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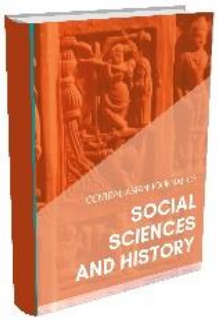

Ethnocal Features of Tillage and Fertilization Methods (On the Example of Southern Uzbekistan)

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Abstract:

This article describes the ethno-local features of soil cultivation and fertilizer application among the population of southern Uzbekistan based on available sources and literature, as well as field data.

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Speaking about the ethno-local features of the traditional agriculture of southern Uzbekistan in the late XIX - XX centuries, it should be noted that in general, the land suitable for agriculture in the region is divided into two types: irrigated and non-irrigated. Irrigated land is called "wet land" and non-irrigated land is called "lalmi", "spring land" or "dry land". The term is widely used by Uzbek, Tajik and other Turkic-speaking peoples living in the southern and eastern foothills of the region [1:32.]. The term was also known to the Tajiks of Qorategin and Darvaz [2: 1118].

Two methods were used to cultivate the land in the region. In the first method, mainly vacant crop fields were rested and left empty, while in the second, the crop area was plowed. Both methods are referred to by different names in different parts of the oasis. For example, in the mountainous areas of the region, the method of land reclamation is called "Dam dodan", and the method of plowing the land is called "Kara shudgor". Plowing began with the arrival of the month of "carrier" in the solar calendar, and according to the current lunar calendar, it covers the period from March 21 to April 21 [3: 92.].

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Another agro-technical measure that served to restore soil fertility was to leave the land vacant. Due to the cultivation of agricultural land in most households of the old agricultural areas of irrigated agriculture, the planting of grain was very rare. "The arable lands of the Sarts are never empty, they are plowed from year to year" [4:60.].

Deposits and plows are almost non-existent in the region, as the uncultivated soil there has not only restored fertility, but rather salinization has taken place. In other regions of Uzbekistan, this practice was called plowing for a short time. The Fergana Valley also had a three-field crop rotation system. For example, after harvesting winter wheat, it was irrigated several times (up to 5-6 times in Khorezm), and the same plowing and plowing was carried out. In this form the field was left vacant from early July to September, plowed again, and planted with winter wheat. The number of irrigations differs not only from the nature of the soil, but also from the crops planted. This means that in the Kashkadarya and Surkhandarya oases the land was plowed 2-3 times for cotton and once for wheat. In Kashkadarya, the land left over from short-term plowing is intended only for winter wheat and not for other crops. Fertilizers were also sown during plowing.

The rotation of crops, which has long been known to local farmers, also served to increase soil fertility. In the 1920s, in southern Uzbekistan, where more than 70% of irrigated land was occupied by industrial crops, cotton was usually planted in one field for 8-10 years, followed by corn, alfalfa or alfalfa [5:34]. It was believed that cotton could be grown for 30 years in one place with regular application of manure. In other grain-growing areas, millet, sesame, corn, and legumes were commonly planted after wheat, and they yielded more [6:94.].

Farmers in the region did not know how to deal with agricultural pests. In particular, locusts, which often completely destroy crops, have caused great damage.

In the early twentieth century, local farmers had no idea about scientific meteorological and astronomical data, and as a result of systematic observation of natural phenomena, they acquired a variety of phenological knowledge. Based on them, as a result of centuries of experience, several cycles of folk calendars were developed, the knowledge of which was necessary in agricultural activities. The most common calendar among landowners is the farmers ’90-day cycle (ninety), which consists of four parts of 9 days each: spring, summer, fall, and winter. This 90-day cycle coincided with the calculation of the ancient solar calendar, which was also widely used by the settled agricultural population. In almost all ancient agricultural regions, the seasons coincided with the following months of the solar calendar: the spring months: hamal, savr, javzo; summer - cancer, asad, sumbula; autumn - mezon, aqrab, kavs; winter - jadi, dalv, hut.

The period of cold winters and hot summers was a small chilla of 20 days (25 days in Khorezm) before the large (40-day) winter chill, known in some areas as the “chilla”. The beginning of the year is in the spring, usually in the month of Hamal (March). ("Hamal entered - entered into force") The month of hut (February) was the beginning of the year in the southern regions, where agricultural work had previously begun. With the arrival of the month of Hut, the farmer began to prepare for spring farming. There is a saying among the people, "If it is good, it is hut, if it is good, it is milk, and if it is bad, it is hut puting."

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The beginning of the month, as well as the time of the beginning of crops, the growing season or other parts of the agricultural calendar, is determined by the position of the stars, the arrival and departure of birds, and other phenological signs. The approach of summer and the ripening of wheat are determined by the appearance of the constellation Pleiades (Hulkar) and the position of a group of stars in the constellation Libra (Libra). In the spring period, it was freely predicted whether the next month would be rainy or dry, if the crescent was in a horizontal position, then the moon would be dry, if it was vertical, it was believed to be rainy. In general, the appearance of the new moon among people foretold that there would be no peace and tranquility on Earth.

The flight of birds was associated with spring cooling, which had a strong impact on soil condition and especially planting time. The arrival of swallows was observed in Khorezm, which coincided with the onset of a strong cool wind, in some cases with snow or rain. Only after the cold snap did the farmers believe that they could easily start planting early. According to the solar calendar, this time corresponds to the second half of Saturn and the beginning of Zeus. The appearance of the ring heralds the beginning of summer, and the last spring bird is symbolic, after which it can be assumed that summer has come [7:].

According to ancient experienced farmers, from the time the flock of birds arrives until its first chicks appear, it is still possible to plant and harvest all the crops, after which the planting period ends. The onset of autumn cooling is also determined by the bird calendar. The first autumn month of the calendar is marked by the flight of large galaxies of black storks (shellfish). The autumn flight of the ducks foretells the onset of the first frosts.

Local farmers had their own charter (pamphlet), which included mainly religious instructions and certain aspects of production activities, and followed a number of rituals and customs. In the spring, the first outings in the field, the harvest and other processes were celebrated with a ceremonial feast, a collective feast.

The agriculture of the former Uzbekistan, based on primitive techniques and empirical knowledge, was mainly very small farms.

For example, in the Fergana Valley, the average farm area was about 2 hectares, while more than half (52.8%) of the land was owned by landowners ranging from 0.5 to 1.3 hectares. The fact that more than a third of arable land and three-quarters of the value of agricultural products are concentrated in the hands of large landowners, the lack of land owned by most farmers has negatively affected not only farm budgets but also their incomes. According to experts, farmers who have up to 1 tanob of land "are humble in their food consumption, spending 21-40 rubles per capita per year and get rid of half-starvation" [8:34.]. A.P. Demidov, studying some budget data of the previous Fergana agricultural enterprises, said, “The farms of the settled population of Fergana region, which has relatively good soil fertility, are located in such a circle that they provide living conditions and food in Fergana. The farmers were dissatisfied. ” The situation in other regions of Uzbekistan was no better. The low profitability of small farms has forced Uzbek farmers to engage in seasonal work, many of whom have moved to other parts of Turkestan in search of additional income. According to the 1917 census, a significant proportion of the farms were engaged in auxiliary handicrafts and labor. For example, in Namangan district, out of 97,214 farms, 38,04 farms were engaged in various handicrafts, of which 12,571 farms were not engaged in agriculture and animal husbandry.

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The limited and low budget of the rural worker made it more dependent on market conditions. The slight increase in market prices has also been a heavy burden on small farms, which in nature have almost no income, drawing them into awkward credit deals with lenders and large farmers.

All these circumstances, the backwardness of the economy, social development, the policy of Tsarist Russia prevented the technical development of agriculture in Uzbekistan to remain almost at the level of the Middle Ages. For the same reason, the distribution of agricultural crops in different regions was uneven. Among the sown crops, grain, primarily wheat, played an important role. Syrdarya ranks first, Samarkand second and Fergana third among Turkestan's three main agricultural districts. During this period, the cotton-growing region was Fergana region, where cotton accounted for about 40% of the total crop area, while in the Syrdarya region less than 8% of cotton was grown [8:14.].

During the colonial period of Tsarist Russia, the area under cotton in the Emirate of Bukhara was almost five times higher, and in 1909 in its main cotton-growing area - the Zarafshan Valley - 25%. In the Khiva khanate, before the First World War, 16.3% of irrigated land was cotton, while by the end of the 19th century, cotton was about 9%. These changes marked a turning point in the development of agriculture in the twentieth century and played a key role in making significant changes in the management system, the technical equipment of the economy.

In short, the rich experience of agriculture, which had developed over the centuries, began to be forgotten. The population was adapted only to planting, caring for and harvesting cotton. Different ethnic groups in the region were relocated from their settlements to cotton-growing areas. As a result, the transformation of the traditional management culture began to be observed.

During the period of independence, the rich agricultural heritage of our ancestors began to be restored. In particular, as a result of the revival of horticultural traditions, tillage and fertilization of the land, everyone began to cultivate agricultural products in accordance with their needs or market principles, and one-sided production in the field was abolished.

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