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Current Situation, Problems and Suggestions for Agriculture in Kyrgyzstan

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The Importance of Agriculture

Kyrgyzstan is a small country in Central Asia, and agriculture plays a significant role in its economy. The agricultural sector focuses particularly on livestock and grain production. It employs approximately 30% of the population. Livestock farming is concentrated on sheep, goat, and cattle breeding. The country is also a major center for Angora goat breeding. Among grains, wheat, barley, rye, millet, and maize are the most prominent. Fruit and vegetable cultivation also takes place, but production is smaller than that of livestock and grain production. The agricultural sector has played and continues to play a crucial role in the economic and social development of countries. Agriculture is one of the cornerstones of Kyrgyzstan's economy. This is due to the country's vast fertile lands and favorable climatic conditions. Furthermore, the agricultural sector constitutes 15% of the country's economy.

Land Resources

Kyrgyzstan has a land area of 19.995 hectares. 65% of this area is covered by mountains. Kyrgyzstan has a total land area of 19.180 hectares. However, only 10.541,1 hectares of this land is used for agricultural purposes. The rest is unsuitable for agriculture. In the country, crop production is carried out on 12% of the arable land, while the rest consists of pastures and highlands.

Agricultural Production

Agricultural production in Kyrgyzstan is divided into two main categories: crop production and livestock farming. Crop production and livestock production each account for approximately 50% of the country's agricultural value, making them roughly equal.

Plant production

Plant and animal foods are the primary sources of sustenance for living beings. Among these, plants are the most fundamental food source for all living things. According to the latest data from

Kyrgyzstan, a total of 4,835.2 thousand tons of plant production was carried out on an area of 1,283.6 thousand hectares.

Greenhouse Cultivation

According to the latest data from Kyrgyzstan, there are 2.451 greenhouse businesses on a total area of 175 hectares. The most suitable regions for greenhouse cultivation in Kyrgyzstan are Jalal-Abad (Bazar-Korgon district) and Osh (Aravan district). However, technological advancements in greenhouse cultivation are not yet present in these regions, and greenhouse farmers generally produce without heating. In the Chuy region, there are 205 greenhouse farmers in a total area of 45 hectares. 80-85% of these greenhouses are small family businesses (greenhouses are 2-3 decares in size). Tomatoes, cucumbers, and strawberries are the most commonly produced crops in the greenhouses. The greenhouses are generally individual or block-type greenhouses with a height of 4 meters [1].

Problems and Suggestions in Plant Production

When the statistical data is examined, it is seen that with the decrease in grain production areas throughout the country, a significant amount of grain and grain products have been imported into the country. In addition, it has been determined that the yield per unit area in wheat production is low. The situation should be evaluated in a short time, and the development and use of high-yielding varieties should be encouraged.

Animal Production

Livestock farming is an economic activity based on natural resource management that determines the production and consumption habits of the Kyrgyz population, supports socio-economic development, and has a mitigating effect on domestic and international migration movements. In Kyrgyzstan, livestock farming constitutes the main source of income for rural families.

Animal Production Problems and Suggestions

Looking at Kyrgyzstan's livestock potential, it is noticeable that despite the increase in the number of livestock, the variety and quantity of animal products are limited. Furthermore, livestock farming is mostly carried out in small family businesses using traditional methods. In Kyrgyzstan, where livestock farming is widespread, it would be beneficial to encourage technological investments aimed at increasing the variety of animal products, in addition to modern enterprises, in terms of their contribution to the national economy. It is necessary to assess the current situation regarding livestock and animal products and to make future plans.

Fishing

Significant progress has been made in the fishing sector in Kyrgyzstan in recent years. Fishing activities are prohibited in Lake Soun-Köl and Lake Issyk-Kul. The important fishing reservoirs in the country are Toktogul, Kirovskoe, Orto-Tokoi and Bazar-Korgon reservoirs, where the main commercial fish species are Gokcha trout, Peled, Carp, Bream, Tench, Pike, Silver carp and Grass carp.

Agricultural Machinery

After Kyrgyzstan gained independence, the modernization of the agricultural sector progressed very slowly, and it has still not transitioned to intensive farming. The main reasons for this include the collapse of the Soviet Union, which left Kyrgyzstan facing significant shortages of fertilizers, agricultural machinery, and spare parts, as well as a lack of information and a resulting sudden decrease in agricultural income. Data shows that the use of machinery in agriculture is at a very low level.

Organic Farming

Kyrgyzstan has great potential in the field of organic farming. The low use of pesticides in agricultural production, the growth of wild forms of numerous plant species throughout the country, and the presence of natural forests greatly contribute to the development of organic farming. The Strategic Plan developed by the Kyrgyz Parliament in December 2018 states that the country should transition to 100% organic farming production by 2030. According to the latest data from the Ministry of Agriculture, there are more than 1,300 family farms in the country engaged in organic production on approximately 20,000 hectares. The biggest problems in organic product cultivation are product certification and marketing.

Cooperativism

Kyrgyzstan has legislation in the field of cooperativism that is in line with world standards. While there are more than 5000 cooperatives in different sectors throughout the country, approximately 600 cooperatives are registered in the agricultural sector. The biggest problem in the development of cooperativism in Kyrgyzstan is the low trust of farmers in the cooperative system and their lack of information. A Union of Cooperatives operating

in the agricultural sector in Kyrgyzstan has been established. More detailed information about this union can be accessed at <https://cooperativ.kg/o-soyuze/>.

Strengths of Republic of Kyrgyzstan Agriculture

- Agriculture being one of the top priority sectors
- Recent support and incentives provided to agriculture
- Potential for organic farming
- Climate diversity
- Rich flora (Biodiversity and Gene resources)
- Availability of state-owned agricultural lands available for lease
- Development process in smart farming, digital applications, and agricultural record systems
- Water availability
- Existence of a State Agricultural University
- Attractive country for foreign investors

Weaknesses of Republic of Kyrgyzstan Agriculture

- Lack of efficiency and quality in production
- Lack of qualified personnel and knowledge
- Inadequate processing of agricultural products
- Deficiencies in product planning and soil management
- Fragmentation of land and very low land area per farm
- Lack of agricultural inputs, tools and equipment, and problems with access to them
- Inadequate irrigation infrastructure
- Lack of rural development programs, lack of support for young people and women in rural areas
- Small family farms not benefiting sufficiently from agricultural support
- Insufficient agricultural data and statistics
- Insufficient level of controlled food storage and processing facilities
- Lack of standardization and branding of agricultural products
- Trust issues for investors

Suitable Areas for Investment and Trade in the Republic of Kyrgyzstan

- Food processing plants (Fruit drying, processed food, etc.)

- Agricultural production (modern greenhouses, etc.)
- Organic product cultivation projects
- Agricultural lands available for lease from the state
- Fruit production and export (Significant export potential to Europe and Russia)
- Production of pressurized irrigation systems
- Consulting and implementation for land consolidation projects
- Agricultural tools and equipment
- Production and processing of medicinal and aromatic plants (The flora is suitable for the production of numerous medicinal and aromatic plants)
- Fisheries and aquaculture investments
- Aquaculture investments in facilities to be privatized

Conclusion

Kyrgyzstan strives to increase productivity in agricultural production by using modern technologies. The state invests in the modernization of the agricultural sector and places particular emphasis on infrastructure investments, such as irrigation systems. Despite recent developments in Kyrgyzstan's agricultural sector, the country needs to work harder to increase productivity and improve its export capacity. Challenges in the agricultural sector include insufficient water resources (in fact, inefficient resource utilization, underdeveloped standardization and raw material processing), soil erosion, and inadequate farming methods. Kyrgyzstan has the potential to become a market for agricultural exports, particularly in livestock, grains, and fruits and vegetables.

In conclusion:

- Increasing food security: It is necessary to increase

agricultural productivity, reduce post-harvest losses, and improve food transportation systems.

- Promoting sustainable agriculture: It is necessary to promote organic and sustainable farming practices within the scope of food security and environmental sustainability.
- Improving rural livelihoods: Rural development should be encouraged, easy access to agricultural credit and support opportunities should be provided, and infrastructure in rural areas should be improved to ensure the sustainability of production for those living in rural areas.
- Strengthening agricultural research and development: It is necessary to strengthen agricultural research and development to increase agricultural productivity, produce new technologies in the sector, and increase and promote agricultural productivity.
- Development of the agricultural trade chain: To stimulate economic growth in the sector by creating added value in agricultural products, it is necessary to develop agricultural trade and other chains.

- Cooperation with member countries of the Organization of Turkic States: The establishment of the Organization provides a significant opportunity for the agricultural sector in member countries. Using these opportunities, it is necessary to review policies related to the agricultural sector and to jointly develop solutions to the sector's problems. In particular, joint efforts are needed in areas such as water resource management, preventing land fragmentation, reducing input costs, adopting innovative agricultural systems, encouraging young farmers, and increasing the added value of agricultural products.

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