Progress of grain production development in Kazakhstan and Mongolia

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Abstract. The grain market is a core of the agricultural sector in many countries. The market performance is an important indicator of the quality of economic reforms put in place in the country as well as the implementation of agri-food policy. Improving the economic efficiency of the grain sector of the agri-food industry remains a major challenge, the solution of which is attributable to the presence of state support, enhanced international cooperation, the study and application of modern new technologies and advanced experience of leading countries. Modernization of the grain market infrastructure requires significant financial resources, which can be mobilized with an integrated approach to this issue.

1. Introduction
The purpose of this article is to show and analyze the degree of grain production development using wheat as an example, and also to indentify the main measures aimed at improving the finance and credit support for the grain market development in Kazakhstan and Mongolia [1].

Grain production is one of the strategic sectors of the Republic of Kazakhstan, on which the country’s food security, income and employment of the population, the development of related industries depend. The production and sale of wheat is traditionally the main direction of the grain industry of Kazakhstan, the source of capacity building and realizing the export potential of the agricultural sector [2].

Mongolia’s economy is traditionally more focused on cattle breeding, so the specific nature of the Mongolian economy is still nomadic (distant-pasture) stockbreeding, which accounts for more than 80% of the total agricultural output, and the remaining 20% is agricultural production [3].

To increase the production of grain crops (wheat in particular) and the development of markets for these products, it is necessary to intensify international cooperation, develop and improve grain cultivation and storage systems, increase the competitiveness of the leading grain market enterprises and enhance public-private partnership [4,5].

2. Materials and methods
The theory and methodology of this thesis are based on the problems of strategic management development of the agricultural sector, the agri-food market in general and the grain market in particular.

The information base for research includes the statistics of the Republic of Kazakhstan and Mongolia, immediate information from the Ministry of agriculture, scientific publications on the studied issue and other sources.

The following methods have been used for conducting this research: abstract-logical, statistical-economic and balancing.
3. Research on the development of grain production (wheat)

Grain-product sub-complex of agribusiness, being the largest sector of regional agroindustry, traditionally served as a basis for establishing the most important proportions of socio-economic development of the region. However, for a long time the grain industry has been characterized by low rates of structural and technological modernization and renewal of fixed assets, especially in the field of grain storage and processing [6].

There has been a recent interest in grain cultivation, the pasture lands are being developed for cultivating crop production. The information on the acreage of Mongolia corroborates this (see table 1).

| Table 1. Size of acreage, thousand hectares |
|--------------------------------------------|
| Periods | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Grain crops, including: | | | | | | | |
| Kazakhstan | | | | | | | |
| Wheat | 13848.0 | 13464.0 | 13088.7 | 12387.6 | 11771.1 | 12437.0 | 11976.6 |
| Mongolia | | | | | | | |
| Grain crops, including: | | | | | | | |
| Wheat | 291.35 | 297.31 | 275.55 | 291.24 | 361.21 | 355.07 | 365.65 |

Land desertification is a serious problem in Mongolia. To strengthen the agricultural sector development, over the last years the government of Mongolia has developed and implemented state programs "Revival of agricultural production" [7].

The measures were taken to intensify the development of agriculture, particularly, the introduction of soil protection technology, including wind erosion. We drew special attention to the experience of Canada and Kazakhstan and supplied the equipment of Canadian modernization since the mid-70's from Kazakhstan. At the same time, 350.0 hectares of land were used or 40% of the total cultivated lands were covered. Along with this, 50 repair and service departments with a repair capacity of 100-400 trucks, 26 grain- cleaning power-driven elevators with a capacity of 20-40 tons of grain per hour have been put into place and into operation of granaries with 100.0 tons.

In Mongolia, in recent years, the development and introduction of new technologies for grain cultivation has helped to achieve as high crop yields as in Kazakhstan (Figure 1).

| Figure 1. Average grain yield in the Republic of Kazakhstan and the Republic of Mongolia for 2011-2017, c/ha. |
|----------------------------------------------------------|
| Republic of Mongolia | Republic of Kazakhstan |
| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| 15.0 | 15.6 | 16.8 | 13.2 | 16.9 | 8.6 | 11.6 | 11.7 | 12.7 | 13.5 | 13.4 |

In 2016, due to weather conditions (drought) in Mongolia, the grain yield was only 5.6 c/ha, in Kazakhstan this figure reached 13.5 c/ha. However, the wheat yield in Mongolia reached 13.2 c/ha by 2017, the same indicator as Kazakhstan- 13.4 c/ha, respectively (see table 2).
Table 2. Whole grain yield for 2011-2017, thousand tons

| period  | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
|---------|---------|---------|---------|---------|---------|---------|---------|
| Kazakhstan |        |         |         |         |         |         |         |
| Grain crops, thousand tons | 26960.5 | 12864.8 | 18231.1 | 17162.2 | 18672.8 | 20634.4 | 20585.1 |
| of which: wheat | 22732.1 | 9841.1  | 13940.8 | 12996.9 | 13747.0 | 14985.4 | 14802.9 |
| the proportion of wheat in grain crops, % | 84.32  | 76.50  | 76.47  | 75.73  | 73.62  | 72.62  | 71.91  |
| Mongolia |        |         |         |         |         |         |         |
| Grain crops, thousand tons | 4498.9 | 4807.9  | 3929.7  | 5292.5  | 2187.9  | 4987.0  | 2462.4  |
| of which: wheat | 4341.1 | 4638.2  | 3637.3  | 4805.6  | 1986.7  | 4544.9  | 2303.6  |
| the proportion of wheat in grain crops, % | 96.49  | 96.47  | 92.56  | 90.80  | 90.81  | 91.14  | 93.55  |

*Source: according to data from Statistics Committee of Kazakhstan and Mongolia [8,9]

As can be seen from the table, in the Republic of Kazakhstan, the percentage of gross wheat yield in grain was 84.6 % in 2011, and by 2017 it amounted to 71.9 %, that is, the proportion has been decreasing every year, due to the preference of wheat to oilseeds (lentils are especially popular). In Mongolia, the proportion of gross wheat yield in 2011-2017 are over 90%. Thus, in 2016 Mongolia has fully met its domestic food needs.

The dynamics of price changes per 1 tonne of wheat can be seen in figure 2.

As can be seen from the figure, the growth of wheat stocks in Kazakhstan and Mongolia has led to an overall decline in its price. The same trend can be observed worldwide.

Every year, there is an increasing interest in the need for agricultural development, which employs more than 30 % of population of Mongolia.

As one of the key indicators of both countries over the last two years, GDP quantitatively expresses the growth of the economy (Table 3).
Thus, the agriculture of Mongolia until 2012 on average contributed about 11.3 % of the country's GDP, and in Kazakhstan only about 7.7 %. The share of agriculture in GDP in 2017 in Mongolia amounted to 10.3 %, and in the Republic of Kazakhstan only 7.6 % and it tends to decrease.

Despite the growth of actual agricultural output in both Mongolia and Kazakhstan, the decline in the share of agriculture in recent years is associated with an increase in total GDP, including a significant increase in industrial sectors.

Thanks to the potential of Kazakhstan, the relatively low share of agriculture in GDP still allows to fully ensure the stability of the domestic food market, its secure saturation with basic food and access to foreign markets with environmentally friendly products.

The country has created a steady basis for providing the population with agricultural products and achieving food security in the country, but still unresolved are the problems of diversification and innovation and technological development of Kazakhstan's agro-industry, which require the development of an adequate investment policy and the implementation of highly efficient and competitive investment projects.

The establishment of investment funds with participation of quasi-state companies and foreign investors. JSC "National Management Holding "KazAgro" (JSC "NMH "KazAgro"), being a leading development institution in the domestic agricultural sector, plays a crucial role in solving these issues (figure 3).

It will reduce fixed and operating costs per production unit and at the same time increase productivity, thereby increasing overall profitability.

In crop production, the main areas of state financial support are per-hectare subsidies for priority crops, as well as the cost of mineral fertilizers, herbicides, biological products, seeds and costs.

Increasing the availability of funding for agribusiness entities will be achieved by increasing the amount of funding, as well as the redistribution of subsidies from less to more effective subsidies to attract investment. In addition, the loan policy of JSC "NMH "KazAgro" will be reviewed.

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**Table 3. GDP indicators at current prices in the Republic of Kazakhstan and the Republic of Mongolia for 2012-2017**

| Period | Kazakhstan | Mongolia |
|--------|------------|----------|
|        | GDP at current prices | GDP at current prices, agriculture | GDP at current prices | GDP at current prices, agriculture |
|        | mln tenge | USD | mln tenge | USD | mln tugrik | USD | mln tugrik | USD |
| 2012   | 31015186.6 | 208002.1 | 2393619.0 | 16052.7 | 16688419.0 | 12292.8 | 1878786.0 | 1383.9 |
| 2013   | 35999025.1 | 236633.3 | 2949485.0 | 19387.9 | 19174242.0 | 12567.3 | 2572044.0 | 1685.8 |
| 2014   | 39675832.9 | 221417.7 | 3143678.1 | 17543.8 | 22227054.0 | 12224.2 | 2965360.5 | 1630.9 |
| 2015   | 40884133.6 | 184387.0 | 3307009.6 | 14943.6 | 23150385.0 | 11747.5 | 3091999.0 | 1569.0 |
| 2016   | 46971150.0 | 137278.3 | 3684393.2 | 10761.8 | 23942866.0 | 11147.9 | 2798772.0 | 1303.1 |
| 2017   | 53101281.8 | 162887.4 | 4070916.8 | 12676.5 | 27895524.0 | 11429.6 | 2885999.0 | 1182.5 |

* Source: according to data from Statistics Committee of RK and Mongolia
In the future, the subsidy system will undergo the following fundamental changes: 1) reducing product-specific subsidies from 2019 in crop production; 2) phased introduction of an automated system considering all applications for subsidies, monitoring and consolidation of data on recipients. Instead of product-specific subsidies, the share of subsidies will be expanded to reduce the interest rate on loans and leasing, as well as reimbursement of some of the costs incurred by agro-industry entity while implementing the investment project. Rates of remuneration will be subsidized on loans for purchasing fixed assets, working capital financing, including credit/leasing of new farming and manufacturing equipment. Subsidies will be provided until the end of the loan duration. Interest rate subsidies on loan and finance lease agreements will also be continued [10].

To improve the efficiency and availability of services provided by the subsidiaries of JSC National holding "KazAgro", the project of digitalization "E-Kazagro" will be developed, that involves the automation of application process by subsidiaries of JSC National holding "KazAgro" from agribusiness entities for credit and leasing online, automation services for obtaining guarantees for loans and for purchasing agricultural products. The implementation of "E-Kazagro" project allows to ensure transparency of receiving and processing applications, to reduce the time of receiving services by connecting to the systems of state bodies, to improve the quality of services provided by subsidiaries of JSC National holding "KazAgro", to reduce the cost of agribusiness entities for submitting an application, to increase funding and provide services electronically on a “one-stop-shop service” basis. The internal business processes of JSC National holding "KazAgro" and its subsidiaries will be digitalized, measures will be taken to improve corporate governance, which will optimize and improve the efficiency of activities throughout the group of the holding companies.

To support agricultural producers, JSC National holding "KazAgro" plans to introduce a model based on the successful foreign experience of credit cooperation institutions by improving legislation aimed at addressing the limiting factors, including the possibility of credit societies consolidation by establishing the Central Association (possibly in the form of a second-tier bank). The proposed model will allow:
- to involve the funds of the participants into the economic turnover of regions and thus provide the institutions of credit cooperation with their own sources of funding;
- to expand access for those groups and segments of population that do not receive sufficient financial services today;
- to strengthen the financial stability of loan society system as one of the instruments of state policy in the field of agriculture.

It is also necessary to intensify the exchange of experience between experts and heads of agricultural organizations of the region, as well as with colleagues from other regions of the country and the CIS. Various platforms (exhibitions, scientific conferences and seminars, "field days", competitions of different levels) should be used for this purpose. It is necessary to develop incentive programs on modernization of production, updating agricultural machinery fleet and technological advancement providing the minimum cost loads for agricultural organizations.
4. Conclusion

To solve the problems of agriculture in Mongolia, it would be interesting to have the following areas of generally positive experience of Kazakhstan in institutional support of agriculture through the functioning of the National holding "KazAgro":

- despite the crisis in the world, the investment potential of the Holding does not decrease, but tends to increase, which will have a positive impact on the finance and investment support of the agricultural sector and will allow in such conditions to increase the promising groundwork for the future;
- creating the state Institute of development as a Holding will allow to expand a set of tools and the directions of financial and investment resources in the sphere of the country's agro-industry;
- the holding institutional support for the agricultural sector will increase the level of officials responsibility through the mechanism of corporate governance, as well as ensure transparency and efficiency of the use of limited budgetary finance and investment resources allocated to support agricultural producers.

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