

The Role of State in the Sphere of Innovative Development of the Agricultural Complex of Ukraine¹

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Abstract

The article examines the current state of innovative agricultural development in Ukraine and determines the role of the state in the sphere of innovative development of the agricultural complex. It considers the most problematic characteristics and factors of the slowdown of innovative development of domestic agricultural enterprises. It also suggests measures that would promote the increase of innovative activity of agricultural enterprises.

Key words

Innovations, innovative development, innovative activity, agricultural sector, agro-industrial complex, government regulation, development of agricultural production, agricultural innovation system.

JEL Classification: Q13, Q15

Introduction

The structural changes in Ukraine's agrarian economy and their orientation towards economic and social efficiency are taking place in complex and controversial conditions, with continuing decline in agriculture and degradation of rural territories. The existing agricultural potential remains unrealized and its conditions far from meeting the needs of the village. The current situation is extremely complicated as Ukraine has not, within the two years of reforms, sufficiently increased the efficiency of agricultural production, nor has it carried out technical and technological re-equipment and implemented an innovative model of development in this sector. Under administrative-command economy, the innovative development of agricultural complex was purely declarative and was not implemented. First, innovation programs in agrarian and industrial complex were funded by the residual principle. On the contrary, plans of the development of military, space and aircraft technologies were implemented efficiently and at the global level. Second, programs of scientific-technical development were financed from the state budget only. Consistently unprofitable agricultural sector could not accumulate funds for either innovative designs or training professionals who could

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implement technical and technological innovations in production and ensure the operation of the know-how. Enhancement of innovative activity in Ukraine should occupy the central place in the implementation of the state economic policy in agricultural production. However, the innovation business remains poorly developed in Ukraine. Innovation in agricultural production refers to the venture (risk) capital. Therefore, its development requires substantial national and foreign investments. The risks should be compensated not only by the incomes of innovative enterprises, but also by guarantees, tax breaks, cheap credits and insurance.

Observance of the above rules and increased international competition is possible only through promotion of innovative activity of agricultural entities, otherwise it is impossible to ensure their sustainable development and the economy in general. Innovations are the main tool and condition for increasing the efficiency of production of domestic agrarian manufacturers. The creation and practical implementation of various innovations is an inexhaustible source of accumulation of various changes. S. Illiashenko notes in this regard that innovative activity, the essence of which consists in the creation, implementation and dissemination of innovation, affects all aspects of human development, and even changes the environment and human life, the ways of ensuring its existence and development (Illiashenko, 2003, p. 278).

The practice of innovative activities in different countries is very diverse and dynamic, but the common and most important point is that the role of the state in the choice of priorities for research and technological development and their projected provision has recently increased in different countries.

1 Methodology

The goal of this paper is the research of regularities of innovative economic development and study of various aspects of government regulation and support of innovation processes that was carried out in scholarly papers of such outstanding Ukrainian and foreign economists as L. Antoniuk, V. Heiets, S. Dorohuntsov, S. Illiashenko, P. Laiko, N. Levchenko, P. Muzyka, P. Melnyk, B. Milner, M. Odnoroh, N. Prytula, L. Reikova, V. Ryzhykh, P. Sabluk, V. Trehobchuk, O. Shubravska and others. Our research aims to carry out the analysis of the current state of innovation activity of Ukrainian enterprises of the agricultural complex, as well as to work out recommendations and measures of government support of the implementation of innovation projects and promotion of innovative development in agro-industrial complex.

2 Innovation activities in the agricultural sector of Ukraine

Innovation development is undoubtedly among the priority areas of economic activity that require compulsory state incentives and support. S. Dorohuntsov and L. Reikova note in this regard that consistent implementation of appropriate state policy in science and technology, active promotion of the development of basic sectors of the economy that determine scientific progress should provide a significant impact on the innovative development (Dorohuntsov, 1996, p. 4-11). V. Ryzhykh also emphasizes

that the need for an integrated approach to the sequence of research and development, creation of product samples, pre-production and mass production as a single stage of the innovation process is a prerequisite to ensure effective state regulation of processes of innovation and technological development (Prytula, 2011, p. 238-242).

With regard to innovation activities in the agricultural sector of Ukraine, it should be noted that it is immature and does not meet the level of innovation processes of member countries of the WTO, which, in turn, threatens its competitiveness.

Agricultural sector is one of the strategic constituents of the economy and an area that determines the future of the country for a long term. Ukraine has not to date reached sustainable development in this area, thus leaving the strategic issues of development of the economic model ensuring sustainable development of agro-industrial complex open for discussion (Laiko et al., 2008, p. 96).

Nowadays, with the growing global demand for food, increasing food prices, abrupt climatic fluctuations that provoke unpredictable harvest volumes in the global agricultural market, an increasingly great attention is paid to innovative component of agro-food development which is considered one of the key factors for the stabilization of agricultural production. With this in mind, search for new technologies is extremely important as they can increase the efficiency of agro-industrial complex in the conditions of depletion of natural resources, including the degradation of arable land, depletion of freshwater sources, and adaptation of the industry to climate change (Trehobchuk, 2006, p. 27).

The specific character of innovations in agrarian sector is determined by the peculiarities of agriculture itself, namely:

- land is the main factor of production;
- there is clear interaction with living beings (plants, animals and microorganisms);
- the production has a seasonal character and a high level of risk.

Innovation activity in agriculture can be studied in four stages:

1. Development of innovations.
2. Approbation and testing the new innovation.
3. Reproduction of innovations.
4. Implementation innovation in the production process.

With the introduction of innovation in the sector, as a rule, the types of products do not change, but rather improve their characteristics. Agriculture depends largely on natural biological and environmental factors. Innovation development in this area of human activity should embrace, beside the traditional production-technological and organizational-managerial components, such kinds of innovations as selective-genetic and economic-socio-ecological. In this context, the Ukrainian agricultural complex should be aimed at such principal objectives of innovation development as *technological modernization, ensuring resource saving in the sector, improvement of quality characteristics of the products, and improvement of the environmental component of agricultural development* (Sabluk, 2002, p. 6).

To reduce the risks and increase the efficiency of innovation, it is necessary to form an economic mechanism of implementing science in the structure of agricultural

production. The choice of the most efficient forms and methods of innovation activity in agricultural production requires, first of all, scientifically grounded management that provides setting the goal and choice of strategies, development of innovation projects, project, risk and personnel management, managing the creation, development and quality of new equipment, and evaluation of the efficiency of innovations. Setting the goal and selection of innovation strategy occupies the central place here. This determines the defining of the most appropriate areas of economic and scientific-technical policy based on long-term forecasting of the development of agricultural production during the transition to the market, taking into account the total of external and internal factors, resource constraints at the micro-, meso- and macro- levels (Ryzhikh, 2008, p. 396).

At the present stage of development of the agro-industrial complex of Ukraine the introduction of new technologies and scientific and technological progress plays an important role. Innovation is a means of increasing the efficiency of production, as well as adapting the enterprise to changes in the social, economic and political environments.

Today, the process of forming innovation system in Ukraine, especially in agriculture, is going on under very adverse conditions:

- insufficient provision of scientific sphere with material and technical resources,
- limited information resources,
- deficiency of skilled workers.

Innovative development of agricultural sector is impossible without well-developed infrastructure. However, experts do not have adequate information to address the urgent problems of national agriculture at the theoretical level. Given the spread of privatization and commercialization of agriculture, the information is becoming more and more confidential (Laiko, 2009, p. 27).

Table 1 The system of measures to promote innovative agricultural development

	Measures	Mechanisms of implementation
1	Legislative support of agricultural development	Formation of the legal framework; adoption of laws and regulations; development of state targeted programs, formation of the Concept of Agricultural Innovation Policy
2	Implementation of agrarian reform	Setting priorities in agricultural development, structural change, activities, patterns of agricultural development, land reform
3	Indicative planning	Development of a system of payment and performance indicators, defining the volume of public procurement
4	Tax regulation of agriculture	Establishing a single flat tax, tax breaks, incentives, exemption of income tax on part of income for certain types of activities; use of charged VAT; use of tax preferences

5	Credit and financial policy	Providing public loans, investments, opening additional credit lines, application of advanced payments, providing commodity credits (leasing of fuel, lubricants and agricultural machinery); use of targeted subsidies, attraction of foreign loans and investments, use of collateral land and property, introduction of fixed interest rates, introduction of financial lease, introduction of cheaper loans of commercial banks, additional payments (bonuses), subsidies, partial compensation for the cost of agricultural machinery
6	Price regulation	Determining targeted procurement prices, ensuring parity prices, subsidizing food production (reserve and guarantee procurement in order to level seasonal fluctuations).
7	Infrastructure provision	Formation of a network of agricultural market infrastructure: agricultural exchanges, leasing companies, land bank; promotion of material and technical maintenance; development of transport and service infrastructure: trading houses, harvesting, marketing and service co-operatives, credit unions and others
8	Land reform	Establishing ownership of the land, rules for land use, introduction of land tax, land monitoring, land management, land sharing
9	Regulation of agricultural imports	Establishment of import duties on agricultural products and their duration (expiry dates), establishment of quotas on imports of agricultural products, introduction of a system of certification and control on the importation of imported agricultural products
10	Meeting state requirements in agricultural products and raw materials	Defining the scope and structure of public procurement, concluding state and regional contracts, placement of state orders among performers
11	Technical re-equipment and improvement of production	Development of domestic agricultural machine building; promoting the implementation of new technologies, cultivation and storage, partial compensation of the cost of agricultural machinery, financing from the state budget (financial leasing)
12	Ensuring food quality	Introduction of public health expertise, state registry, identification and certification

Source: Own processing.

Ukraine should have a real long-term program of development of innovation activity with detailed government measures (Table 1). The development of the innovation activity of enterprises from their own savings with certain support of the state and

providing long-term and medium-term loans should be the initial basis for the increase in profitability. So today there is an urgent need for the adoption of immediate and effective measures to stop further development of negative trends in agriculture and provide the scale of most agricultural products, improve product quality, improve price situation in the consumer market, and so on. The government should reduce tax burden to stimulate the export of agricultural products and control raw materials markets.

It should be noted that innovation is always an interactive process, i.e. it is possible only as the communication process between all links of the NIS (National Innovation System) leading to active flow of knowledge, technologies and products from one innovation process entity to another. Therefore, among the extremely important components of the NIS, beside the above mentioned ones, is a system of interrelations that ensures transfer of innovative product through (Levhenko, 2010, p. 12):

- interaction between enterprises;
- interaction between enterprises, universities and research laboratories;
- diffusion of knowledge and technologies to firms;
- mobility of labor.

The government should create favorable conditions for innovation activities that would lead to the development of all entities of innovation sphere. Each country seeks an optimal ration of forms of state support of innovation which depends on many factors as the level of development of the national economy, the state of scientific-technical sphere, legal framework, etc. (Antoniuk, Poruchnyk & Savchuk, 2003, p. 19).

Obviously, the role of the government is not only to finance fundamental research development in agriculture. It is necessary to realize, at the highest managerial level, the importance of:

- implementing of new technologies to ensure further development of agricultural complex,
- stimulating the creative process by creating conditions for its development,
- competent choice of priorities in the field of innovation and impartial selection of corresponding projects,
- development of mechanisms of indirect support of modernization of agricultural sector, primarily to influence the process of the formation of agricultural innovation market, as the decision on their implementation is taken by the agricultural producer directly.

Agricultural science in Ukraine is 75% financed by the state budget (national sciences on the whole get 39% of state funding). This situation is another evidence of the inefficiency of the reforms conducted in the agricultural sector; as a result, agricultural science remained isolated from agricultural production and poorly commercialized, which is contrary to international experience. The paradox of the situation is that in the conditions of a large-scale de-technologization and de-industrialization of the agricultural sector it has almost completely preserved its scientific potential. It has declined only by 1.3 since 1991, while the total number of researchers in the country decreased 2.6 times (Levhenko, 2010, p. 59). In general, the decrease in the number of researchers in the agricultural sector was less significant than the reduction of the agricultural sector itself, including production volumes, the size of arable land and the number of employees in this sector.

The knowledge-base of agricultural sector has even increased over the years of reforms. Over 11 thousand scientists (15% of the total number of scientists in the country), including 2.1 thousand doctors and candidates of sciences, over 200 academicians and corresponding members of the Academy of Sciences currently work in this sector. The agricultural sector is served by the state Ukrainian Academy of Agrarian Sciences, which includes more than 120 research institutions (Levhenko, 2010, p. 60). Also, well-developed system of educational institutions works to meet the needs of this sector.

The problem is that the level of demand for the results of agricultural research by agricultural production is still very low, which naturally also leads to a decrease in the quality of its operation. The main reason is that large agricultural enterprises have not been formed and market integration of farms has not taken place.

To solve these problems drastic transformations are needed within both national innovation system and its agricultural component. With this level of agro innovation system, in the first place, it is important to ensure the increase of innovation proposals, increase of susceptibility of manufacturers to innovations, and formation of an efficient connection between science and production.

In Ukraine extensive investments in research and development, technical and technological modernization of the main capital in agriculture are carried out only by a limited number of large highly profitable enterprises. For the majority of local agricultural producers innovative methods and economic means are little known and virtually inaccessible.

According to the State Statistics Service of Ukraine, in 2012 the number of organizations that conducted scientific and technical activities, decreased by 3.7% to 1,208 organizations compared to 2011, including 52.8% of the industry profile; 27.2% research institutions of academic profile, 14.6% higher education institutions, 5.4% the factory (production) sector (State Statistical Service of Ukraine. 2012, p. 11-15). This trend does not correspond to the practice in developed countries, where the majority of scientific organizations belong to the factory sector (sector of companies), and therefore are maximally close to the final stages of the development and production, including innovation.

The trend of annual decline in the number of organizations engaged in scientific and technical activities is accompanied by invariable structure of their distribution by field of science: the largest share falls on technical (42.1%) and natural sciences (35%), the lowest on social sciences (12.6 %) and the humanities (3.7%) (State Statistical Service of Ukraine, 2012, p. 15-20). As of 2012, 16 technology parks were recorded in Ukraine and innovative products worth 12.681,9 million hryvnias were implemented (Levhenko, 2010, p. 59-72).

Analysis of the main directions of modern science and technology in agricultural and food products in Ukraine suggests that the most common trends in crop production are as follows: the introduction of new varieties of hybrid plants, the use of advanced technologies of minimum tillage, and organic precision farming. In the livestock the most common are the improvement of technologies of keeping and feeding the livestock, and the establishment of modern veterinary products and systems of protection from disease. In the field of agro-processing it is creating bacterial starter cultures. In the area of agro-food development it is adaptation of the concept of devel-

opment of wholesale markets of agricultural products to domestic conditions (Trehobchuk, 2006, p. 95).

Today the agriculture innovation process in Ukraine is not active. The number of agricultural enterprises that carried out the experimental introduction of scientific developments has decreased in recent years. At the same time, the number of agreements concluded between farmers and regional centers of scientific support of agricultural production has reduced, with less extra budgetary funds involved in these centers (Odnoroh, 2008, p.239).

At the same time, factors associated with acute price disparity between agricultural products and material and technical resources, electricity and services provided by these companies remain a separate block of factors that obstruct the development of innovation of agricultural enterprises. The price disparity is largely due to the lack of efficient pricing. Dynamics of prices in the agricultural sector is formed spontaneously. Prices for agricultural products are not established on the basis of free supply and demand in the market. The most effective method of adjustment of prices is the appropriate infrastructure of agricultural markets: exchanges and agricultural trading houses.

Stock market for agricultural products in Ukraine has intensified its activity since 1995. An efficient exchange trading in Ukraine requires certain conditions:

1. Functioning of exchanges is impossible without a free market where there are no wholesale markets and fairs.
2. The manufacturer does not dispose of his products, intermediary trade activity is banned, and there are no large trading companies which are the main clients of the exchange.
3. Exchange trading can exist under conditions of competition between sellers and buyers.

It is doomed to failure if there are state monopolies that own the bulk of individual goods. Therefore, at the national level is necessary to ensure the formation of the legal framework and information-analytical support of agricultural market monitoring and forecasting of agricultural market situation, the implementation of strict control over the quality and safety of agricultural products, and the introduction of European standards of product quality. To implement these measures, along with existing management bodies in agriculture, it is advisable to establish national management bodies of individual food markets that have to merge in their structure the representatives of relevant ministries and civil society organizations from the supply and demand of a certain type of agricultural production.

Throughout the world, government plays a decisive role in the formation and operation of agro-innovation system. It should not only build the foundations of the system and develop a set of effective mechanisms for interaction between components, but also stimulate the development of the respective areas of domestic fundamental science and facilitate the acquisition of transfer of advanced manufacturing of agro-food production. In the field of agro innovation the state should take over full funding of fundamental research. Applied projects that are being developed, usually with a focus on specific market demands, require much less government support and can be implemented with private sources of funding. The exception should be made for projects aimed not to obtain additional income in the first place, but to address social

problems, with the involvement of innovation resources, particularly on ecological of agribusiness. In these cases it is advisable for the state to participate directly in funding of such projects, provide incentives and subsidies to developers and end users of innovative products, and stimulate advancement through the introduction of stricter environmental regulations.

The main sources of financing of innovation activity are (Laiko, 2009, p.29):

- state budget of Ukraine,
- local budgets,
- internal funds of specialized state and municipal innovative financial institutions,
- internal or external funds of innovation entities,
- funds (investment) of any natural or legal persons,
- other sources not prohibited by the legislation of Ukraine.

State not less than farmers is interested in the innovative development of the agricultural economy, in view of the possibility of rational, prudent use of land, strengthening energy independence and food security, increase of food export potential of the country and its competitiveness in foreign markets.

Priority actions of state influence on the development of innovative national agricultural production are as follows:

- reproduction of material and technical base of agricultural production on a new basis,
- large-scale use of innovative technologies in all areas of agricultural production,
- creation of industrial and social infrastructure for innovative reforms,
- development of economically sound and efficient mechanism for state protectionism.

Legal support of innovative activity in the agricultural sector is based on the *Constitution of Ukraine, the Concept of Scientific-Technical and Innovation Development, Laws of Ukraine "On Scientific and Scientific-Technical Activity", "On Innovation Activity", "On Priority Directions of Science and Technology", "On State Forecasting and Development of Programs of Economic and Social Development", "On Investment Activity"* and others. However, analyzing the legal and regulatory framework ensuring implementation of the organizational and managerial capacity of innovation has identified a number of gaps and collisions of law that hinders innovation activity and makes the whole mechanism of innovation system ineffective.

Public administration and regulation of the innovation process in the country is not perfect, there is dispersion of management functions across different government authorities, and there is no single national center of management and coordination. The authorities entrusted with the task of implementation of national innovation policy are as follows:

1. State Agency for Investment and National Projects of Ukraine,
2. State Agency on Science, Innovations and Information of Ukraine,
3. Ministry of Education and Science of Ukraine
4. Ministry of Economy of Ukraine.

In general, government agencies, involved in the implementation of innovation policy, represented by different departments, the competences of which are not clearly defined or clearly divided, are often redundant. The consequences of this situation is the lack of improvements in the way of achieving the objectives set by the state, impossibility to identify those responsible, "squandering" and misuse of public funds. Under such conditions it is impossible to rely on the formation of a truly unified state innovation policy (The EU Project, 2011, p. 63-70).

3 Development of agro-industrial production in Ukraine

Analysis of innovation development of agro-industrial production in Ukraine can identify a number of problems that hinder improving the competitiveness of the industry.

- Firstly, there is no reasonable and effective innovation policy of the state. Ukraine's refusal from the priority scientific and technological development in the early days of its independence, as well as the lack of a system of government priorities, the exclusion of science, advanced education and innovation from the main productive forces are all major challenge for the rapid development of state economy (Doronin, 2010, p.73).
- Secondly, there is no state system of management of innovation process. Distribution of management areas between departments leads to a lack of common goal and objectives and uncoordinated actions, scattering of human and financial resources. Such management has never been aimed at solving national problems; instead, it has always been focused on individual industries.
- Third, the regulatory framework of regulation of innovation is fragmented, inconsistent, controversial, and therefore imperfect. Ukraine has adopted more than 100 laws, regulations governmental acts and various departmental documents that are un coordinated and do not form a single legal framework of innovation.
- The fourth problem is the lack of financial mechanism of innovation activity. The main source of funding for innovation are internal funds. At the same time, in developed countries quite extensive and dynamic network of private investment and venture capital funds plays a crucial role in the support of innovative activity. Due to the lack of clear rules and guarantees, private capital is not yet moving towards innovation sector.

Today, the future way of development of agricultural production in Ukraine looks like a dilemma. Either to succeed in creating a competitive industry that for a number of priority areas will find its rightful place in world markets. Or inevitably loss of this perspective; as a result, Ukraine's accession to the developed world will be impossible. Therefore, the transition to effective public policy of innovative development of agro-industrial production is one of the priorities of state administration.

The strategy of the implementation of this policy should be realized in a systematic and consistent manner. All participants of the innovation process should be interested in combining their interests and efforts for the creation and application of new knowledge and technologies to enter the domestic and foreign markets with competi-

tive products. In the implementation of this interaction and thus creation of an economy based on knowledge, the role of the government is the core.

The priority areas of investment in agriculture primarily include:

- revamping and modernization of the existing enterprises,
- investment in environmental protection,
- increased scientific and technological developments and their implementation in practice of the companies.

The existing own resources potential should be appropriately used as it can greatly accelerate the development of economy of Ukraine.

As noted above, the innovation systems of different countries are more or less different. This is due to national peculiarities of the historical development of each country. Collectively, the individual characteristics of national economies that determine their ability to innovative development form the so-called innovative environment. The composition of factors that determine this environment consists of many parameters that characterize the level of society as a whole, reflecting its mental and cultural peculiarities.

In particular, the factors that determine the condition and quality of innovation environment, in other words, innovation climate, are as follows (Milner, 2010, p. 18):

- the state of economic freedom,
- lack of corruption,
- lack of bureaucratic barriers,
- set of conditions for the development of small business competitiveness,
- the availability of venture capital,
- the society's loyalty to commercial success,
- security from crime and arbitrariness of officials,
- contract enforcement mechanisms.

National innovation policy in the agricultural economy of Ukraine should be carried out in compliance with the following principles:

1. Recognition of innovative activity as one of the main areas of the agrarian economy which determines the level of production.
2. Environmental safety, quality of life, adaptation of agricultural technologies to different levels of intensification of agricultural production.
3. Production and resource potential, mixed forms of economy and organization of work.
4. The concentration of public financial resources for the production of equipment and technologies that determine the scientific and technological progress
5. Direction of innovative activity on social and economic priorities of agro-industrial complex.
6. Combination of government regulation of innovation and market innovation mechanism.
7. Application of targeted-program methods of economy management to high-tech industries.

Government support of innovation activities of an agricultural enterprise is carried out in two ways: direct involvement of the state (government funding of innovative

projects, providing public property for implementation of innovation, regulatory support) and by creating favorable conditions for its development (encouraging the production of innovative resource-saving products, special tax treatment, financial-credit support, simplifying licensing procedures, quotas).

The most important prerequisite for sustainable economic growth in Ukraine is becoming an urgent necessity to intensify investment and innovation in agriculture, radical modernization of the technological base and the introduction of modern technologies and methods of production. The scale and complexity of the challenges of high sustainable economic development of innovative agribusiness objectively determine the growth of the role and value of the regulatory indicative state influence on the processes that occur in this area (Laiko et al., 2008, p. 287).

As in Ukraine the development of innovative entrepreneurship is only in its initial stage and it does not provide significant results in improving management, the following areas of improvement of entrepreneurship in this area should be considered important:

1. *From the state* - to provide a stable policy that aims to support business in the sphere of science.
2. *From sectorial entities* - development of priority directions of the development of industries; establishment of sectorial research centers; providing financial assistance to promising scientific research firms from sectorial budgets in the first stage of their establishment; concluding contracts between ministries and small research firms to develop promising new technologies, improving the existing standard processes to improve their efficiency, quality, reliability, and other parameters that can provide competitive products;
3. *From industry associations and corporations of different forms of ownership* - contracts for certain types of scientific research projects according to production needs; incentives for promising research projects aimed at improving technological processes, improving the quality of products.

Conclusion

The involvement of the state in shaping a favorable innovation environment is undoubtedly critical, since the government can form an institutional framework to encourage private industrial sector based on economic freedom and competitiveness. In recent years, the importance of the external institutional environment has increased enormously due to a significant increase in the mobility of capital, labor, entrepreneurship both nationally and internationally. Both the economic and social impact that could be potentially gained from innovation at all levels –national, regional and local – requires from national governments special efforts to create a favorable environment to attract investment in areas that stimulate the development of innovation, namely human capital, research and communication infrastructure, i.e. areas that determine the size, quality and contemporary dynamics of the internal market and, in turn, are powerful factors in attracting investment.

Innovation is particularly important at a time when both national firms and national economy as a whole are at the stage of overcoming the economic downturn. In-

novation, as noted, is a powerful engine of economic development and a means of solving various social, economic and global challenges in developed countries and developing ones, making it possible to raise productivity, generate employment through the creation and dissemination of knowledge and their future productive use. And it is obvious that the state is entrusted with a special responsibility for the effective formation and development of the economy based on innovation. This type of economic development can be implemented only through continuous and targeted search, preparation and implementation of innovations that can increase the efficiency of functioning of social production.

All organizations face the challenge of innovation. Their survival and growth depends upon their capacity to create product and service innovations and the ways in which they deliver them on the market. New products or services are critical to successful growth for most SMEs. It is therefore essential to ensure that SMEs are able to build an intellectual property rights strategy as an integral part of their business strategy. This strategy is intended to help them avoid missed opportunities, e.g. in licensing, attracting investors and to estimate the business risks caused by lack of protection (Jarossová, 2013, p. 6).

Analysis of innovation development of agro-industrial production in Ukraine can identify a number of problems that hinder improving the competitiveness of the industry. Concurrently, the future way of development of agricultural production in Ukraine looks like a dilemma. Either to succeed in creating a competitive industry that for a number of priority areas will find its rightful place in world markets. Or inevitably lose of this perspective; as a result, Ukraine's accession to the developed world will be impossible. Therefore, the transition to effective public policy of innovative development of agro-industrial production is one of the priorities of state administration.

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