening the theoretical foundations of information and scientific support agricultural enterprises and facilitate, with this extension services and agricultural consulting.

**Analysis of the main research and publications.** The main theoretical and methodological provisions relating to the disclosure of the nature and content of innovation, characteristics and laws of its manifestation in agricultural production and

the problems of organization and development of extension services examined V.I. Blagodatniy, O.M. Borodina, V.O. Vasilenko, S.A. Volodina, O.I. Dacia, O.V. Donets, V.O. Zagotova, S.M. Illyashenko, T.P. Kalna-Dubinyuk, M.H. Koretsky, I.M. Kryvoruchko, M.F. Kropyvko, P.M. Makarenko, M.I. Malik, J.N. Novikova, I.A. Pavlenko, P.T. Sabluk et al.

**The purpose of the study.** Consider the characteristics of the formation and development of the innovation process in agriculture and indicate the place of extension services in the transfer of technology.

**The main material.** Economic crisis in agriculture adversely affected primarily the rate of implementation of the achievements of scientific and technical progress. The peculiarity of his depressive type in the agricultural sector of Ukraine has been a sharp decline in domestic production facilities and reducing the level of technical provision of agricultural producers. [2]

Conceptual framework of strategy for economic and social development of Ukraine should be directed at improving the level of innovation of the national economy, namely, the creation of economic incentives and institutional regime for the promotion and effective use of science in all areas of the national economy, the development of an efficient innovation system of member firms, research centers, universities, venture capital companies, etc., the implementation of quality reforms in education with all the opportunities of getting high-quality continuing education by combining the efforts of government and charitable foundations, the formation of a dynamic information infrastructure, innovative and competitive economy. [4]

The innovation process is implemented transfer of information from the field of research and its material transformation in production and is a collection of interrelated elements that unite the activities of production and innovation. Scientific organizations, implementing formations and consumers of scientific and technical products (agricultural producers) must act coordinately in the innovation process, from identifying needs and scientific invention to mass development of innovations.

Innovation process associated with the creation, development and dissemination of innovations. As part of this process, the developers of innovations

for profit create and promote innovation to their customers. It begins with the emergence of the idea and ends with its commercial realization.

In the innovation process may be involved at least two subjects – the manufacturer of innovative product and the consumer, three (manufacturer innovation, promotional formation and consumer) and more (investors, government, etc.). Aside from having the subjects of innovation for the production, implementation and replication of innovative design it is necessary to create certain conditions - the needs, capabilities, motivation and availability of the innovation system.

In general, the structure of the innovation process can be represented in the form of four main steps:

- The creation of scientific developments;
- Dissemination of innovation (bringing information about innovation, education);
- The development of innovation in manufacturing;
- Evaluating the effectiveness of innovation [5].

The main form of promotion of innovation is technology transfer: the transfer of patents, patent licensing, trade of inventions without patent, transfer of technical documentation, transfer of know-how, transfer of technological information accompanying the purchase or lease (leasing) equipment and machinery, information exchange in personal contacts at seminars, symposia, exhibitions, etc.; engineering, research and development in the exchange of scientists and experts, holding by various companies joint research and development, organization of joint production, joint ventures.

Technology transfer is a process of transfer of skills, knowledge, technologies, methods of manufacturing, samples of manufacturing and composite objects of technology among governments and other institutions to ensure that scientific and technological progress. Transfer of technology makes it available to the general public, it promotes the use and reproduction technologies and create new products, processes, materials or services.

For distribution and implementation of innovations, and thus transfer technology uses different directions and specific channels. An important role is given to the operation of innovative units that would facilitate effective implementation of the results of innovation in production and would be a link between science and industry. At the present time this issue not given proper attention. Later, with the development and improvement of information technology and innovation units need to be created conditions for producers to learn about innovation not only with work experience of advanced economies, but also directly from scientists at the stage of creation of innovation. And such formations as intermediaries between actors of the innovation process for the agricultural sector should be a consulting or extension services that turn is intelligent subsystem or part of the system information of agriculture.

Extension is the key to scientific and technical progress in agriculture. These organizations are very active participants in the agricultural Ukraine's information space, producing large amounts of information, as well as dealing with its processing. These services create conditions for obtaining additional income by agricultural producers and rural populations. But not everyone can take advantage of their services.

Extension services should play a leading role in the development of effective information and knowledge exchange throughout the network of informational supply of agriculture. This intelligent element of network, but rather of its structure which provide various types of extension services, regardless of the form of financing, have to jointly create demanded information resource and together with global information resources play as an effective environment for agricultural producers.

Mastering of methods of agricultural extension is especially important for administrative employees of district, regional levels of government agricultural and regional agricultural extension services, consulting firms, expert consultants of agricultural science and education institutions. Agricultural extension consists of knowledge and dissemination of agricultural information: information, training, innovation, expert advice. This extension services able to really convey to producers

and use for optimization of production functions and processes all components of the system informational supply the agricultural sector.

Extension system consists of the following four subsystems:

- Information and referral. Provides maintenance and updating of a data bank of information resources provided by scientific institutions, libraries, extension services and producers.

- Consulting. Combines the structure of consulting service industry and agricultural enterprises on the economic analysis, organization, management, technology and production economics, business planning and monitoring.

- Innovation. Enables the creation of innovation based on new knowledge, which allow the user to increase the level of production, contributes to the development of knowledge.

- Training. An open system, based on the information and practical advice subsystem [6].

Innovative activity - is a complex dynamic system of action and interaction of different methods and factors management bodies engaged in the research, creation of new products, improvement of equipment and work processes and forms of organization of production based on the latest science, technology, planning, funding and coordination scientifically - technical progress, improving economic levers and incentives, development of measures for the regulation of complex of interrelated measures aimed at accelerating the development of intensive scientifically - technical progress and improving its socio - economic efficiency. It is associated with the transformation of scientific research and development, inventions and ideas in new or improved product introduced on the market, new or improved process, used in practice, or a new approach to social services.

**Conclusions.** The current state of agriculture requires increased knowledge and practical skills of profitable agriculture in a market economy, the provision of extension services on economics, technology, management, marketing, accounting, tax, law, environment, etc., the timely implementation of plans of social and economic development of civil society, the spread and implementation of modern

technology, latest achievements of science and technology, which are the main objectives of the agricultural extension service [1].

At present, there is the problem of ensuring effective operation of agricultural extension services, which are formed as a legal entity and operate in a different legal form and have different forms of ownership, or are the structural units of agricultural education and research institutions.

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## UKRAINE ON WOLD SUGAR MARKET:PROBLEMS AND PROSPECTS

*S.A.Stasinevych, PhD*

*The results of analysis of the structure of world production of sugar-producing countries, export-import operations with sugar Ukraine and the place of Ukrainian sugar on the world market. Comparison of indices of sugar production in Ukraine and the EU.*

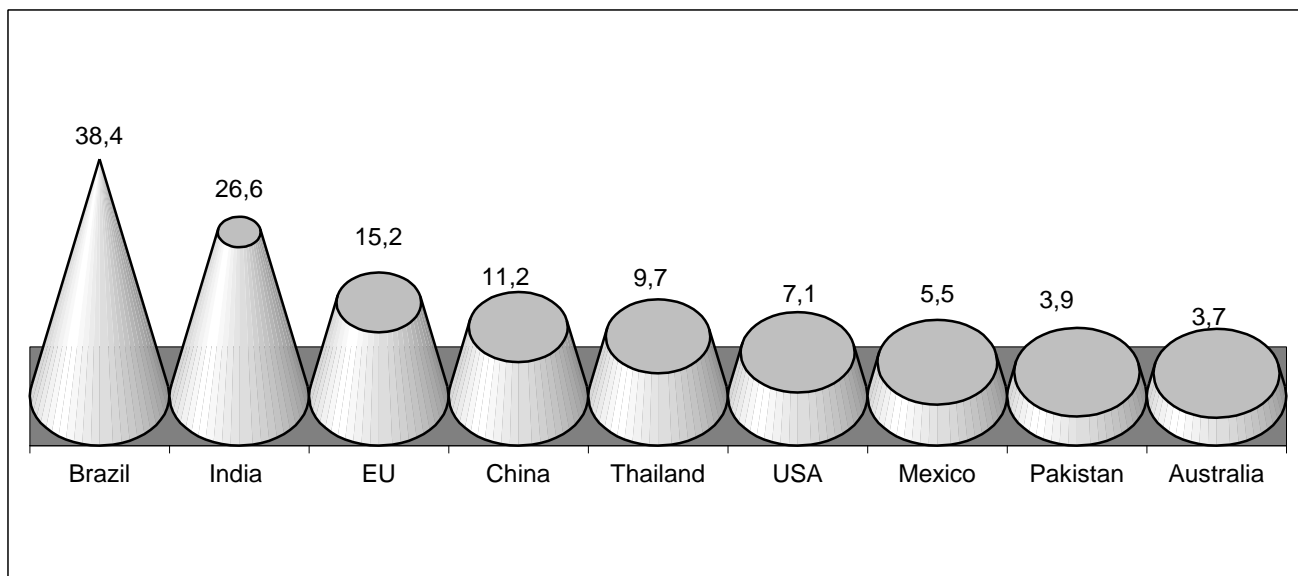
***Sugar, sugar beet, cane sugar, production, world market, export, import quotas, the European Union and Ukraine.***

Currently developing economic relations through increased globalization, including European integration. Do not bypass them and the sugar industry in Ukraine. Since 2008 the country is a WTO member, but significant progress on promotion of domestic sugar to the world market is not observed. The reasons lie in the same industry. First of all quantitative research needs to factor in whether a country produces enough high quality competitive products? **The purpose** of the study is to analyze the formation of the world sugar market and identify Ukraine's place in it.

**Analysis of recent research and publications.** The problems of global and domestic Ukrainian sugar market researched famous scientists and practices O. Varchenko, A.Zayets, A. Bahatyrenko and others. However, the change in the world market requires analyzing these processes in order to obtain lessons to rebuild their own industry.

**The main material.** Today, sugar production in the world is of two main raw materials: 80% - from sugar cane, respectively, 20% - from sugar beets. According to the International Sugar Organization, sugar is now producing more than 100 countries. The largest sugar producer in the world is Brazil, which produces almost 40 million tons of sugar, while sugar it converts only half grown sugar cane (the second half is used for the production of ethanol - the ratio of sugar cane, which is used to solve the food problem and the issue of power is variable parameter, which, in particular, depends on market conditions prices renewable energy).

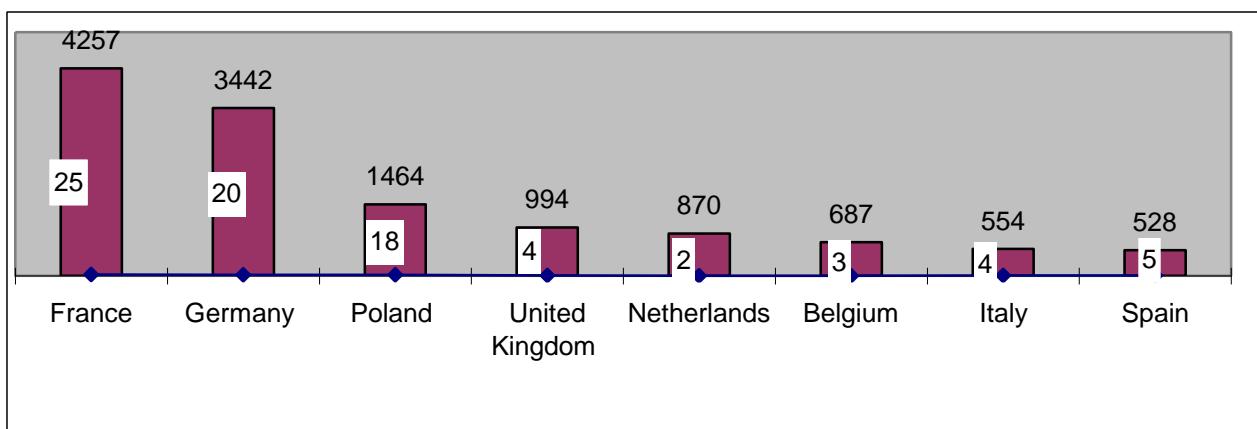
The second position in the global production of sugar is India, where the 2010/11 marketing year has produced 27 million tons of production (Fig. 1) and 26 million tons according to preliminary data for 2011/12 marketing year. Record volume of sugar production reached Thailand - almost 10 million tons



**Figure 1. Rating chart the world's leading sugar producers (Data of 2010/11 MY, million tons)**

In the European Union, where the sugar is processed sugar beets were produced over 15 million tons of products. The first five largest sugar producers in the EU are France (4257 tons in 2010/11 MY, operated 25 refineries), Germany (3442 tons, 20 companies), Poland (1464 tons, 18 plants), United Kingdom (994 tons, 4 plants), the Netherlands (two companies produced 870 tons) (Fig. 2). In 2011/12 MY, the amount of sugar in the EU according to preliminary figures are higher than the previous year (17-18 million tonnes), particularly in Germany, production of sugar exceeds 4 million tons.

In Ukraine in 2011 operated 77 refineries and has produced 2.33 million tons of sugar from sugar beets and about 250 tons - of imported raw cane sugar, which is imported into the country within the annual quota (267.8 thousand t) - conditions-duty in connection with the accession to the WTO. Thus, the global production of sugar (which amounted to 173 million tons) in Ukraine accounted for less than 1.5 million tons and 15% relative to the volume of sugar beet in the EU.



**Figure. 2. Number of plants and the amount of sugar (tons) countries largest producers in the EU (data from 2010/11 MY)**

Thus, the area under sugar beet in Ukraine is more than 35% of the crop material in the EU. Thus, the performance of complex sugar beet in the EU and Ukraine differ significantly (Table 1).

**1. The areas under sugar beet and sugar beet production in Europe and Ukraine (2011) \***

Country	Acreage of sugar beet, thousand hectare	Total production of sugar, thousand tons	Sugar production from 1 ha of crops of sugar beet, ton/hectare
France	381	4257	11.2
Germany	345	3442	10.0
Poland	195	1464	7.5
United Kingdom	93	994	10.7
Netherlands	71	870	12.3
EU	1539	15180	9.9
Ukraine	544	2331	4.3

\* According to the National Association of Sugar Producers of Ukraine "Ukrtsukor" Sugar

Sugar per 1 ha under sugar beet in Ukraine (4.3 t / ha) is 2.3 times lower than in the EU (9.9 t / ha), including 2.6 times than in France (11.2 t / ha) and 2.9 times less than in the Netherlands (12.3 t / ha).

Considering carry-over stocks of sugar remaining in Ukraine at the beginning of the domestic production season 2011 (1 September 2011), the amount of which is estimated ministries, was not less than 300 tons of sugar in Ukraine was a significant export potential for this product. If the internal needs of the country's sugar quota measure "A" by the Cabinet of Ministers of Ukraine in 2011/12 MY 1860 approved the terms of tons, Ukraine could export about 700-800 tons of products. However,

sugar exports from Ukraine in 2011 was, according to official figures, only 6.2 tons (Table 2).

**2. Export and import of sugar Ukraine (according to official data of the State Statistics Service of Ukraine), thousand tonnes**

Years	White sugar		Other sugars	
	Import	Export	Import	Export
2007	18,2	5,2	3,5	63,7
2008	62,2	11,4	3,8	33,4
2009	77,2	24,7	6,7	19,0
2010	83,9	0,3	19,1	35,0
2011	37,8	6,2	15,2	23,4
2012	0,6	174,3	12,5	20,5

\*Including lactose, glucose, maltose, fructose, artificial honey, caramelized sugar and molasses.

World's largest sugar exporters are countries - the largest producers: Brazil in 2010/11 MY exported 25.8 million tons of sugar, Thailand - 7.4 India - 3.2, EU - one million tons of sugar gradually increasing (up to 3.8 million tons) increases exports of Australia, the amount of which reaches 2.6 million tons.

Import of white sugar to Ukraine in 2010 amounted to 83.9 thousand tons - it was almost completely deliveries from Belarus (within the Free Trade Agreement): 83.5 tons. This obviously imported sugar cane origin. In 2011, imports of white sugar in Ukraine declined to 37.8 thousand tons, but 99% of this amount was imported also from Belarus. Thus, the domestic sugar market of Ukraine is vulnerable to imports of white sugar from Belarus.

However, the country has seen an increase in sugar production: in 2011 it produced 596 thousand tons in domestic consumption of 360 tons. In contrast, exports of white sugar from Ukraine in this period decreased to almost zero: 2010 - 0.3, 2011 - 6.2 thousand tons. Thus, the export of other sugars in increase of imports (these products in 2010-2011 came mainly from Russia and China). In the Russian Federation in 2011 was a record crop harvested sugar beet - 46, 3 million tons, and Russia has taken a leading position in the world in terms of sugar production - production of raw materials for its own origin sugar exceeded 5 million tons as

needed 5.6 million tons creating, among other things, the export potential (exports rated by association "Soyuzrossahar" may exceed 200 tons).

Ukrainian sugar importers are Asian countries - mostly former Soviet republics (Kazakhstan, Georgia, Kyrgyzstan, Uzbekistan, Turkmenistan), as well as Lebanon and Syria. Also in 2012 has been reduced to zero using Ukraine quota import of raw cane sugar. In 2012 there is a better balance of export and import operations Ukraine in its favor by activation of exports in 2012 was exported more than 174 tons for imports under 174 tons of sugar.

In 2012/13 MY in Ukraine set quotas "A" at 1833 thousand tons of sugar beets harvested area was 449 hectares (516 hectares against last year), 18.4 million tons grown sweet potatoes, worked 63 sugar mills. Issue sugar season in 2012 was 2,222 tons, which is 5% less than the previous year, when it produced 2.33 million tons of products. However, over stocks of sugar (650 tonnes) twice higher than before the completed marketing year. Consequently, export opportunities are not reduced. But today a number of traditional Ukrainian importers of sugar was not needed. 2 years ago a potential exporter of Ukrainian sugar considered Russia. However, 2011 and 2012 distinguished record amount of sugar in its own raw materials - sugar beets. Thus, in 2012, according to State Committee of the Russian Federation on Statistics, the country produced 4.9 million tons of beet sugar, in addition, 447 tons of cane - so, of 90% self-sufficient in production of domestic origin, problems with the import of raw sugar and does not exist. Therefore propose Ukrainian sugar nearest neighbor little to no sense.

Ukraine carried out in recent years sugar exports to Central Asia, including the former Soviet Union - Kyrgyzstan, Uzbekistan. But now the government sees an opportunity to provide Kyrgyzstan with sugar all over the country on their own, despite the fact that there is a sugar plant (JSC "Kaindy-Kant"), but the two companies are willing to produce sugar. Conducts modernization of Building capacity of a single sugar units (JV OJSC "Horazm Shakarim") and Uzbekistan [5].

Generally sugar production in the world could reach a record high - 177, 6 million tons in the season in 2013, primarily due to an increase in harvest sugar cane in Brazil, where sugar production will increase to 38.5 million tons in 2013/14 MY.

According to International Sugar Organization for sugar stocks by the end of the season will increase to 66.3 million tons. Some countries are producing the policy of "closure" of the domestic market from imports of sugar. For example, in India the sugar market operators insist on raising import duty on sugar from 10 to 60%, going solely on self-reliance.

Thus, Ukraine is difficult today to find free niches in foreign markets sugar, although interested in the Ukrainian sugar China and Afghanistan. Furthermore, it should be noted that in the official negotiations on a free trade area between Ukraine and the European Union agreed to establish export quotas for Ukrainian sugar to the EU in the amount of 20 thousand tons per year, which is important in terms of new markets distribution [4].

**Conclusions and recommendations for further research.** Studies of modern Ukraine's position on the sugar market in the world and compared to EU countries made, unfortunately, disappointing results: Ukrainian sugar beet subcomplex satisfying now almost exclusively domestic needs of the country's sugar.

In Ukraine to increase the importance of the industry in the global sugar market and restoration of the country of export status of this product must take decisive steps to improve sugar beet production.

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**ECONOMIC EFFICIENCY OF THE PRODUCTION AND  
PROCESSING OF SUNFLOWER ARTSYZ DISTRICT OF ODESSA  
REGION**

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*The article provides a brief overview of the main indicators of economic efficiency of production and processing of sunflower in in Artsizskiy district of Odessa region and ways to improve it.*

**Keywords:** *economic efficiency, production of sunflower, sunflower processing, production intensification of sunflower .*

**Statement of the problem.** Ukraine in recent years is the global leader in the production of sunflower and sunflower oil, although the culture fell on our land only in the XVIII century. Strong position in Ukrainian agribusiness sunflower primarily due to its high competitiveness. Demand and prices for sunflower seeds from one year remain consistently high. Sunflower seeds for the farm area of its cultivation is one of the main sources of their return through both sales to processing and export. If we consider the strategic importance of this agriculture its perspective is clear. Therefore the study and analysis of major economic indicators of production and processing of sunflower, the necessity to improve technology for growing sunflowers and definition features of formation its performance remains a topic for research.

**Analysis of recent research and publications.** Solve of the problem to increase the economy efficiency of production and processing sunflower attracted and continues to attract the attention of many researchers. Many theoretical developments and recommendations on this issue have highly scientific and practical value. The basis of modern methodology for determining the economic efficiency of agricultural production are labor of A.V. Cohan, L.I. Jasinska, I.Yu. Tsober, P.P. Borschevskii, P.I.Haydutskii, V.D. Honcharova, B.M. Danylyshyn, M.I.Dolishnii, S.I. Dorohutsov, N.V. Kondratyuk, Yu.P. Lebedynskii, A.S. Lysetski, etc. ..

**The aim of research** was to study the basic and economical indicator of the production and processing of sunflower Artsyz district of Odessa region, to show their comparative performance in the past years and define basic ways to improve production and processing of sunflower.

**The main material of the study.** Artsyz District was established in 1940. The area is located in the southwestern part of the Odessa region, 160 km from the regional center and covers an area of 137.9 hectares, of which forests cover 453 ha, reservoir - 847 ha. District has a special place in the geographical location among the southern Odessa region - it is the center of the southern part (Bessarabia).

Artsyz district is in the steppe zone. The natural conditions of the area are characterized by moderate continental climate. The average temperature in January - 2 - 3 °С, July 25 °С. Average annual temperature of 8.2 °С. The growing season lasts 180 to 210 days. Average annual rainfall - 340 mm, including the growing period 200-240 mm. Area refers to not damp, warm agro-climatic zones. Summer is hot and dry, it is characterized by a large number of sunny days. Winter is very cold, mild, characterized by frequent thaws and frosts are occasionally significant. Period with zero temperature is 250 days. Beginning of the period with an average daily temperature above 15 ° C, which coincides with the beginning of the most intense vegetation in the second week of May. Available for the district is eastern and north-easterly winds. Describing the climate of the area, it should be noted about the possible long-term drought.

Soils in the area are ordinary black. These type of soils have high natural fertility. They have relatively large amounts of basic nutrients. Consequently, soils and climatic conditions of Artsyz district are favorable for growing sunflower. That is why it crops occupy an important place in the structure of crops and agricultural economy of the district groups (Table 1).

Table 1

**The area under cultivation of crops on farms Artsyz area**

Culture	2008		2009		2010		2011		2011 year in % of 2008
	Area, ha	%	Area, ha	%	Area, ha	%	Area, ha	%	
Grains and legumes	20304	71,31	20218	70,12	31217,5	69,50	32416,7	66,28	159,7
Including:									
winter wheat	8956	31,46	9203	31,92	14657	32,63	12882	26,34	143,8
buckwheat					20	0,04	128,2	0,26	
rye	18	0,06	20	0,07	22	0,05	10	0,02	55,6
winter barley	5489	19,28	5578	19,35	8698,7	19,37	8361,5	17,10	152,3
spring barley	2245	7,89	2305	7,99	1767	3,93	1791	3,66	79,8
peas	1526	5,36	1705	5,91	2340	5,21	2034	4,16	133,3
oat	87	0,31	90	0,31	153	0,34	137	0,28	157,5
millet	158	0,55	20	0,07	634,8	1,41	331	0,68	209,5
sorghum	257	0,90	310	1,08	467	1,04	1886	3,86	733,9
other grains	28	0,10	7	0,02	45	0,10	310	0,63	1107,1
maize	1540	5,41	980	3,40	2413	5,37	4546	9,29	295,2
Sunflower	1952	6,86	2197	7,62	2710	6,03	6986	14,28	357,9
Rape	4963	17,43	5148	17,86	9677,3	21,54	8166	16,70	164,5
Potato	-	-	-	-	4	0,01	-	-	
Open ground vegetables	20	0,07	20	0,07	35	0,08	70	0,14	350,0
Melons and Food	32	0,11	48	0,17	54	0,12	35	0,07	109,4
Fruits	100	0,35	103	0,36	106	0,24	103	0,21	103,0
Grapes	1100	3,86	1098	3,81	1115	2,48	1133	2,32	103,0
Total crop	28471	100	28832	100	44918,8	100	48909,7	100	171,8

The analysis of Table 1 shown that the structure of sowing areas Artsyz district almost unchanged. The largest share of total acreage reserved for cereals and leguminous plants, due to favorable soil and climate conditions for their cultivation. These cultures are very coarse and have some food value. Legume crops have also agronomic value. They enrich soils by nitrogen. Share of grain crops and leguminous crops is chang over last years as follows: 2008 - 71.31% , 2009 - 70.12%, 2010 - 69.5% 2011 - 66.28%. The area under grains and legumes cultures increased four years at 59.7%.

A large proportion of the planting area occupied by crops and crops such as rapeseed - 16.7% and sunflower - 14.28%. During the study period the area rape

increased by 64.5%, and sunflower - in 3,6 times. This increase of sunflower area is a consequence of high economic efficiency of its cultivation. Compared with other oilseeds sunflower oil provides the highest yield per unit area (750 kg / ha on average in Ukraine).

Economic efficiency of production of oilseeds means getting maximum output from one hectare of land area at the lowest cost all district and unit of production [1].

Economic efficiency of sunflower depends on a complex set of natural, economic, technological, scientific, and technical factors. In studying this issue, industry figure following features: sunflower picky about soil conditions. Agro requirements do not allow to grow this crop in specialized farms. The plants of this crop is very sensitive to all kinds of herbicides. It should also take into account requirements change depending on the purpose of its use. Key indicators characterizing the level of economic efficiency oilseeds are: productivity, cost and price of 1c, weight gains per 1 kg, product profitability.

In Artsyz district sunflower production area is 15.73% in the structure of cash flows and is an area in transition. In order to determine whether effective is the industry should first should to carry through analysis of the dynamics of its development (Table 2).

*Table 2*

**Dynamics of production of sunflower in Artsyz area**

<b>Index</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2011 in% of 2008</b>
Planting area, ha	1956	2197	2710	6986	357,2
The yield of 1 ha, hundredweight	12,5	13,0	24,7	19,8	158,4
Gross yield, hundredweight	24450	28601	67006	138595	566,9
Sales, hundredweight	18596	39565	56366	121778	654,9
The level of marketability,%	76	138	84	88	x

From Table 2 we can see that from 2008 to 2011 the area of sunflower seed is increased in 3.6 times. It contributed to the high increase in the profitability of this crop. Demand and price for sunflower seeds from year to year remain consistently high. Currently, the world market of oil production is developing

rapidly and this growth is due not only to an increase in demand for food oils and fats of vegetable origin, but also the use of oilseeds for technical purpose - the production of alternative biofuels. You can also trace the growth indicators such as yield from 1 ha - by 58.4%, gross - in 5,7 times; sales - in 6,5 times. The level of commercialization of sunflower grew from 76% to 88%, which suggests that the economy has increased the number of sales in relation to total yield. In 2009, the commercialization of sunflower was 138%, indicating that sales were more by 38% than the harvest. This occurred due to stocks of previous years.

Analyze the cost-effectiveness of sunflower Artsyz district of Odessa region (Table 3).

*Table 3*

**Economic efficiency in the production of sunflower Artsyz area**

<b>Index</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2011 in% of 2008</b>
Total cost of 1 hundredweight, UAN	121,15	129,28	144,81	200,56	165,5
Price of 1 hundredweight , UAN	156,2	196,11	299,97	322,15	206,2
Profit / loss for 1 hundredweight , UAH	35,05	66,83	155,16	121,59	346,9
The level of profitability / loss of crop production,%	28,9	51,7	107,1	60,6	X

Over the past four years the profitability of sunflower has increased with 28.9% to 60.6% (by 31.7 percentage), indicating the increase in efficiency of the culture. Relatively high levels of profitability due to reasonable production costs and higher price realization. In 2011 compared with 2008, the cost of 1 hundredweight of seeds increased by 75.5%, and its price realization increased by 2 times. Under these conditions, earnings per 1 hundredweight of seeds increased by 3.5 times. Increased economic efficiency of sunflower occurred as through the development of extensive way, as evidenced by an increase in acreage by 3.5 times, and due to the intensification of production as evidenced by the growth of sunflower yield by 58.4%.

The farms that grow oilseeds, are economically dependent on refineries on the provision of loans and financial resources for direct communication of seed

quality (humidity, Oil yield), which is the basis for determining the realizable price. It will eventually form the level of production of oilseeds and products of their processing [1].

To analyze the cost-effectiveness of sunflower processing should calculate basic indicators such as cost of production, profitability (Table 4).

*Table 4*

**Key economic indicators sunflower processing in PE "Bessarabia"**

Index	2008	2009	2010	2011	2011 in% of 2008
Production of primary products, t					
Sunflower oil	6597	8840	7780	8820	133,7
Oilcake	8439	10456	8760	9355	110,9
Fuel pellets	-	-	1799	2569	-
Cost of 1 of these products USD.					
Sunflower oil	4890	5175	6850	7750	158,5
Oilcake	350	400	600	820	234,3
Fuel pellets	-	-	500	680	-
Selling price of 1 ton of product, UAN					
Sunflower oil	5600	6900	9200	10250	183,0
Oilcake	750	900	1650	1850	246,7
Fuel pellets	-	-	650	950	-
Sales, t					
Sunflower oil	6500	8840	7780	8820	135,7
Oilcake	8430	10350	8750	9340	110,8
Fuel pellets	-	-	1790	2560	-
Gain on disposal of 1 ton of product, UAH					
Sunflower oil	710	1725	1420	2500	352,1
Oilcake	400	500	1050	1030	257,5
Fuel pellets	-	-	150	270	-
Profitability of production,%					
Sunflower oil	14,5	33,3	20,7	32,3	X
Oilcake	114,3	125	175	125,6	X
Fuel pellets	-	-	23,1	39,7	X

During the period from 2008 to 2011 crude oil production increased by 33.7%, oilcake – by 10, 9%. In 2010, PE "Bessarabia" began to produce pellets. The price of unrefined oil has increased by 83%, and the cost - by 58.7%. This ensured the growth of profits from the sale of 1 ton of 3.5 times the profitability of oil production has increased from 14.5% to 32.3%. Profitability of cake for

analyzed period grew and was 125.6% in 2011, due to the fact that the cost of 1 ton of finished products was 44% of the cost of its implementation. Profitability of fuel pellets also increased: from 23.1% in 2010 to 39.7% in 2011.

To improve the efficiency of sunflower cultivation is necessary to consider by manufacturer following factors: improved regional placement of crops taking into account the botanical and biological characteristics, production technologies, selection of varieties, use of appropriate protective equipment, etc.; strict observance of duty with sunflower in a field crop rotation; application of intensive technologies first growing and harvesting with the aim of reducing costs per unit of production, the introduction of high-yielding hybrids with high oil content, to attract the necessary funds for the development of industry and material resources (equipment, fertilizers, seeds) by looking for potential investors and creditors, and integration into agro-industrial cooperative formation to address the problems of production and management of crops.

**Conclusions.** Growing sunflowers always been traditional industries of agricultural production and an important part of the strategy economic development. Without the use of modern technology of production and processing sunflower, scientific study areas improve its production, regulation of relations between producers and processors You can not expect to obtain high yields, and as a result, highly cost-effective production and processing of sunflower.

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**Advisory activity in the area of domestic organic production**  
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The article outlines the current state of organic production in Ukraine, highlighted its role and importance, the characteristics of individual companies providing advisory services to producers of organic products.

*Keywords:* organic farming, organic food, counseling, consulting and advisory activities.

In today's increasingly widespread in Ukraine and the world becomes organic production. This mainly concerns the practice of growing and processing of healthy food. Dynamics of increasing demand for organic products in Europe indicates prospects for Ukrainian farmers to rapidly integrate sophisticated, but quite profitable and stable market for organic products which rapidly grows nearby. Practical experience shows that organic farming is able to compete with the now dominant - intense. For further development of organic farming in the Ukraine is a necessary state support and subsequent formation of an extensive system of advisory activities in this area.

**Analysis of recent research and publications.** Problems of development of organic production in Ukraine are reflected in the scientific researches by V. Shlapak, M. Kobysch, N. Kapshtyk, G. Chorniy, V. Artysh and other scientists. The development of advisory activities in the organic sector studied by such scholars as N. Iliuk, M Zhukovsky, A. Doub, T. Kalna-Dubinyuk, L. Rybak, A. Dubin and others. However, these issues require further examination subject to the conditions present.

**The aim** - to explore the current state of organic production in Ukraine and extension in this area, to outline prospects.

**The main material.** The organic movement in Ukraine began fifteen years ago, but it is particularly intensified in the last 5-7 years. Evidence of this is the growing number of households who prefer organic production. As of 2011 there

were already 155. In general, for organic farming they took 270 thousand hectares. In previous years, the organic production mainly specialized large farms. Mostly they are exported to EU countries.

In the last 5-7 years this activity is particularly interested in relatively small farms that usually work on filling food domestic market. Growing demand for organic produce noticeable in large cities such as Kyiv, Donetsk, Kharkiv, Dnipropetrovsk. Currently, the most active demand organic products is among people under 35 years of age. Most of the advantage it provides families with young children, pregnant women. However, there are buyers and seniors who want to remember the forgotten taste of food and quite wealthy. Organic production is a result of organic farming, which is the minimum tillage and application of soil, active and healthy use of green manure crop rotation using nitrogen-fixing legume crops, making only organic fertilizers, as well as a complete rejection of GMOs and chemical fertilizers and means of dealing with crop. Also effective organic production provides for organic livestock, based on - free Loose keeping domestic animals, creating natural but safe and comfortable conditions of their detention, respect the natural balance in the diet feeding, feeding a 100% organic foods and additives of natural origin ( salt, chalk, natural minerals, etc.). The use of organic technologies leads to enhance the natural biological activity in the soil and restore the natural balance of nutrients. In the context of organic farming amplified reducing properties, normal operation of living organisms, is a restoration of humus, and as a result - increasing crop yields. According to FAO, the Food and Agriculture Organization of the United Nations, which for many years studied the effects of agricultural chemistry and methods of industrial agriculture, the future of agricultural development in the world is built on the same technology of organic renewal of natural resources and minimize the dependence on exhaustible resources, the implementation of respect nature by the farmer and the consumer. Now that the level of industrialization and intensity of use of agricultural chemistry led to a catastrophic deterioration of soil fertility and economically damaging over-renewable resources, the United Nations began to

urge world leaders to pay attention to biologically viable organic farming technology.

In the present basic problem of development of organic agriculture in Ukraine and worldwide associated with low levels of vocational education is in question of the application of organic technology. And this, despite the fact that the vast majority of scholars and practitioners proved practical results of long-term balanced rationality organic methods of farming. While the majority of farmers waiting for help. It can be expressed in legislative initiatives shaping the national certification system, rules, standards, concessional lending.

Although worldwide organic production is a strategic direction of agricultural development in Ukraine is currently no law that would regulate the activities of organic producers. Ukraine still remains the only European country without organic laws, which makes organic production in the country is not recognized officially. And this despite the fact that the potential of organic agriculture in Ukraine is one of the largest in the world, due to high natural fertility of the land and the relatively low level of contamination by agrochemicals fields. Agroecological potential yield in Ukraine according to the Food and Agriculture Organization of the United Nations is 6.2 tons per hectare, while the actual average yield now stands at only 2.5 tons per hectare. It is the world's largest capacity that can be used most effectively using organic farming technologies. Today, the state is still trying to support the economy. Thus, the state target program of rural development for the period till 2015 is projected to amount of the share of organic products in total gross agricultural output to 10%, is expected to stimulate organic farming, normalization of organic farming and the establishment of its certification.

Thus, given the almost complete lack of public support in Ukraine, the Ukrainian lands and recovery of net food consumers is Ukrainian business enthusiasts. Currently, organic producers are consultative and advisory assistance from the International Public Association "Ukraine BIOLan" Organic Federation of Ukraine, the Independent Association of Ukrainian public organization

"Dorada" All-Ukrainian Organization "Club of Organic Agriculture" project USAID «AgroInvest" GIZ German Society , Embassy of the Netherlands, Switzerland and France [4].

International Public Association "BIOLan Ukraine" - an organization designed to support all those who made their choice in favor of organic farming - farming approach, which eliminates the use of GMOs, the application of chemicals during cultivation and storage, as evidenced by appropriate certificates [1]. Association "BIOLan Ukraine" was founded in 2002 to promote organic agriculture. The priorities of the activities of the Association "Ukraine BIOLan" sees: a network of producers and of the internal market for organic products, the development of legislative and regulatory framework for organic production, quality assurance of organic products through its certification and standardization, the introduction of a separate course on organic production of educational programs specialized educational institutions, raising public environmental awareness.

Association "Ukraine BIOLan" acts as a platform for the exchange of information on organic production of innovative technologies and their effective application. Today, the Association consists of 143 members, of which 54 - farmers engaged in organic production. Also association processors, distributors, scientific and public organizations belong to the association. Structurally "BIOLan Ukraine" includes two units: the marketing department, which is working with medium and small farmers, helping them realize the produced organic products, large manufacturers - find partners and sources for products, as well as consulting department (Department of Extension), which provides information and research component - from switching to an organic form of its active implementation. The main objective of the Department is consulting on increasing quality awareness and provide practical knowledge of organic products. For each year, the Association of Consulting Department provided 200 Consultation process in different regions of Ukraine - held demonstrations, field days and open houses, workshops and visits to farms across Ukraine to promote

the organic movement in Ukraine. In general, the Association "BIOLan Ukraine" provides a range of consulting and advisory services to producers, processors, buyers, traders, investors, and consumers - depending on your needs. Equally active consultative and advisory activities in the field of organic production provides Organic Federation of Ukraine. The basic direction of activity - providing the necessary information about organic production. It provides advice on systems, the basic requirements of the rules of organic farming, assistance in obtaining information about studying in the centers of training for organic agricultural production, offering free participation in seminars, conferences, round tables, held her in Ukraine, promotes participation in International Exhibition for organic agriculture, international seminars and conferences with partial coverage [5].

Association "Dorada" as an independent all-uniting business advisory activity - agricultural advisers, experts, consultants and advisory services that are professionally engaged in agricultural advisory services. The association of more than 500 professional advisors, 1,000 expert consultants and 30 agricultural extension services in 24 regions of Ukraine and Crimea. [3] The transition to organic production is a very important decision for any agricultural producer or entrepreneur. This decision often leads to changes in the structure of business, its management and financial system. It is very important to think carefully about the process. It is necessary to pay attention to the advice of experts - counselors in the field of organic production that can provide any information about the requirements and benefits, certification procedures, marketing products, etc. [2]. In this regard, the activities of the above companies is extremely important and relevant.

**Conclusions and recommendations for further research.** Summing up, it is worth noting that, despite the great prospects of development of organic production in Ukraine, further forming an effective system of extension in this sector is a priority. The urgent need is to create institutions that advise and monitor the activities of organic production at all stages of the production process. In

advisory activities for the transition to organic farming producers should use the experience of other countries by providing the necessary information to farmers, organization and conduct of education, training and so on.

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В статті окреслено сучасний стан органічного виробництва в Україні, висвітлено його роль та значення, наведено характеристику окремих підприємств, які надають дорадницькі послуги виробникам органічної продукції.

*Ключові слова:* органічне виробництво, органічні продукти, дорадництво, консультативно-дорадницька діяльність.

В статье очерчено современное состояние органического производства в Украине, освещены его роль и значение, приведена характеристика деятельности отдельных предприятий, которые предоставляют консультационно-информационные услуги производителям органической продукции.

*Ключевые слова:* органическое производство, органические продукты, консультационно-информационная деятельность.

# EVALUATION OF THE EVOLUTION OF THE PROCESS OF AGRICULTURAL LAND REFORM IN UKRAINE

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*Agricultural land reform in Ukraine was a complex process, characterized by changes to the whole system of doing agriculture, based on private ownership over collectivization, and private farms and agricultural enterprises over kolkhozes and sovkhozes.*

*This paper aimed to clarify the process of agricultural land reform in Ukraine by classifying the three-stage evolution of the reform, and discussing creation mode of farms. Extensive review of Laws, Decrees, Land Codes, and past studies on land reform in Ukraine were used as a background to evaluate realities of land reform process in Ukraine.*

*In the following space, we divide the whole process into three stages: the implementation period (1991-1993), the transformation period (1994-1999), and the establishment period (2000-2011). Considering the fact that the draft of the law on land market and cadaster in Ukraine was issued for approval, it may be predicted that Ukraine will enter into a new stage of land reform after 2014. This stage may be termed "Restructuring."*

## ***Agricultural land reform, transformation, three-stage evolution, new stage of the reform***

In 1991, the Soviet Union (USSR) collapsed and Ukraine became an independent country. Drastic changes took place hereafter. This study aims to clarify the actual process of transfer of ownership of land from state to citizens, and examine the evolution of land tenure and farming systems after the establishment of private land ownership in the country. For that purpose, this paper attempts to present a synthesized

description of agricultural land reform process by sorting out sometimes confusing and vague information seen in the forms of Laws, Presidential Decrees, and Land Codes during the period from 1990 to 2011. For the sake of discussion, we will divide the post-independence evolution into three stages. In fact, due to the lifting of the Moratorium on the sale of land in January 2014, it is considered that the country is now entering into the fourth stage, but this paper is limited to the evolution until the end of 2011.

The general objective of this paper is to clarify the characteristics of the land reform process in Ukraine by classifying into a three-stage evolution. We therefore conducted an intensive review of available documents such as Laws, Decrees, and Land Codes, and past studies on land reform in Ukraine.

The structure of this paper is as follows. In the second section, we will first describe common characteristics of Ukrainian agricultural system under the control-command system of the USSR, to which the need for urgent reform arose at the time of independence. Then, in the third section, the transfer process of state land ownership will be discussed in detail by organizing the entire post-independence process into three stages. Conclusions of this study are presented in the fourth section.

## **UKRAINIAN AGRICULTURAL SYSTEM DURING THE SOVIET PERIOD**

According to the State Land Committee of Ukraine, in the days when Ukraine was a part of the former Soviet Union (USSR), the country was contributing 18% (52 million) of the population and 16% of gross domestic product (GDP). With a share of territory in the Soviet Union of only 2.7%, these numbers were impressive.

With more than 11,000 state (sovkhozes) and collective enterprises (kolkhozes), more than 35 million hectares of land were cultivated. Ukrainian agriculture was characterized by the predominance of collective farms (76% of all agricultural producers in Ukraine) and land holdings of between one and five thousand hectares. Of the approximately 4.8 million workers who made up the labor force in agriculture, 84% were directly engaged in agricultural production, 14% were seasonal workers and only

2% were in management. Average number of employees was about 380 workers per farm.

During the era of the Soviet Union and its central-command system, most products or raw materials were transferred to different parts of the USSR to meet their needs or for further processing into different products. It was an enforced policy that any member of the USSR would not produce finished products (ready to sell) but be a donor of raw materials for a final production process. Only when it was unreasonable to move it somewhere else, was a member country able to produce finished products. All financial benefits were gathered at the center and later Moscow decided how to use it. In that situation, not all members of the Soviet Union could develop equally and therefore, at the time of USSR collapse in 1991, none of the member countries of the Soviet Union had their own political and legislative systems, causing severe difficulties in implementing reforms and innovations.

The characteristic feature of the Ukrainian agricultural system during the Soviet period was collectivization. In general, the common and universal characteristics in Ukrainian agricultural system were as follows:

- 1) A system of large state and collective farms (kolkhozes and sovkhozes)
- 2) Production operations that were centrally planned
- 3) Planned use of inputs and controlled prices of inputs
- 4) Use of collective forms of labor organization based on labor brigades
- 5) Planned wage funds and centrally defined production bonuses
- 6) Centrally controlled prices for farm products
- 7) State monopoly of food storage, processing, distribution and sale
- 8) Restrictions on private food production
- 9) State control of all land use
- 10) State control of finances, credit and banking

Due to the low economic efficiency of agricultural production, unresolved food

problems and Ukraine's loss of its position as an exporter of certain commodities, the urgent need for various reforms arose in the country as soon as it became independent. Agricultural land reform as a component of the economic reform, which aimed to stimulate the Ukrainian transition to a market economy, was legally implemented six months before Ukraine declared independence from the Soviet Union in 1991.

Before discussing the process of land reform in Ukraine, let us briefly examine the case of the Baltic States, which were also parts of the Soviet Union and have gone through land reform. Actually, in Baltic States, Poland, and other East European countries, land markets emerged more quickly than Ukraine, because the following conditions were achieved (Shulga and Kulinich, 1995):

- 1) Large numbers of objects such as land parcels, buildings, or premises were established with the civil legal status of "real property."
- 2) These objects were transferred to or recognized in the ownership of individuals and juridical persons who had the legal capacity to acquire and dispose of them in direct person-to-person transactions.
- 3) Reasonably convenient and cost-effective methods became available to bring together sellers and buyers, and lessors and lessees.
- 4) The civil law was revived to recognize these transactions as binding and the courts were empowered to uphold the rights and obligations created by these transactions.
- 5) A convenient and cost-effective method was provided to obtain proof of legal rights, whenever needed, through the land book or registry.
- 6) Soviet-style administrative land management, which made the state a mandatory third party in all transactions, was abolished.
- 7) Economic activity reached a level sufficient to create demand for land and property objects, and individuals and juridical persons began to make a supply of units available for sale/lease.

These nations achieved market activity relatively quickly because, at the start of transition, they had stated a clear goal of reviving the civil law. These countries had European-style civil codes in the period before Communist rule (USSR), and the civil principles and practice were legitimate and familiar for most citizens. In this context, each element of land and property reform (legislation, institutional change, legal and transaction documentation, and procedures) could be adopted from and tested against the complete, modern systems of property and land laws in Europe generally (Nosik and Valetta, 2002, pp.11-29).

In contrast, civil law tradition was weak in Ukraine, and there was no broad agreement to the goal of achieving European-style principles and practice. Concepts of social protection and noncompetitive economic activity remained attractive to many groups, and the principle of “land as the patrimony of all the people” was kept in the Constitution and the Land Code. On the basis of this principle, Ukraine retained the Communist-era concept of the Land Fund, which had described the state system of control over the allocation and use of the land. Ukraine’s land reform has been deliberately gradual and has sought to introduce selected elements of civil law alongside the Land Fund (Nosik and Valetta, 2002).

### **THREE STAGES OF LAND REFORM IN UKRAINE**

The goal of Agricultural Land Reform in Ukraine that started in 1991 was the formation of true owners and masters of land, who would contribute to social and economic progress of the countryside, resolution of the food problem and raising the agricultural economy to the world level. This reform started from the transfer of land from the State Fund into the ownership of non-state agricultural enterprises. Historically, for the first time private farms were created as independent legal entities outside the collectivist framework. In practice, people who had been working in agriculture most of their lives received the rights to own that land plot and to make decisions about the way of farming. They could even decide not to cultivate the land themselves. It was considered

that private farming had to inspire former members of kolkhozes as well as any citizen of Ukraine with agricultural education and a wish to be involved in agricultural activities.

However, the reality was that even with the right to receive a land plot from the State free of charge, the number of private farms did not increase at all from 1991 up to 1994, and only from the end of 1994 was there some progress in the creation of private farms. In fact, agricultural land reform in Ukraine was a complex process, characterized by changes of the whole system of doing agriculture, based on private ownership over collectivization, and private farms and agricultural enterprises over kolkhozes and sovkhozes.

In the following space, we divide the whole process into three stages: the implementation period (1991-1993), the transformation period (1994-1999), and the establishment period (2000-2011). Features and problems of each stage are now discussed.

### ***First Stage: Implementation (1991-1993)***

The 15th March 1991 marked the beginning of agricultural land reform in Ukraine in that all land in the country (both agricultural and non-agricultural) became subject to reform in accordance with the resolution of the Supreme Soviet passed in December 1990. This first resolution, “On Land Reform,” was followed by a long list of laws, presidential decrees, and governmental resolutions that have gradually created a comprehensive legal framework for agricultural land reform in Ukraine. In general framework, reformation of land relations presumed the implementation of a set of institutional, functional, economic, social, legal, ecological, and other measures, aimed at the formation of new social relations connected with land use (Law on Amendments and Additions to some Laws of Ukraine, 1993).

The importance of this stage is that the State monopoly for ownership of land was eliminated and for the first time in Ukrainian history people obtained the right to own

some specific plots of land. It was the first step of private land ownership in independent Ukraine. At the same time it should be mentioned that despite the implementation of new the system of land ownership in Ukraine, the traditional Soviet form of land tenure (inheritable lifetime possession for lands) had remained. Special feature of such form of land tenure was that land could be used, leased, bequeathed, passed in inheritance, but not sold (During the USSR time, land could not be sold, because the State owned it and there was no private ownership for land. In independent Ukraine, land could not be sold, because there was the Moratorium on selling agricultural lands from 1992 and up to 1.01.2014).

The aim of the first stage was to change the state ownership of land and assets, *free of charge*, to the possession and use of Ukrainian citizens and members of former kolkhozes.

The January 1992 Law on Forms of Land Ownership eliminated the monopoly of the state on ownership of land, which had been a feature of the Soviet system since 1917 and caused transformation of lands out of the State Fund into the ownership of non-state agricultural enterprises (structural reorganization of kolkhozes/sovkhoses, when kolkhozes were transformed into collective agricultural enterprises and sovkhoses were privatized) (Figure 1).

**USSR time** ----- >State monopoly for lands 100%

**After 1991** ..... >No more State Monopoly

All agricultural lands were divided:

25% Remained in Exclusive State  
Ownership

60% Land under Former Kolkhozes  
(collective ownership of members)

15% Land under Households  
(privatized by people)

***Fig. 1. Transformation of lands out of the State Fund***

Source: State Land Committee of Ukraine, 2011

Exclusive state ownership was retained for a fairly restricted list of land categories, as follows:

- 1) Land in common use in villages and towns
- 2) Land used by the mining industry, transportation, communication, and defense
- 3) Nature reserves, recreational lands, health resorts, historical and cultural monuments
- 4) Forests and water bodies (except small areas up to 5ha included in the holdings of private farms)
- 5) Land of agricultural research and teaching institutions with their experimental stations
- 6) Land of state farms specializing in seed selection, elite-seed production, livestock selection and pedigree livestock breeding
- 7) Land of state farms specializing in hops, essential oil plants, medicinal plants
- 8) Land of state farms specializing in fruits and grapes.

Some of these categories of land retained for state ownership were quite understandable by universal standards, while some categories were obviously dictated by a mixture of political and economic considerations (Law on Forms of Land Ownership, 1992); for instance, grapes for the wine industry and large-scale fruit orchards were regarded as a national strategic asset. All other lands could be transferred to collective and private ownership.

The new Land Code introduced mechanisms for transferring land to private ownership in March 1992. As is shown in Table 1, a total of five categories of land use were set out and the size of land plot defined for each category under this new form of ownership. For instance, for a dacha, summer cottage owned by city residents, private

land ownership was restricted to no more than 0.1 ha per household. Plot size for house construction was also determined for villages, settlements and cities respectively.

It is important to note that a citizen with agricultural education or a will to be involved in agricultural activities was entitled to a maximum of 2.0 ha of land and given a right to receive such land from the state. Historically, this was the first step in the creation of private farms in Ukraine at least on paper in that the 1992 Land Code gave a right to create a private farm on obtained land plot. However, because the procedure for creating such private farms was not specified in the Land Code, no land was actually transferred to private farmers before 1994.

*Table 1.*

**Purpose and size of land that could be transferred to private ownership for households**

<b>Land use purpose</b>	<b>Land size (ha)</b>
Private orchards	not more than 0.12 ha
Summer cottages (dacha)	not more than 0.1 ha
Individual garages	not more than 0.01 ha
Subsidiary households	not more than 2 ha
Private house construction:	
in villages	max 0.25 ha
in settlements	max 0.15 ha
in cities	max 0.1 ha

Note: These non-agricultural lands and extra land area could be purchased at a certain price.

Source: Land Code of Ukraine, 1992

In addition, the 1992 Land Code severely circumscribed the rights of private landowners. Owners may not sell private land. During the moratorium, privately owned land may be alienated only to the local authorities from whom it was originally received. The moratorium applied both to land received from the State Fund and to lands obtained from the local authorities. In the latter case, the individual was to be reimbursed when land was alienated. In practice, land classified as privately owned

could only be passed through inheritance during the moratorium, and the rights associated with this form of property were not different from the traditional Soviet form of land tenure called “inheritable lifetime possession”.

Restrictions on private ownership of land according to the 1992 Land Code included the following:

- Moratorium on selling of privately owned land;
- Land must be used for farming;
- Land must be farmed continuously with no break of more than one year in active farming;
- Sound ecological and soil protection practices must be observed;
- Land may be leased out for a term not exceeding 50 years.

If these conditions were not met, that private land would be taken away from its owner by administrative auction of local authorities.

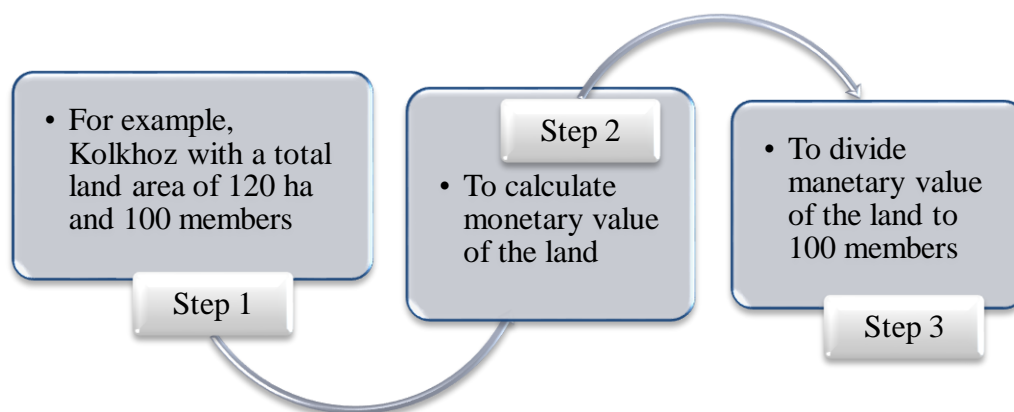
However, mechanisms for transferring land to collective ownership were clearly introduced in the 1992 Land Code, which defined the categories of producers entitled to hold land under new forms of ownership.

Collective ownership was intended primarily for legal bodies, and the recipients of collective ownership were as followed:

- Collective agricultural enterprises
- Agricultural cooperatives
- Agricultural joint-stock societies
- Agricultural partnership
- Gardening societies

These collective lands actually belonged to the individual members of the collective, and each member, including both active and retired, was entitled to an equal share of land. Therefore, a procedure was also established for calculating the size of land share among the members of a collective, which essentially involved dividing all

available land by the adult rural population (Figure 2).



**Fig. 2. Procedure for calculating the size of an average land share for members of kolkhoz**

Source: State Land Committee of Ukraine, 2011

However, the 1992 Land Code did not elaborate the rights of these shareowners beyond their right to receive a physical plot of land corresponding to the share at the time of exiting from the collective. This meant that physical division of the collective lands could not be made.

**Table 2.**

**Land area in Ukraine by farm type (1,000 ha)**

<i>Year</i>	<i>Total land</i>		<i>Agricultural enterprises</i>	<i>Household plots</i>	<i>Private farms</i>
1990	42.030	39.357	2.669	-	
1991	41.973	38.061	3.864	-	
1992	41.930	36.747	4.833	-	
1993	41.890	36.260	5.011	-	
1994	41.862	35.764	5.357	741	
1995	41.853	35.442	5.589	822	
1996	41.840	35.240	5.694	906	
1997	41.854	35.029	5.789	1.037	
1998	41.827	34.806	5.919	1.102	
1999	41.829	34.408	6.243	1.178	
2000	41.827	30.941	8.543	2.342	
2001	41.817	29.327	9.736	2.754	

2002	41.800	27.940	10.939	2.921
2003	41.789	25.826	12.799	3.164
2004	41.764	24.524	13.819	3.421

Source: State Land Committee of Ukraine (various years).

Table 2 presents the area of land transferred from the State Fund to different types of farm from 1990 to 2004. It is clearly seen that for the first stage of land reform (1991-1993), no land was given to private farms and large areas were transferred to collective agricultural enterprises.

In addition, it should be mentioned that the average size of land plot transferred was larger in the Southern and Eastern regions than in the Western and Central Ukraine. The size differed according to the area/oblast and to the relief of the territory. In forest-steppe and forest areas in the West and North of the country, land plots were smaller in size than those in steppes in the South of Ukraine.

Let's summarize the results in the first stage of agricultural land reform:

- 1) For the State: No more monopoly for lands, and the State Reserve was created corresponding to only 10% of lands for specified use;
- 2) For people: Received the right for life possession of the land under their households with the right to inheritance. Potential right to become a private farmer (only on paper);
- 3) For collective enterprises and their members:

No more control-command system and all members of former kolkhozes became collective owners of all lands and assets (at least on paper).

### **Second Stage: Transformation (1994-1999)**

Although the privatization of land ownership was promoted in the first stage of land reform, the transformation of collective ownership and the creation of private farms could not be carried out in practice. Therefore, these issues were mainly taken up in the following stage by two presidential decrees: "On Immediate Measures for Acceleration of Land Reform in the Sphere of Agricultural Production" (№666: Nov.

10, 1994) and “Regulations for Division into Shares of Land Transferred to Collective Ownership of Agricultural Enterprises and Organizations” (№720: Aug. 8, 1995).

The 1994 decree instructed the local authorities to transfer the land used by farm enterprises from state to collective ownership, and then to expedite the division of collectively owned land into individual and private shares (Table 3).

**Table 3.**

**Person`s right for the land by type of ownership**

<b>Type of ownership</b>	<b>Person`s rights for the land</b>	<b>Supported by document</b>
Collective	Person has a right to receive a land plot for free from the state as a member of the kolkhoz	No any official papers for land
Collective-shared	When person received the land from the kolkhoz, that land is without demarcated land borders. Person has a right to use, lease and bequeath the land	Paper Certificate
Private	Person exchange Paper Certificate to State Act or receive directly a State Act if he was not a former member of kolkhoz. This land plot has demarcated borders. Person can use, lease, bequeath and sell his land plot.	State Act

Source: State Land Committee of Ukraine, 2011

This was actually a two-stage procedure: transfer of state owned land to collective ownership, followed by transformation of undivided collective ownership into collective-shared ownership through distribution of land shares in the form of individual certificates of entitlement. Table 4 shows the change in average size of farms of different types. Agricultural enterprises, which were created on the base of former kolkhozes, started to decrease in size from 1990. This could be explained that members of such enterprises used their legal rights to obtain the land shares (certificates of entitlement) and to exit the enterprise. The size of created private farms had increased

through cooperation of such people, who came together to do private farming using their lands, time (labor), and assets, and/or through receiving the land share free of charge from the state according to the law.

Table 4.

**Change in average size of farms (ha) of different types 1990-2004**

Year	Agricultural enterprises	Private farms	Household plots
1990	2,900	0	0.5
1994	2,200	24	1.3
2000	1,450	57	2.1
2004	940	80	2.6

Source: Calculated from AgroUkraine 2006

The size of household plots was also increasing, as people used the right to privatize this land and in case of need could apply for some extra land from the State Reserve for purposes mentioned in Table 1.

It must be emphasized that the procedure for transfer of the land used by farm enterprise from the collective to collective-shared ownership had some special features, as follows:

- 1) The division of collectively owned land into shares was based on the principle of equal distribution to all beneficiaries, adjusted for land quality.
- 2) The land share represented the right of an individual to private ownership of an underlying plot of land, without physical demarcation of that plot in the field or even on a map.
- 3) The right to a land share could be sold and bought, leased, given in gift to another person, exchanged, bequeathed, or even mortgaged.
- 4) Land shares were thus more tradable than actual land plots, at least on paper.

Share-based privatization did not actually allocate land use rights to individuals.

Rural residents received paper certificates of landownership (“land shares”), without physically getting a plot of land, and certificate holders were allowed to convert the land share into a private plot when leaving the former collective farm (Revised version in 1997, Presidential Decree №720, 1995).

Rural residents had received paper certificates confirming their entitlement to a plot of land of a specified size but in an unspecified location. The non-land assets (farm machinery, buildings, and livestock) had been divided into value-based paper shares. The collective farm (now transformed into a corporate farm) was no longer a closed entity, as it had been during the Soviet era, and individuals were entitled to leave the collective taking their shares of land and assets with them. Yet very few corporate farms distributed land and assets in kind to the shareowners, and very few farm employees actually left corporate farms for independent farming. The land and asset shares typically remained locked in collective ownership and use.

Privatization through share holdings did not encourage large corporate farms to change their mode of operation, in that this mode of privatization often resulted in only “changing the sign on the door.” Nor did it change the government policies toward the large farms (Revised version in 1997, Presidential Decree №720, 1995).

Thus, it is clear that the 1994 presidential decree reaffirmed the fundamental right of individuals exiting with land, which was first established in the 1992 Land Code. The decree stated that every individual was free to leave the collective enterprise with a physical plot of land, and that the individual’s right of private ownership would be certified by an official title. On the other hand, the decree also set up a mechanism for internal reorganization of collective enterprises by stating that owners of land shares may voluntarily pool their shares to create various associations, partnerships, cooperatives, or other farming organizations. Their land shares could be invested in the equity capital of the enterprise, or alternatively leased to the enterprise for a definite term. Most importantly, perhaps, according to Shulga and Kulinich (1995, p.19), it did not remove the barriers for individual members to exit from large corporate farms. Neither farm directors nor shareowners generally rendered their support and allowed

other members to leave the corporate farm. Relatively unfavorable conditions for private farmers in matters of access to capital, inputs, and markets, compared to agricultural enterprises, dissuaded most members from exiting the corporate farms. In fact, many details of the exit procedure such as allocation of land and asset shares, the method of identification of concrete plots of land and division of large farm assets, were worked out only years after the initial decrees authorizing farm exit (Shulga and Kulinich, 1995, pp.19-27).

The outcomes of the second stage of land reform may be summarized as follows:

- 1) For people: private ownership of land was created for households, and private farms were established.
- 2) For collective enterprises and their members: certificates were issued for the members of corporate farms to prove that they have a land plot in the former kolkhoz, but without delineation of the actual land plot in the field or even on a map; non-land assets (farm machinery, buildings and livestock) were divided into value-based paper shares.

### **Third Stage: Establishment (2000-2011)**

The land reform processes have had different impacts on the agricultural sector during the third stage. First, they led to a large diversity in organizational and legal forms of agricultural enterprises and to a substantial growth in their number. According to the State Statistics Committee of Ukraine, 73.8% of agricultural producers were individual farmers, 13.8% partnerships, 7.5% private enterprises and 1.7% cooperatives in 2010.

Second, the land ownership structure has changed significantly as well (Table 5). In 1990-2010, the area of agricultural lands owned by agricultural enterprises decreased by 46.8%. As a result, the share of these enterprises in the total agricultural land area dropped from 92.1% in 1990 to 49.5% in 2010. In 1990, the portion of state agricultural enterprises in the area of agricultural lands was 23.6%, while in 2010 it went down to 2.4%. During the same period, agricultural lands owned by individuals increased from 2.7 million hectares to 15.9 million hectares (5.9 times).

**Table 5. Structure of agricultural lands, by farm type (at the end of year)**

Land property	1990		1995		2000		2005		2010	
	mln.ha	%	mln.ha	%	mln.ha	%	mln.ha	%	mln.ha	%
Agricultural lands-total	42.0	100	41.9	100	41.9	100	41.8	100	41.6	100
Agricultural Enterprises in that:	38.7	92.1	35.2	84.0	29.9	71.4	22.1	52.9	20.6	49.5
State	9.9	23.6	7.1	16.9	1.8	4.3	2.9	1.0	1.0	2.4
Non-State	28.8	68.6	28.1	67.1	28.0	66.8	20.9	50.0	19.6	47.1
Individuals in that:	2.7	6.4	5.6	13.4	8.5	20.3	14.9	35.6	15.9	38.2
household plots	2.5	6.0	3.9	9.3	4.3	10.3	4.7	11.2	4.9	11.8

Source: State Land Committee of Ukraine, 2011

Third, a particular feature of the third stage of the reform was the *issue of a State Act* on land plot, which confirmed the right of individual for that specific land plot. After the land purchase agreement or other deed is notarized and registered by the notary in the State Register of Real Estate Transactions, the individual should do the following: apply for the State Agency of Land Resources for issuance of the State Act (Deed) on Title of Ownership to the Land Plot and registration of the title to ownership in the name of individual. For this purpose, the technical documentation for drafting the State Act (Deed) should be developed.

In general, the procedure for the development of technical documentation and obtaining of the State Act (Deed) takes three or four months. A lot depends on the designated use and location of the land plots (Nouel, 2008).

In practice the State Act is like a passport for the land, which strictly defines borders of a land plot and gives the right to a person to use, lease, bequeath and sell the land plot in the future (after the Moratorium on selling agricultural lands will be cancelled) (Figure 3). State Act is recognized as the final document confirming the title of ownership to the land plot.



**Fig. 3. State Act on Title of Ownership to the Land Plot in Ukraine**

Source: State Land Committee of Ukraine, 2013

Fourth, this is the period when kolkhozes and sovkhoses ceased to exist. In order to define and to classify agricultural producers who were representing the agricultural sector of Ukraine after kolkhozes and sovkhoses disappeared, the following three definitions are used (according to State Committee of Land Resources):

- 1) *Agricultural enterprises, also called large agricultural producers* – include state enterprises, joint-stock companies and partnerships of all types, private enterprises affiliated with industrial, transportation and other spheres, organizations and scientific research institutes;
- 2) *Private households, also called household plots or small agricultural producers* – include individual or family households with land estates, forms of agricultural production when an individual or a family produces commodities to satisfy the family needs in foods or with other purposes;
- 3) *Private farms, also generally considered to be small in size* - a form of enterprise, using owned or rented lands and other assets. A private farmer operates the business unit to produce, sometimes process, and market agricultural commodities and is registered by the government as a farm.

In other words, the Agricultural Enterprise category includes the largest farm holdings, such as former state and collective farms, which are still struggling with, post Soviet realities and the modern and efficient corporate style holdings. Private Households are comprised of individual and family rural households that produce food primarily for personal consumption, but also market a certain percentage of commodities to

supplement family income. Last, Private Farm is very similar to private households, but is registered as a business.

Therefore, it can be said that land reform in the third stage not only changed the organizational forms of "farm enterprises" but also caused a profound impact on the individual sector, accelerating the creation of independent private farms. This process was promoted by the issuance of State Acts. The third stage was also the last period of existence of Soviet kolkhozes and sovkhoses in independent Ukraine.

The outcomes of the third stage of land reform may be summarized as follows:

1) For the State: Ukraine evolved from exclusive state ownership of land in 1990 to a mix of state and collective ownership in 1993-1995, and finally to a mix of state and private land ownership in 2000-2011.

2) For people: they received wider rights for their land plots after the exchange of paper certificates into State Acts. The number of private farmers has increased. Moreover, the individual sector (consisting of the traditional household plots and independent private farms that began to emerge after 1994) today controls more than 40% of agricultural lands, contributing 70% of agricultural output.

3) According to State Land Committee, by 2011, nearly 90% of the State Acts were issued for land plots in Ukraine, which guaranteed the right of the person to a specific land plot in specific area.

## **CONCLUSION**

This paper aimed to clarify the process of land reform in Ukraine by classifying into three-stage evolution, and to discuss creation mode of farms. Extensive review of Laws, Decrees, Land Codes, and past studies on land reform in Ukraine were used as a background to evaluate realities of the land reform process.

We divided the 20-year process of agricultural land reform in Ukraine into three stages, implementation, transformation, and establishment, with a view to the fact that it is a part of a larger complex process, characterizing transformation and development of the whole country.

With the implementation of agricultural land reform, Ukraine made an effort to change

the agricultural system and to create more productive forms of farming, by switching from collective to individual forms of farming.

During the implementation of agricultural land reform, private farms have been expected to grow to a main sub-sector of agriculture in Ukraine after 1994, but it did not happen. According to our study, the increase in the number of private farms was rather slow because of various constraints, including bureaucracy, poor legislation, problems with finance, etc. It could be concluded that to reap the benefits of private land ownership and individual farming initiatives, it may be necessary for the government to provide a stable legislative environment with clearly defined and easily transferable property rights, speed up demonopolization of support services (infrastructure), and encourage the development of functioning markets in land, assets, and commodities. This is not an easy agenda, especially because these measures must be implemented in combination with adequate economic policies. But without the effective development of private farming, sustainability and competitiveness of market-oriented agriculture are hard to be seen.

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*Аграрна реформа в Україні є комплексним процесом, який характеризує зміни усієї системи ведення сільського господарства.*

*Дана стаття має намір дослідити аграрну реформу з точки зору стадій її еволюції. Таким чином, двадцятирічний період реформи був поділений на три стадії: впровадження, трансформація та організація.*

*Оригінальність даної роботи полягає у дослідженні змін у використанні землі та змін у власності на землю в процесі аграрної реформи, з метою зрозуміти хто ж саме та яким чином скористався можливістю отримати землю у володіння для ведення сільського господарства та як реалізував це право.*

***Незалежність, аграрна реформа, трансформація, стадії еволюції, приватна власність.***

*Аграрная реформа в Украине – комплексный процесс, который характеризует изменения системы ведения сельского хозяйства в целом.*

*Данная статья намерена рассмотреть аграрную реформу на основе стадий ее эволюции. Таким образом, двадцатилетний период реформы был поделен на три стадии: введение, трансформация и организация.*

*Оригинальность данной работы состоит в изучении изменений в использовании земли, а также собственности на землю в процессе аграрной реформы, с целью понять кто именно и каким образом воспользовался возможностью получить землю в собственность для ведения сельского хозяйства и как было реализовано*

*это право.*

*Независимость, аграрная реформа, трансформация, стадии эволюции,  
частная собственность*

## **ASPECTS OF MULTIOBJECTIVE OPTIMIZATION IN PLANNING OF THE ENTERPRISE**

**N. SHULHA, Senior Lecturer,, A. Poratuy, master.**

*Considered the aspects of multi-objective optimization planning company. Was shown advantages and disadvantages of the method. Proved methods of selection options for solutions.*

**Singlecriterion optimization, multicriteria optimization, the method of principal components method concessions.**

As the market economy conditions increasing demands for scientific validity planning activity of company. Among the numerous methods of planning deserves special attention multi-objective optimization method, the possibility of which determine the relevance of the research.

**Analysis of the main research and publications.** Research on this topic conducted by such scholars as M. Cruz, R. Tulchin, S. Kirichenko, O. Kryvda, A. Kavtysh, M. Hreschak, A. Kotsyuba, S. Vojvodina, B. Serduk.

**The aim of article** - justification applying the method of multi-objective optimization in the planning of company activity.

**The main material.** The work of enterprises in market conditions necessitates the implementation of a new approach to solving strategic forecast and current planning production and marketing of finished products.

Desired level of competitiveness and businesses sustained presence in the target market can be achieved by the simultaneous implementation at least four groups of objectives: economic, social, environmental and investment.

In most cases, optimization problems in the organization of companies settled as single-criteria. But single-criteria approach can be justified only if index is taken as a criterion, is totally dominant and inaccurate information sufficiently small.

It is not possible to determine the rate or criteria of any degree that would be reflected all aspects of the dynamics of the enterprise, so using single-criteria approach is not appropriate. The consequence of this simplification is to reduce the cost-effectiveness calculations derived from the implementation in practice of individual enterprises.

The approach reflects the use of multipurpose optimization to meet the challenges of planning, first found in the works of V. Novozhilov [2].

Revealing the economic aspects of production through the application of planning, prof. I. Nelidov said: "There can be any single indicator that even has the highest level of generality that would allow display versatility,

multidimensionality, dynamic variety of economic phenomena such as the development and improvement of production ..." [4].

Using the method of singlecriteria leads to simplification, which results in reduced economic efficiency that can be obtained from the implementation of the results into the practice of enterprises [1].

If the solution of singlecriteria problems methodological problems do not occur, and only possible computational difficulties, the way of multi-objective decision. The question that should be considered the best alternative for the problem of multiple objective functions that are contradictory and achieve optimum at different points of the set of alternatives? Multicriteria goals can be to each other in the following ways: 1) according to neutral targets, and 2) the purpose of co-operating. (usually the system can be seen using one objective, while others are achieved at the same time), and 3) competing goals (one of the objectives can be achieved only through the loss for the rest).

You can offer a structure currently existing procedures for decision multicriteria problems of this kind (Fig. 1).

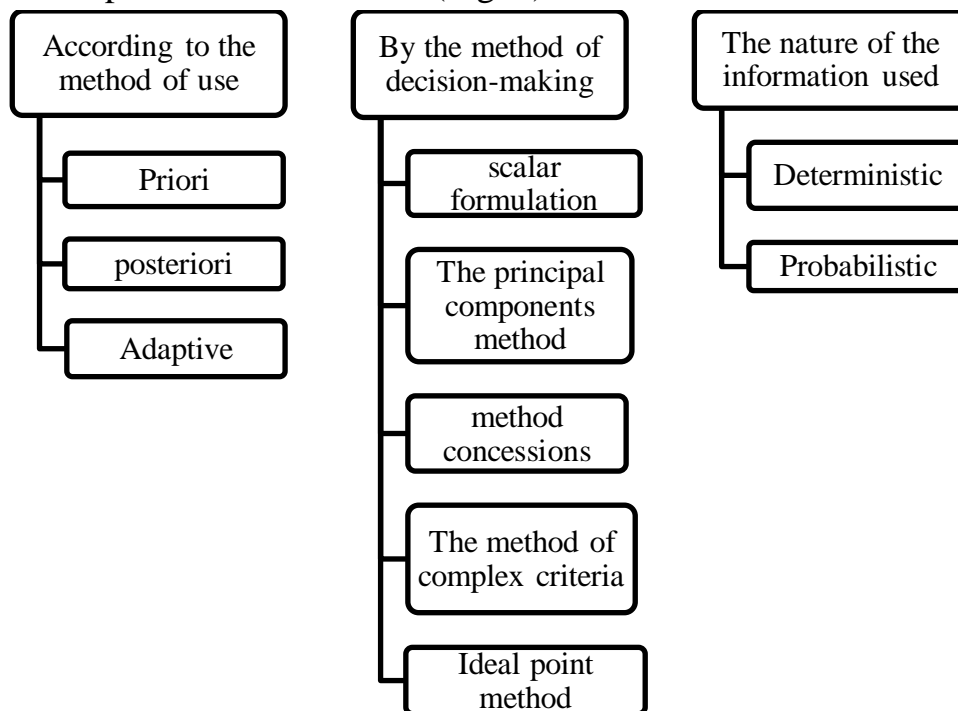


Figure. 1. Structure solution procedures multicriteria problems

This structure helps to better understand the solutions to problems faced by the researcher.

The method consists in reducing the problem to singlecriterion optimization.

The method of principal components is that the quality criteria associated with one of the indicators, selected as the main. In the main characteristics imposed restrictions. In this case, the main indicator is implemented optimality criterion, on the other - admissibility.

The method is simple, vividly but the free choice of the main criteria can lead to tragic consequences or results in ineffective [6].

For problems in which the criteria are uneven, used method concessions. 1) place the criteria for their importance (most important is first); 2) Find the optimal value  $W_1^*$  of the objective function  $W_1$ ; 3) Do the assignment on the first performance indicator, ie worsen  $W_1^*$  size to a value of  $W_1^{**} = k_1 W_1^*$ ; 4) introduce additional constraints in the problem  $W_1 \geq W_1^{**}$ ; 5) to find the optimal value  $W_2^*$  of the objective function  $W_2$ ; 6) Do the assignment for the second performance indicator,  $W_2^{**} = k_2 W_2^*$ ; 7) enter into additional task constraints  $W_2 \geq W_2^{**}$  8) a new task with two additions solved by the third measure of efficiency and so on; 9) the process of problem solving ends when the solution will be obtained on all counts. The final plan will be optimal [1].

Method of complex criteria. Is to create a total monoindicator. Thus, the basic idea of the method consists in building a single function arguments which are components of the vector benefits. Often this function is represented as a fraction where the numerator are all values which increase desired, and the denominator - those who would like to reduce. [3]

Chance problem statement, which provides, built process many criteria one by introducing a priori weights  $\lambda_i$  for each criterion  $f_i(x)$ . Coefficients are selected based on the degree of importance of intuitive representation of different criteria: important criteria weight obtained with larger absolute values. After the weights multicriteria problem is reduced to a function of singlecriterion goal  $f(x) + \lambda_1 f_1(x) + \dots + \lambda_R f_R(x)$  [5].

Instead of a simple linear combination of the initial criteria can be used more sophisticated means of formation of these new criteria.

**Conclusions and recommendations for further research.** Based on the above, we can conclude of the case for the practical application of multi-objective optimization to address the economic, planning, financial and administrative tasks in the enterprise. Multiobjective optimization is one of the natural methods of solving conflicts that arise when solving economic problems because, in most cases, it is impractical strive to achieve only one goal (often local), should strive to develop quality plan, targeted to achieve key business objectives. Application of multi-objective optimization opens up new possibilities of use of technical, economic and financial indicators used to measure activity.

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**UDC: 336.761**

**THEORETICAL ASPECTS OF USING FUNDAMENTAL FACTORS IN  
THE STUDY OF COMMODITY EXCHANGE MARKET SITUATION**

**V. Yaworska, PhD, Associate professor, NULeS of Ukraine**

*The essence of commodity exchange market situation is studied, the main methods of research, the classification of fundamental factors and ways of their using in research of commodity exchange market are described.*

***Keywords: commodity exchange market situation, fundamental analysis, fundamental factors, commodity exchange prices, commodity exchange market.***

Commodity exchange plays an important role in the formation of market pricing mechanisms at the commodity and financial markets. Commodity exchange prices are one of the major indicators of forecasting agricultural enterprises activities. Today, commodity derivatives could be considered as tools that determine future prices trends. Competitive and transparent commodity exchange pricing mechanism allows to consider all the circumstantial factors that occur or are expected on a commodity or financial markets. In practice, such factors called fundamental factors, according to this, their research focused on a fundamental analysis of commodity exchange market.

**Analysis of recent research and publications.** The subject of the present study of fundamental factors involved in the professional commodity market participants and leading scientists of commodity exchange activities, among which are many foreign authors such as John Murphy, E. Nyman, A.Erlih, J. Schwager and others. Domestic researchers of commodity exchange activities include M. Solodky, A. Sohatska, L. Prymostka and others. However, short period of domestic commodity exchange market development in Ukraine requires deeper research of theoretical and practical aspects related to the use of fundamental and technical analysis in domestic practice.

**The objective** is to consider the theoretical aspects of using of the fundamental factors in the research of commodity exchange market conditions with providing the world commodity exchange practice.

**The result of research.** Research of commodity exchange market situation provides the study of current indicators of the commodity exchange market with purpose to forecast future trends of its development [3]. Thus, study of commodity exchange market conditions based on a synthesis of fundamental indicators, which include direct stock indices, as well as factors that influence on the formation of current situation on the commodity exchange market. The most common fundamental factors of commodity exchange market include:

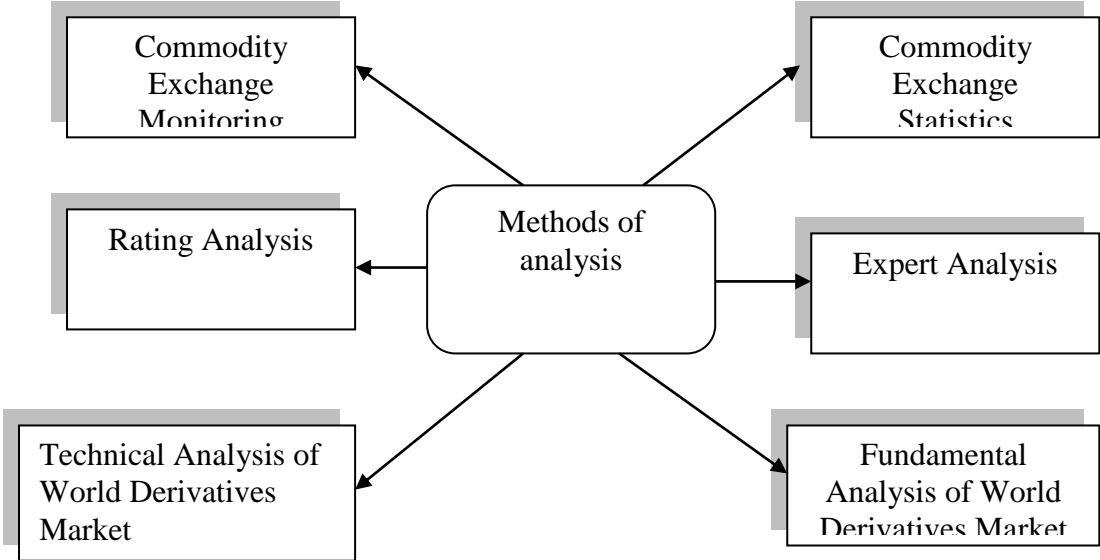
- The volume of trading, open interest;
- Structure of commodity exchange trading, kinds of derivatives;
- Futures and options prices, contract's specifications;
- Economic, financial, political, social indicators and news;
- Commodity exchange trading participants (hedgers, speculators or arbitragers).

Commodity exchange trading experience shows that the formation of derivatives prices depends on the conditions of supply and demand in the commodity market. There are different ways of study the commodity exchange conditions [2]: 1) research of price volatility (regular, irregular, seasonal, cyclical); 2) clarify changes: isolating events and determine their consequences; theoretical basis of changes in commodity exchange market conditions.

There are two ways of studying prices volatility:

- definition of market situation as a process of changing trends of growth and decline;
- definition of market conditions that affecting on the current situation, their interrelation and interdependence.

In general, commodity exchange market situation based on many factors which need regular research, especially research of the economic cycle, the investment market potential, financial indicators and others. Classification of basic research methods of domestic commodity exchange market situation is shown in Fig. 1.[2].



**Fig. 1. Classification of Research Methods of the Domestic Commodity Exchange Market Situation**

Among all the above mentioned methods, we want to pay special attention on the consideration of fundamental research method. Traditionally in the world practice fundamental and technical analysis are used by participants in the analysis and forecasting of commodity exchange market situation and developing of future trading strategies. Technical analysis based on statistical analysis of historical data, the fundamental – on studying the influence of fundamental factors on the commodity exchange market situation. However, in the world practice best results of analysis can be reached through using fundamental and technical analysis in collaboration.

Consideration of fundamental analysis involves the study of fundamental factors influence on the macro and micro levels. The research of economical situation provided with studying such factors as: GDP, employment rating, inflation, interest rates, exchange rates and others. Also determine the social, political and economic climate of investments and efficient market, industrial analysis, which involves the study of the business cycle in the economy, its indicators, analysis of a particular

company (firm, corporation): status and prospects, management development, organizational and market conditions, financial position, pricing modelling [2].

Fundamental analysis takes into account that into the current commodity exchange market situation affect all factors that shown general market situation in the country. It is important to note that fundamental factors are divided into [4]:

- unexpected - natural disasters, political upheaval, scandals,
- expected irregular – increase interest rates, election results,
- expected regularly - publishing inflation data, GDP.

The influence of fundamental factors on the formation of commodity exchange prices is shown a quick reflection. Sometimes even waiting the release of all political news or reports of stock prices are displayed in future price formation.

For example, a sharp drop of wheat futures prices contracts reflected by prediction of future harvests of grain, announced U.S. Department of Agriculture (USDA). However, commodity exchange participants will also expect fall in stocks of grain companies and manufacturers of fertilizers [1]. Thus we see a direct impact of fundamental factors on the formation of supply and demand of commodity exchange market. Studying of fundamental factors and their correct interpretation can identify the current situation on the commodity exchange market that affect on the forecasting of its development and, consequently, the correct strategic decision-making in the commodity exchange trading.

**Conclusions.** Thus, the importance of the fundamental factors in the study of commodity exchange market situation is shown by ability to best describe of current state of the commodity exchange market and psychology of participants. Difficulties of fundamental analysis depend on the correct interpretation of fundamental factors and its influence on the forecasting of future commodity exchange market situation.

At the end, Ukrainian participants of commodity exchange market don't use fundamental and technical analysis in their practice. Main reason of this is absence of practice and derivatives instruments.

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В.А. Яворская. Теоретические аспекты использования фундаментальных факторов в исследовании биржевой конъюнктуры.

*Определено сущность биржевой конъюнктуры, приведено основные методы исследования биржевой конъюнктуры, классификацию фундаментальных факторов и их использование в исследовании биржевой конъюнктуры.*

Ключевые слова: биржевая конъюнктура, фундаментальный анализ, фундаментальные факторы, биржевая цена, биржевой рынок.

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*Визначено сутність біржової кон'юнктури, наведено основні методи дослідження біржової кон'юнктури, класифікацію фундаментальних факторів та їх використання у дослідженні біржової кон'юнктури.*

**Ключові слова: біржова кон'юнктура, фундаментальний аналіз, фундаментальні фактори, біржова ціна, біржовий ринок.**