

Public Administration in the Agricultural Sector of Kazakhstan

Administración pública en el sector agropecuario de Kazajstán

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ABSTRACT:

The authors analyzed international experience in providing financial aid to the agricultural sector of economy and evaluated its adaptation in Kazakhstan. The study highlighted practical introduction of direct and indirect support tools being most effectively used in the United States and in the European Union (EU). The authors explored state financial backing of the Kazakhstani agricultural producers upon generalization of positive international experience and outlined proposals on its unification within the framework of the Eurasian Economic Union.

Keywords government regulation, innovative development, economic impact, smokestack industry.

RESUMEN:

Los autores analizaron la experiencia internacional en la prestación de ayuda financiera al sector agropecuario de la economía y evaluaron su adaptación en Kazajstán. El estudio puso de relieve la introducción práctica de herramientas de apoyo directas e indirectas que se utilizaban más eficazmente en los Estados Unidos y en la Unión Europea (UE). Los autores exploraron el respaldo financiero estatal de los productores agrícolas de Kazajstán sobre la generalización de la experiencia internacional positiva y esbozaron propuestas sobre su unificación en el marco de la Unión Económica Euroasiática.

Palabras clave regulación del gobierno, desarrollo innovador, impacto económico, industria de la chimenea.

1. Introduction

Agriculture is the most important segment of agro-industrial sector in Kazakhstan, which should be considered not only as a sector that provides food products and industrial raw materials, but also as a major customer and consumer of industrial products, which determines profit in different sectors of economy [8.9]. In particular, high level of agricultural production, its solvency, the need to use logistical resources, determines the country's sustainable economic

development. Population demand for almost 75% of consumer goods is covered by agriculture. At the same time, food expenditures of an average Kazakhstani family make about half of its budget.

Several specific features of agriculture significantly reduce its investment attractiveness. These include seasonal production, high capital intensity, high dependence on natural climatic conditions, permanent risk in getting stable incomes, inelasticity of demand for many agricultural products, substantial time gap between production costs and ready-prepared products. This results in low competitiveness of the agro-industrial sector, which requires permanent state financial backing as well as government regulation improvement of the country's agricultural sector.

In the developed economies, permanent and stable support for agriculture is provided through various financial tools (subsidies and compensations, tax reduction or tax exemption, reduction of tariffs on resources used in agriculture, crediting and insurance mechanism combined with government subsidies, etc.) (Silberglitt, Anton, Howell, Wong, Gassman, Jackson, Landree, Lawrence Pfleeger, Newton, & Wu, 2006).

Market globalization along with increasing competition in the high-tech field have become key factors contributing to the development of inclusive cooperation, which particularly refers to agro-industrial production (Sigarev, & Nurkuzhaev, 2014; Sandu, Svobodina, Nechaeva, Kosolapova, & Fedorenko, 2013). This requires a long-term strategy of scientific and technological development aimed at innovation, formation of financial market, efficient capital distribution, prevention and reduction of risks, increase in competition in the financial services market, improvement of their quality, reduction of credit resources (Samuelson, & Nordhaus, 2011).

Further development of agriculture in Kazakhstan requires increase in government support combined with its efficient use and return of invested resources. Each tenge invested in production should work for the result bringing maximum profit.

Research publications provide various methodological approaches to determining the effectiveness of using public subsidies. However, in most studies its assessment is limited by definition of estimation effectiveness of its specific types, or by the total amount of state financial backing related to agriculture. Research materials do not provide assessments of its effectiveness and distribution of support to business entities is not considered in terms of the achieved input efficiency. Therefore, it is often believed that substantial support to agriculture is useless and wasteful because of the low return of investments.

Development of agricultural sector in Kazakhstan requires comprehension of the accumulated experience in the development of market-related forms, methods and principles of government regulation, especially in terms of accession to the World Trade Organization. Blind copying of foreign experience without due regard to the Kazakh specifics does not provide economic stabilization and progress in the field of agro-industrial production. On the contrary, it hinders these processes. Research papers highlight attempts to find a reasonable solution to this market-related problem.

Originality of this research paper is determined by an attempt to develop recommendations on improving effectiveness of the state financial backing mechanism, development of various forms and methods of total state financial backing of agricultural producers, promotion of structural changes by means of investment policy promotion.

According to foreign statistics, public support of agricultural producers in the European Union makes 39%, in the US - 36% and in Japan - 15%. The share of public support in the EU total production makes 36%, in the United States - 39% and in Japan - 37% (Wigier, 2014). Leaders in the field of agricultural production permanently increase state financial backing of agriculture, where about half of the used subsidies presents financial aid, which distorts production and trade. This conclusion was made by the OECD experts in their annual report "OECD Agricultural Policy: Monitoring and Evaluation» (2013) based on the results of

agricultural policy studies in 47 countries, which makes almost 80% of the entire investment in the agricultural sector. These countries include the OECD and the EU member states as well as a number of emerging economies being regarded as major players on food and agricultural markets (Brazil, China, etc.).

State financial backing of agriculture includes both direct and indirect regulations (Klimova, 2013; Sandu, Svobodina, Nechaeva, Kosolapova, & Fedorenko, 2013; Amanor, & Chichava, 2016). Direct governmental financial support in foreign countries includes direct government compensation payments; payments for damage caused by natural disasters (Samuelson, & Nordhaus, 2011; Amanor, & Chichava, 2016) payments for damages caused by production restructuring (payment for acreage reduction, forced livestock slaughter, etc.); subsidies per livestock unit or population area; funding for procurement of production resources (subsidies for purchase of fertilizers, pesticides and animal feed).

Direct subsidies to agriculture are provided in almost all developed economies; however, they differ by their level and structure (Miyao, 2012; Abdymanapov, Toxanova, Galiyeva, Muhamedzhanova, Ashikbayeva & Baidalinov, 2016). The largest share of direct subsidies to agriculture in the general structure of public expenditures is observed in Norway, Australia, as well as in the US and in the EU. As regards specific sectors, the largest share of public expenditures on crop production is observed in the United States, Canada and in the EU; on livestock production- in Finland, Norway and in Switzerland. Thus, the economically developed European Union that has favorable natural conditions and high-tech equipment, allocates most of its budget for maintaining prices for agricultural products as well as for protection against the impact of global markets. In general, foreign trade protection makes about 60% of the EU budget.

Subsidies in the EU have already reached 45-50% of the produced agricultural commodity products; in Japan and Finland, this figure makes 70%. Indirect financial backing of agriculture include a number of measures, such as price regulation referring to agricultural products and food market by means of supporting domestic prices for agricultural products; preferential financial and credit support; preferential taxation system, quotas and taxes on export and import of food products; agricultural insurance.

State financial backing of agriculture in the EU as well as in the United States, in Japan and in other industrialized countries has a significant impact both on national markets and on the global agro-food market. OECD experts noted significant differences in the amounts of support among different countries. While donations are increasing in several countries that can provide substantial subsidies (Japan - 56%, Korea - 54%, Norway - 63% and Switzerland - 57%), state financial backing decreases in those countries, which provide a relatively low level of subsidies (Israel -11% Mexico -12%, United States - 7%). Insufficient agricultural support is observed in Australia (3%) and in Chile (3%), in Ukraine (1.3%) and in New Zealand (1%). Some developing economies that are regarded as key players in agriculture permanently increase the amount of their agricultural subsidies. In China, state financial backing increased up to 17%, in Indonesia – up to 21%, in Kazakhstan – up to 14.6%, in Russia – up to 13.5%. Insufficient agricultural support is observed in Brazil and in South Africa - 5% and 3%, respectively (Hesse, 2008).

Food security of any country is characterized by two main aspects – the share of imported food products and (quite often) by low quality of these products (State support for farmers in developed countries, 2010; Dzhorobaeva, 2011; Amanor, & Chichava, 2016). States not only support production by administrative price regulation and subsidized payments, but also by increasing competitiveness of their agricultural sector. They actively provide general services for national agricultural producers, which include introduction of innovative technologies, support of marketing, financial and transport infrastructure, insurance costs, development of consulting in rural areas, upgrade of rural infrastructure and veterinary services.

In recent years, decrease in the state financial backing related to agriculture has become a global trend. This decrease is generally determined by the increase in the worldwide food prices

and only partially – by the ongoing changes in the agricultural policy of specific states. States gradually move away from granting subsidies associated with production, however, support that distorts production and trade still makes about 50% of all subsidies (Uzun, 2015).

Along with the decrease in relative support, its methods are also changing. Lesser support is provided to production of certain agricultural products and greater – to various production-limiting programs, for example, when compensation payments are associated with fixed areas and yield, or with a fixed number of livestock. The annual report "OECD Agricultural Policy: Monitoring and Evaluation" (2013) indicates that environmental concerns tend to remain a low policy priority in terms of providing agricultural support. However, some countries have adopted broad-based policy tools that require farmers receiving payments to comply with certain minimum environmental standards.

One of the most important indicators referring to state financial backing of agriculture is the level of state support of agricultural products. It reflects correlation between all price subsidies for production and sales (including exports) of agricultural products and prices of agricultural producers.

This regulation has the following main objectives: stabilization of prices for agricultural products by limiting their dynamics in a relatively narrow corridor; price support aimed at providing expanded reproduction opportunities for agricultural producers; regulation of the agricultural production volume and structure; maintenance of food market stability (Samuelson, 2011; Wegier, 2014; Amanor, & Chichava, 2016).

For example, price support for agriculture in the EU makes up to 91% of the total amount of budgetary funding, in the US, this figure makes 48%, in Canada - 53%.

In the EU, public procurement prices ("intervention prices") perform the function of minimum prices. Public organizations buy agricultural products at these pre-fixed prices. In addition, target prices, which guarantee a certain level of income to medium and large farms, are set at a high level (State support for farmers in developed countries, 2010).

The ten percent differentiation of target prices by months of a fiscal year aimed at compensating costs of unsold goods storage has significant impact on agricultural producers' incomes. There are two kinds of price support as regards agricultural production in the United States: target and collateral support, oriented at cost reimbursement, including average profit rate and the estimated land rent. Relatively large farms receive the largest share of assistance (70% of budget funds).

In addition to compensation for losses caused by drop in prices, the developed economies widely use measures aimed at protecting domestic food market from imports.

In the developed economies, the average weighted tariffs on imported agricultural products make 43.1%, in the developing countries - 18.7%, in the emerging economies - 13.3%.

Functioning of agricultural loans, including preferential ones, is important in the system of public economic regulation.

Significant development of agricultural loans in the United States is determined mainly by a rapid development farm structure in the agricultural sector. Loan funding of agricultural enterprises in the United States varies between 35 and 70% of total expenditures. The share of loans varies considerably by certain cost categories. When dealing with real estate, purchase loan up to 70% of transaction amount is granted, in terms of machinery and equipment – between 40% and 70%, livestock - about 50%, various elements of current assets - up to 100%.

Loans promote development of competitive advantages; incentives are used with a view to foster sales and production flow management; loan resources are used by businesses as a new source of profit.

In the US, public support of the agricultural sector is aimed at implementing a number of goals, such as: (1) ensuring high production efficiency; (2) rural development; (3) food support of the

poorest families (4) food security through comprehensive inspection of food quality; (5) environmental protection; (6) development and implementation of programs related to marketing and management; (7) development of science and education through research activities in the field of agriculture.

Public support of agricultural producers in the EU brings together the following areas: (I) loan programs, providing public loans through credit institutions, agreements with commercial banks on reduction of loan interest; (II) implementation programs aimed at increasing sales volume of particular types of agricultural products; (III) international trade programs aimed at removing trade barriers and regulation of export-import supplies as well as at protecting domestic producers by means of customs and tariff regulation of export-import operations; (IV) programs aimed at regulation of agricultural production volumes with a view to balance supply and demand of goods. For example, programs aimed at land withdrawal through land conservation and reduction of certain crop areas.

Although, keeping in mind the Common Agricultural Policy of the European Union, one should note differences in the ways and methods of funding. For example, Germany introduced a system of assistance given to new farmers. Besides gratuitous grants, this system includes a loan at 5% per annum or a public loan for construction at 1% per annum with repayment of 2% per year. The average interest rate on agricultural loans in Germany is 7.3% per annum. In addition, one can conclude a commercial credit insurance contract with the view of purchasing production means (the insurance rate makes about 0.4%). (Dzhorobaeva, 2011).

In France, the mechanism of preferential loans for agriculture is based on bonus allowance - repayment of the difference between a contractual interest rate and a preferential loan provided to the farmer by the state to the bank.

Key areas of agricultural reforms in the EU include orientation at increasing agricultural competitiveness of each member state with a view to improve food security across the EU; provision of long-term economic and ecological competitiveness of the agricultural sector; assurance of harmonious development of agriculture throughout the EU.

2. Methodology

This research is based on the analysis of the world public administration experience in the field of agricultural production. This made it possible to reveal the most important measures related to state financial backing of agriculture in the developed economies (Weinstein, 2011), which include price regulation providing stable incomes of producers and expanded reproduction possibilities; direct subsidies referring to land areas and livestock, which is closely linked to production conditions; financial and loan support; formation of social and industrial infrastructure in rural areas; tax regulations, ranging between 2.5 and 6% of total farm costs; regulation of land relations.

These methodological approaches contributed to determining the directions and objectives of public support for agricultural sector in Kazakhstan as well as the effectiveness of agricultural subsidies, which is also reflected in the volume of investments in the agricultural infrastructure.

The authors determined funding sources of total agricultural support, which include the budget and consumers of agricultural products; the share of budgetary payments per 1 ha of crop, 1 head of livestock; increase in state backing of agrobusiness in Kazakhstan, the change in its structure, the share of subsidies in the total volume of investments, target indicators, which include forecast indices characterizing economic conditions in the agricultural sector, production and processing, domestic and foreign trade referring to agricultural products and food, social services, natural resources, environment and food security. The paper gave insight into the role of public programs providing general services, which serve as a basis for services and preferences provided for agriculture and rural people.

In order to improve public support of agricultural production, the authors of this research proposed to establish State food security reserves; food aid for vulnerable population; support

of direct payments to producers; financial participation of the state in insurance programs and income assurance.

This research was performed through monitoring of various printed and online materials, statistical data and data provided by national and regional state authorities, related research papers provided by the authors and other sources.

3. Results

Forms and methods of state backing of agricultural producers within the framework of the Eurasian Economic Union (EAEC) is aimed at efficient functioning of all economic sectors. Agro-industrial complex is among the key segments. The main objective of agro-industrial policy is effective implementation of resource potential aimed at the increase in production volumes of competitive agricultural and food products. The most important objectives include balanced development of agricultural production and the food markets; equal access of producers to the overall food market, unification of requirements related to circulation of agricultural and food products; protection of producers' interests in foreign markets, increase in export volumes and expanding its nomenclature; coherent agro-industrial policy based on equality and consideration of interests, mutually beneficial trade and meeting social demands as a key priority.

According to OECD, PSE / CSE database (2012), state backing of producers in Kazakhstan is at a moderate PSE level as compared with other countries. According to Producer Support Estimate, its level in Kazakhstan is close to Ukraine (7%), Indonesia (9%) and the United States (9%), however it is half as high compared to Russia (22%) and to the average OECD level (21%). Taking into account the OECD Monitoring and Evaluation report of agricultural policies (Agricultural Policy Monitoring and Evaluation 2011: OECD Countries and Emerging Economies), it should be noted that producer support in Kazakhstan, measured on the basis of PSEs did not show any apparent long-term trend: its value varied from 27% to (-6%); producer support was characterized by a clear growth trend since early 2000s.

Fluctuations in the level of producer support in Kazakhstan occurred mainly due to fluctuations in the level of market price support (MPS). Budget transfers began to play an increasingly important role after 2005, when restoration of economic growth was observed and budget allocations to agriculture support programs were increased. Producer support had a greater impact on the overall support level or on slowing down the decline in market price support, as it happened in 2007-2008 and in 2010, or on the increasing growth effect of market price support, as it happened in 2005-2006 and in 2009. Later (during 2010-2014), one could observe increase in market price support.

While assessing producer support in Kazakhstan, it was important to consider both its level and forms. Support can be provided in the form of price regulation or subsidies with a view to reduce resource cost. In addition, it can be provided in the form of payments per hectare or per animal head; alternately, it can be provided in the form of direct payments to producers.

Market price support is directly linked with production output and it can have a significant impact on production volume. For this reason, this form of support is believed to have a distorting impact on production and foreign trade. Research studies demonstrate that Market Price Support (MPS) is the dominant component of PSEs in Kazakhstan. Pricing policy interacts with other factors and creates a gap between domestic and world prices. Underdevelopment of infrastructure in Kazakhstan is obvious; it does not allow domestic players to fully benefit from higher prices on foreign markets.

Domestic price regulations in Kazakhstan still focus on the grain sector. Presently, resource management involves domestic price regulations through government interventions referring to food resources. Since the beginning of price growth on the world food markets, Kazakhstan began to apply anti-cycle strategy aimed at stabilizing prices for agricultural products (for example, grain products).

Kazakhstan, has gradually introduced a system of guaranteed purchase prices for all domestic producers. This assumed orientation of state backing policy at reducing the risk of market prices decline for producers. The guaranteed price is determined on a "cost plus" basis, which could imply considerable budget expenses under certain market conditions. State regulations referring to the Kazakh food market are currently evolving towards strengthening of regulation mechanisms related to domestic market prices. Similar macroeconomic trends can be observed in the EAEC countries.

Meat and milk production sectors are very significant in the total value of Market Price Support (MPS) in Kazakhstan. These products compete with imports and they are protected by import tariffs. Practically, Kazakhstan does not provide regulation of domestic prices for livestock products at the national level. Market price support for livestock products also includes additional support for the sector, keeping in mind the fact that forage grain prices in Kazakhstan are generally lower, as compared with the world ones. In the case of livestock sector, weak market infrastructure predetermines additional protection of producers, because it increases the value of imported products in Kazakhstan and reduces relative competitiveness of imported products on the Kazakh market.

Research studies indicate that payments for livestock products were the only significant form of direct subsidies paid per ton of commercial products. This subsidy was originally introduced in Kazakhstan only for poultry production, however, its coverage was expanded, and by 2011, the subsidy covered almost all livestock products (poultry, beef, pork, lamb, milk, eggs, wool, etc.). According to research materials (2006-2011), the size of this subsidy, calculated as percentage of average producer prices, indicates a relatively high level of support, and ranges from about 50% of beef prices to 13% of eggs prices. In terms of general preventive measures taken during that period, the subsidizing policy aimed at supporting agricultural producers by means of substantial costs taken from the state budget.

For example, in 2010 30% of payments per hectare of oilseeds and sugar beets were partly made in the form of subsidies per ton of these crops (this referred to products delivered for processing). High subsidies per hectare established for these crops caused moral hazard to producers, reducing their interest in further crop harvesting and marketing.

The new mechanism of state backing is based on the current Program for the Development of Agroindustrial Complex of the Republic of Kazakhstan for 2013 - 2020 "Agribusiness 2020". This Program envisaged increase in state backing of the agricultural sector by 4.5 times that will attract about \$70,0 billion of private funds. Already in 2015, the amount of subsidies for the development of this sector made almost \$1.0 billion (176.8 bln. tenge), which is twice as much as the amount allocated in 2013 (88.7 bln. tenge).

Particularly, in terms of livestock, subsidies implied the following funding directions: (1) depreciation of young pedigree stock; (2) subsidies for breeding works; (3) depreciation of artificial insemination and embryo transplantation; (4) subsidies for pedigree bulls (beef breeds). When purchasing young pedigree stock (dairy breeds of heifers, young females) in Kazakhstan, reimbursement amounts make up to 50% (118,000 tenge/ head (1,000 USD/head), which is comparable to relevant costs in Russia, Belarus, Ukraine; in the EU countries – 154,000 tenge / head.; in Australia, North and South America – 235,000 tenge / head).

In addition to the existing subsidizing resources and activities related to crop and livestock production, the Program contains a number of new support tools, such as financial restructuring, reduction of interest rates on loans and leasing, subsidizing costs referring to loan guarantees and insurance costs. Investment subsidies present a new area; this gives the possibility to provide partial compensation of investment costs in agriculture.

Since 2014, Kazakhstan has been providing subsidies for processing enterprises in order to ensure procurement of raw materials. The list of subsidized agricultural products includes the most import-dependent ones: sugar, milk powder, butter and cheese. Research data show that

during 2013-2015, butter production in Kazakhstan increased by 11.6% and milk powder - by 24.4%. Development of oil crops processing will provide long-term and stable sales of raw materials, neutralize risks of sharp fluctuations in prices for raw materials, along with high value-added costs as well as increase in tax and investment in agribusiness. These measures significantly expand access of agricultural producers to funding. This will improve competitiveness of domestic agricultural producers and processors of agricultural products.

In accordance with the program "Agribusiness 2020", Ministry of Agriculture of the Republic of Kazakhstan developed the Scheme of regional specialization and optimal use of agricultural lands aimed at specific agricultural goods. The scheme is developed with regard to administrative-territorial division of the Republic with detailed data related to areas based on a number of key factors. Each factor consists of a number of indicators: natural-climatic factor; production factor; product sale possibilities. In view of these factors, subsidizing, crediting, financing, and other state backing measures have been changed. , One of the main conditions includes compliance of the above Scheme with high natural-climatic and production potential and with results of activities.

All natural-climatic factors were assessed with due regard to the following parameters: precipitation, soil types, salinity degree, acidity, terrain, soil fertility (bonitet), availability of irrigated lands, temperatures during the vegetation period, availability of suitable pastures, availability of suitable sources of irrigation water for pastures, including underground water with acceptable mineralization level, length of the grazing period. Assessment of production factors includes crop productivity indicators, availability of sown areas in the region, recommended crop rotation, availability and proximity of processing capacities and retrospective specialization of the region. Marketing possibility assessment referring to agricultural products implies consideration of the following aspects: presence and proximity of sales markets, product delivery possibilities.

In order to meet the requirements of the Agreement on common rules of public support for agriculture, the EAEC member states developed the unified methodology of calculating public support for agriculture. This methodology is based on the existing international developments, including methodology used by the World Trade Organization and by the Organisation for Economic Co-operation and Development.

In the agri-food market, pricing correlation between supply and demand at all distribution stages of agricultural and food products is provided. Public regulation measures should be directed at the development of sustainable marketing conditions, ensuring increase in product competitiveness as compared with products of the third countries, equal competitive conditions in bilateral trade, fair pricing from producers to consumers, profitability and investment attractiveness, affordability of agricultural products for the population. (Agrarian sector of Kazakhstan, economic and social modernization, 2010).

In order to assess the situation on agri-food markets, indicative prices for basic products without assumed losses are being developed. They are used to identify and to correct public support mechanisms taking into account prevailing market conditions. State support for modernization and construction of new market infrastructure facilities is needed to implement the agreed price policy, public regulation measures, to create equal conditions for access of producers to agri-food markets. These conditions include logistics centers, wholesalers and specialized markets, sea and river terminal complexes as well as specialized machinery. State incentives ensure harmonization of tariff policy in transporting agricultural and food products, which will provide balanced development of production in various regions (Program for the Development of Agriculture in the Republic of Kazakhstan, 2013).

Public support for agriculture includes measures, which do not have any impact on trade; measures, which affect trade to the fullest extent, along with their distorting impact on mutual trade.

Policy aimed at regulation of agricultural prices and farm incomes primarily involves monitoring

of economic indicators: production costs by groups of specialized farms or production types; parity of prices for industrial and agricultural products; profits of agricultural producers and production branches.

As a result, the information - statistical data system is formed; this system will provide regular impact on market prices as well as on production, incomes, savings and investments.

Agricultural development requires stock exchange trading, which provides fair pricing that gives the possibility to create mechanisms for profitable funding of the agricultural sector. This funding will reduce state budget burden, increase tax revenues and stimulate agricultural lending that could be provided by commercial banks (State Program for Innovative Development of Kazakhstan, 2014).

There are two possible options of using stock exchange technologies as regards trade in food products: stock exchange auctions, organization and development of futures markets. In the first case, stock exchange trade is conducted in form of simple or reverse auctions, attended by representatives of producers and consumers. This maintains government control over product movement, which allows eliminating the impact of subjective factors on prices. Thus, commodity producers become key market participants. Trade is carried out through standard contracts based on warehouse receipts; in this case, the government actually resells contracts, considered by the clearinghouse of public stock exchange.

Further development of the agri-food market requires effective expansion of demand from the population; diet optimization with due regard to the recommended standards; monitoring of prices for agri-industrial goods produced in the EAEC member states and the imported ones, including pricing analysis at all stages of production, processing and sales; monitoring of the world market conditions; economic assessment of agricultural producers; analyzing the effectiveness of the existing public regulation measures; development of recommendations on the improvement of public regulation effectiveness with regard to indicative prices (State Program for Agricultural Development and Regulation of Agricultural Products, 2012; State Program of Sustainable Rural Development, 2011; Agri-industrial Sector of the Republic of Kazakhstan, 2012).

Uniform requirements related to production and circulation of products are implemented through technical regulations and documents ensuring their application. These requirements are established at the level that ensures production with regard to global rules. Being part of a technical regulation system, coordinated approaches to grain quality assurance should be formulated; the main production type as well as monitoring of safety and quality of main products should be provided. Relevant analysis is carried out by the authorized governmental and independent institutions. Monitoring results suggest that full information regarding characteristics of each product entering the market should be generated.

Uniform requirements in the field of safe handling of plant protection products and veterinary drugs are established and unification of requirements referring to production and circulation of agricultural products is ensured.

As regards achievements in the field of plant varieties selection and seed breeding, uniform requirements related to their import, export and transportation through the single customs territory are set; a single register of plant varieties and seed breeding products is created; procedures related to testing plant varieties and hybrids for homogeneity, stability and economic use are unified, seed certification approaches, mutual recognition of certification bodies and testing laboratories is ensured.

Common responsibility for violations of the set requirements and procedures in the field of livestock breeding is provided through maintenance of a uniform breeding assessment framework. In addition, uniform requirements for import, export and transportation of genetic material on single customs territory are set; a single register of livestock breeds is developed; a single procedure of issuing breeding certificates is established; a single integrated control system for livestock products "from field to table" is established with regard to identification

and registration of animals and animal products. Modern computer and mobile technologies are currently used to observe the life cycle of each animal in "real time".

For this purpose, Kazakhstan provided identification of the entire livestock population through digital passports. This identification system should contain registers of livestock owners, processing companies, trade organizations, veterinary drugs, identification tags and laboratories. It is necessary to ensure the possibility of identification data exchange with other public information resources in order to improve control efficiency. Both producers and owners will have free access to information regarding animals and livestock products (Order of the Minister of Agriculture of the Republic of Kazakhstan, 2015; Khussainov, 2012).

Legal and contractual framework in the veterinary field should provide comprehensive control of livestock and products of animal origin "from field to table" upon the previously mentioned identification system. Besides, this system implies establishment of a single information center and relevant legal framework in the field of veterinary medicine, veterinary laboratories for the unified system providing laboratory support in parallel to relevant veterinary and sanitary measures; appropriate expertise; unified monitoring and diagnosis of diseases; coordination of measures aimed at prevention and elimination of extremely dangerous animal diseases.

One should establish uniform regulations, including processing and issuing of veterinary accompanying documents referring to veterinary-sanitary examination, circulation of medicine and feed additives for veterinary purposes.

Development of export potential is based on coordination of sales and marketing policy on foreign markets as well as on optimization of export flows. It is possible to conduct single export policy as regards specific commodity items. This refers primarily to grain exports (Uzun, 2015).

Competitiveness of the agri-industrial sector in the longer term is determined by rapid technological modernization and original scientific and technological developments in various agricultural fields. In this regard, financial and other resources will be focused on innovation-based research. In terms of global financial crisis, this approach is regarded as the most relevant and practical one. According to forecasts, underfunding of investment subsidies in Kazakhstan up to 2017 may be equal to 64.3 bln. tenge (Table 1).

Table 1.
Investment subsidies in Kazakhstan, bln. tenge

	Years				Total amount (2014-2017)
	2014	2015	2016	2017	
Program "Agribusiness 2020"	25,5	29,4	19,2	21,0	95,1
Law of the Republic of Kazakhstan "On the Republican Budget"	13,4	5,8	5,8	5,8	30,8
Insufficient funding of investment subsidies	-12,1	-23,6	-13,4	-15,2	-64,3

Results as presented in Table 1 reveal that teachers (36.7%) frequently stated that using computer in class provides to attract students' attention to the lesson. That quote supports this perception of teachers "... *Students are experienced with regard to using computer in their daily-life so most students interact with it at their homes, so computers are attractive tools for students ...*" Nevertheless, many teachers (22.4%) also expressed the contributions of using computer as providing long term learning in students and making easy to learn subject.

In order to provide equal conditions for producers of agricultural products in the EAEC countries, one needs to establish standardized forms and methods of public support as regards pricing, insurance, subsidies, investment and taxation.

4. Conclusions

Effective use of scientific potential requires synchronization of legal and regulatory framework related to functioning of agricultural science, formation of a common information space in the field of science and technology, establishment of joint research institutions, based on self-sufficiency, using grants and programs for joint research activities (Treaty establishing the EAEC, 2014; Decision of the Board of the Eurasian Economic Commission, 2014).

Coordination of research activities is based on a joint plan of perspective basic and applied research as well as on the implementation of international programs and projects. Development of scientific potential is provided by training of researchers in relevant secondary and higher educational institutions.

Establishment of a unified information space in the agri-industrial sphere demands an integrated information system based on consolidation of the existing information resources and exchange of information between them, which, in turn, provides production, processing and use of information related to the development of agrobusiness. In addition, this system should provide agricultural development forecasts, analysis of public support efficiency, monitoring of food security status; increase in the efficiency and quality of management decisions.

As regards agricultural policy development, one should shift the focus from public subsidies to investments aimed at productivity increase and efficient use of resources, and continue active improvement of investment climate. Public support of investment projects will be carried out largely by using new tools: investment subsidies, subsidies referring to interest rates of loans and leasing. Thus, investment subsidizing, introduced in 2014, increased the volume of investment in fixed assets of food industry by 16.5% and amounted to more than 40.0 bln. tenge; the interest rate on loans and leasing was compensated to 1764 agrobusiness subjects, including 15.4% (271) of processing enterprises. (according to data provided by the Ministry of Agriculture).

In order to create equal economic conditions for agricultural producers in the EAEC countries, one should establish standardized forms of public support related to pricing, insurance, subsidizing, investment and taxation (Sigarev, & Nurkuzhaev, 2014).

In 2013-2015, because of the ongoing global financial crisis and, in particular, financial crisis in Russia, domestic producers of dairy and poultry products faced the marketing problem (overstocking caused by the dominant presence of imported products in consumer markets). In order to improve competitiveness of dairy and poultry products and to find the way out of this situation, the authors of this research suggest increasing the established subsidy rates for these types of livestock products by 50% during crisis periods (six months). This proposal can be implemented by reallocating local budget funds, provided for subsidizing crop production sector, which would not require additional budget spending.

Rural development policy includes five priorities: promotion of innovations; increasing of competitiveness; organization of food chains and risk management; preservation of ecosystems; stimulation of efficient resource management. Strategic interests of the EAEC countries include effective functioning of their common market, including agri-food market, ensuring food security and competitiveness of food products.

Summarizing the experience of agricultural development around the world, one can tell that most countries use subsidies as a major tool to support agricultural production. However, some leading countries-exporters of agricultural products (Australia, New Zealand, Argentina, Brazil, etc.) do not support direct subsidizing of producers.

Subsidizing systems of the developed countries include the following basic forms of public

regulation in the field of agriculture: price support (USA), income support through payments per hectare and livestock population (EU), income support through payments based on income level (Canada) and preferential loans (Brazil) (Klimova, 2013; Sandu, Svobodina, Nechaeva, Kosolapova, & Fedorenko, 2013; Snigireva, 2013).

The most effective system of public regulation in the field of agriculture was developed in the United States, where one third of agricultural enterprises receive budget payments in different forms.

We believe that the US experience in the field of public support to agriculture is important for Kazakhstan, Belarus and Russia in terms of the funding principle, when budget subsidies are granted only for specific programs, with due regard to certain requirements.

Currently, Kazakhstan faces the following problems in the agricultural sector (Agrarian sector of Kazakhstan, economic and social modernization, 2010):

- Backwardness of agricultural technologies, physical and moral deterioration of the basic means of production;
- Excessive losses of irrigation water, poor commercial fish farming, as well as inefficient use of other natural resources;
- Small-scale agricultural production;
- Insufficient genetic potential of seeds and livestock;
- Lack of high-quality raw materials for industrial processing and insufficient share of domestic downstream products in the domestic food market;
- Excessive domestic demand for essential foodstuff;
- Insufficient attraction of investments in the agricultural sector;
- Insufficient development of rural cooperation.

In Kazakhstan, relevant organizational and economic measures should include the following:

1. Lifting of restrictions related to circulation of agricultural lands. In other words, circulation of agricultural lands should be increased by simplifying procedures and conditions for privatization of agricultural lands; lifting of restrictions on land transactions in the secondary market (simplification of procedures on changing the status of land plots, reduction of registration time required for transactions, etc.).
2. Improvement of legislation in the field of grain production, which implies introduction of online register of grain crops, which would allow increasing trust and investment attractiveness of grain crops.
3. Liberalization of seed breeding regulation (recommended and expected changes in the permissive character of the State Register of Breeding Achievements).
4. Improvement of water tariff policy through the establishment of appropriate market rates that will attract investments in restoration of irrigation systems.
5. Introduction of automatic subsidizing in the agricultural sector, which will increase efficiency and purposefulness of the agricultural policy, elimination of all corruption prerequisites as regards subsidies.

Implementation of possibilities and cooperation benefits related to the improvement and distribution of incomes of agricultural producers, creation of conditions for consolidation of agricultural production, optimization of agribusiness costs.

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