eISSN: 2229-3213 pISSN: 2229-3205
The Journal of Applied Science and Social Science
Volume 16,Issue 02 February, 2026

ABOUT THE NEW TECHNOLOGIES DISTRIBUTED IN AGRICULTURE IN TURKESTAN

Djurayev Murodjon Ravshanovich
Asia International University
1st year master's student

Abstract: This article provides a scientific analysis of new agricultural techniques and their types that have spread in the Turkestan region.

Keywords: Turkestan, agriculture, technique, equipment, plow, archival document, seeder, agricultural machinery.

In the late 19th and early 20th centuries, agricultural machinery and technical equipment were the most widespread among new technologies in Turkestan, and archival documents provide rich information about plows of various brands. On July 27, 1898, the “Turkestan Agricultural Society” reported in a report sent to the Russian Ministry of Agriculture and Land Affairs that a large batch of plows such as the “Eckert” plow with 2-position teeth, weighing 8.2-9 pounds, which is very strong for turning dry and hard soil, the “Sakka” light plow, which can be pulled by 1-2 horses, and the “Fuldzer” plow were brought to Turkestan. It was also noted that the Indo-English plow, which can be pulled by 2 horses, which is considered a working animal, is convenient for cultivating rice fields. Plows of the Ryazan and Gefrix Sad, Shell and Botkin factories began to be used in small peasant farms. The plows shown above were 2-position, 1-position, and heavy ones were 3-4-position, and were used for deep plowing. They were available at preferential prices from agricultural warehouses in Turkestan.

The plows brought to Turkestan were of various types, and their brands were of various numbers. There were 3 brands of the “Samokhod” (self-propelled) plow, the N 1 plow was pulled by 3 horses, plowed the land to a depth of 3-2/1 versts, a width of 6-2/1 versts, weighed 4 pounds, and cost 24 rubles, the “Samokhod N 2” plow was pulled by 2 pairs of horses, plowed the land to a depth of 4 versts and a width of 7 2/1 versts, weighed 5 pounds, and cost 28 rubles. The “Samokhod N 3” plowed by 3 pairs of horses, plowed the land to a depth of 4, 2/1 versts. Its weight was 5 4/3 pounds, and it was valued at 30 rubles. There were 5 different types of the “Southern Russian Plow” (N0, N1, N2, N3, N4, N5) diss., which were pulled by 3 to 3 pairs of horses. Such plows weighed 7,8,4,9,10 pounds, and cost 28 rubles, 34 rubles, 35 rubles, 36 rubles, and 40 rubles, respectively. These plows were wheeled, and their spare parts were distributed free of charge.

Dozens of types of agricultural machinery were imported: threshers, hoeing machines, mowers, seeders, shovel and disk harrows, horse-drawn rakes, flails, Lithuanian scythes, hay mowers for alfalfa and grass, Russian scythes, American harvesters, samarezkas (self-cutting grass), cultivators, and hay-binding machines. For example, 22,000 “Locomotive” threshers were imported to the Russian Empire annually from the Garreb factory in England (this factory was 120 years old in 1905), and single- and double-track threshers and crushers for crushing corn were imported from the Gofer and Shrans firms. The R-2 and R-3 threshers weighed 5 pounds and cost 75 rubles. The "Maliy Bogatyr" thresher, which was used by a horse, crushed corn with a husk and used it as cattle feed. Its weight was estimated at 14 pounds and its price was 75 rubles.

Dozens of types of single-handed grass cutters (grass cutters) were imported to Turkestan, including SRV (weight 4 pounds, price 26 rubles), SRN (weight 5 pounds, price 32 rubles), SXD (weight 6.4 pounds, price 40 rubles), SDV (weight 5 2/1 pounds, price 75 rubles), SN1 (weight 10 pounds, price 75 rubles), CN2 (weight 15 pounds, price 125 rubles), which were made of cast iron and steel. There were also types of self-cutting machines called "Bentalia" such as NSK

(weight 18 pounds, price 160 rubles), NDP (weight 22 pounds, price 190 rubles), which were not moved from one place to another due to their weight. Such self-cutting machines were once expensive and were used on large peasant farms.

The winches were equipped with windward devices, and there were simple types such as N1, N2, N3, and heavy, complex types numbered N4 and N5. Simple winches weighed 10-12 pounds and were priced at up to 125 rubles, while heavy ones weighing 16-20 pounds were priced at up to 140 rubles. Their windward devices cost 25 rubles. Archival sources indicate that there were 25 types of winches, both hand- and horse-drawn, adapted to both winches and threshing machines, weighing from 9 to 25 pounds and priced from 25 to 225 rubles. They were the equipment of the Baden Machine-Building Plant, presented by the Baden Vaililigym Joint-Stock Company (Baden, Germany).11 At the beginning of the 20th century, the Varaksin winch became widespread; they were compact, light, and easy to use.

Among the seeders, the “Eckert” track seeder of the Katyusha system imported from America is widespread. There are 3 types of American seeders, and 2 types of “Eckert” seeders are widespread. The following table gives a broader idea of this. It can be noted that a seeder used in agriculture is a mechanical or technical device or sowing machine designed to sow seeds in the soil at the same depth and distance. The main functions of seeders in agriculture are to evenly distribute the seeds, regulate the depth of sowing, save labor and time, as well as increase productivity.

Along with the seeders, there was a steel-toothed American harrow with a spiral spring of the Bollingworth brand (27 teeth, weight 9.4/1 pound, price 60 rubles-diss), a steel hay mower "Massey Harris" (blade length 4 2/1 feet, weight - 18 pounds, price - 140 rubles), a wheel, a connecting rod, a steel conductor, a sharp knife (with a strong wooden support), a harvesting machine weighing 26 pounds, price 140 rubles, a sheaf binder of the "Massey Harris" brand weighing 37-39 pounds, price - 350 rubles, which was distributed throughout the region. "Massey Harris" sheaf binders were one of the most expensive pieces of equipment, and they were sold without some necessary parts for 300-310 rubles.

In conclusion, the new agricultural techniques that have spread in Turkestan have led to positive changes in the region's economic and domestic life.

Foydalanilgan adabiyotlar ro’yxati:

1. Elova D.D. XIX asr oxiri – XX asr boshlarida Turkistonda yangi texnikalar tarqalishining iqtisodiy-ijtimoiy va madaniy-maishiy hayotga ta’siri. Tarix fanlari bo’yicha falsafa doktori (PhD) dissertatsiya Avtoreferati. –Buxoro., 2022-yil.

2. Elova D.D. ТУРКИСТОН ТАРАҚҚИЙПАРВАРЛАРИНИНГ ЯНГИ ТЕХНИКАЛАР ВА УЛАРНИНГ ЎЛКА БЎЙЛАБ ТАРҚАЛИШИДАГИ РОЛИ.// Journal of Research in Innovative Teaching and Inclusive Learning 2 (1), 9-12.

3. Elova D.D XIX АСР ОХИРИ-XX АСР БОШЛАРИДА ТУРКИСТОН ХЎЖАЛИГИГА МАРКАЗДАН ҚОЧУВЧИ НАСОС ТЕХНИКАСИНИНГ КИРИБ КЕЛИШИ // TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI 2 (11), 162-165

4. Болъшаков Каенное селъское хозяйства склад в туркестанское ведомости, 1913.№78.

5. Asror o’g’li A. A. PRINCE OF AFGHANISTAN ISAK KHAN ORIENTALIST DN IN THE INTERPRETATION OF LOGOPHET //Web of Semantics: Journal of Interdisciplinary Science. – 2024. – Т. 2. – №. 5. – С. 82-85.

6. Asror o’g’li A. A. History of Afghanistan-Bukhara Relations in the Process of Incorporation of Bukhara Emirate into Russian Customs System //American Journal of Social and Humanitarian Research. – 2022. – Т. 3. – №. 11. – С. 339-342.

7. Akhmadjon A. HISTORY OF BUKHARA-AFGAN RELATIONS IN THE PROCESS OF INCLUSION INTO THE RUSSIAN CUSTOMS SYSTEM //International Journal of Philosophical Studies and Social Sciences. – 2023. – T. 3. – №. 3. – C. 39-46.

8. Ahmadov A. XX ASR BOSHLARIDA BUXORO VA AFG'ONISTON EMIGRATSIYASI VA REMIGRATSIYASI //Modern Science and Research. – 2025. – T. 4. – №. 1. – C. 842-845.

9. Ahmadov A. BUXORO AMIRLIGIDAGI AFG'ONLAR: HAYOTI VA FAOLIYATI XUSUSIDA //Modern Science and Research. – 2025. – T. 4. – №. 2. – C. 1304-1308.