



IRRIGATED AGRICULTURE IN KHIVA KHANATE IN THE XIX-EARLY XX CENTURIES AND CROP TYPES

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ANNOTATION

This article provides a systematic analysis of the agricultural and farming traditions of the Khiva Khanate in the late 19th and early 20th centuries on the basis of scientific literature and the importance of farming in the lives of the population based on historical materials.

KEYWORDS: *Agriculture, types of cultural economy, types of crops, corn, wheat, barley, rice, gouache, alfalfa, traditions, ceremonies, festivals, Navruz.*

INTRODUCTION

The Khorezm oasis occupies the lower reaches of the Amu Darya and is bordered by the Karakum and Kyzylkum deserts. Geographically located in the northern latitudes. The fertile soil of the Khorezm oasis and the long-term preservation of sunny days, the abundance of running water create favorable conditions for farming in the oasis. Therefore, in the Khorezm oasis of the east, such as Egypt, Mesopotamia, India, China and Iran, historical conditions have made artificial irrigation the main condition for agriculture and the main guarantee of a rich harvest of agricultural products. Thanks to artificial irrigation, over the centuries, productivity in all areas of agriculture has been much higher, and the crops grown have provided the oasis population with much-needed benefits.

"I have never seen such a variety of crops in Germany as in Khiva," he said. Here, all the houses were built with bridges, surrounded by gurgling streams, and as I walked through the gardens through the meadows: I was delighted by the sound of migratory birds. The crumbling cotton-walled houses gave a spectacular view of this wonder" [1., p.211].

Indeed, the well-known researcher, the well-known Khorezm scholar, academician M. Yuldashev, in his book "Land tenure and state system in the Khiva khanate" [2., p.13] states: This view was also shared by almost all foreigners who came to Khiva in the first half of the 19th century on diplomatic or trade missions. In particular, N. Muravyov, G. I. Danilevsky, I. Krauze, L. Kastenko, and even A.L. Kun noted that grain was a leading crop.

The fact that grain farming was the mainstay of oasis farming remained unchanged in the late 19th century. The census of 1910 in the Khiva khanate gives us enough information not only about the grain we are trying to identify, but also about the entire agricultural crop [3., p.28].

According to researcher M. Yuldashev, Khiva was mainly planted with wheat and corn, while the rest was planted with arna, rice, flax, sesame and watermelon.

Wheat is the main crop and winter wheat is the main crop. In particular, in the central and southern villages of Khorezm, 30% of the land is wheat fields. These areas were mainly Manok, Kat, Kilich-Niyazbi, Yangi Urgench, Qiyat-Kungrad, Astana, Yangiarik. If we look at the data of 1910, we see that wheat was planted on 17,500 acres of land in and around the khanate of Khiva. In particular, in the New Urgench, Kat, Gurlan and Mangit khanates, 7,000 to 5,000 tanobs were planted.

The people of Khiva, writes Orest Shkapsky, wrote: "Most of the arable land was planted with food crops for the villages: wheat, corn, millet, rice and legumes, mosh, beans and other crops."

L. Kstenko, who observed oasis farming, took a larger farm as a model and analyzed it on his own. For example, a large landowner showed how to cultivate 100 acres of land (17 acres) as a farm. It is planned to plant winter wheat on about half of the 100 fields. The remaining 25 acres are set aside for alfalfa. In the end, the remaining 25 land plots were allocated to the partnership [4., p.287].



In late May and early June, about 5-6 hectares of wheat fields were planted with oats. The wheat fields were left vacant until the fall. In the fall, this wheat was replaced by winter wheat and alfalfa. Thus the arable lands were repeated for several periods[4., p.287].

Khorezm farmers were well aware of the soil and its properties. In particular, ethnographer IM Jabborov notes that "local farmers divided the soil into three groups."

The first - the original red chakka soil - this is the best soil.

The second - saline soils - alluvial - is widespread in the lower reaches of the Amu Darya. Also, in the Khanka region, the soil is "vop", "Saugha" - hard, but the most fertile soil.

The third - "chala" - is blue and is not suitable for cultivation[5., p.283].

In Khiva lands, "vop" soil is widely used as a waste of Amudarya water for fertilization. Well, the soil composition of the Khorezm oasis was different in different places. Therefore, fertilization of arable lands is considered to be one of the most important conditions for yield. But the main thing is the local fertilizer.

Local manure collection The manure is collected due to the care of the livestock kept in the house and the frequent cleaning of their bottoms. Sand is always stored for drying in the barn. The soles of my feet are wet. The bottom of the cattle was sprinkled with half-dried sand. After some days, the barn was cleaned and collected. Classes will be taken outside. The lesson from the barn was called "Nonbar". The lesson is "Nonbar" mixed with "Vop" or sand - "chaga".

It is no secret that the cultivation of wheat played an important role in the khanate. L. Krauze says that it is grown a lot of marrow and winter wheat. At the end of September and the beginning of October, Khazarasp, Khiva, Dashovuz, and Kyzyl-Takir districts were the main wheat fields of the khanate [6., p.41].

According to ethnographer L.Sazonova, the land planned for winter wheat has been carefully plowed. That is, in the sun from early August to early September, "sucking the sun"[3., p.28]. It is called "plowing" to save time and prepare such land in winter. Later, when the land was plowed again, especially when winter wheat was replaced by summer wheat, the land was plowed 710 times.

If it was replaced with wheat after sowing, it was plowed 3 times, and if it was replaced with rice, it was plowed 1-2 times. In September, the land was irrigated again, divided into ponds, drained and sown. The sown seeds are covered with dandono and molo. More manure sprinkled. The seeds selected for planting are prepared earlier. Seed selection for wheat is also determined on the eve of wheat

flowering. That's the decent thing to do, and it should end there.

The sowing of the seed was responsible, and it had to be sown by hand and evenly over the entire thirty. During sowing, the seeds are stored in the soil or in the soil. Thus, the seed that was planted sprouted and grew taller in the winter. The wheat field required only 2-3 irrigations.

Winter wheat ripens in early and mid-June. It should be noted that the spring sowing season is measured by the population in a separate agricultural calendar. However, this account will not be forgotten by the people, it will be partially remembered. For example, this account was maintained for ninety or "ninety days" [5., p.283].

In the spring, especially after Navruz, arna and summer wheat were planted, and in the first days of May, local cotton was planted. From May 10, the most important day for the farmer is called the most important day of the year for the crop.

Shkapsky points out that there are two types of wheat and says that it is winter and summer wheat. But both are said to be planted in different seasons, with winter wheat being planted in September and winter wheat in spring in March.

The soil was softened and plowed by plowing the wheat fields 10 times.

Each desyatina is fed with 800 carts of manure. Then the land is irrigated 3-4 times. Winter wheat is irrigated only in spring. Spring wheat ripens in summer. According to Shkapsky, there were 3 varieties of winter wheat and 2 varieties of summer wheat.

Researcher Shkapsky notes that "rice is one of the plants in the Khorezm oasis that requires special care and special conditions." Although this plant is partially similar to oats in appearance, it grows in water and lives with water. Therefore, it is a plant that requires a lot of care. Rice stalks are harvested and scattered on rice paddies. Then the land is irrigated and dried. The soil is plowed 8-9 times and rice seeds are sown in the flooded area. Rice is planted in May. The rice field always enters from one side and exits from the other. Watering is stopped when the rice starts to sprout. It is left without water for a few days until the rice is ripe and begins to harvest in September. Each pound can yield 130 pounds of land.

It should be noted that N. Muravyov, who came to Khiva in the autumn of 1819, first saw corn growing in the fields as if it were a tree. It is no coincidence that when Muravyov inquired about the plant, he said that it was indeed a favorite plant of the Khorezm people. That is why, according to Muravyov, almost all foreigners who came to Khorezm after him were not indifferent to "corn". Also, geneticist NI Vavilov came to the oasis in 1925 and got acquainted with the "Plant World". Probably,



he wrote that he found his homeland only in Khorezm, except for Africa. Corn has many plant-like properties [8., p.19]. The plant is planted in early May and cared for until August 1. When corn seeds are sown sparingly, they ripen early. There are varieties of corn "May Khair" or "Yosmak". This type does not require much water. However, the large head variety ripens in October

The peculiarity of corn cultivation is that the lands under corn are fertilized with saline soils.

The corn seeds were sown by hand and the seeds were buried. The ground is plowed. After the seeds are sown, water is given to the thirties, who are divided into lakes.

In the southern part of Khorezm, when the corn seeds reached 30-50 cm, they were isolated and the roots of each were cut with a hoe, leaving a distance of 50-60 cm between each. The bottom of each corn is called the "Tomuq" [5., p.5]. When the corn is ripe, its head is separated from the stalk by the "Egg Head" lake. Corn stalks were harvested at a depth of 25-30 cm. The collected stalks are left in the sun to dry, as they can be pressed together and rot. That is why it is dried.

The thickly sown corn seed is called "Govush" and was used as hay for livestock. Govush was used as hay instead of hay because of its long neck and juice at the base. The first harvest of goose was done in June and it was harvested 4-5 more times during the season. The harvested goose is dried in the sun. The dried gourd is cooked. Then the roof of the house was taken to the fireplace to keep it in the sun. This type of grass is usually planted on top of a barn.

Commenting on corn, O. Shkapsky writes: "Corn is the favorite plant of the Khiva people." It grows from 3 to 5 feet tall. The stalk of the corn is thick and about 2 fingers in size. The green cornfields are reminiscent of thick reeds. Corn is planted in well-drained soil in May. A dozen acres of corn fields were fertilized with 1,000 carts of sand. Corn is watered only 4 times. When the plant is ripe, the corn is stored until the first frost, when it is harvested.

O. Shkapsky recounts the following incident: "In the early autumn of 1891, due to the cold, in the Khiva khanate corn from all over the country was given to cattle as hay instead of gouache" [8., p.32]. The yield of corn is said to be "130 to 260 days for every tenth of a hectare of land."

As Kondrashev points out, there are varieties such as red oats, oats, white oats, red oats and oats. "It is impossible to find a more luxurious and ornamental plant than corn, except in the Khiva khanate and the Amudarya region" [9., p.112].

Beda is planted on the outskirts of the oasis, especially near sandy soils. In some places, alfalfa can be harvested for almost 10-15 years, and in others for 5-6 years. Alfalfa cultivation, like other crops, required care. Beda is plowed with perennials

and mulch. Clover fields required occasional watering. Alfalfa is harvested 4-5 times a year, tied and cultivated. After the alfalfa cultivars have dried, they are placed on the barn or on the side.

In the case of large plots of land on self-sufficient farms, up to 1 or 2 acres of land is allocated for alfalfa. Irrigation was especially important in the care of alfalfa, especially in the spring. After two harvests, alfalfa sprouts in June. By the end of June, the seeds begin to gather. The alfalfa collected for seed is thrown into the threshing floor. Once this alfalfa is dried, it is harvested. It seems to be added to the clover. The vision is thrown into the threshing floor. The seeds are then cleaned through a sieve.

Growing alfalfa for seed was a difficult task. It is possible to collect 80-100 kg [5., p.6] of seeds from almost 300 m² of land. Alfalfa seeds have been used to dye gray fabric yellow. The sale of alfalfa seeds was held at the Yangi-Urgench market. Major traders bought alfalfa seeds in New Urgench, brought them to Orenburg, and then sold them to Italy, Germany, and the United States [7., p.52].

Orest Shkapsky puts forward a more interesting view of Khiva bedding, the lack of pastures for livestock in the Khanate, forcing people to look into the matter themselves. Alfalfa is grown in Khiva due to the need for hay for livestock. Once planted, weeds can be harvested for up to 8 or even 10 years. Beda gives a good harvest only in the second year. Therefore, it was first sown in the spring by mixing it with wheat.

It should be noted that alfalfa is grown as hay for livestock in all regions of the khanate and is recognized as a very productive plant due to its very thick growth. This perennial plant was planted once every five years, and even more so if properly cared for it could be harvested and used on the farm for up to 7, 8 years.

Researcher Kondrashev S. K.'s data on alfalfa differ significantly from those of other researchers: "When planting alfalfa as a specific plant in the khanate, it can be mixed with alfalfa or millet or even sesame seeds as a means of protection. In the same way, when alfalfa is protected from the sun or natural influences at the time of sowing, the alfalfa enters the crop after the second harvest after the wheat or millet planted with it is harvested.

Indeed, in the process of planting observed in the village:

First, in the spring before sowing millet was watered 4 times. Planted in late May.

Second, in late June, alfalfa was sown with millet seeds during the cotton watering process. But nothing is harvested, it is impossible. In early spring, 150 carts were sprayed on 20 acres each of 400 acres of manure per acre. Watering was particularly noticeable in the second and third harvests. There is no need for water in the first and fourth sickles.



CONCLUSION

The process of harvesting alfalfa is as follows: the alfalfa is harvested daily for domestic animals or the alfalfa is harvested in bulk. Kondrashev, who has been watching alfalfa harvests by locals, said, "Local farmers are very careful when harvesting alfalfa. Thus, it is profitable for a local farmer to reap with a sickle. That's why the proverb "Harvest from harvest" was born" - Kondrashev wrote.

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