



### STUDYING THE TERMS OF PRODUCTION AND USE OF A COMBINED SEEDER

Nurabaev B. U.

Candidate of Technical Sciences, Karakalpak  
Institute of Agriculture And Agricultural Technology

Xamidov N. M.

Doctoral Student, Karakalpak Institute of Agriculture  
And Agricultural Technology

Niyetullaev A. Q.

Master Student, Karakalpak Institute of Agriculture  
And Agricultural Technology

#### Annotation

In order to strengthen the ability to sow seeds of diverse dispersion and high-quality sowing, the article addresses the simplicity of the seeder system, produced when farming crops in the harsh soil and climatic circumstances of Karakalpakstan. Events with low power consumption are displayed.

**Keywords:** combined unit, seeder-roller, punching tool, kinematically connected ball shafts, seed spreader,

In contrast to other locations, the conditions in Karakalpakstan prevent agricultural crop seeds from germination in a measured way until late spring. This is due to the development of planting with specialized methods and the preparation of the land. The underlying cause is that when certain instruments are used to cultivate the land, an excessive number of processings with soil-cultivating equipment are performed, the sowing period is prolonged, a plot of land is compacted, and moisture is drained. The Republic of Karakalpakstan is in the northernmost zone, hence labor costs to grow cotton products there are 2-3 times greater than in other places. When preparing the ground for crops, a specific number of attempts are made to harden the aggregates because there is little sod in the base and the earth has the highest density owing to salt leaching [1].

As a result, one of the pressing challenges of our time is the development of mechanical methods for preparing the land for the soil and climatic conditions of the republic, in how much sowing and sowing, and the entrance of its products into agriculture.

It is suggested that in order to study these tasks, a combined design tailored to Karakalpakstan's soil characteristics be developed by enhancing some of the production-level technological tools now in use.

The one we provide is comparable to the seeder (SU1501943 A1) used to plant seeds beneath film. It has a film perforator and a frame-mounted seeder. The battle side of the tambour has a



bullet mounted inside it that has a perforator. The punching tool is constructed like a bucket, with two pieces that are hinged on the shaft. The bucket's front portion is spring-loaded, while the back portion is created in the shape of a flat plate with the ability to fast spin around the axis. The axle is situated on a radius that extends in the movement direction from the center of the punching wheel to the edge of the window behind the planter. A film bearing and a straight guide are mounted on the rim. With the aid of a piercing tool, seeds are inserted into a groove that has been made in the base. The offered seeder's drawbacks are thought to be its high propensity for clogging the holes from the interior of the drum wall and its challenging cleaning process. In addition, there will be significant seed damage. It is intended to develop a straightforward seeder-coil method to improve the ability to plant cotton seeds with shaggy coats after moistening them (Fig. 1). The movable seeds are pushed under the spring by a two-stage immovable cam shaft that is positioned inside the cage and is kinematically coupled to the bottom bushing. A circular hole is located behind the cultivator bushings to accommodate any seeds. In the seeder, 1 hole is kinematically connected with 2 pushers, 3 springs, 4, 5 ball shafts 6, 7, and a groove is installed to hold the seeds of the sleeve. Hole 2 and the turn of the pusher 3 are placed along the holder 8

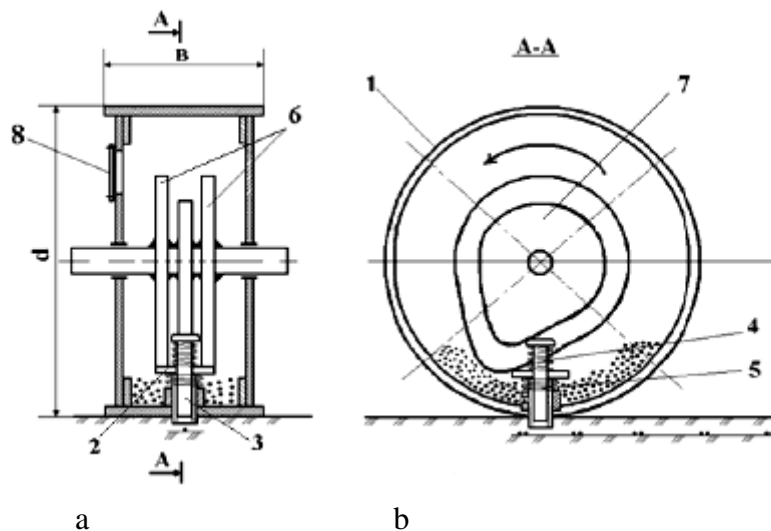


Figure 1 shows the seeder- roller's design.

Picture a - seeders' backside

Picture b- bowl portion as seen from the side.

One seed-roller, two holes, three rollers, five springs, seven kinematic axle-shaped shafts, and eight hatches are used to plant seeds in crops.



Figure 2 shows an image of a combination unit with a seeder-roller in the proletarian process.

For the purpose of planting cotton seeds and other seeds, Hatch 8 has been erected on the rink's side wall.

The way the seeder operates is as follows: during crop rotation, cotton and other agricultural crop seeds fall into the slots in the banks of the hatch in the background, and the introduced testes 3 banks are lodged in the base.

The cutter 3 moves along the tiny profile of the shaft as soon as the hole 2 reaches the ground, and the sleeve starts to penetrate the soil under the influence of the large profile of the shaft. Currently, the opening expands, allowing the grain to fall into the bush rather than the box's bottom. The seeds are pushed out by the pusher 3 squeezing the spring 4, and the bush enters the base as much as possible under the influence of the roller shaft. They instantly return to the box after sowing, and the box ensures that the soil is compacted for successful sowing development. A skilled specimen of a combination sowing machine that prepares and sows the field for the planting of high-quality seeds was developed on the basis of new technologies created in the harsh soil and climatic conditions of Karakalpakstan. Scientific research led to the assignment of the combined unit's operating for agricultural crops.

A two-stage immovable spherical shaft and a kinematics pallet bushing pushing moveable seeds make up the basic mechanism inside the proposed seeder, which increases its capacity to sow seeds of various dispersion. behind the spring Each hub of the digging equipment has a hole drilled into the rear of it where seeds can be placed in the base.

The integrated planting structure, developed for growing crops in the harsh soil and climate of Karakalpakstan, ensures high-quality sowing events with less expenditure of energy.



### **Bibliography**

1. Аминов С. Технологические основы механизации хлопководства зоны Приаралья. Монография. Нукус. Изд. «Билим» 1998 г.
2. Аминов С., Артикбаев Б., Жолдасбаев Б. Қорақалпоғистон шароитида қишлоқ хўжалик экинларини етиштиришда тупроқни экишга тайёрлаш ва экишни амалга оширадиган комбинациялашган агрегат // Ресурстежамкор ва фермербоп қишлоқ хўжалик машиналарини яратиш ва улардан фойдаланиш самарадорлигини ошириш: Республика илмий-амалий конференцияси илмий мақолалар тўплами. - Гулбаҳор: 14-15 август, 2020. – Б. 174-177.
3. Аминов С. и др. Патент РесУзбекистан №IAP 06654 Сеялка каток.