INTERNATIONAL MULTIDISCIPLINARY JOURNAL FOR RESEARCH & DEVELOPMENT
SJIF 2019: 5.222 2020: 5.552 2021: 5.637 2022:5.479 2023:6.563 2024: 7,805
eISSN :2394-6334 https://www.ijmrd.in/index.php/imjrd Volume 11, issue 08 (2024)

УДК: 631.314.4

IMPROVING THE QUALITY OF LEVELING BY MODERNIZING BASE GROUND RECTIFIERS

Shodiyev Shodiyor Shavkat ugli
Bukhara Institute of Natural Resources Management

Abstract: The article describes the technological processes of selection and leveling methods of the type of leveling, based on the conditions of uneven height and leveling conditions in the organization and selection of current and main Leveling Works of irrigated crop areas.
Keywords: Bucket, soil, resource-saving, technology, softening, bullet, area, device, scheme, aggregate speed, machining, diameter, radius of curvature, grinding quality, roughness

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 power of the techniques, improve the travel of work and reduce as much as possible the negative effects generated from the work performed.

The development of the modern agro-industry of the Republic of Uzbekistan is based on all branches of Agriculture: rental contracting, farm, farm and peasant farm associations. The current development of production in agriculture is planned on the basis of general mechanization, the application of intensive and industrial methods of growing products in ham. The production of small-capacity energy and working machine mechanization for farms and rental contractors is aimed at positively solving the issues of importation from abroad.

In order to properly process the ground, it is necessary to know its physical, mechanical and technological properties. The soil is a multiphase mucite, consisting of a mixture of solid particles, water, air and living organisms. The technological property of the soil depends on the ratio of the above phases. The soil of the physically optimal moisture level is well rubbed, does not stick to the working organs, requires little energy when plowing. The hardness of the soil expresses its mechanical viscosity, that is, how much it resists the immersion of a solid. One of these is a qualitative leveling of irrigated land. As a result of quality leveling, agricultural machines work with high unum, the brine of the lands is well washed, the seed falls to the same depth, the germination is also uniformly complete, 6-7 percent water is saved. The current leveling is carried out in two stages. First of all, the marzas are leveled and the egats and tithing are buried, this work is carried out only in the fall. At this first stage, it is absolutely impossible to leave the work of leveling the land to spring, since when a large amount of moisture accumulates in the soil in the spring, the soil becomes dense if the land is leveled. And in the second place, the surface of the entire field is leveled to the cover before sowing the seed seeds. In the first stage of leveling work, greiders of type GN-2,8 and GN-4 should be applied, in the second stage-VP-8, VP-5, kzu-0,3 type rectifiers, MV-6,0 type rectifier-molars.

It is worth noting that one of the main factors in improving the reclamation of irrigated arable land in agriculture is its leveling. The yield of agricultural crops in leveled areas increases by 40 – 45 percent compared to unregulated areas, water consumption in irrigation decreases, and working conditions are improved, as well as the impact on ecology increases in the performance of the next expletive agricultural techniques. [2]

It is known that the current and explutational leveling of land on irrigated arable land is 35 of the total land area of farms in short periods of each year...40 percent is aligned with long-base P-2,8 a, P-4, Pa-3, PPA-3,1 and other rusted land rectifiers before planting in autumn and

Spring [3]. Leveling irrigated land.-.it creates conditions for increasing the yield of agricultural crops, preventing labor consumption and high waste of water during the irrigation of Fields, high-quality processing between the rows and high-quality execution of harvesting by machine.

As a result of several processing and watering of the soil, various irregularities occur in the fields: during the plowing process, long egats and furrows are formed, after watering, high-low ones and residual irregularities from the previous year. In addition, in certain sections of the field, from repeated watering, the soil is observed to sit and drown. All such irregularities can be eliminated by putting into practice the current (explutational) alignment in the process of preparing the fields for planting. It is necessary to carry out the current (operational) leveling process in a short agrotechnical period. The fact that existing farms currently have few long-base rectifier machines, as well as changing the geometric shape of existing rectifier softeners, makes the current rectification difficult to complete in time.

Such a problem can be solved only if you know the way to improve the softening device of land leveling machines with a long base, as well as increase work productivity.

Studies show that when the speed of movement is increased to 8.5 km/h, the moderate movement of the rectifier and the uniform grinding of the incision pallets increase the leveling level, ensuring that the ground plane is of good quality. When the speed of movement of the rectifier is increased to more than 8.5 km/h, the vibration of the car frame increases, which begins to negatively affect the quality of work of the rectifier. This situation increases the resistance of the working body to fall and rise more than normal. This causes the drag resistance to change larger. This condition leads to a large change in the size of the prism, which is pushed into the junction. As a result, the plane quality of the field is impaired in such a way that the unevenness of the yield ballad [3]. The improvement of the softening device of longitudinal rectifiers was carried out in Central Asia with the aim of substantiating the technology of rational operation. It is found in scientific research that as a result of many passes of rectifiers from one place, the upper fold of the Earth becomes much denser and larger, the aggregate is reduced by the productivity of work. These disadvantages, especially on land with small contours, are common in this process.

Based on the above opinions and considerations and a number of scientific research works, it can be said that the improvement of the softener device is required to increase the working efficiency of the long-base rectifier and further improve the quality of its ground leveling and reduce its drag resistance.

To do this, it can be achieved by using an emollient disk device. The main function of the disc device is to reduce the resistance of the rectifier blade to shearing in pre-softened and large cross-sectional areas, to form the area surface plane corresponding to the agrotechnical requirement in 1-2 passes over the area surface. Qualitative leveling of areas and improvement of the soil fraction is carried out with the installation of a device with a softening disc in front of the leveler bucket. If a disc device installed on a tall Earth rectifier is applied in practice, the ecological essence and physical properties of the natural structure of the soil are improved, the fertility of the soil increases. Provides the opportunity to reduce the cost of work and leveling processes carried out in agriculture by a certain percentage, as well as the cost of products. In mechanization and improved agriculture, the quality of work performed when leveling irrigated land is improved, the costs spent on irrigation are reduced. For plant development, the composition of the soil improves, increasing yields. It can be concluded that this is a result of an improvement in the quality of work of the rectifier, as well as its positive effect on soil ecology.

LITERATURE USED:

1. President of the Republic of Uzbekistan "on measures to further improve the reclamation of irrigated land and the rational use of Water Resources in the period 2013-2017".PQ-1958.

2. M.Akhmedzhanov "planirovka oroshaemix zemel" Tashkent - "cocktail" 1991 g.

3. I.Hasanov., J.Kuchkarov., U.Hasanov recommendations" on the effective use of techniques for preparing land for planting." Bukhara-2013

4. I.Hasanov., J.Kuchkarov., U.Hasanov. TIMI BF is a collection of scientific articles and abstracts of the traditional 2nd scientific and practical conference dedicated to the" year of veneration of the elderly". Bukhara-2015 y 124-125 b.

18. Egamberdiyev, M. S., Oripov, I. U., Hakimov, S., Akmalov, M. G., Gadoyev, A. U., & Asadov, H. B. (2022). Hydrolysis during hydration of anhydrous calcium sulfosilicate. Eurasian Journal of Engineering and Technology, 4, 76-81.

19. Egamberdiev, M. S., Oripov, I. U., & Sh, T. S. (2022). Development of a Method for Measuring the Layered Moisture State of Concrete and Various Bases. Eurasian Journal of Engineering and Technology, 4, 82-84.

20. Z.Z.Qodirov, I.A.Oripov, A.Tagiyev, G.Shomurodova, & M.Bobirova. (2022). WATER-SAVING IRRIGATION TECHNOLOGIES IN SOYBEAN IRRIGATION, EFFECT OF SOYBEAN ON GROWTH AND DEVELOPMENT. European Journal of Interdisciplinary Research and Development, 3, 79–84. Retrieved from https://www.ejird.journalspark.org/index.php/ejird/article/view/33

21. Isayev S. X., Qodirov Z. Z., Oripov I. O., & Bobirova M. B. (2022). EFFECTS OF RESOURCE-EFFICIENT IRRIGATION TECHNOLOGIES IN IRRIGATION OF SUNFLOWERS ON LAND HYDROGEOLOGICAL CONDITIONS. British Journal of Global Ecology and Sustainable Development, 4, 95–100. Retrieved from https://journalzone.org/index.php/bjgesd/article/view/55

22. Qodirov Z.Z, Oripov I.O, & Avezov Sh. (2022). Effect of Drip Irrigation of Sunflower Crop on Soil Meliorative Status. Texas Journal of Agriculture and Biological Sciences, 8, 107–111. Retrieved from https://www.zienjournals.com/index.php/tjabs/article/view/2382

23. Khodirov Z, Jumaev J, & Oripov I. (2023). Application of water-saving irrigation technologies in the irrigation of fodder beets grown as the main crop. Texas Journal of Agriculture and Biological Sciences, 17, 34–39. Retrieved from https://zienjournals.com/index.php/tjabs/article/view/4137