

INNOVATIVE TECHNOLOGIES IN THE IMPROVEMENT OF MELIORATIVE CONDITIONS OF IRRIGATING LANDS

¹Kuchkarov Jurat Jalilovich, ²Saylixanova Maftuna Komiljonovna, ³Kattayev Bobir
Sobirovich, ⁴Ibodov Islom Nizomiy o'g'li

External doctorate student, Bukhara branch of the Tashkent Institute of Irrigation and Agricultural
Mechanization Engineers, the Republic of Uzbekistan¹, Student, Bukhara branch of the Tashkent Institute of
Irrigation and Agricultural Mechanization Engineers, the Republic of Uzbekistan², Student, Bukhara branch of
the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, the Republic of Uzbekistan³,
Student, Bukhara branch of the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, the
Republic of Uzbekistan⁴

ABSTRACT

The article highlights the key strategic product of our country's major export potential, which is the main product of cotton fiber by qualitative land improvement. One of the key factors in the development of agriculture is the detailed description of the land-improvement condition of the land by improving land-reclamation condition in the conditions of degradation of land suitable for farming and limited water resources.

Key words: *water saving, furrow irrigation, disk space, innovative technologies, the mechanic, long-base scheduler.*

Gradual transition to market relations, achievement of sustainable development of agriculture and water resources of the Republic of Uzbekistan in the period of development through interconnection with the world community on the basis of common economic policy, improvement of rational use of water resources, working out of modern technological processes as well as automated working equipment and at the expense of introduction into production by using water and land which is directly related to perspective ways of transition to new forms for agricultural production[6].

Today, the issue of rational use of water resources is one of the most important issues for specialists in agriculture and water resources. The demand for agricultural crops of irrigation water in vegetation period is not always provided. In addition, the achievement of high-quality and high-yield irrigation technology depends on the reclamation of cultivated lands [10]. To do this, agro technical treatment of irrigated land will need to be implemented by using modern technologies. As we know, our government is accepting a lot of Decrees and resolutions on wisely 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 meliorative conditions of lands" on the 29th of October in 2007 and the state programme 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 wisely 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 Programme on wisely using of water resources and improving meliorative state of irrigating lands during 2013-2017 years". In accordance of above given Decrees, to increase capacity of investment on the sphere of agriculture, topup into practice broad using of

foreign modern technics and technologies is one of the most important problems in Uzbekistan. We must promote effective using of modern foreign agricultural and irrigating technics and technologies in our republic [1]. 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. It is because of using its fruitful lands in time and increasing fertility level while using new modern meliorative and constructive technics 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 technics has a great value in it, because without these technics opportunity of cleaning and digging meliorative 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 technics do not waste time and fuel, the quality of work is high. It is impossible to use old agricultural technics 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 technics and technologies. They didn't stop at it and are going to developed countries to practice and giving their results on this sphere [5].

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

1. To improve experience of skillful personnel to manage modern foreign agricultural and irrigating techniques and technologies.
2. To organize work and programme system of foreign technics correctly.
3. To use modern technics and technologies to improve ameliorative condition of lands and the quality of fertility.

From many years farmers are learning to increase fruitfulness of crops. In this aim they developed getting out wetness of soil, strengthen sandy lands, ploughing lands, planting seeds, working on rows, feeding the crops, watering, taking care of them and other agro technical action. So they getting improve the ameliorative condition of land.

Especially one can improve the productivity of causing bringing drought and its reason and fight against it. It should be build the theoretically and practically especially in improving fruitfulness of crops watering and getting out wetness and how to use the style of watering land.

Developing agriculture in independent years was done several conception, it was provided growing agricultural products.

In the latest years to form the agriculture in Uzbekistan and to develop farmer agriculture. Producing and constructing market infrastructure carries out the plans in the village and to form the class of legal landowners. It gives producing agricultural foods also increasing the profits population of the villages.

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. 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 [8,9].

[1] 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 [2]. 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 [4]. Due to excessive moisture in low (deep) areas of the unspoilt palace of the square, the development and productivity of the cotton fell significantly. Cotton yield has diminished because there is not enough humidity in places. (Figure 1, Table 1)

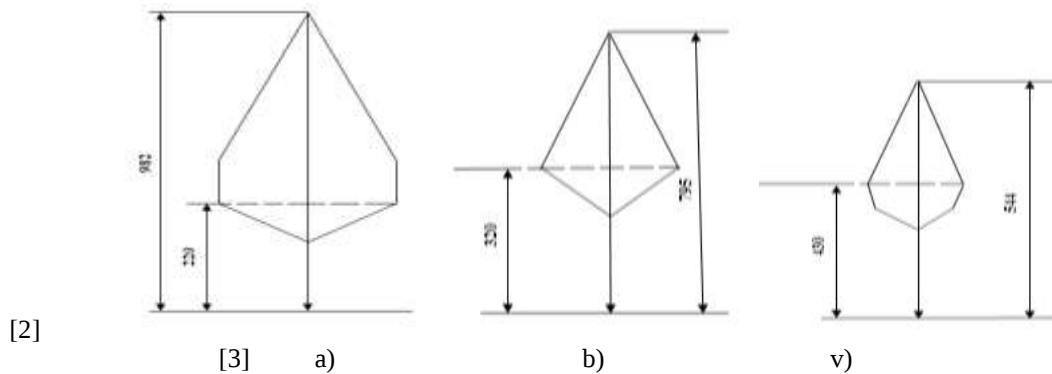


Figure 1: The size of the pine tree. a) picture in a flat palace; b) in areas with high untouched, and v) at low altitudes

table 1

[6] Plot relief	[7] Observing date	[8] The height of the bush, mm	[9] Number of horns, pcs	[10] Number of bolls, pcs
[11] Flattened	[15]	[17] 312	[21] 3,5	[25] -
[12] Uneven	[16] 1.07	[18]	[22]	[26]
[13] Height		[19] 224	[23] 2,0	[27] -
[14] Low		[20] 163	[24] 1,3	[28] -
[29] Flattened	[33]	[35] 546	[39] 2,8	[43] 6,3
[30] Uneven	[34] 1.08	[36]	[40]	[44]
[31] Height		[37] 391	[41] 6,0	[45] 2,2
[32] Low		[38] 324	[42] 4,9	[46] 1,3
[47] Flattened	[51]	[53] 701	[57] 14,6	[61] 12,2
[48] Uneven	[52] 1.09	[54]	[58]	[62]
[49] Height		[55] 572	[59] 7,1	[63] 4,0
[50] Low		[56] 463	[60] 5,3	[64] 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 agrotechnical 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.

REFERENCES

1. Following documents which are approved by council of Ministers and regional authorities “The state Resolution on wisely using water resources and improving meliorative state of irrigating lands during 2013-2017 years”.

2. Khikmatov P.G. The study of the qualitative and technological indicators of the work of the long-base scheduler in order to substantiate the optimal width and motion speed. Abstract of the Ph.D. Tashkent, 1978
3. Vasilenko P.M. Elements of the method of mathematical processing of experimental results. Moscow, 1958
4. Vedenyapin G.V. General methods of experimental research and processing of experimental data. Moscow, Kolos, 1967
5. Governmental documents on construction, reconstruction fixing works in the meliorative systems and buildings, Tashkent-2015, page 56.
6. Qo'chqorov J.J., Turaev B.M. Murodov M.M. Calculations on spherical disk instant center of rotation. iScience Poland modern scientific challenges and trends collection of scientific works of the international scientific conference. Issue 8. Warsaw 2018 129-131 pages.
7. Qo'chqorov J.J., Turaev B.M. Murodov M.M. About movement of soil on spherical disk. iScience Poland modern scientific challenges and trends collection of scientific works of the international scientific conference. Issue 8. Warsaw 2018 126-128 pages.
8. Qo'chqorov J.J., Turaev B.M. Murodov M.M. The results of experiments on the use the screw in front of the skimmer scoop. The way of science. International scientific journal № 11 (57), 2018, Vol. I. Volgograd. 58-60 str.
9. The issue of mechanization and electrification of agriculture. Start VII. Fan Tashkent 1970 year. 106-111.
10. www.ziyonet.uz.