



PREPARATION OF SOIL WITH KFG 3.6 KARAKALPAKSTAN

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ANNOTATION

In the conditions of Republic Karakalpakstan during crops from for small humus, low fertility and the worst mechanical structure not always it turns out high-grade shoots and accordingly low productivity of agricultural crops. Therefore, it will be expedient will apply a cultivator milling subsoiler (KFG 3,6) with a skating rink to reception finely lumpy structures named «agronomical valuable fraction», creating preconditions for a guarantee crop from agricultural crops.

KEYWORDS: *Lumpy soil, a universal cultivator subsoiler - KFG 3,6, rink, agronomical valuable fraction, an additional crop, profit, profitability of manufacture*

INTRODUCTION

The Republic of Karakalpakstan, due to the climate and hydrogeological conditions, is characterized by low humus content, weak structure, lumpy soil and a high tendency to salinization.

At present, when using tools for pre-sowing tillage on saline, heavy and medium-mechanical soils of the Republic, high-quality cultivation is not achieved, which does not satisfy the requirement of agrotechnics of irrigated agriculture, therefore, multiple treatments with different implements are performed. This, obviously, will entail the irrational use of technology, desiccation of the soil, uneven compaction of the surface layer. Compared with passive tools, the use of a KFG-3.6 milling cultivator provides several operations in one pass, obtaining a fine-grained soil structure and a leveled field surface. However, after cultivating the soil with a KFG-3.6 milling cultivator, it is necessary to do malignancy (leveling) as a separate unit to obtain the necessary soil density.

Improvements in technology and increasing the productivity of crops with the rational use, conservation and increase of soil fertility are considered as an obligatory section of state policy, zonal farming systems and plans for the development of the country's economy.

MATERIALS AND METHODS

The influence of presowing soil compaction with rollers in the aggregate by a KFG-3.6 milling cultivator on the growth, development and productivity of cotton was studied in the fields of the experimental farm of the Karakalpak Research Institute of Agriculture in the field.

The soil under the experimental plot is old-irrigated, meadow type, medium loamy in mechanical composition, the groundwater level fluctuates at a depth of 1.2 - 1.8 m. The experiments were repeated four times. S-4727 variety was sown. Humus content is very low (0.67). The soil of the experimental plot is medium saline, the type of salinity is chloride sulfate. The size of the plots was (4.8x50m) 240 m².

The experiment was carried out according to the generally accepted method in four repetitions and the following options:

- 1. Conventional tillage as in production*
- 2. Pre-sowing treatment - two-time harrowing with malovaniya.*
- 3. Processing by a milling cultivator (KFG — 3.6) and double malovaniya.*
- 4. Processing with a milling cultivator equipped with rollers with different pressures.*

Each year, 15 t / ha of organic, 210-250 kg / ha of nitrogen, 130-150 kg / ha of phosphate fertilizers were applied.

RESEARCH RESULTS

The research results showed the positive aspects of the use of KFG-3.6. When cultivating soil with KFG 3.6, it was achieved on a finely lumpy structure, which had an agronomic valuable fraction of 80-83%, so seedlings quickly began to appear, growth and development accelerated. It was revealed that the pre-sowing cultivation of the soil with a KFG-3.6 milling cultivator with a skating rink facilitates the emergence of seedlings. According to the emergence of plants in the control variant, the number of plants that sprouted 16

days after sowing (on the last observation date) was 19.5 units per linear meter, and when treated with KFG, the number of plants sprouted was 3.6 days 16 days after sowing (on the last date of observation) were 24.2 units per 1 p / m.

The results of the experiment show that processing with a milling cultivator significantly improves the soil structure. The skating rink - mala also affects the structure of the soil. The optimal fractions in

the control variant were 13.4–19.7% less than in the usual treatment. The highest degree of crumbling was observed when combining processing.

According to the height of the main stem, in the control variant, the number of plants that sprouted 16 days after sowing (at the last observation date) was 81.2 cm, and when processing with KFG - 3.6 the number of plants that sprung 16 days after sowing (at the last observation date) were 83.3 cm.

Table- 1
Qualitative indicators of comparable instruments

Indicators	KFG 3.6 + soil deficiency			KFG 3.6 with roller		
	Heavy loamy	Medium Loam	Easy loam	Heavy loamy	Medium Loam	Easy loam
The hardness of the soil at a depth of 0 ... 10cm	0,40	0,34	0,30	0,47	0,42	0,38
Specific traction resistance. KN / M	0,69	0,78	0,94	0,36	0,41	0,48

The cotton yields in the experimental plot in the control variant, the average yields were 30.6 c / ha, and when processed with KFG - 3.6 and compaction was performed using a small equalizer, the cotton yields were 34.3 c / ha and 3.7 c was obtained / ha of the additional crop in comparison with the control option, and when processing with KFG - 3.6 and where soil compaction was performed using a roller, the cotton yield was 35.8 c / ha of crop and 5.2 c / ha of additional crop was obtained in comparison with the control option, as well as 1, 5 c / ha of additional crop compared to options where the seal was made using a small equalizer.

The research results show the need for the use of tools of the cultivator of the milling deep-ripper (KFG-3.6), which received an additional yield of 3.7-5.2 kg / ha due to the production of structural soil, which is called "Agronomic valuable fraction" in production.

CONCLUSIONS

1. In unfavorable soil and climatic conditions of the Republic of Karakalpakstan, it is advisable to use the KFG 3.6 milling cultivator deep cultivator for good soil preparation.

2. During pre-sowing preparation of the soil with a cultivator with a milling deep-ripper (KFG 3.6), the content of the agronomic valuable fraction with sizes of 10-0.25 mm was 83.2%, when in the control variant on a high agrotechnical background this indicator was 63.5% and in the variant where the processing was carried out with KFG 3.6 and compaction was carried out with a small equalizer structural indicators of 76.9%.

3. When pre-sowing the soil with a cultivator with a milling deep-ripper (KFG 3.6), shoots appear better and more amicably, growth and development are better that create the prerequisites for the best crop.

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5. With the use of KFG 3.6, the profitability rises sharply and due to the additional crop, the cost of buying KFG 3.6 tools is quickly covered and KFG 3.6 serves the farm for a long time. It should be noted that, the universal implement will need to be correctly connected to the tractor PTO at the indicated mark.

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