

Efficiency of Irrigated Land Meliorativity through the Usage of Fixing Softening Disk Device to Base Leveler

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ABSTRACT

This article highlights the experiments on the study of the technological process of workman's softening disks, the shape of a drawing prism, changes in hardness, volumetric weight, soil aggregate composition, field surface alignment and change in traction resistance of the unit at different speeds of its movement.

INTRODUCTION.

As we know, our government is accepting a lot of Decrees and resolutions on widely using of water resources and improvement of meliorative conditions of lands and as a result of successive policy of providing their execution, improvement of irrigating lands in our republic and increasing fertility of growing plantings are being reached. It must be emphasized that development of agriculture is closely connected with land resources and their ameliorative state nowadays. The cooperation of scientists, specialists and science achievements are having a great importance on providing results of works for improvement of meliorative state of lands. For example, the first president of Uzbekistan accepted 3932th Decree "About measures on complete development of system of improving ameliorative conditions of lands" on the 29th of October in 2007 and the state program for 2008-2012 years which is directed to increase works on the melioration branch, to improve lands and fertility and 1958th Presidents' Resolution "About measures on widely using of water resources and improving ameliorative state of lands during 2013-2017 years". To provide effective execution of such Decrees Cabinet of Ministers accepted 39th Decree on the 24th of February in 2014 "About additional measures for providing effective execution State Program on wisely using of water resources and improving ameliorative state of irrigating lands during 2013-2017 years". In accordance of above given Decrees, to increase capacity of investment on the sphere of agriculture, to put into practice broad using of foreign

modern techniques and technologies is one of the most important problems in Uzbekistan. We must promote effective using of modern foreign agricultural and irrigating techniques and technologies in our republic. These technologies bring innovative programs and news with themselves. It helps to share ideas with 2 countries' representatives, to bring up experienced personnel and to develop their working process. During learning those new technologies our representatives of agriculture will be known with their experience and new approaches. Nowadays our country is on the leading place among agricultural developed countries [1]. It is because of using its fruitful lands in time and increasing fertility level while using new modern ameliorative and constructive techniques and technologies. These achievement of Uzbekistan helps to cooperate with the world's developed countries in the sphere of agriculture. As we know agricultural developed countries are coming to Uzbekistan are meeting with our representatives and are having meetings to introduce their new ideas and technologies on agriculture. And certainly it shows the highest achievement of our country on the agrarian sphere. As it is known lands fertility depends on water cleaning of ditches and irrigation canals in time helps to reach complete supply of water into the lands in time. Service of our present time techniques has a great value in it, because without these techniques opportunity of cleaning and digging ameliorative objects is not possible. The difference between old and modern foreign ,national techniques is high. We can give following examples to show the difference: waste of fuel and time, quality of the work and others. But modern strong techniques do not waste time and fuel, the quality of work is high [2.3.7.8]. It is impossible to use old agricultural techniques completely. Our president gave a lot of privileges to business men and farmers. So our farmers are using these privileges perfectly. We also must emphasize that our farmers are exporting their own harvest and are able to bring foreign techniques and technologies. They didn't stop at it and are going to developed countries to practice and giving their results on this sphere.

Taking into consideration above given ideas and opinions we shall emphasize followings:

- ✓ To improve experience of skillful personnel to manage modern foreign agricultural and irrigating techniques and technologies.
- ✓ To organize work and program system of foreign techniques correctly.
- ✓ To use modern techniques and technologies to improve ameliorative condition of lands and the quality of fertility.

PROCEDURE OF RESEARCH.

The process of technological working piece of the softening disc, which is mounted on the base plateau.

The observation of the soft disk's working technology indicates that the soil formed before ladle also softens to a certain depth by means of discs, and the disc itself acts around its arrow. During the aggregate movement, the disks on the leveling stack are placed in half the opposite side of each other, ensuring that the soil is uniformly distributed around the width of the ladle. This positively affects the planning of the flat area. Fragments of soil rotating around disks crush large crates as a result of friction, and the aggregate composition of the soil planting layer improves. The change in the aggregate speed from 0.69 to 2.08 m / s will improve the above processes and will ensure the agro technical requirements before the physical and mechanical composition of the soil in irrigated lands[13,14,17,18,20].

It has been investigated during the experimental study that the transformation of the tensile aggregate at the different velocities of the soil coil has been investigated and it can be seen that the cross-sectional surface of the soil coil varies according to the speed and the cross-sectional profile is reduced at high speeds.

This is due to the intensive loading of near the scoop soil at the high speeds of the aggregate. At low frequencies, the aforementioned process is relatively slow, improves soil softening, and there is almost no observing lump density of the casing. The upper part of the coat formed with the upper part of the arched soil is expanded relatively, and the soil aggregate relative to the large velocities at smaller speeds of the flattening unit. It was also observed that the agility of the disc rotation in the case of the aggregate at high speeds between the ground discs does not necessarily depend on the moisture, and the smooth movement of the soil does not occur. This requires a separate study of the discs relative to each other and the diameter of the discs [12].

Agriculture is one of the most important sectors of the economy of the Republic of Uzbekistan, dependent on the technology of farming, where the land-improvement status of the existing irrigated cropland and its leveling are realized.

Our country is a country with a huge agro-economy potential and it is natural that the optimal solution of water and agricultural problems, including land-to-earth problem, has a positive impact on agriculture and economy. The productivity of agricultural crops and the high quality of their products depend on the effective solution of soil and land issues. This, in turn, leads to a steady rise in the economy.

Our country is the major strategic product of great export potential - the main producer and supplier of cotton and its products. One of the key factors of agricultural development is to improve its fertility by improving the land reclamation condition in the conditions of increasing degradation of the area of land suitable for cultivation and limited water resources [14].

The growth of the economy of our country is closely linked to the further development of agriculture and water management, in particular, the need to improve the effectiveness of the analysis of the causes and consequences of water scarcity and the fight against it. The development of new methods of cultivation of new lands, particularly in improving crop yields, requires thorough development of methods for designing and utilizing irrigation and drainage systems to establish scientific and practical basis for regulating water regime in irrigated areas. Within the framework of the measures on effective utilization of land, water, fertilizers and energy resources, the land leveling and the use of innovative techniques in this area are important. In order to ensure that crops are kept at the required level, it is necessary to carry out the current and basic capitalization within specified periods. When tailoring is used, the "alignment" and "layout" methods can be used to maintain a fertile layer of soil. It is known from the research that in the ordinary method, the area of cotton planting is higher by 4-5 quintals per hectare. [16,17] It should be noted that more than 90% of agricultural production is produced by the method of farming. This situation indicates that the water resources are of great importance in agriculture, and their deficit affects not only the production of agricultural products, but also the entire economy of the country. One of these economical technologies is the technology of laser leveling of agricultural land. We can see that the method of land leveling using a laser can be done on a special laser device and save up to 25% of the irrigation water. The surface area of flat areas in flatbeds of laser leveling is flat, with a high noise level and the plane is close to zero horizon. As a result, the water is uniform and evenly distributed and the soil area of the crop area is uniformly moistened. The uniform, even distribution of water helps to save it. [18,20]

An analysis of the results of the research has shown that improving the quality of mechanized works up to 15-25% when implementing the hard disk flattening device, which improves the baseline leveling, will result in the improvement and development of technical crops. In order to investigate the dependence of the microorganism of the field on the development of cotton and cotton productivity, a series of experiments were carried out at a depth of 10 meters, and the number of breeds of cotton was 3 meters long. the development of the palace has improved. Due to excessive moisture in low (deep) areas of the unspoilt palace of the square, the development and productivity of the cotton fell significantly.

RESULTS OF RESEARCH.

Cotton yield has diminished because there is not enough humidity in places. (Figure 1, Table 1)

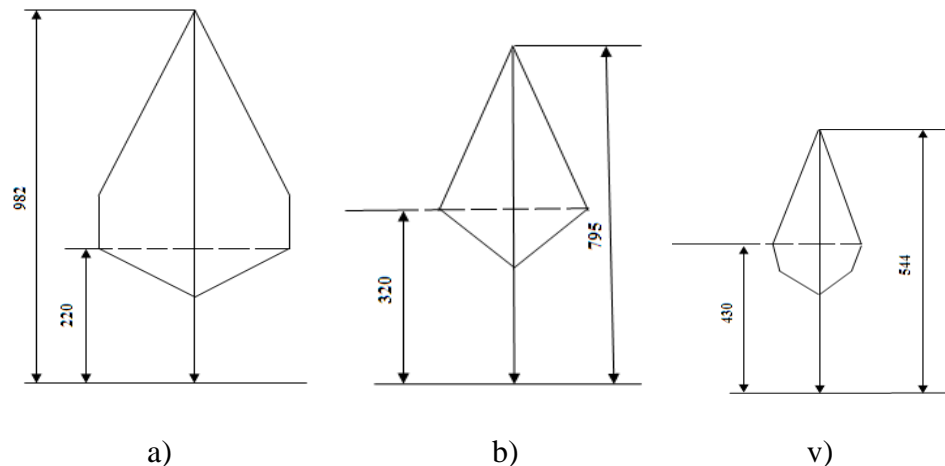


Figure 1: The size of the pine tree. a picture in a flat palace; b - in areas with high untouched, and v - at low altitudes.

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Plot relief	Observing date	The height of the bush, mm	Number of horns, pcs	Number of bolls, pcs
Flattened	1.07	312	3,5	-
Uneven		224	2,0	-
Height Low		163	1,3	-
Flattened	1.08	546	2,8	6,3
Uneven		391	6,0	2,2
Height Low		324	4,9	1,3
Flattened	1.09	701	14,6	12,2
Uneven		572	7,1	4,0
Height Low		463	5,3	2,4

The results of the above research and experiments have shown that the disk space scattering of irrigated land areas, along with improving land reclamation, has the following advantages:

- ✓ Water wasting cannot exceed 2 ... 2.5 times;
- ✓ Stingless fever exceeds 4 times;
- ✓ Irrigated lands are stored on the surface of the premises;
- ✓ Determination of soil fertility, non-extraction of soil fertilizers and their extinction;
- ✓ Qualitative processing of the series is ensured;
- ✓ Provides high quality and high speed of all agro technical arrangements;
- ✓ The crops are more productive;
- ✓ Construction of the mechanic;

In summary, we can say that the above points and analyzes show that the qualitative leveling of land in improving land reclamation is of utmost importance.

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