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Grain Production Economy in Kazakhstan

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Abstract: The article includes analysis of global grain production, forecast of global wheat consumption, shows major grain exporters. In Kazakhstan grain production is the main type of agricultural production and marketing. However, due to the small-scale character of production, insufficient implementation of intensive technologies, grain production is instable and has law quality.he rticle proposes the solution of the following main issues: establishing large-scale agricultural enterprises, allowing the use of innovative technologies of grain production and other crop products competitive in domestic and foreign markets; solution of the problem of price disparity for agricultural products and production means; develop social infrastructure of rural areas; increase subsidies to grain production and grain processed products. The main trend of government regulation of grain market development is the elimination of the deficit of forage grain (feed) in livestock production by using public stabilization resources for agricultural producers who are involved in livestock and poultry breeding and ensure needs for forage grain. It is necessary to use target prices, which play the role of regulatory indicators of parity price correlation for industrial and agricultural products, getting of profit by agricultural producers at the level of other sectors of economy and getting profit for extended reproduction.

Key words: World grain market · Grain production · Yield capacity · Grain receipts · Prices · Subsidies · Fertilizers · World Trade Organization

INTRODUCTION

Agriculture is an important sector of economy of Kazakhstan. Huge land reserves with large farmland areas (arable land, pastures and hayfields) enhance the development of large scale agricultural production.

Land cultivation is the leading sector of agriculture in the country and grain production is the main branch which provides population with bread products and livestock feed [1]. Need for wheat increases because of quick growing of the population in developing country and, as it is expected, will increase on 60% to 2050 [2].

Kazakhstan produces 13,5-20,1 mln. tons of grain and therefore the country is on the third place in the CIS after Russia and Ukraine. The average grain sales for export are 10-13 c/ha. Increase of grain production enhances the increase of grain sales volumes and increase of profitable industry. Average grain export is 2,8-7 mln. tons and 1.3-2.2 mln. tons of flour. More than ¾ of grain crops is spring wheat. It is sown mainly in the northern part of the country and winter wheat is grown in the south [1].

Agricultural production in Kazakhstan has a small-scale character: there are 2009 thous. of agricultural enterprises, of which 193.4 thous. private farms [2]. The most largest exporter grain are USA, Canada, Australia, France and Argentina. Import his (its) first of all country of the West Europe, Japan, Russia [3].

In addition there are more than 2.2 mil. households, which produce about 20% of crop production and more than 80% of livestock production. Main part of production is of low quality because using modern technologies in conditions of small-scale production is impossible. In this regard, there is a need of integration of farms through various forms of cooperation [4]. The Final spares grain in the world in forecast of the worldwide

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consumption of the wheat in 2012-2013 forms 684,3 mln. tons that several below forecast past month, but on 1,7 percents below in contrast with corresponding to factor of the previous season. Such reduction is also connected with sharp reduction on 8 percents of the consumption of the wheat in stern purpose in contrast with record level 2011-2012. It Is Expected growing of the consumption forage grain only in United States of the America in two times more than moreover offer of the corn will be extremely limited [5].

Countries-the world's leading exporters are the leaders in introduction of resource-saving technologies. Obviously conservation technologies in the development of world's agricultural production is the priority: advanced technologies allow the increase of grain production with more extensive use of fertilizers and plant protection means and high prices for fuel and labor have resulted in reduction of the profitability of grain production.

The most important issue of agricultural development, especially grain production is the financial position of agricultural producers. Price liberalization has led to fast growth of prices for the resources for the village and food products. As a result, agricultural producers are without fixed and current assets. All this has led to disruption of farming systems. The problems of grain production development are as follows: insufficient financial resources, underdeveloped infrastructure of agricultural production, etc.

MATERIALS AND METHODS

For the development of high-quality grain production it is necessary to introduce high-yielding grain crop varieties, apply optimal amounts of mineral fertilizers and plant protection products and comply with the technology of cultivation of zonal features and natural-climatic conditions.

Main Part: In 2012 grain harvest worldwide was 2.3 billion tons and consumption has increased to 90 mln. tons. Over the past 12 years, transferable grain stocks remain at a low level, which causes growth of food product prices.

In the world three types of grain crops are dominating: wheat, rice, that are food products and corn which is mostly used as feed for animals.

In 2011 the world corn production was 868 mln. tons (43%), wheat-689 mln. tons (34.1%), rice-461 mln. tons (22.9%).

In 2011, in China 456 mln. tons of grain was harvested (19.8%), in USA-384 mln. tons (16.7%), in India -226 mln. tons (9.8%).

In the world cereals are grown on 700 mln. ha, population is 7 billion people and 0,1 ha of grain crops per person. In 1990-2010the average annual productivity growth was 1.1%. Consequently, many countries are importing grain. In 2011 the largest importer of grain was Japan, which has purchased more than 25 mln. tons of grain. Egypt, Mexico, South Korea and Saudi Arabia, each of them imported more than 10 mln.tons. Saudi Arabia depends on import to 90% [6].

In 2011 Kazakhstan produced agricultural products (services) for 2,286 billion Tenge, of which 58.5% crop production. In crop production cereal crops are prevailing (by gross yield, crop area). In Kazakhstan the average annual yield of grain crops in the last 5 years (2007-2011) was 12.2 c/ha versus 10.6-c/ha- index of the previous 5 years and it increased to 1.6 c /ha (15%).

Over the last 5 years (2007-2011), 123.9 bln Tenge from budget were allocated for the support of crop production, which is 5.8 times higher than in the previous 5 years (2002-2006). Every year loans are provided for spring field works and harvesting.

In 2011, cereal crops were cultivated in the area of 11.7 mln.ha, using moisture-resource-saving technologies, which is 3.2 times higher than in 2006. Drip irrigation was used on 21 thous. ha, that is 29 times higher than in 2007.

The key parameter, which influences grain market is gross harvest which, in turn, is instable and varies depending on weather conditions from 12.2 mln.ha tons (in 2010) to 22-23 mln. tons (in 2011). Grain prices change inversely proportionally to gross harvest.

In the structure of sown areas of Kazakhstan the share of cereals was 76.5%, fodder crops-11.8, oil crops-8.6, potatoes, vegetables and melons-1.8%.

In 2011 in the structure of sown areas for cereals, the share of wheat was 77.7, barley-rye, oats-9.6, corn for grain-5.5, rice-5.3 and legumes-1.9%.

Wheat yield-18.3 c / ha, corn for grain-49.9, barley, rye, oats-18.7 c /ha, rice-43.7 c /ha.

In the structure of gross harvest of grain crops, share of wheat was 84.3%, corn-1.8, barley, oats, rye-10.7, rice-1.3, legumes-1.9% [7].

According to the results of agricultural sector grain production in Kazakhstan provides main profit: in 2011 the profit was 220 billion Tenge, including grain sale-120 billion Tenge (54.5%), wheat-106 billion Tenge (48.2%). The level of grain profitability is 48.2%, wheat-51.7%, corn-44%, rice-18.9%.

Small-scale production doesn't allow grain production management on intensive basis. In conditions of complete use of material, labor and land resources, labor productivity and use of advanced technology remains low, which reduces the competitiveness of domestic agricultural products and in terms of WTO will lead to the dominance of imported products and pushing of Kazakhstan's producers out of market.

The instability of grain market implies unstable financial position of agricultural producers (AP), which affects the amount of investments to modern technologies in crop production.

Such instability is a threat to food security. In the long term perspective, it may prevent Kazakhstan to enter global grain market, because it will take several years for grain producers to establish business contacts on particular markets and they can lose them in one bad year.

Exporters can also face certain problems in terms of wheat sale on world markets. Consumption in traditional markets such as Central Asia, Afghanistan, Iran, is about 6 mln. tons despite the prices. Own consumption is about 8 million tons.

Thus, in the years when the harvest volume exceeds own consumption plus exports to traditional markets AP face problems related to grain sales on alternative markets. Transportation costs are high due to the remoteness of global markets and these results in the reduction of price and profit for AP.

In this regard, it is needed to diversify crop production. Our production should focus on market, which has a significant demand for oilseeds, legumes, fodder, etc. In perspective, sown area should meet the demand and market requirements. In this regard livestock production has big perspectives, which in the future should become a stable consumer of crop production.

Also it should be noted that over past 6 years, prices for agricultural products remained unchanged. The average price varies in the range of 150-200 USD per ton. At the same time, since 2005 the cost of fuel has increased 2.8 times (for AP) and the cost of herbicides and fertilizers-2-3 times. Updating of agricultural machinery goes slowly, which is worn out at 87% and requires increased costs for maintenance work.

One of the main objectives of the State Program of rapid industrial-innovative development of Kazakhstan for 2010-2014 is to ensure the competitive agricultural production in the volumes sufficient to cover the needs of the domestic market and establish export resources, aimed at leading positions in foreign markets. It is expected that in 2015, export potential of the industry in total export volume of the country will increase to 85%. Achievement of these goals will be possible due to institutional transformations such as normative-legal regulation and, in particular, changing and addition of new standards in the legal framework of grain market in order to resolve the problems [8].

For the Development of Grain Market it Is Necessary:

- Determine terms of insurance of civil responsibility of grain enterprises to holders of grain receipts and its parts;
- Introduce electronic grain receipts;
- Formulate the mechanism and use of State grain reserves to ensure the needs of livestock industry and poultry in forage grain.

The key trend in State regulation in developing grain market is clarification of one of the goals of public administration and regulation of grain market-eliminating potential shortage of forage grain (feed) in livestock production and poultry farming due to the sales of public stabilization grain resources to AP who are involved in livestock and poultry breeding in order to ensure the need for forage grain, as well as their crediting for the implementation of this goal [9].

The need for government regulation of the domestic meat market by regulation of forage grain market was frequently mentioned by Kazakhstan experts. In particular, poultry meat market needs an effective system of State protection from imports and support, especially in terms of price dumping and significant pressure from service providers and forage grain.

Level of poultry population in the country strongly depends on gross grain yield and prices for forage grain, so State regulation of feed grain market as a priority condition will have positive effect on production of poultry meat in private farms. This, in turn, can have a positive effect on restraining of prices for meat and meat products. Now Kazakhstan is facing significant level of import dependence on processed products-sausages, about 40%, canned meat and meat-cereal-52% [10].

Assessing the situation on the world market, according to the data of International Food Policy Research Institute it should be noted that the dynamics of world grain prices is determined by the largest world exporters and importers: Canada, Australia, Argentina, ECT China, India, Pakistan, Japan, increase in world prices

for wheat mainly occurs due to a dynamically developing countries of South-East Asia, which do not have sufficient land resources to meet the growing demand of the world market resources.

One of the main factors influencing on the wheat price is natural-climatic conditions. For example, as a result of drought in the United States, which provides world grain volumes, substantial loss of grain about 30% is expected, which is able to affect half of the world grain export grain and the reduction of wheat will affect the entire global market, affecting even consumers of Egypt and China.

In 2012 world grain trade has reduced by 9 million tons in comparison with 2011, consumption to 37 mln. tons, final transitional stocks to 36 mln. tons.

Current decline in gross grain harvest in the United States, in Europe, Russia, Ukraine and Kazakhstan have increased the growth of prices on the world market, compared with the same prices of the previous year, on wheat 340 USD /t versus 300 USD/ t.

World prices for grain (wheat, corn, soybeans, rice, barley, sorghum, canola) in 2012 reached a record. World grain prices index calculated by experts has exceeded 310%, that is higher than the index of the same date of 2011 to 17%.

Average export prices for grain on the world market compared with same prices of the previous year are as follows: wheat $340/t versus $300/t.

In order to protect domestic market from the effects of rising prices for food products, many countries are taking measures that could lead to even greater worsening of situation, which imply restrictions on exports or establish control over the price level, or approved both measures at the same time.

Such measures can only temporarily alleviate the situation, but in the long term will lead to a narrowing of the markets and their destabilization.

Estimate of the ratio of prices showed that price for wheat in the domestic market is 70% of the world price. In terms of grain production, taking into account the export potential of AIC of Kazakhstan, it should be noted that the problem of transportation, standardization and certification, define a clear sale frames in Kazakhstan and neighboring regions, making its implementation on the world market impossible.

Grain yield in 2011 reached 16.9 c/ha, gross yield-27 million tons. In 2011 Kazakhstan exported more than 40% of produced grain, due to which the country entered top 10 major grain exporters in the world.

In terms of export relations Kazakhstan faces instability of the world market. For example, grain exports vary from 2.0 to 6.5 mln. tons.

The basis of grain export is wheat, the share of which is 90%. Wheat is exported to all CIS countries and is over 48% of total sales. However, supplies of grain to the markets of the countries-participants of Customs Union are reducing and they have greatly decreased in recent decades.

For comparison, the structure of grain crops in Russia is more diverse and wheat is only 60.3%, but in Kazakhstan, the share of wheat is 85.8%, grain fodder-12.7%. However, taking into account that the structure of grain production and most natural drought cycles in our countries are practically the same, it becomes a problem to expand wheat trade with Russia. Moreover in Kazakhstan sown areas have decreased to 7%. Also in 2012 due to the drought the average grain yield declined almost 2 times.

In terms of high competition of grain market development (Russia and Ukraine), characterized by high export potential of wheat, Kazakhstan needs to develop export of grain to foreign countries, which has the tendency to increase [8].

Kazakhstan possesses competitive advantages: vast areas of land, diverse natural-climatic zones and agri landscapes from north to south and from west to east. The main problems of agricultural sector of economy are as follows: technological lagging behind; chronic disparity of prices for agricultural products and production means; under developed social infrastructure of villages.

However, according to international research centers, in short term, namely grain sector will be one of the main areas of economy and transition to innovative development.

In 2013 to solve the problems of increasing crop production, the area of wheat will decrease to 329 thous. hectares, corn areas will increase to 5 thous. hectares, other grain crops-to 22 thous.hectares, it is planned to increase the area of oilseeds and forage crops to 124 thous. hectares.

Funding is also a very important matter: “Kaz Agro” allocated a budget loan 60 billion tenge to agricultural producers for spring sowing and harvesting operations and procurement of agricultural products for the provision of socio-entrepreneurial corporations (SEC) at 3% of annual interest rate. The forward purchase of wheat and barley from producers will be done on spring-summer

funding at guarantees of AP, in the rate of 6 thous. tenge per hectare of sown area.

21.2 billion of loans have been prolonged for agricultural producers of Aktobe, Almaty, Kostanai, West Kazakhstan and Karaganda regions. Subsidies for crop production have been foreseen in amount of 31.4 billion Tenge. Prices of fuel and lubricants for spring field works are lower to 10-12% than on market.

The price for one ton of elite seeds has reached 70 thous. Tenge per ton, so the subsidy rate will increase from 19.5 to 25 thous. tenge

Implemented budget "Program on development of agri-industrial complex in the Republic of Kazakhstan for 2013-2020" (Agribusiness-2020): The rate on leasing of agricultural machinery will be 45% per annum. Subsidizing of interest rate on leasing will amount 212 billion Tenge up to 2020.

For the first time subsidies are allocated for herbicides produced by foreign companies.

It is envisaged to make the annual volume of subsidies for mineral fertilizers up to 23 billion Tenge in 2013-2020, purchased fertilizers and herbicides will be subsidized differently: domestic-50% and foreign-30% of their value. For the renewal of the new agricultural machinery enabling the introduction of innovative technologies, it is necessary to have additional funds about 106-110 billion Tenge.

An important area of State regulation of grain markets is subsidizing of production. However, in Kazakhstan market these factors have little effect on the efficiency of grain market: disparity of prices is observed, so there is a need for public support.

Using world experience, it is necessary to use system of prices, especially target prices (control, oriented, basic, normal).

Target prices play the role of regulatory indicators of price parity ratio for industrial and agricultural products, covering costs of taxation and other expenses, payment of interest on loans, gaining income by grain sector workers at the level of average income of workers of other sectors of economy and getting income, which is sufficient for expanded reproduction.

Purchase prices are generally guaranteed by the State and are set by authorities and they must be equal or maximally close to the level of target price.

Intervention prices are mainly used by the State in the form of collateral prices in collateral operations. In case of the excessive decline in market prices for grain, the State buys grain on market (purchasing interventions) by minimally guaranteed prices or issues a loan on grain collateral. Grain purchased by the State on collateral, is used to replenish national and local funds and for State commodity interventions. In case of shortage of grain on market, leading to excessive increase of prices, the government sells grain from public reserves on intervention prices.

The threshold prices in the system of State regulated prices are intended to protect the interests of domestic producers of grain on own market from external competitors with their dumping products. They provide the country's food security, preserve the level of grain prices and stimulate exports in terms of maintaining stability of domestic market.

Loss of grain production, resulting from the breach of price balance and inflation, should be compensated by corresponding increase of guaranteed prices, or other forms, providing compensation of increased cost of means, production of industrial origin. It is better to determine the value of emerging imbalances at least once in a quarter with the help of price indexation, using statistical methods. The Ministry of Agriculture takes decisions on providing regulatory impact on market prices through the "Food Corporation".

International experts highly appreciate Kazakhstan's grain market (Customs Union), which remains one of the world's competitive commodity markets. Grain receipts are now being introduced in Russia.

However, the main problems of grain industry in Kazakhstan are related to the dependence on weather conditions and low yields.

Consequently, Kazakhstan grain market requires improvement of methods and forms of government regulation, aimed to address the issues of technological modernization, improving yield capacity, consideration of all processes-from grain harvest to final sale on domestic and foreign markets and processing.

Taking into account natural-climatic conditions, for the development of grain production it is necessary to introduce technological crop rotation in growing grain crops that incorporates the use of 3 technologies (soil protection, zero, minimal till) has a 10-year cycle and each type can be applied only a limited period of time.

The use of technological crop rotation protects the soil from wind erosion, moisture is better collected and stored in the soil, ecology improves, grain yield increases 3-5 times, quality of grain-to 20-30%, number of used machinery and tractors is reduced 1.5-2 times, cost of fuel and lubricants decreases to 25-30%.

CONCLUSION

The introduction of intensive technologies, increase of government financial support through subsidizing preferential loans, preferential taxation, insurance, pricing and addressing other problems will ensure food security, export of grain and solution of the specific problem of food security at global level.

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