

**FORMATION AND DEVELOPMENT OF THE PAXTAOROL STATE FARM: BASED
ON THE EXPERIENCE OF MIRZACHO'L CULTIVATION**

Gulyamov Alisher Azizovich

Asia International University

“Lecturer of the Department of Foreign Languages and Social Sciences”

aligulyamov1997@gmail.com

Abstract

The formation and developmental stages of the “Paxtaorol” state farm are analyzed based on historical sources. The study highlights the farm’s initial activities, its establishment under challenging socio-economic conditions, the construction of irrigation systems—particularly the K-20 canal—and their significance. Furthermore, the development of cotton cultivation, increases in yield, seed production, and agronomic experiments are scientifically examined. The article also addresses the soil salinization problems specific to the Mirzacho‘l region and the reclamation measures implemented to mitigate them. Additionally, information is provided on the gradual mechanization of agriculture and the formation of social infrastructure within the state farm.

Keywords

Paxtaorol state farm, Mirzacho‘l, cotton cultivation, irrigation system, K-20 canal, seed production, agronomic experiments, cotton yield, land reclamation, soil salinization, crop rotation, mechanization, agricultural machinery, Soviet agrarian policy, Danilchenko, Orlov.

The “Paxtaorol” state farm in the Mirzacho‘l region is one of the prominent examples of cotton cultivation development during the Soviet era. The establishment of the farm was initially carried out under very difficult conditions, with workers living in two-room barracks without floors, and roofs level with the ground. The pioneers of the seed-production farm worked under the leadership of Aleksandr Tikhonovich Danilchenko, around whom harmonious and loyal worker families united.

In the early years, the daily life of the workers was extremely harsh: they plowed the land with hand tools, struggled with food shortages, often went months without proper washing, and had almost no access to medical care. Yet, they believed in their work and abilities, dreaming of machines working in the fields, living in well-lit rooms, and seeing vast cotton fields instead of barren lands. Over the years, their devoted labor bore fruit: cotton fields appeared, tractors began to operate in the fields, electric lights shone, and newly arrived workers admired the builders’ dedication, learned from their experience, and began to teach others. Thus, the farm quickly transformed into a modern cotton enterprise.

To carry out the farm’s work effectively, irrigation systems and infrastructure were first developed. Alongside digging canals and small irrigation ditches, the construction of the K-20 canal was implemented as a major project. The canal was commissioned in 1928, with a length of 27.5 km and 84 branches serving the farm’s hamlets. Through this canal, a total of 217 km of irrigation channels, about 2,300 smaller ditches, and 8 sluices (5 made of reinforced concrete) were established. The commissioning of the K-20 canal enabled the expansion of cotton fields to 10,000 hectares and significantly facilitated farm operations. Later, the canal was reconstructed, and the irrigation network was improved.

Initially, the farm was organized as a seed-production enterprise, with its primary goal being the cultivation of high-quality cotton seeds. Aleksandr Tikhonovich Danilchenko and his assistants carried out this task with dedication. From 1925 to 1929, various experiments were

conducted to test cotton varieties, irrigate and fertilize the cotton, and monitor boll thickness. As a result, the “Navroskiy” cotton variety was found to be the best in terms of yield and fiber quality. Optimal sowing dates were also determined, with April 10–30 identified as the most suitable period for early and medium-maturing varieties.

At the same time, from 1929, the farm gradually transformed from solely a seed-production enterprise into a large-scale cotton-growing enterprise. Later, in 1964, it was renamed the “Paxtaorol” technical school state farm.

The “Paxtaorol” state farm strictly implemented a cotton-wheat crop rotation system, which was recognized as a key condition for maintaining soil fertility. Salinized lands were irrigated and included in reclamation works. This approach was later applied to other cotton farms in the Mirzacho‘l region. The use of mineral fertilizers began in 1927; initially, fertilizers were imported, but later they were supplied by domestically produced products. In 1930, Soviet scientists and the farm’s agronomists established fertilizer application standards for different soil types.

During the 1930s, soil salinization became one of the most pressing issues. According to Ye. G. Petrov, head of the Paxtaorol experimental station, in 1931, 655 hectares out of 7,760 hectares were salinized, and by 1932, salinized lands exceeded 2,000 hectares. The farm team conducted leaching and other reclamation measures to combat soil salinity.

In the early years, nearly all cotton cultivation activities were carried out manually. Sowing, cotton care, and harvesting were performed by dozens of workers by hand. Later, horse-drawn seeders and cultivators were introduced, although harvesting still lasted more than four months. The farm strictly adhered to the cotton-wheat rotation system every year, which formed the basis for increased soil fertility and crop yields. During the first five years, the farm sold 337,200 centners of cotton to the state, with an average yield of 13.7 centners per hectare. Yield per hectare increased from 10.8 centners in 1925 to 17 centners in 1929. This success demonstrated in practice the Communist Party’s policy of agricultural collectivization.

Aleksandr Tikhonovich Danilchenko served as the first chief agronomist of the farm, leading its development for several decades. His assistants, M. M. Zaonegin, A. V. Paradiev, and the experimental station staff, successfully implemented measures to increase soil fertility, improve cotton yields, and conduct research experiments. The farm director, S. Orlov, also played an important role in this process. For his contributions to the development of Soviet cotton cultivation, Danilchenko was awarded the Order of Lenin and received the title of “Distinguished Agronomist” in the Uzbek SSR.

As a result, despite being established under difficult conditions, the “Paxtaorol” state farm transformed into a modern cotton enterprise through dedicated labor, scientific experimentation, and the introduction of technology. The farm’s experience became a model in seed production, cotton cultivation, irrigation systems, crop rotation, and the use of mineral fertilizers. Furthermore, the dedication of its leaders and workers enabled the creation of a large-scale socialist cotton farm in the Mirzacho‘l region. The “Paxtaorol” farm not only produced crops but also became a school for training young specialists, enhancing its scientific, practical, and educational significance.

In 1935, Aleksandr Tikhonovich Danilchenko was appointed to the leadership position at the Main Directorate of the Cotton Committee (Glavxlopkom) in Tashkent. He was succeeded at the state farm by Mikhail Mikhailovich Zaonegin, who had previously served as assistant chief agronomist, and was appointed as the chief agronomist. Zaonegin worked at the “Paxtaorol” state farm until 1932, after which D. S. Zakusin, also a chief agronomist, continued the farm’s advanced practices, working diligently to achieve high yields from cotton and other crops.

One of the most important tasks at the farm was the mechanization of cotton planting, which received particular attention. The Communist Party and the Soviet government prioritized increasing labor productivity in agriculture and approved the import of agricultural machinery from abroad. As a result, by the end of 1924, the “Paxtaorol” state farm received 12 American Fordson tractors. These were the first tractors on the farm, but they were insufficient to cultivate the entire 5,930-hectare area, and some land was still worked with horses and oxen. In 1925, the farm had 252 horses and an equal number of oxen, but the number of tractors steadily increased. By 1929, 87 tractors were operating, equivalent to 2,098 horse-power.

At the same time, the share of land cultivated by horses and oxen decreased significantly: in 1925, half of the arable land was worked manually, in 1926 it was 45.5%, and by 1927 only 12% of the land relied on animal power. From 1928 onward, all plowing operations were fully mechanized.

The farm rapidly developed, with a new tractor workshop and a cotton-cleaning plant capable of processing 10,000 tons of compressed cotton per year being constructed. Additionally, a repair workshop for agricultural machinery was fully equipped, including a newly established cast-iron foundry. The following year, the farm planned to expand its cultivated area to 10,000 hectares, with the new land fully mechanized. For the first time, powerful combines and graders covering widths of 12–18 meters began operating in the Paxtaorol fields. Meanwhile, electricity, initially available in only two hamlets, was planned to be extended to six hamlets, providing power to settlements located up to 27 kilometers away.

All of these developments were not merely plans but tangible realities, demonstrating the strengthening power of the Soviet Union.

As a result of the implementation of Lenin’s industrialization plans, tractor factories were launched in the country, enabling agriculture to be supplied with additional machinery. By 1931, the “Paxtaorol” state farm had 130 tractors, and by 1933, their number had increased to 209. During this period, cotton seed was planted by tractor for the first time. While only 1.5% of the cotton area was sown using tractors in 1930, by 1933 this figure had risen to 72%. The farm’s mechanization specialists became pioneers in introducing machinery into cotton cultivation, and neighboring kolkhozes and state farms frequently visited to study their work.

In 1933, the Toshkil state farm was converted into a tractor park and machine-breeding point (MSP), later integrated into the Central District Workshops (MRU). One of the farm’s first tractor operators, Anton Yefimovich Nikitenko, drove a Fordson tractor and later operated domestically produced tractors. He worked for many years as a mechanic and, before retirement, managed workshops he had organized for five years, training dozens of mechanics.

However, by 1934, only land plowing and sowing were mechanized; cotton care, especially harvesting, was still largely done by hand. The “Sotsialisticheskiy Paxtaorol” newspaper, in its July 30, 1934 issue, reported on the strict labor organization for cotton care. Articles described brigades and housewives cleaning cotton bolls from weeds, preparing them for processing, and consistently exceeding daily work norms. For example, the Salopenko brigade, consisting of 37 members, regularly exceeded its quota and earned the mobile Red Banner of the department.

The “Paxtaorol” farm team developed into a strong and efficient collective, achieving significant success in increasing cotton yields, developing other agricultural sectors, and establishing livestock farms. The contribution of Aleksandr Semyonovich Orlov was invaluable. On July 17, 1934, he was awarded the Order of Lenin by the decree of the Central Executive Committee of the USSR. According to the farm newspaper, the award motivated both Orlov and the farm team to work even harder and achieve higher cotton yields. Aleksandr Semyonovich Orlov spent entire workdays in the fields with the brigades, demonstrating tasks with a hoe or

spade, and was recognized as an excellent organizer and exemplary director. With the support of the Party and farm activists, he successfully organized operations and elevated the “Paxtaorol” state farm to one of the largest cotton farms in the Soviet Union. The farm received and maintained the All-Union mobile Red Banner, and Orlov’s work was duly recognized by the Party and government.

Thus, despite being established under challenging conditions, the “Paxtaorol” state farm became a modern center for cotton cultivation and seed production through mechanization, scientific experimentation, dedicated labor, and excellent organization. Its experience served as a model for other cotton farms in the Mirzacho‘l region and functioned as a training school for young specialists, enhancing its scientific, practical, and educational significance.

REFERENCES.

1. Gulyamov, A. (2025). MANG‘ITLAR SULOLASI DAVRIDA DAVLAT BOSHQARUVI, TUZUMI VA ICHKI SIYOSATI. *Modern Science and Research*, 4(1), 790-798.
2. Gulyamov, A., & Xamidova, R. (2025). ABU RAYHON BERUNIY BUYUK QOMUSIY OLIM. *Modern Science and Research*, 4(2), 758-766.
3. Gulyamov, A. (2025). BUXORO AMIRLIGIDA ISTIQOMAT QILGAN MILLIY-ETNIK GURUHLAR. *Modern Science and Research*, 4(2), 1020-1028.
4. Azizovich, G. A. (2024). Trade Relations of Population in Bukhara Emirate, Shariah Rules and Regulations in Commercial Affairs, Partnership Relations. *EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION*, 4(9), 189-194.
5. Azizovich, G. A. (2024). Family-Marriage and Inheritance Relations of the Population in the Bukhara Emirate. *Miasto Przyszłości*, 53, 964-969.
6. Gulyamov, A. (2024). BUXORO MUZEYNING TASHKIL TOPISHI TARIXI. *Modern Science and Research*, 3(12), 659-667.
7. Gulyamov, A., & Atoyeva, M. (2025). ABU ALI IBN SINO–ILM-FAN TARIXIDAGI BUYUK ALLOMA. *Modern Science and Research*, 4(3), 591-599.
8. Gulyamov, A. (2025). O ‘RTA ASR SHAHARLARINING DEMOGRAFIK HOLATI, SHAHARLARNING KENGAYISHI, AHOLINING IJTIMOIIY TARKIBI. *Modern Science and Research*, 4(3), 974-983.
9. Gulyamov, A. (2025). TARIX SAHIFALARIDA SOHIBQIRON AMIR TEMUR. *Modern Science and Research*, 4(4), 449-459.
10. Gulyamov, A. (2025). BUXORO VOHASIDA DINIY MAROSIM VA URF-ODATLARDAGI TRANSFARMATSIYA JARAYONLARINING ETNOGRAFIK TAHLILI. *Modern Science and Research*, 4(4), 1676-1686.
11. Gulyamov, A. (2025). G ‘ARBIY YEVROPA O‘RTA ASR SHAHARLARIGA AHOLI MIGRATSIYASI, MILLIY-ETNIK XUSUSIYATLARI. *Modern Science and Research*, 4(5), 1316-1322.