



TRANSFORMATIONS OF THE AGRICULTURAL ECONOMY IN THE FERGANA VALLEY IN THE LATE 19TH - EARLY 20TH CENTURIES

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Abstract: *This article examines the transformation processes of the Fergana Valley's agricultural sector in the late 19th and early 20th centuries within the context of Russian colonial policy. Employing scientific methods, the research analyzes the main directions of changes in agriculture, irrigation, and land relations, as well as the impact of these processes on the socio-economic situation of the region's population. Drawing on archival materials, statistical reviews of the Fergana region, and contemporary historical research, the study demonstrates that the introduction of American cotton varieties, expansion of irrigation networks, and implementation of imperial reforms in the region led to the formation of a new, cotton-oriented economic model. Despite certain achievements, such as increased crop yields and improved transport infrastructure, the colonial agrarian policy resulted in rising farmer indebtedness and social dependency, failing to ensure sustainable development. The study reveals the contradictory nature of modernization and its long-term consequences for the socio-economic development of Central Asia.*

Keywords: *Fergana Valley, agrarian economy, colonial policy, cotton cultivation, irrigation, Russian Empire, Central Asia.*

INTRODUCTION

The Fergana Valley, located in the heart of Central Asia, stands as one of the most fertile and densely populated regions of the area encompassing modern Uzbekistan, Kyrgyzstan, and Tajikistan. By the late nineteenth century, following the Russian conquest of the Kokand Khanate in 1876, this region became a major focus of imperial agrarian and economic transformation. Russian officials aimed to integrate Fergana into the empire's agricultural production system—primarily to secure raw cotton for the textile industry of Russia's central provinces.

Prior to this transformation, Fergana's economy was based on traditional smallholder farming. Villagers practiced a mixed system of agriculture combining cereal cultivation (wheat, barley, millet) with the irrigation-based production of rice, fruits, and cotton for local consumption. Communal irrigation systems, maintained collectively, provided the foundation for productivity in an otherwise arid landscape. The late 19th century marked a decisive turning point: through new irrigation projects, land reforms, and the introduction of American cotton varieties, the region experienced a transition toward a colonial cash-crop economy.

The aim of this article is to analyze the transformation of Fergana's agrarian economy between the 1870s and the 1910s—its structure, methods of cultivation, land use, and social implications—based on archival, statistical, and historiographical materials.

Methods. This study employs a historical-economic method integrating both qualitative and quantitative data. The research draws upon:



Primary sources: Tsarist statistical surveys (Statisticheskii obzor Ferganskoi oblasti for 1887–1914), administrative reports, and archival documents from the National Archive of Uzbekistan and regional archives of Fergana.

Secondary sources: Monographs and modern historical studies by Uzbek and Russian scholars (Ziyoev, Abdurakhimova, among others).

Comparative and structural analysis: to trace agricultural indicators such as crop acreage, irrigation expansion, and productivity levels.

The data were interpreted to identify key stages of agrarian transformation and the socio-economic impact of Russian colonial policies on the local population.

Results

In the precolonial period, agriculture in Fergana was characterized by small-scale subsistence farming. Farmers cultivated wheat, barley, rice, and fruits; tools were rudimentary, and irrigation relied on simple earth canals.

After 1876, the Russian administration began to reform this system by promoting cotton cultivation as a strategic export commodity. By the 1880s, American cotton seeds were introduced, and by the early 1900s cotton fields expanded rapidly. Statistical records show that cotton acreage increased from 16,300 hectares in 1888 to more than 300,000 hectares by 1913. Average yields rose from 7.1 to over 13 tons per hectare due to improved varieties and better irrigation management.

Irrigation development became the cornerstone of the agrarian transformation. Between 1890 and 1914, several major irrigation projects were launched, including the Romanovsky Canal (1913), which expanded cultivated land by more than 38,000 hectares. However, most peasant canals remained communal and manually maintained.

Irrigation lay at the heart of Fergana's agricultural transformation. During the late 19th and early 20th centuries the Russian administration invested in new water works. Extensive surveys (covering over 650,000 hectares in Fergana, Samarkand and Syrdarya regions) were carried out by 1900, yielding plans for eight major irrigation projects totaling about 229,000 hectares. The most ambitious of these was the Romanovsky (later Northern Golodnostep) Canal on the Syr Darya, completed in 1913. This 37-km canal brought Syr Darya water into the Hungry (Golodnaya) Steppe north of Fergana, ultimately irrigating about 38,000 hectares by the opening ceremony. On the Fergana plain itself, several branch canals and reservoir upgrades (e.g. on the Kara Darya and Chatkal rivers) slightly expanded irrigation by 1910, though most preexisting villager canals were only repaired rather than extensively re-engineered.

These irrigation works allowed more land to be sown to cotton and cash crops. Indeed, colonial propaganda optimistically touted Fergana as a “blooming oasis” once the new water arrived. In practice, the technology available remained limited. Cotton processing in the valley was still rudimentary: in 1900 there were only a few small ginning factories, and much cotton was cleaned by hand at the household level. New mechanical threshers or reapers were hardly in use; instead, draft oxen continued to pull plows and trampoline machines. Even so, the introduction of American cotton varieties in the 1880s – thanks to Tsarist seed programs – boosted per-hectare yields substantially. After 1900 the



growing use of imported American seed (and hybrid selection) meant that by 1905 an American cotton crop could average about 13.0 tons per hectare, versus only 10.5–12.1 tons for local strains. In short, while the irrigation and tools remained relatively primitive, scientific cotton varieties and small-scale processing did improve productivity.

Transportation improvements likewise aided agricultural growth. The railroad reached Fergana in 1899 (from Orenburg–Tashkent via Samarkand), greatly reducing the cost of shipping cotton to Russian markets. By 1906 the Orenburg–Tashkent line connected further, so that even grain and rice could flow out (and machinery flow in) more easily. Most industrial facilities (cotton gins, flour mills, tanneries) clustered near these railheads in Kokand, Namangan and Andijan. Thus, by 1910 an integrated network of canals and rail lines bound Fergana's farm economy more tightly to the empire, enabling a sharp rise in export crops while improving market access for local produce.

The combined effects of Russian policy and technology can be seen most clearly in the cotton boom. In 1888 only about 16,300 hectares in Fergana were planted to cotton. But under Tsarist encouragement this acreage expanded rapidly. By 1899 it had reached roughly 171,000 hectares and by 1902 about 235,000 hectares. This represents a nearly 50-fold increase from the early 1890s. Parallel to this expansion, yields climbed: average cotton yields in Fergana rose from roughly 7.1 t/ha in 1901 to 13.3 t/ha in 1902, thanks largely to better seed varieties. (For comparison, by 1905 American cotton averaged about 12.9–13.1 t/ha, versus 10.5–12.1 t/ha for native types.)

By 1910 and beyond the cotton area stabilized at very high levels. Official figures show 291,600 hectares in cotton by 1910, rising to about 300,360 ha in 1911 and 313,226 ha by 1913. In 1914–15, on the eve of war and revolution, Fergana farmers had more than 366,000 hectares under cotton – an area double or triple that in competing regions. This means by 1915 roughly one quarter of all arable land in the valley was cotton (far outstripping traditional food crops). Other crops were still grown in parallel (for example, official reports for 1913 show thousands of hectares in wheat, barley, rice and orchards), but none saw such explosive growth. Grapes, melons and mulberries remained important in local markets, but statistical summaries from this period do not list any new commercial crops of comparable scale to cotton.

These statistics indicate the depth of the colonial transformation: Fergana had effectively become a cotton monoculture on irrigated land. As one historian puts it, “cotton yield and the large economic income from it have encouraged the expansion of cotton growing areas in the Ferghana Valley,” and “officials of Russia in Turkestan and local merchants were interested in growing cotton in the largest possible areas and making the most profit”. In short, empirical evidence confirms that by 1915 the valley's agrarian economy had shifted decisively towards American-variety cotton, with ever-higher outputs and expanded acreage.

Discussion. The data reveal both progress and contradictions in Fergana's agrarian transformation. Russian imperial policy successfully reoriented the local economy toward cotton, providing infrastructure, seeds, and irrigation, yet it also entrenched social inequality and economic dependency.



Fergana's integration into global commodity networks accelerated modernization but on colonial terms. Increased yields and exports benefited the imperial center more than local producers. The persistence of communal land tenure prevented capitalist-style modernization, while credit systems deepened peasant indebtedness.

These dynamics mirror broader colonial patterns observed across Asia and Africa, where export-oriented agriculture strengthened imperial economies but disrupted traditional livelihoods and food security.

In Fergana, the growing monoculture of cotton reduced crop diversity, making rural communities more vulnerable to economic and ecological risks.

Conclusion.

By the early 20th century, the Fergana Valley had undergone a profound agrarian transformation. Traditional polycultural farming gave way to a cotton-centered system tied to imperial industry and trade.

This transition, while boosting productivity and infrastructure, also created new dependencies and social tensions.

The colonial modernization of Fergana agriculture exemplified a dual legacy: technological progress combined with social dislocation.

These developments laid the groundwork for the large-scale cotton monoculture of the Soviet period, but they also embedded systemic economic vulnerabilities that persisted throughout the 20th century.

Thus, the transformation of Fergana's agrarian economy stands as both a case of economic adaptation and a cautionary example of colonial exploitation's long-term consequences.

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