



NEW TECHNOLOGICAL ASPECTS OF CROP CULTIVATION

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ANNOTATION

The fourth and subsequent crops: closing of moisture with a cultivator with loosening working organs; sowing of annual or perennial grain crops (rapeseed, alfalfa, clover, etc.); when cultivating perennial grasses, spring spring harrowing with fertilization and sowing of grasses.

Key words: material, sowing and planting, care of crops and plantations, harvesting. The techniques

Technologies of cultivation of agricultural crops include tillage, fertilization, preparation of seeds and planting material, sowing and planting, care of crops and plantations, harvesting. The techniques used in the cultivation of cultivated plants are due, on the one hand, to their biological characteristics, and, on the other, to the soil and climatic conditions of the cultivation area.

Tillage in the accepted technology of cultivation of agricultural crops should be carried out by the following machines:

For a couple: spring and summer cultivation of the soil as weeds appear (2-3 times). In the presence of perennial weeds, it is necessary to introduce herbicides of continuous action. The last treatment is deep: dump, non-dump or chiseling, depending on the conditions of the zone. The first crop after steam: sowing with a tillage sowing unit; harvesting with crushing and spreading straw; immediately after harvesting, processing with a cultivator with paws or rippers, or a discator.

The second crop after steam: closing of moisture with a cultivator with loosening working bodies; sowing with tillage sowing machines or aggregates; harvesting with crushing and spreading straw; immediately after harvesting, processing with a cultivator with paws, rippers or discators.



The third crop after steam: closing of moisture with a cultivator with loosening working organs; sowing with a sowing tillage machine and a sowing tillage unit; harvesting with straw grinding; immediately after harvesting, cultivators or discators are treated to a depth of 8-12 cm; after the appearance of weeds, deep non-fall loosening or chiseling of the soil.

The fourth and subsequent crops: closing of moisture with a cultivator with loosening working organs; sowing of annual or perennial grain crops (rapeseed, alfalfa, clover, etc.); when cultivating perennial grasses, spring spring harrowing with fertilization and sowing of grasses.

After the last harvest of grain crops, disking along and across the field to a depth of 8 to 16 cm. After the appearance of weeds or grasses, deep loosening of the soil. Then the crop rotation is repeated.

The soil and climatic conditions of the regions of Russia are diverse. They differ from each other in the amount of positive temperatures and precipitation throughout the year and during the growing season, the relief of the field surface, the type of soil and other factors. Depending on these factors, various crop cultivation technologies are used, providing for methods of tillage, sowing and care, which contribute to creating conditions for the growth and development of plants and, consequently, obtaining high yields.

The results of research and production experience show that the choice of the method of tillage and sowing depends on the physiological needs of cultivated cereals, fodder or industrial crops. Therefore, in the accepted crop rotation, when cultivating the soil for different crops, it is necessary to create the degree of soil crumbling, the density of addition and the depth of tillage corresponding to the cultivated crop. In addition, the method and period of tillage and sowing should contribute to the preservation of moisture in the soil and the elimination of all types of soil erosion.

Based on the above, it follows: when cultivating potatoes, vegetable and industrial crops, when planting organic fertilizers in the soil, as well as once in the crop rotation (after 5-9 years) to move the top layer of soil down, a dump treatment to a depth of 0.2-0.3 m is necessary;



on soils subject to wind erosion, once in a crop rotation, deep non-tillage of the soil to a depth of 0.2-0.3 m or chiseling of the soil to a depth of 0.35-0.45 m with preservation of stubble and crumbling of the soil in accordance with agrotechnical requirements is necessary;

following the harvesting of cereals and other crops, in order to preserve moisture in the soil, it is necessary to shallow soil tillage to a depth of 10-16 cm or loosening the soil to the depth of the arable layer with ripping or disc working bodies: cultivators with working bodies for continuous tillage or rippers, discators;

in case of late sowing, the early closure of moisture is carried out with tools with spring rippers or ripping vibrating working bodies to a depth of 5-6 cm;

pre-sowing tillage is carried out to loosen the soil to a sowing depth of 5-8 cm with the creation of a mulching layer of soil, depending on the clogging of the field with paws or rippers on a spring rack;

sowing, depending on the conditions of the zone, is carried out in ordinary, strip or scatter methods to a depth of 5-8 cm with simultaneous application of mineral fertilizers and sealing them at a sowing depth or below 3-5 cm; with different types of coulters;

pre-sowing treatment with simultaneous sowing and fertilization is carried out by tillage sowing units with different types of working bodies to a depth of 6-8 cm.

In order to reduce the number of passes of units across the field and the timing of field work, newly created units should be universal with replaceable working bodies or replaceable modules with the above-mentioned working bodies and combined, performing several technological operations in one pass of the unit.

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