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IMPROVING THE EFFICIENCY OF USING BASE GROUND RECTIFIERS

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Abstract: This article summarizes the results of a study to improve the efficiency of using existing basin levelers when leveling irrigated arable land.

Аннотация: В данной статье обобщены результаты исследования по повышению эффективности использования существующих выравнивателей бассейна при выравнивании орошаемых пахотных земель.

The main problem of agriculture today is high yields, with low energy consumption. The increased demand for energy means that this problem needs to be solved faster. Therefore, it is advisable to make good use of the cuvat of techniques, improve the quality of work and reduce as much as possible the negative effects that result from the work performed. Leveling of irrigated arable land and basic mechanical processing remains one of the processes that require the most energy consumption in agricultural production. Because to carry out this process, from 30% to 40% of all energy spent in agriculture to 4 million in equivalent micdor.tons of liquid fuel are consumed. Therefore, it is important to look for ways to level the ground as well as improve soil processing machines, increase the technical level of their reliability and reduce the energy consumption of machine tractor units along with the racobatbar approach.

It is worth noting that the search for ways to reduce energy consumption is directly related to increasing the productivity of base land rectifiers, improving the quality of leveling, reducing labor and money costs. Depending on the soil zones in the conditions of the Bukhara region, the impact of the techniques on the soil was studied as much as possible on the example of the land leveling process in field conditions, and analyzes were carried out on the basis of the work process of all types of land leveling machines. It is known that in the research carried out by our scientists in this area, it is determined that the current and operational leveling of land in the conditions of our region is carried out annually in a short agrotechnical period. 25 from the total land area in each farm...30%, with long-base P-2.8 A, P-4, Pa-3, PPA-3.1 and other brand rectifiers before planting in autumn and spring, the explutation is leveled [4]. While these land

rectifiers are visually simple, the performance, technologically, is very complex, and their efficiency depends on the dimensions of the area and irregularities and several other factors. The main criteria for the effective operation of land rectifiers: the quality of work, the cost of work and the amount spent on the unit of work performed.

Longitudinal rectifiers are used for light leveling of land. These often have an unevenness length of 20...It can be used in places up to 30 meters, up to 20 cm high. In the results of the scientific research work carried out, our scientists note that the size of the irregularities in the Bukhara region is 15 to an average length of...30, Eni 20...The Balad of up to 40 meters is on average 10...20 cm [5]. On small contoured plots (3...Up to 5) the average length of the irregularities is 7...11 m, the average height of the irregularities is 10...Around 15 cm. The analysis of the above irregularities shows that the irregularities on the plots with small contours in relation to the plots with medium and large contours differ in size. From this it follows that land with small contours has a higher level of flatness than middle and larger land. When we use land rectifiers with long bases in areas with small contours, the corners of the plots and the turns remain unaltered. Because the working length of these rectifiers is 15...16 m, turning radius 15...Up to 20 meters. Due to its low maneuverability, there is little working success. It is necessary to align the corners of the plot with the help of hands. Taking into account the above, as well as the scientific work and experience of a number of specialists, it is possible to use grader rectifiers in small contoured areas, branded units GN-2.8 A and GN-4A. But the base of these rectifiers is small, so the quality of work does not fully meet the requirements of agrotechnics. Therefore, it is recommended to use the following improved base rectifier, determined during the experiment in which it was carried out that it is effective to use small height rectifiers in small contour areas.

Figure 1. The ground leveler with a base is a device scheme with a softening disc, which is installed in front of the junction. 1-discs, 2-discs mounted axle, 3-spokes the rotation of softening discs.

TIQXMMI Bukhara branch

The softening working body of the base rectifier was improved by the profesor-teachers of the Department of" mechanization of water management and melioration". A device with a softening disc is installed on the front of the rectifier housing and(Scheme 1) at some point the soil is cut and loosened. As a result, the structure of the soil improves, and the operating performance of the aggregate increases by 1.5 times. With this recommended improved working part, a plane is formed corresponding to the agrotechnical requirement in one and two transitions. As a result, the reclamation of the soil improves. Taking into account the above, we tested in the experiment with the installation of softening discs on the front of its housing in order to increase the performance of a small-sized rectifier. According to the results of experiments, the quality of work of the rectifier has improved, while the operating costs have decreased by almost twice. The longitudinal rectifier created by the research is made up of the following parts, softening discs, discs with a built-in Axis and sponges that ensure its rotation, and frames that hold the sponges as well as the disc device. The structure of this device reduces the resistance to loosening

by cutting off the soil layer, cutting large cuttings, plant root stems and cartilage in unimproved areas. Cut softening discs are mounted at a distance equal to one axis. Cutting softening discs ensure the uniform spread of the soil along the width of the junction. As a result, the leveling quality of the aggregate is improved. In place of the conclusion, it can be said that qualitative leveling of the lands improves the composition of the soil and increases yields. This will lead to a higher level of agricultural development.

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