



SCIENTIFIC AND PRACTICAL BASIS FOR THE EFFECTIVENESS OF THE MODERN METHOD OF IRRIGATION

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Abstract

Due to global climate change, the demand for irrigation water is increasing everywhere in the world, in this regard, the available limited water resources are becoming scarce, careful use of the available limited water resources is considered an urgent task of today. A drip irrigation system is an irrigation network designed to deliver the amount of water to the root layer of cotton equal to the plant's water needs. The difference between drip irrigation and other irrigation methods is that the water is supplied evenly across the field according to the needs of the crop. Crop areas of the field are moistened uniformly. Excess moisture does not occur in the soil, the main task of today is to eliminate excess water loss.

Keywords: global climate, irrigation system, efficiency, water, resource efficiency, technique, scientific-practical basis.

Introduction

Water is taken up through the tree's roots and transported to the leaves by a sophisticated surface. In this regard, the transition to advanced irrigation methods is one of the most important tasks in developing water-abundant technology based on fan achievements. Also, the February 24, 2021, issue of the United Nations Declaration on the Elimination of All Forms of Discrimination against Women stated: "The management of water resources and the development of the irrigation sector in the Republic of Uzbekistan 2021 The resolutions "On approval of the strategy for 2023" assign the task of developing and introducing traditional methods of gastrointestinal irrigation before scientists and experts involved in agriculture.

As the population of Surkhandarya region grows, the need for the most necessary agricultural products and raw materials increases, demand for water resources will continue to increase today and in the future, and in order to ensure the safety of water resources, one of the main approaches to improving economic social conditions is the need to expand the scope of the use of modern innovative irrigation systems in grain cultivation in irrigated areas. To do this, it is a very important task to develop irrigation fruits, irrigation procedures, irrigation elements, technologies, and technologies. To assist individuals desiring to benefit the worldwide work of Jehovah's Witnesses through some form of charitable giving, a brochure entitled Charitable Planning to Benefit Kingdom Service Worldwide has been prepared. During the research period, scientific and practical research field experiments were carried out on the cultivation of gastrointestinal tract in natural farm conditions of the region through innovative irrigation technologies, irrigation procedures in the "biochemist" method, irrigation time, and the creation of resource-efficient technologies and technologies.



The District of Angor, in the province of Surkhandarya, is located in the southeastern part of the valley, with an area of 29.6,000 hectares. The region's irrigated land area is 326,000 hectares. For example, the total area used in agriculture is 139400 hectares. There were 79180 hectares of crops and grain, 79700 hectares of lalmi, 33647 hectares of perennial trees, 19744 hectares of meliorative land, and other agricultural crops. Preparing the ground for chicken planting is one of the most important agrotechnical activities. Together with the southern regions of the region (Sherabad, If irrigation is carried out in the northern regions (Uzun, Sarajevo, Denov, Oltinsoy, and Shoorchi), where the weather is cool and precipitated, the fields will be fully planted and the grain will be satisfied with the demand for water until it blooms, piracy saves water.

Table 1 Irrigated areas and water consumption in the 2022-2023 hydrological year in the districts of Surkhandarya region

Name of irrigation system administrations and districts	2022 October 1st 2023 Water received by October 1, mln.m3		Water received during irrigation season 2023, mln.m3		Water received during the 2022-2023 nosing season, mln.m3		Total irrigated area, ga	Including	
	Limit	In Action	Limit	In Action	Limit	In Action		Mining, ga	G'alla, ga
Sherabad	186,3	207,0	132,1	141,5	54,2	65,5	18161	7000	4136
Boysun	54,6	48,7	35,9	34,1	18,8	14,6	1992	0	408
Thermal	307,4	334,9	214,2	241,2	93,2	93,7	40896	10538	8279
Jarkurgon	288,9	333,6	211,1	247,4	77,8	86,2	29470	7540	8700
Interesting	447,9	497,0	325,2	348,9	122,7	148,1	41222	9171	16600
Qumkurgon	315,9	332,7	238,8	244,1	77,1	88,6	29326	8742	8785
Muzrobod	490,9	522,8	382,1	398,0	108,8	124,8	37750	6868	17445
Oltinsoy	181,7	172,6	125,8	126,8	55,9	45,8	19925	3221	3943
Sarajevo	140,3	143,1	97,5	101,9	42,8	41,2	14310	2650	2899
Denov	172,9	187,6	116,0	120,5	56,9	67,1	14888	2441	3100
Long	139,5	162,1	96,9	118,1	42,6	43,9	16403	4000	3808
Anchor	407,0	372,7	291,2	242,1	115,8	130,6	41645	9258	14300
Shurchi	193,8	214,0	136,3	151,3	57,5	62,7	20012	7100	5597
Total	3327	3528,9	2403,0	2516,0	924,0	1012,9	326000	78529	98000

In the regional districts, there are 326,000 irrigated areas in the 2022-2023 hydrological year, We can see that the water consumption for water consumers in the regions increased by 201.9 million square feet or 106 percent from October 1, 2022 to October 1, 2023, compared to the limit, while the amount of water received during the irrigation season in 2020 was 113 million. We can see an increase of m3 or 104.7 percent, water received during the 2022-2023 nosing season increased by 88.9 million square feet [88.9 million sq m] or 109.6 percent (table 1), which means that the amount of water we need to consume increases year after year compared to our water consumption. Taking into account this, the use of water-transfer technologies is a time-consuming requirement today, and the use of technology is of great importance.

In all regions of the region, chickens are sown on a feather, if there is little moisture in the feathers, it is recommended to give wet harvesting water with 1100-1300 m3 of water per hectare before planting.

In recognition of this, a number of initiatives are being undertaken to expand the modern drip irrigation system in order to avoid a traditional method of cultivating grain. The total amount of



water available last 2022 was 4 billion. It is 680,000 m³ and is 4 billion for irrigation. It was 421 million square feet [421 million sq m]. Including 9708 m³ of water was spent per hectare of land per season.

For the first time in a natural farming environment in Surkhandarya region, experimental scientific research was carried out in a theoretical way in the development of drip irrigation systems, resourceful, irrigation fruits, irrigation procedures, technologies, and technologies for the cultivation of grain in the conditions of medium-sized sand soils.

In 2022, chicken planting work was planted on 74078 hectares of land and 244,800 tons of tomatoes were cultivated, according to a proposal to accommodate promising and new varieties, The region consisted mostly of high, sparsely wooded tablelands cut through by deep ravines. "Bright-1" variety was planted on 5163 hectares, as well as new varieties for 2516 hectares. The main varieties for the region are "Bukhara-102" and "Sultan".

New promising grain varieties planted throughout the region will be able to fully meet the requirements and standards of world standards. In addition to the peculiar characteristics of new varieties, many disadvantages are made in the maintenance of the variety. In today's developing world, In studying innovative experiences and combating pests and insects in the care of the gastrointestinal tract, scientific-based agrotadbers and, most importantly, innovative irrigation technologies, irrigation system, and serious considerations have been achieved in accordance with the standards that correspond to grain crops, tomatoes, and crops.

The irrigation system is a irrigation network designed to deliver the same amount of water to the root layer of the gastrointestinal tract, equivalent to the plant's need for water. Unlike other irrigation methods of irrigation, water is given smoothly throughout the field, in accordance with the needs of the crop. The location of the crop in the field is uniformly moistened. Excess moisture does not occur in the soil. When irrigating irrigation, the humidity of the root layer is held uniformly, and the crop spends all its energy creating its own crop.

The result: Advantages of using irrigation: Weed grows less in the field, and the cost of anti-weed activities decreases. It is easier for technology to enter the field, soil erosion is eliminated, crop yields increase and quality improves: Mining - 41-47 s/ga.

When irrigated, water is saved: water is given only to the part of the field where the roots of the crops are located, and the rest of the field remains dry; The watering regime will be consistent with the demand for water of the plant and will not be given too much water; Water from the soil evaporates poorly; Water does not scatter throughout the field; Water is not absorbed into the soil; Water does not flow into the air; Water is taken up through the tree's roots and transported to the leaves by a sophisticated surface.

Water is taken up through the tree's roots and transported to the leaves by a sophisticated surface. There will be no need to loosen the soil (cultivation) and get reinddeer. An area with no soil is easily driven at the end of the season. Since the fertilizer is given along with the water, no equipment is used for fertilization. As a result, fuel lubrication materials are exceeded. Since fertilizer is given along with water, the amount of fertilizer decreases by 35-45%. In the field, divers do not correct rice carrying kettles, which means that the manual labor in irrigation decreases sharply. Water and feed are distributed evenly according to the crop area; The crop develops uniformly and the crop ripens at the same time; Harvesting the same ripe harvest becomes easier; The drying of the crop yields allows you to harvest the crops freely; There is no soil erosion due to the lack of water in the



field; Groundwater levels do not rise because of the low absorption of water into the soil; The soil is not dehydrated;

Conclusion: In the republic, the following have been identified in the process of conducting scientific research on irrigation and irrigation technology through a drip irrigation system, one of the innovative irrigation methods derived from various educational and economic conditions: Theoretical scientific research has resulted in the use of bioclimatic methods to determine the order in which crops are irrigated in today's global climate change and water shortages it's suitable. The fact that the entire length of the calculated layer during irrigation provides uniform moisture along the owner, reducing water waste by 53-59% compared to the control option, an increase in cotton yield by 7.8-10.5 s/h, a 35% decrease in ash resources, a reduction in fuel lubricant costs by up to 45%, an increase in mineral fertilizers by 35-48%, and an innovative medium-pressure drip to ensure that water reaches the roots of the gastrointestinal tract in one fruit we believe that the use of irrigation systems is of great importance. In the southern regions of the republic, the "Sultan" grain is used by modern drip irrigation systems in a changing contextual climate, i.e. spending less water resources, obtaining more mulé, wetting the gastrointestinal tract smoothly from beginning to end, spending less water, The resulting embryo was allowed to develop in nutrients and then inserted into her womb, where it implanted.

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