Current Trends and Outlooks of the Development of the Kazakhstan Grain Market

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Abstract: The trends and problems of the development of the Kazakhstan grain sector are studied in this paper. Special emphasis is placed on the effect of the external factors on the development of the grain market and export potential of the country. The results of the study demonstrate that despite the state support measures that are being undertaken, the sector still faces a number of crucial problems, such as low crop capacity of grains and its strong dependence on climatic conditions; poor logistic infrastructure of grain storage, processing, transportation and export; low efficiency of the financing and insurance policies of grain manufacturers. The current situation in the Kazakhstan grain complex requires the implementation of a clear and well-considered strategy for increasing the productivity and the export potential of the sector. The main trends of further development of the Kazakhstan grain industry should include such measures as improving the legislative control of the terms for access to financing and subsidization of grain manufacturers, diversification of production, export stimulation and entry to new product markets, development of the infrastructure for grain production and export, modernization of the transfer system and commercialization of innovative agricultural technologies.

Key words: Kazakhstan • Grain industry • Innovative agricultural technologies

INTRODUCTION

Food supply security of the country is the key trend in the national policy of the Republic of Kazakhstan. It is a powerful geopolitical factor and the main tool for ensuring stability of the social and economic processes in the country. Carryover grain stock and grain production per person are the main criteria of food supply security of the country. Efficient formation and functioning of the grain market and competitiveness of agricultural enterprises in the foreign market is possible only if the self-regulation of the market is complementary to the state measures for supporting grain manufacturers [1].

The grain market of the Republic of Kazakhstan (the country with transitional economy, which has emerged after the collapse of the USSR) is extremely vulnerable due to its geographical location (58% of its area is occupied by temperate deserts and semi-deserts), the relative backwardness as a result of orientation of the economy towards monocropping in export of agriculture products until 1991 and the effect of social, economic and institutional transformations after the country has become independent [2].

Furthermore, the threat of alteration of climatic conditions is a serious challenge for the development of the Kazakhstan grain market: the international experts predict that water resources in Kazakhstan will have been reduced by 2050 due to melting of glacial ice and air temperature (in particular, during the summer period) will increase [3].

This may reduce grain crops by over 25%, reduce the area of natural forage lands by 30–90% and increase the frequency of droughts, hot winds, as well as the first autumn and late spring frosts. In addition, the probable abrupt reduction of atmospheric precipitation may cause crop losses as significant as 50–70% in the non-irrigated farmlands. Taking into account its location in the zone that is extremely susceptible to climate changes and the global natural processes, innovative technologies should be used in the Kazakhstan agricultural sector.
Furthermore, active support should be given by the state to those agricultural manufacturers who will use modern water-saving technologies [4].

The urgency of studies devoted to the trends and outlooks of the development of the Kazakhstan grain market increases due to the demand for elaboration and implementation of the strategy stimulating the use of new technologies and expansion of crop areas, which can reduce the risk of crop shortages and adapt the agricultural manufacturers to the environmental changes.

**Main Body:** The agricultural potential of Kazakhstan is of global importance. The experts believe that Kazakhstan together with the three largest CIS countries – Russia, Ukraine and the Republic of Belarus – is capable of supplying the global market with food products at amount that would be enough to maintain 500 millions of people. Of course, grain ranks first in this list of food products [7]. The grain industry is the key branch of the Kazakhstan crop sector, which forms the food market, food supply and economic security of the country, as well as the labor and agricultural potential in rural areas of Kazakhstan.

Kazakhstan is currently among the leading grain producers (the country is in the top 10 list of the world grain manufacturers). The share of Kazakhstan in world production of grain during mast years is ~3.3% [5]. Kazakhstan ranks third among the CIS countries for grain production (with Russia and Ukraine being ahead) (Fig. 1).

The grain sector of Kazakhstan is characterized by a number of specific features. First of all, it is the structure of grain production, where spiked grains make up almost 96%. Wheat accounts for the predominant share in crop production (Fig. 2). Barley ranks a distant second.

Taking into account the fact that wheat accounted for 78.1% of the total crop production in 2003, while this share increased to 84.2% in 2012, one can draw a conclusion that wheat production is a major priority, to the prejudice of other grains, such as rice, buckwheat, etc. The current structure is dual by its nature: Kazakhstan should diversify the grain structure for the purposes of the livestock sector and for solving the problems of food supply security, on one hand. However, this monoculture together with barley is the most needed grain culture in world markets and is in compliance with the quality standards.

![Fig. 1: Total yield of the major agricultural crops in the CIS countries in 2012, million tons [8].](image)

![Fig. 2: Structure of grain production in Kazakhstan in 2012.](image)
The relatively low grain crop capacity (9–13 metric centners/ha) is another feature of the Kazakh agriculture. Kazakhstan ranks last among the CIS countries for the grain crop capacity per harvested area (Fig. 3).

The low crop capacity forces the country to use vast sown areas to plant grains, which makes up over ¾ of the total area under crops. The agency of Statistics of the Republic of Kazakhstan reports that the total area under grain crops (including legumes and rice) has increased by 17.2% (to 16,256.7 thousand ha) over the past decade, although their share in the total grain production structure decreased from 79.5 to 76.7%. Wheat monoculture has strengthened its positions in the grain production structure. In 2003, the share of wheat crops to the total grain production was 81.9%, while it increased to 82.8% in 2012 (Table 1).

Over the past decade, the grain sector of the Republic of Kazakhstan has been gradually recovering from the depression in the mid-1990s due to the objective reasons that had a negative effect on the crop sector of the country. During the period from 2000 to 2012, the average grain crop capacity increased by 30%. This was bolstered by solving the agrarian issue, the increased state support of the agricultural industrial complex and the acquired practical experience of people engaged in agriculture that had learnt how to work under new market conditions.

Complex climatic conditions are another significant feature of Kazakhstan grain production. The rural areas with annual precipitation less than 350 mm are conventionally regarded as arid and are classified as the zone of risky agriculture. Precipitation in the northern parts of Kazakhstan, where the major share of spiked grains is grown, is less than 350 mm; hence, the problems of moisture accumulation and saving of soil moisture are the most topical ones for this region.

The dynamics of grain production demonstrates that the amplitude of its fluctuations noticeably varies for different years (Fig. 4).

The instability of grain production in Kazakhstan indicates that the situation strongly depends on weather conditions, which is in good agreement with the data reporting good crops in 2007, 2009 and 2011 and low yield in 2008, 2010 and 2012. Thus, the grain production in Kazakhstan in 2011 was as high as 27 million tons due to favorable weather conditions, while the grain crops in 2010 and 2012 were 12.2 and 12.9 million tons, respectively, because of drought.

The volatility of grain production directly affects export volume and dynamics. Poor crops in 2008 and 2010 resulted in the reduction in export volume in 2009 and 2011 (Fig. 5).

In 2012, the grain export volume from Kazakhstan was increased 2.6-fold and reached 7.86 million tons. However, the export volume decreased rapidly during several last months of 2012 and the tendency toward further decrease is clear. In December, the export volume of wheat and flour was 269.8 and 112.4 thousand tons (the total export volume was 444.6 thousand tons in grain equivalent). These figures of export volume are the lowest ones that have been observed since September 2011 (when it was 400 thousand tons).
According to the data reported by the Committee of the Ministry of Finance of the Republic of Kazakhstan, Kazakhstan’s export of grain in 2012 was 7861.3 thousand tons (wheat and meslin (the mixture of wheat and rye) accounted for 7459.3 thousand tons, or 94.9%) [9]. The barley export volume was 337.4 thousand tons (or 4.3% of the total export volume). Oats, corn, rice, buckwheat, millet and other grain crops accounted for the remaining share.

These figures demonstrate that it is wheat, its mill product (flour) and barley that are the bulk export products, while the rest of grain crops are mostly planted for the needs of the domestic market. Hence, an increase in sown areas of these grain crops without the corresponding increase in the potential of the product markets is associated with certain risks.

Despite the reduction of grain production in 2012, Kazakhstan fully ensures the domestic consumption, remains a large world’s grain exporter, ranks first in the world for flour export and is among the top 10 grain exporters. Furthermore, it should be taken into account that the 2012/2013 season was started with high carryover grain stock (due to the good crops in 2011). In addition, the state has fine-tuned the mechanism of grain interventions since 2009 and purchased ~5 million tons of wheat in 2012. The Kazakhstan Agriculture Ministry estimates the export potential of the new 2012/2013 season as ~7 million tons [10].

Regardless of the fact that the grain reserves are lower as compared to 2011 (20.69 million tons as of January 1, 2012; 13.66 million tons as of January 1, 2013; 6.29 million tons as of June 1, 2013), the problem of efficient sale of grain products is as urgent as during the preceding year.

An analysis of the dynamics of grain prices in Kazakhstan demonstrates that they reduced during the period of 2008–2012. During 2011, the prices in the Kazakhstan’s domestic market decreased more than twofold for wheat and by ~27% for barley. The crop
failure in 2012 in the Kazakhstan market resulted in a steady rise of wheat prices until 2013, reaching 46–47 thousand tenge per ton [11]. However, since February 2013 the prices decreased, being affected by the reduction of the world prices and the reduced demand from the regular consumers (Central Asian countries) and the main importer of the current season (the Russian Federation). As of July 1, 2013, the prices were staunched at 33.25 million tenge per ton (under EXW terms). The dynamics of the weighted average price of wheat grade 3 at the ETS Commodity Exchange is displayed in Fig. 6.

The price transfer (i.e., the level of required market price support (MPS)) is the difference between the world price at the country border (the reference value) and the manufacturer’s price (at the border as well). Figure 7 shows the estimated MPS values made by the Organization for Economic Co-operation and Development (OECD) as the share of the manufacturer's gross product.

It is clear from the presented MPS values in Kazakhstan that it is only in 2009 that private farmers started to gain full income from the state of the market prices. Subsidization of the production process is the key trend in the control of the grain sector by the state. In addition to subsidization of wheat producers and export, several types of state interventions into the grain market are used in Kazakhstan:

- Purchase of grains for state reserves;
- Purchase of grains by the state corporation for commercial purposes;
- Prohibition of exportation.

Prohibition of exportation in 2007–2008 and the increased purchase of grains for commercial purposes by the Joint Stock Company NK Prodkorporatsiya in 2009 and 2011, which significantly contributed to the state of the market, had the most noticeable effect.
The resulting price disparity dictates the necessity of further participation of the state in order to maintain admissible proportions. It should be mentioned that the current pricing of grain products in Kazakhstan is being permanently developed, which considerably reduces the level of price transparency in the grain market in the region and the general efficiency of functioning of the grain sector. The main reason is that there is no grain stock exchange in Kazakhstan.

In general, despite the measures for state control of the grain market undertaken by the government, the sector is still facing a number of serious problems, including the following ones:

**Weak Logistic Infrastructure of Grain Storage, Processing, Transport and Export:** The problem associated with the lack of elevators is extremely urgent during the mast years (e.g., 2011). The problem of wear of the existing elevators remains rather topical. A considerable fraction of elevators, grain-collecting stations and warehouses selling grain products are characterized by a high percentage of wear of the fixed assets and equipment, while the technologies being employed do not ensure proper storage conditions. The cost of grain storage and processing at old-type elevators and their capital output ratio is 30–40% higher than that of modern elevators.

**Low Efficiency of the Financing and Insurance Policies for Grain Manufacturers:** About 30% of small and medium entities of the agro-industrial sector have no access to financing because of the lack of proper marketable mortgage security and unreliable financial state. There currently are some favorable products of bank loans for subsidiary units of the National Management Holding KazAgro, JSC and the reimbursement of credit interest rate for the replenishment of fixed and circulating assets in the framework of state support programs. However, these measures are insufficient for active stimulation of agricultural entities to implementing the investment projects in top-priority spheres of the agro-industrial complex. Furthermore, despite the regulatory framework for obligatory insurance in Kazakhstan crop production, the effect of this institution is insufficient. The insurance premium do not cover the actual losses and expenditures for management, despite the fact that the state participates in these payments. Meanwhile, the demand for the development and steady functioning of the insurance system in this sector is rather topical, which will require further research on whether it needs to be improved.

**The further strategy of the development of the Kazakhstan grain sector should take into account the already existing key trends in the environment:**

- Limited capacity for extensive development;
- The demand for increasing the crop yield and labor capacity in the grain sector;
- Tightening of requirements to the competitiveness and cost efficiency of grain production.

In order to eliminate the systemic problems in the sector and develop the export potential of the Kazakhstan grain sector, one should focus on the following measures:

**Improvement of the Legislative Control of the Terms for Access to Financing and Subsidization of Grain Manufacturers:** The possibility of investment subsidization, the possibility of subsidizing the expenditures associated with the purchase of agricultural products by the grain-processing enterprises at the guaranteed price and the implementation of schemes for guaranteeing and insuring loans taken by agricultural producers from the financial institutions need to be regulated.

**Diversification of Production:** Reducing of the areas under wheat and increasing those under other crops;

**Export Stimulation and Entry to New Product Markets:** In particular, China and Southeast Asian countries are currently one of the priority importers of Kazakhstan grain. Their markets will rapidly grow in accordance to population upsurge.

**Development of the Infrastructure for Grain Production and Export:** New elevators need to be built and the facilities of the existing ones needs to be expanded in the main grain-producing areas of Northern Kazakhstan in order to develop the infrastructure of the grain sector. New grain transfer facilities should be built in order to ensure the development of the western and southern grain export lines.

**Modernization of the Transfer System and Commercialization of Innovative Agricultural Technologies:** Budgetary financing of the agrarian sciences should be increased (with their share in GDP increased to the average level of the industrialized countries) in order to establish a new innovative system for generation and dissemination of advanced knowledge in the grain sector. There should be
established conditions for recruiting private investments in the Kazakhstan grain sector and development of private-state partnership in the sphere of implementing information technologies.

CONCLUSIONS

The study allows one to draw a conclusion that the state is currently offering various types of support to grain manufacturers in Kazakhstan. First, an appreciably fair market price for the manufacturers has been maintained. Second, the conditions that have been established allow one to export a sufficiently large volume of grain. Third, all the available infrastructure is employed to the maximum extent.

However, despite the state support measures undertaken, there still is a number of key problems in the sector, which have a negative effect on the export potential of the grain market of Kazakhstan. The existing problems can be overcome only provided that a set of measures are implemented for the development of the competitive grain sector that would ensure production safety and increase grain export to foreign markets.

REFERENCES


