

## APPLICATION OF COMBINED WORKING BODY IN PREPARING LAND FOR SOWING.

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**Annotation:** The article provides information on the parameters of a combined device that simultaneously performs land preparation work for sowing, and the design of a combined working body is developed.

**Keywords:** field, fuel, soil, operation, volume, aggregate, field, seed.

The cluster model of organizing agricultural production is being widely implemented, as a result of which in recent years the area of land allocated to cotton-textile clusters has reached 52% of the agricultural land allocated for this type of crop. At the same time, the lack of effective market mechanisms for state support of agriculture does not allow increasing the competitiveness of the sector.

These reforms require the development of a wide range of modern financial services and the mechanization of agriculture and deep processing of agricultural products through the increase in access to quality agricultural machinery. It is envisaged to eliminate such problems as the production of quality crop seeds, the organization and development of primary seed production of local and foreign selection varieties, including biotechnological varieties, in the productive use of land in agriculture.

Short-term high-quality soil cultivation before sowing is one of the main tasks among complex agrotechnical measures to ensure the stability of high and high-quality yields from agricultural crops [2].

The specific features of pre-sowing soil cultivation in irrigated areas of cotton growing areas are divided into three zones according to natural-climatic and soil conditions, mechanical composition of the soil, technology of its cultivation, types of machinery and agrotechnical requirements imposed on it. The third zone, which accounts for 58% of the cotton area, includes lands that are difficult to cultivate and are saline to varying degrees. This zone includes the lands of Central Fergana and the lands located below the second zone: the lands of Tashkent, Jizzakh, Samarkand, Syrdarya, Bukhara, Khorezm, Kashkadarya and Surkhandarya regions of the Republic of Uzbekistan.

### Land preparation technology for sowing

Soil condition	Measures to be taken during soil preparation
Autumn plowing (salt is washed off in autumn and winter), floors are leveled in spring. The soil is settled and compacted.	Harrowing in early spring with a two-row harrow; Draw to a depth of 12-15 cm or Harrowing with a disk to a depth of 8-10 cm. Harrowing and harrowing before sowing.
Plowing in spring (washed off salt three or four times, leveled the floor). The mechanical composition of the soil is light or medium, fine-grained.	Harrowing immediately after plowing with a two-row harrow; Draw to a depth of 12-15 cm, harrowing (two or three times), harrowing.

Recommendations for the preparation of arable land in the conditions of the Bukhara region. It is known to our children that in order to prepare plowed land for planting, various technological operations must be performed, depending on the conditions, and for this purpose, the appropriate aggregates are introduced into the field many times. As a result, under the influence of tractor and machine wheels, the soil is compacted more than normal, the harmful, dusty part increases, and the water absorption properties of the soil change.

The repeated introduction of aggregates into the field causes great harm, especially in regions with a dry climate, in areas with little humus in the soil. Under the mechanical influence of aggregates, organic matter decomposes and evaporates together with moisture or is washed away by water. Therefore, the method of minimum tillage is spreading widely and rapidly throughout the world, which requires the effective use of this type of machinery.

The effectiveness of the use of combined aggregates in preparing land for planting in one pass in the conditions of the Bukhara region.

The constructive solution (Figure 1) of the combined machine, its place of application and size, natural climatic conditions of the region, physical-mechanical and technological properties of the cultivated soil, agrotechnical requirements for soil cultivation technology, the possibility of simultaneous technological operations and their relevance to the purpose, and the energy base (power of the tractor used,

constructive and operational advantages) are determined.

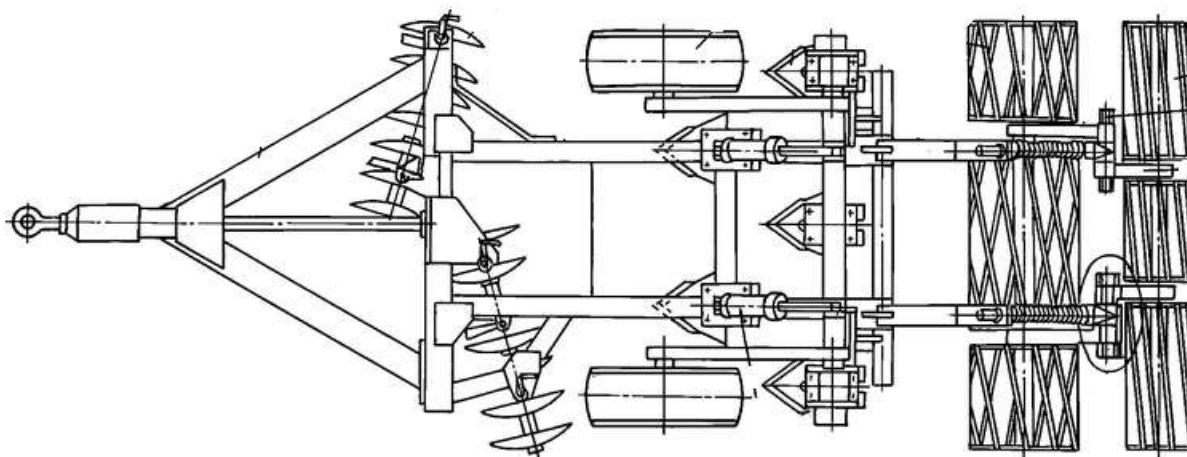


Figure 1. **Structural scheme of the proposed unit.**

In the conditions of the Bukhara region, when preparing the land for sowing, the unit is introduced into the ground at least four times before the seeds are buried in the ground, and a total of 75-90 liters of fuel are consumed per hectare of land. The universal machine we propose can perform five agrotechnical operations at once, and 35-45 liters of fuel are consumed per hectare of cultivated land, and the total fuel consumption, when added to the fuel consumed for sowing, reaches 57 liters. It is obvious that the economic effect is achieved by saving these costs, when conducting experiments in the field conditions of the Bukhara region, a positive economic effect was achieved from the unit in one season. Another issue was the use of a common Ramadan and hydraulic system in the transportation of the universal machine, and the scientific justification of increasing its efficiency by reducing the total resistance. Introducing new technologies in field farming, using energy-efficient universal machines, implementing resource-saving technologies in agriculture, organizing "Smart Agriculture", improving the social situation of our people, and creating our place among the world's leading countries are among the important tasks set before us.

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