## THE EFFECTIVENESS OF APPLYING SOFTENING DISCS TO THE BASE GROUND RECTIFIER

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**Annotation.** This article covers the high speed of the long-base rectifier and the efficiency of applying spherical softening discs in increasing performance and quality of work in the extended coverage width.

**Base phrases:** disc, rectifier, grunt, leveling quality, wheel, technological process, elastic, suspension, contour, working body (knife)

Today, it is an urgent issue to improve the level of flatness of the land, carry out its quality leveling work and create a high leveling aggregate of work productivity for these works. The modernization of the techniques used by farms for the current leveling of arable land is aimed at improving the quality of work of base rectifiers, the dependence of tractor-machine units on work productivity, the study of reducing fuel consumption. In the field of Agriculture, the main emphasis is on improving the reclamation of irrigated land and the development of agricultural production by the head of state, which is a proud and responsible task. Because this is exactly the direction in the economy of the Republic, the cultivation of the main food products of our people, the production of the necessary products ensures the release to the international market in ham. Recognizing the autonomy of this task in nihoyat, it is important to take this direction into account and apply techniques that have been improved to carry out agrotechnical activities with proper quality to ensure stable agricultural production, increase the productivity of land and increase the yield of agricultural crops.

To date, different techniques are used in land processing in agriculture. But the choice of the type, which is cost-effective in all respects in their use, directly requires the study of foreign techniques.

At the same time, 95% of the total arable land area in the United States is plowed using spherical discs, since this method can drive an area of three times a day more than in the traditional method, without loading excess voltage on the tractor and without additional spare parts consumption. Driving land on a spherical disk involves simultaneously preparing both the land for leveling and planting. For deep loosening when soil density is a problem, it is possible to process the ground with a softener in a sediment more than the depth that can be plowed before the disking practice. It is impossible to drive away the lands where crop residues are left a lot, but this can be done with the help of a disc.

Minimum (low) ground handling and driving the ground using a disk are seen as better than previous ground handling methods due to the growing fuel prices and maintenance-dependent costs and the large amount of fuel consumption of large horsepower tractors. Soil moisture is maintained by leaving crop residues on the surface of the soil during minimal (low) cultivation in the ground. Due to the additional

cultivation of the ground, the soil does not give a high yield, and the excessive movement of tractors in the cultivated area also compresses the soil. If the soil does not turn over, the seed of the begolna grass will not be able to move to another fertile place. The creation of the seyalka, which is able to plant the crop on the harvested area (i.e. unprocessed land), quickly eliminates the reasons for plowing the Land [3]. In the practice of minimal cultivation of the ground, it can be used to loosen the compacted soil with a disc softener. It has a greater ground handling capacity per day, using more gravel and less horsepower than others.

The disc ground driving method is much more modest compared to all other methods of driving land. In the US, the cost of driving disc Land Is Us \$ 28 per hectare. Other types of land driving, for example with omoch, cost from \$ 50 per hectare. Costs increase again due to tractor wear and tear of the spine organs. With a disc drive device, more land can be prepared for planting in the short term. It does not matter whether the cultivated area is wet or dry. That is why the use of the disc is considered a customs for all practices in agriculture.

Disc-assisted treatment i.e. the application of softening spherical discs to the rectifier improves the physical mechanical properties of the soil while improving the reclamation condition. By means of a disc device mounted on a rectifier, additional work on all plants in the land can also be crushed without weapons, providing an opportunity to feed the soil. The disc treatment method gives the plant the opportunity to penetrate deeper into the soil and absorb the necessary nutrients and moisture due to the good processing of the roots into the ground, and the yield in provardi is growing from 10 percent to 30 percent. The heavy movement of large tractors over the soil compresses it, and if the soil is moist, the compaction of the Earth will increase by 4 times. This has a huge negative effect on soil treatment and air exchange, as a result of which, under natural conditions, such a land area can be restored and improved in almost 10 years.

The demand for diesel fuel for selected agrotechnical events (in the account of liters per hectare)

Agrotechnical event type	Cam	Middle	High
Deep loosening of the soil (35	12.3	19.8	27.9
cm)			
Land driving in omoch (10 cm)	10.9	17.5	24.6
Land driving on Tanden disc	4.7	5.2	5.7
Drawing (10 cm)	7.1	11.8	16.5
Driving with disc softener	5.7	9.0	12.8

As can be seen from the table presented, driving land with discs is economically convenient in all respects.

Based on the above opinions and considerations and a number of scientific research works, it can be said that it is recommended to apply a softening device to the longitudinal rectifier, depending on the above disc windings, in order to increase the working efficiency of the long-base rectifier and further improve the quality of its

ground leveling and reduce its drag resistance.

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 a plane corresponding to agrotechnical demand in 1 pass over the surface of the field. 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. 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. For plant development, the composition of the soil improves, increasing yields. It can be concluded that this is the result of the positive effect of the rectifier on soil ecology.

## Literature used:

- 1.М. Ахмеджанов. Планировка орошаемых земель. Ташкент., «Мехнат»., 1991, с. 52.
- 2.И.С.Хасанов,П.Г.Хикматов. «Изучение эффективности применения планировочных машин и выбор типа орудия для фермерских хозяйст Бухарской области. Доклады междунароной научно-практической конференция. ТошДУ., Тошкент, 2003, с.221.
- 3. Atamurodov, B. N., Ibodov, I. N., Najmiddinov, M. M., & Najimov, D. Q. The Effectiveness of Farming in the Method of Hydroponics. International Journal of Human Computing Studies, 3(4), 33-36.
- 4. Сатторов, Ш. Я. (2020). Use of aerocosmic methods and gis programs in construction of space data models of pastural land. Актуальные научные исследования в современном мире, (5-4), 16-22.
- 5. Kurbanmuratovich, M. R., Jalilovich, K. J., Ugli, I. I. N., & Ugli, N. M. M. R. (2021). RESULTS OF APPLICATION OF SOFTENING SPHERICAL DISC WORKING ORGANNI IN FRONT OF THE BASE SMOOTHING BUCKET. ResearchJet Journal of Analysis and Inventions, 2(07), 14-22.
- 6. Juraev, F. U., Ibodov, I. N., Juraev, A. J., Najimov, D. K., & Isoyeva, L. B. (2021, October). Development of procedures for corn variets irrigation as main crops. In IOP Conference Series: Earth and Environmental Science (Vol. 868, No. 1, p. 012089). IOP Publishing.
- 7. Juraev, F., Khamroyev, G., Khaydarova, Z., Khamroyev, I., & Ibodov, I. (2021). The usage of a combined machine in the process of preparing the land for planting. In E3S Web of Conferences (Vol. 264, p. 04092). EDP Sciences.
- 8. Муродов, Р. А., Барнаева, М. А., Ибодов, И. Н., & Ёкубов, Т. А. (2020). Динамика объемной влажности при послойно-поэтапном рыхлении на фоне горизонтального систематического дренажа. Экономика и социум, (11 (78)), 933-936.
- 9. Ulugbekovich, M. O., Sobirovich, K. B., Komiljonovna, S. M., & Nizomiy ogli, I. I. (2020). Smart irrigation of agricultural crops. Middle European Scientific Bulletin, 3, 1-3.
- 10. Jalilovich, K. J., Xurram, N., & Nizomiy, I. I. (2021). Theoretical Approach To Determining The Demand For Land Leveling In The Bukhara Region. International Journal of Engineering and Information Systems (IJEAIS), 5(2), 162-164.
- 11. MURADOV, O., KATTAYEV, B., & SAYLIXANOVA, M. Sprinkler Irrigation Equipment and Types of Them. International Journal of Innovations in Engineering Research and Technology, 7(05), 45-47.
- 12. Kurbanmuratovich, M. R., Jalilovich, K. J., Ugli, I. I. N., & Ugli, N. M. M. R. (2021). TO EXAMINE THE EFFECT OF LEVELING AGGREGATES ON PRODUCTIVITY IN THE LEVELING OF CROP AREAS. Web of Scientist: International Scientific Research Journal, 2(07), 30-35.
- 13. Bakhtiyorovna, I. L., & Baxodirovna, B. N. (2021). Development Of Procedures For Irrigation Of Corn Variets AS Main Crops. Academicia Globe: Inderscience Research, 2(04), 109-113.

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- 14. Jalilovich, K. J., & Kurbanmuratovich, M. R. (2021). EFFECTIVENESS OF APPLICATION OF MODERN MELIORATIVE TECHNIQUES IN CLEANING OF OPEN COLLECTORS AND DRINKS. Academicia Globe: Inderscience Research, 2(6), 1-4.
- 15. Fazliev, J., Khaitova, I., Atamurodov, B., Rustamova, K., Ravshanov, U., & Sharipova, M. (2019). Efficiency of applying the water-saving irrigation technologies in irrigated farming. Интернаука, 21(103 часть 3), 35.
- 16. Фазлиев, Ж. Ш., Хаитова, И. И., Атамуродов, Б. Н., Рустамова, К. Б., & Шарипова, М. С. (2019). ТОМЧИЛАТИБ СУГОРИШ ТЕХНОЛОГИЯСИНИ БОГЛАРДА ЖОРИЙ ҚИЛИШНИНГ САМАРАДОРЛИГИ. Интернаука, (21-3), 78-79.
- 17. Fazliyev, Z. S., Shokhimardonova, N. S., Sobirov, F. T., Ravshanov, U. K., & Baratov, S. S. (2014). Technology of the drip irrigation use in gardens and vineyards. The Way of Science, 56.