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**THE IMPORTANCE OF MULTI-SEGMENT FARMING AND LAND
REFORM PROJECTS****Reimov Nietbay**

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Аннотация - В условиях Республики Каракалпакстан значимость многоотраслевых хозяйств высока. Приведены достижения хозяйства «Коныратбай-Мехри», которое начинало свою деятельность как многоотраслевое хозяйство в Каракалпакстане, и а так же в статье обсуждается необходимость разработки проектов землеустройства, подходящих для этих многоотраслевых хозяйств.

Abstract - In the conditions of the Republic of Karakalpakstan, the importance of multi-industry farms is high. The achievements of the Konyratbay-Mehri farm, which began its activity as a multi-industry farm in Karakalpakstan, are presented, and the article also discusses the need to develop land management projects suitable for these multi-industry farms.

Ключевые слова – Республика Ўзбекистан, Каракалпакстан, фермерная хозяйства, многоотраслевая, животноводства, земледелие, засоление, засуха, глобальная изменения климата, нехватки воды.

Key words - Republic of Uzbekistan, Karakalpakstan, farming, multi-industry, livestock, agriculture, salinization, drought, global climate change, water shortage.

Introduction

In recent years, great attention has been paid to the issue of proper organization and rapid development of farming in our country.

The organizational and legal framework of farms is strengthened by the Laws of the Republic of Uzbekistan "On Peasant Farms" dated April 30, 1998 and "On Farming" dated April 30, 1998.

In order to increase the efficiency of farming, special attention is paid to ensuring food security, supplying the population with high-quality ready-made food products, and developing entrepreneurship in remote rural areas, currently operating farms are being gradually transformed into diversified farms.

In our country, the Decree of the President of the Republic of Uzbekistan No. PF-4478 dated October 22, 2012 “On measures to further improve and develop the organization of farming activities in Uzbekistan” serves as a legal basis for the establishment of a large number of diversified farms.

In the development of diversified farms, it is possible to achieve even higher results in diversified farms by combining the livestock - farmer - grain and vegetable - oilseed - potato and fodder sectors in diversified farms, planning the planting of crops that require little water and yield high yields, using drip and sprinkler irrigation, and using water multiple times based on Izrail technology, integrating crop fertilization and other agrotechnical work with the use of modern geoinformation technologies. Also, in order to increase the efficiency of diversified farms, the Decree of the President of the Republic of Uzbekistan “On measures to protect the rights and legitimate interests of farmers, peasant farms and homestead landowners, and to radically improve the system of effective use of agricultural arable land” approved on October 9, 2017, stipulates the termination of land lease agreements with farms that have not established diversified farming activities from January 1, 2022.

Currently, the issue of effective land use is an urgent issue worldwide. Farms, agroclusters and other land users are grouped into cotton, grain, livestock, horticulture, vegetable and melon farms or other types of landowners. The issue of integrating these farms or landowners into a diversified farm in order to obtain crops, maintain soil fertility, and achieve high economic efficiency is one of the urgent problems of the present time. The reason is that diversified farms produce the necessary raw materials on their own, and they are cheap or free for the farm and are of high quality. For example, in diversified livestock farms, it is necessary to combine livestock farming with agriculture in order to produce the necessary forage and feed products for livestock on the farm itself. In turn, meat, milk, eggs, leather, wool and other products produced from livestock are sold in markets, bringing income to the farm, and manure is returned to the soil, enriching it with nutrients. That is, a diversified farm brings in income from many sources compared to a single-farm farm in one direction.

The Decree of the President of the Republic of Uzbekistan No. PF-5199 dated October 9, 2017 “On radical improvement of the system of protection of the rights and legitimate interests of farmers, peasant farms and owners of household lands, measures for the effective use of agricultural land” speaks about the effective use of land, making full use of existing opportunities [1].

The Decree of the President of the Republic of Uzbekistan No. PF-4478 dated October 22, 2012 “On measures for further improvement of the organization of farming activities in Uzbekistan and its development” [4] serves as the legal basis for the establishment of diversified farming activities in our country.

This decree provides for the development of diversified farms, the introduction of effective water-saving technologies, primarily drip irrigation, and modern information and communication technologies into their activities. Also, in order to increase the efficiency of diversified farms, the Decree of the President of the Republic of Uzbekistan dated October 9, 2017 “On measures to protect the rights and legitimate interests of farmers, peasant farms and homestead landowners, and to radically improve the system of effective use of agricultural

arable land” [3] was approved. This decree provides for the termination of land lease agreements with farms that have not established diversified farming activities from January 1, 2022. These decrees and resolutions create the basis for the future establishment of diversified farms in the republic, increasing labor productivity and organizing production in them, and for all farms to operate at full capacity under the name of diversified farms from 2022.

Currently, as a result of insufficiently effective land use, the economic efficiency of land use by farms and other land users is decreasing. This, in turn, leads to a decrease in soil fertility, a decrease in crop yields, the withdrawal of lands from active use, and the loss of land resource efficiency. The establishment of diversified farms is a key factor in ensuring a stable social, economic and political situation in society, including in rural areas, enriching the republic's markets with necessary consumer goods and services, and increasing population employment. It is advisable to always remember that the large-scale development of diversified farms is one of the main reasons for the implementation of the State Food Program of our national economy, and it is possible to partially solve the acute social problem - the issue of ensuring permanent employment of the population.

The activities of diversified farms include not only the cultivation of agricultural products, but also their processing, preparation, storage, sale, and provision of various services. The successful development of diversified farms allows for increasing their financial well-being and rational use of resources, in particular land [2].

On October 9, 2017, the Decree of the President of the Republic of Uzbekistan No. PF-5199 “On radical improvement of the system of protection of the rights and legitimate interests of farmers, peasant farms and owners of household plots, measures for the effective use of agricultural land” was adopted, and in addition, the issue of “On the program for the gradual transformation of farms into diversified farms for 2018” was considered at the thirteenth plenary session of the Senate of the Oliy Majlis of the Republic of Uzbekistan [3].

Further support for agricultural producers, ensuring the effective use of arable land by farmers, peasant farms and homesteads, and ultimately a fundamental change in the attitude of homestead landowners to increasing their incomes. At the current stage, it is necessary to protect the rights and legitimate interests of farmers, peasant farms and homestead landowners, as well as to identify priority areas for increasing the efficiency of the use of agricultural arable land. Strict liability measures, up to and including termination of their rights to land plots, will be applied to farmers, peasant farms and homestead owners who use land inefficiently, do not fully sow crops, or do not carry out agrotechnical measures in a timely manner [4].

The purpose of our research is to study and work with the activities of diversified farms currently developing and effectively operating in Karakalpakstan, to further develop diversified farms based on the activities of diversified farmers in livestock, agriculture and other areas actively operating in the Republic of Karakalpakstan, and the opinions of the heads of these diversified farms, to develop a land management project for diversified farms based on controlling the effective use of land resources, and to increase the economic and profitability of diversified farms [5].

The purpose and task of the study is to analyze the organizational work, types of activities, types of cultivated land, areas and efficiency of the farm carried out by model farms operating in Karakalpakstan;

- To study the type of activity in diversified farms, the types of crops cultivated, the efficiency of livestock farming;
- To study the type and mechanical composition of the soil in the lands of the diversified farms under study in order to correctly place crops according to soil types;
- To calculate the types, amounts and sources of costs required to establish a diversified farm;
- To determine and compare the economic efficiency of diversified farms, the cost of production and profitability;
- To develop a land development project based on the results of diversified farms, soil types and mechanical compositions.

Research location, object, methodology and conditions

One of the research objects is the “Koniratbay Mekhri” farm in the Nukus district, one of the diversified farms in the Republic of Karakalpakstan;

During the research, comparative, monitoring, mathematical and statistical methods were used. The data obtained are being analyzed mathematically and statistically using the B.A. Dospekhov equation (1985) and Microsoft Excel program.

One of the research objects, the “Koniratbay Mekhri” farm in the Nukus district, has a total land area of 705.1 hectares, of which 504.4 hectares are pastures and fodder growing areas, 120.7 hectares are arable lands, 80 hectares are saline and unsuitable for cultivation lands, ditches. The farm is specialized in livestock and flower farming, and 74 people are permanently employed there. The average salary of workers is 2.0-2.5 million soms.

Analysis and research results

In the development of the livestock sector in our republic, the number of large black cattle was increased to 550 heads by 2022, the calf breeding plan was fulfilled by 100-120% in 2021-2023, 65.5 tons of meat and 1400.1 tons of dairy products were produced, fulfilling the plan by 120-130%. Also, despite the salinity of the environment, grain was sown on 117.3 hectares of land of the farm in the last three years, increasing the yield from 20 centners to 23 centners, and 168.6 tons of grain were transferred to the state, fulfilling the plan by 150-170%. In 2017, a mini-workshop imported from Italy was launched at the “Koniratbay Mehri” farm to process 3 tons of dairy products per day and produce 8 types of products. In 2020-2022, this workshop processed and packaged 1,634.8 tons of dairy products, supplying them to preschool educational institutions and hospitals in Nukus city, Nukus and Kegeyli districts. In addition, it is planned to launch a mini-workshop manufactured in Japan (“IVENTA”) for processing and packaging milk and producing cream products. As a result of the proper organization of this farm, since its establishment, the farm has been paying taxes to the state on time and preparing

4,500-5,000 tons of fodder and feed reserves annually, creating a great foundation for the unharmed winter survival of livestock. The total net profit from livestock and agriculture over the past three years is 818 million soms. Using the income wisely, he purchased more than 10 units of necessary equipment for the farm [10,13, 15,16].

Today, more than 30 students of the head of the farm are working selflessly in the agricultural sector of the republic. The farm pays great attention to the patronage of the farm, and over the past three years, the farm has allocated more than 8 million soms for the repair of houses, preschool educational institutions, rural medical stations and schools for low-income families. Also, each of the 5 low-income families was given free cattle at its own expense for their weddings. The multi-branch farm donated 200 kg of cattle to the "Generosity and Help" general people's movement fund, which was established during the pandemic, and a total of 6 million soms of material assistance was provided to 10 low-income families living in the neighborhood who had lost their breadwinners [5,6,17].

During the reporting period, the "Koniratbay Mekhri" farm produced 65.5 tons of meat products, which were sold for 95,000 soms per kilogram, and the farm's net income amounted to 6,222,500,000 soms [9,11,12,14].

Also, during the reporting period, the "Koniratbay Mekhri" farm sold 1,400.1 tons of dairy products to state markets at 8,000 soms per liter, bringing in 11,200,800,000 soms in revenue.

Each of the 550 cattle on the farm produces 8,250 tons of manure per day at a rate of 15 kilograms per head, of which 20% is removed to condition the moisture. 6,600 tons of conditioned manure are then distributed to the farm's forage fields at a rate of 30 tons per hectare, 120.7 hectares of arable land, and 99.3 hectares of land designated for growing new fodder, in an effort to maintain soil fertility.

1760 tons of manure were produced per day from each of the 220 young cattle on the farm, of which 1408 tons of conditioned manure were removed to condition 20% moisture, and 30 tons of manure per hectare were transferred to the forage fields of the farm, and 30 tons of manure per hectare were transferred to 47 hectares of land intended for growing freshly prepared feed, thus maintaining soil fertility. In total, 30 tons of local manure were added to 267 hectares of land, and soil fertility was maintained.

In order to make the farm more beautiful and enhance the green landscape, 500 fruit trees and 1000 ornamental trees have been planted on the farm in the last 2 years at the "Koniratbay Mekhri" farm, and the area of green areas is currently increasing.

In addition, the "Koniratbay Mekhri" farm also has goat breeding, poultry farming, and horse breeding.

Conclusions;

1. It is advisable to redirect existing farms and other land users in our republic from single-type cotton, grain or livestock farming to diversified farms.

2. When organizing diversified farms, extensive attention should be paid to systems that meet their needs, are compatible with each other in crop rotation, and replace soil fertility used for biomass accumulation.

3. Taking into account the water shortage in the Republic of Karakalpakstan and the specialization of some districts in livestock farming, it is advisable to establish livestock-farmer, livestock-vegetable-potato, livestock-grain and livestock-forage farms.

4. During the reporting period, the "Koniratbay Mekhri" farm produced 65.5 tons of meat products and sold them for 95,000 soms per kilogram, with a net cost of 6,222,500,000 soms and 1,400.1 tons of dairy products sold for 8,000 soms per liter, bringing in 11,200,800,000 soms of income, a total of 17,423,300,000 soms of income.

5. In addition, the "Koniratbay Mekhri" farm delivered 168.6 tons of grain to the state, bringing 505,500,000 soms of net income to the farm, and a total of 17,928,850,000 soms of income from cattle breeding and grain to the diversified farm.

6. During its activity, the "Koniratbay Mekhri" farm has, in a short period of time, supplied the markets of the Republic of Uzbekistan and Karakalpakstan with high-quality meat, milk and other food products, enriched the farm's account by 18 billion soums and provided about 50 neighboring villages with permanent employment.

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