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Soil Ecology When Applying a Softening Disc Device to a Rectifier

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ABSTRACT

Based on the experiments carried out in this article, information on improving the ecology of the soil using a softening disc device on the base rectifier and increasing the working productivity of the rectifier is covered.

The ecological leprosy of the natural structure of the soil depends on its physical properties; that is, its mechanical composition, large – small size of particles, porosity, water permeability, air exchange, absence of light, slight amplitude changes in movement.[1]

The mechanical composition of the soil is represented by the relative amount of particles of different sizes. In the case of a soil particle (0.2 mm...2 mm), its structure is good, in which moisture, air are well stored; in a small – particle (0.2 mm...20 µm) soil, moisture and air will be difficult to pass, since the porosity of low particles is dense to each other. If the density of loamy soils in plowed rural farm lands is 1.0...1.2 g/cm3, then as a result of the Walk of agricultural techniques, the density of the soil rises to 1.35...1.55 g/cm3, and its ecological essence decreases. When the soil is compacted in a dry state, the particles crumble, the pores shrink and decrease, the passage of water becomes more difficult, there is less Air [2]. Soil is a genus with the ability to transfer water, retain heat and air, as well as being a life environment for living organisms.

Qualitative leveling of irrigated land, one of the environmental measures of soil melioration, can be carried out in practice by improving the working organs of rectifier machines.

Repeated leveling in our region is carried out before planting every year at 30...35% of the total area. Ground leveling work is carried out in the fall, or in early bakhor, using long-base leveling machines of the P-2.8; p-4A; PPA-3.1. The maneuverability of long-base leveling machines is

not high, and their weight is more than 2 tons, as a result of multiple turns of aggregates, the impact of Tractor Wheels on the soil negatively changes, which leads to compaction beyond the agrotechnical norm [3]. Such arable land can be achieved by passing 3-4 times over the surface of the area with existing leveling aggregates to form an agrotechnical demand-appropriate plane. This can lead to impaired soil fertility and soil erosion. To eliminate the above problems, the base rectifier working body was improved by scientists of the Bukhara branch of TIQXMMI. A spherical disc softener is installed on the front side of the leveling bucket, at some point the soil is loosened and the layer - by-layer cuts as a result of which the structure of the soil improves, increasing the operating performance of the aggregate by up to twice the tensile resistance by 7 percent. This is done in one pass with the recommended evolutionarily working part, forming a plane corresponding to the agrotechnical requirement. As a result, soil compaction and erosion are reduced, and harmful substances emanating from the tractor engine are reduced and have little impact on environmental ecology.

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