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## **ОТКАЗАТЬ ВВЕДЕНИЕ ТЕХНОЛОГИЧЕСКИЕ ПРОБЛЕМЫ И ИХ АНАЛИЗ**

*Аннотация:* В статье анализируются научно-практические работы по проблемам капельного орошения сельскохозяйственных культур, его преимуществ перед капельным орошением. На основании анализа работы, направленной на решение проблем, было отмечено, что существует необходимость в эффективном использовании технологии капельного орошения. В данной статье представлен анализ результатов существующих научных исследований, основе технологии капельного орошения.

*Ключевые слова:* вода, капельный полив, урожай, агат, система, рельеф, технология, эффективность.

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## REFUSE INTRODUCTION TECHNOLOGICAL PROBLEMS AND THEIR ANALYSIS

***Abstract:** The article analyzes the scientific and practical work on the problems of drip irrigation of agricultural crops, its advantages over drip irrigation. Based on the analysis of the work aimed at solving the problems, it was noted that there is a need for effective use of drip irrigation technology. This article provides an analysis of the results of existing scientific research, which is the basis of drip irrigation technology.*

***Keywords:** Water, drip, irrigation, crop, agate, system, relief, technology, efficiency.*

**Introduction.** Due to the fact that Uzbekistan is an arid region, agricultural crops are grown in the country on the basis of irrigated agriculture. It does not allow obtaining high yields without irrigation, drip irrigation is a relatively new method of irrigation used in agricultural practice, in which the crop is transferred in the form of drops using water filters, purified using special filters, the root system of the plant reaches local moisture. In intensive technologies for the cultivation of agricultural crops, i.e. in conditions where the size and quality of the crop depends on the determination of moisture and feeding regimes, the use of drip irrigation systems gives very good results.

Excess soil moisture after watering can lead to crop drowning, and the break between waterings dries up the soil and leaves the plant without water. On the other hand, drip irrigation maintains the uniformity of moisture in the root layer of the crop and its even development.

Drip irrigation has been used in Uzbekistan since 1975 as an experiment in the irrigation of orchards and vineyards. In the experimental farm SANIIRI

(ISMITI) in the Zaamin district of the Jizzakh region, at first 10 hectares, then 200 hectares of vineyards, a drip irrigation system was created, developed in Uzbekistan. In 1993, the area of drip irrigation systems in the country reached 1134 hectares. In 1991-1992, a drip irrigation system based on Israeli technology was introduced at the Savoy state farm in the Andijan region for 1,000 hectares of cotton fields, of which 500 hectares were put into operation.

**Materials and Methods.** B. Djurakulov and Sh. in the barren meadow soils of the Surkhan-Sherabad steppe. Mirzaev conducted special studies of cotton in order to determine the effectiveness of various types of irrigation. To maintain soil moisture above 70-65% with respect to NPV, 5 times in cotton irrigation options, total 5545–5585 m<sup>3</sup>/ha, 10 times with drip irrigation, total 2945–3050, 10 times in film irrigation options, total irrigated 2140 –1840 m<sup>3</sup>/ha [3].

On the problem of efficient use of irrigation water in agriculture, many scientists, including Kh.A. Akhmedov, A.A. Rachinsky, S.M. Krivovyaz, F.M. Rakhimbaev, B.F. Kambarov, P.B. Arakelov, A.Kh. Sokhrakov, F.A. Baraev, M.Kh. Khamidov and others conducted scientific research [5, 6, 7].

Drip irrigation technology has advantages over other irrigation methods in terms of increasing yields and improving the quality of crops, saving water resources, reducing material and labor resources for agricultural activities, reducing the amount of fertilizers used for feeding crops, and completely eliminating soil leaching. Unlike other irrigation methods, drip irrigation creates optimal water-physical conditions for the plant in the developing soil layer, the plant receives water and physical substances when it needs it. It does not suffer from various stressful situations, and the plant spends its energy only on development and harvesting.

**Results and Discussions.** Given the shortage of water in Uzbekistan, the level of water supply has always been one of the most important factors in

agricultural production. The positive results obtained in a short period of time have contributed to the rapid spread of drip irrigation in many countries of the world. This method has not attracted enough attention from land users in our country. There are many reasons for this, according to farmers, the main reason is the cost and complexity of the drip irrigation system, as well as the fact that the quality of the water intended for irrigation does not correspond to the drip irrigation technology (cloudy and turbid.). Therefore, due to the high cost and complexity of water-saving irrigation technologies, the President adopted Resolution No. PQ-4919 of December 11, 2020. The decree provides for the allocation of subsidies and loans to farms that have introduced drip irrigation technology. The modern drip irrigation system is used in the cultivation of many agricultural and horticultural crops. During drip irrigation, the space between the rows, called “ditches,” remains dry from start to finish, compared to conventional irrigation, where water is usually drained into a ditch [2, 9].

B. Turuspaev completed his thesis on the topic "Technology of drip irrigation of gardens on the slopes of southeastern Kazakhstan". In this study, we studied the dynamics of soil moisture depending on the volume of water supply and determined the water consumption of fruit plantations with drip irrigation, established the optimal size of the area with drip irrigation and the depth of moisture. completed., determine the shape and size of the humidification scheme depending on the volume of water supply, develop a method for calculating irrigation technology and determine the requirements for the design of drip irrigation systems to ensure this technology, studied the effect of drip irrigation on the productivity and economic efficiency of gardens on the slopes of mountain terraces. [9].

S. Nurjanov "The regime of drip irrigation of cotton in the foothills" (on the example of the Samarkand region).

In research work on the development of cotton irrigation regimes in the foothills of the land, for:

determination of the optimal amount of irrigation, their distribution according to the stages of cultivation, watering and irrigation of cotton;

a number of scientific and practical studies have been carried out, such as determining the characteristics of growth and development, as well as the formation of the cotton crop depending on the irrigation regime [8].

In the dissertation of Z. Artikov on the topic "Irrigation and drip irrigation with a mixture of water and fertilizers with a mixture of water and fertilizers planted in the furrows of the Surkhan-Sherabad gorge", the introduction of drip irrigation to reduce cotton consumption. and increase the cotton harvest.

conducted a number of scientific and practical studies, such as studying the effect of drip irrigation on the growth, development and productivity of cotton in a simple way and using laser radiation.

In one part of the song field, the soil moisture is insufficiently moistened due to the fact that in one part of the song field, water drains excessively, and in another part of the song field, water is drained into the field.

With drip irrigation, the roots grow in lumps, the root of the plant does not grow deeply, it is easier to deliver water and fertilizers, it is easier for the plant to get water and fertilizers from the soil.

With drip irrigation, water is evenly distributed across the field to meet the needs of each crop at a specific time.

With drip irrigation, the optimal physical water regime of the soil for the plant is created in the soil layer where the plant root develops.

Drip irrigation systems can be used even when other irrigation methods can be used or when irrigation is not producing good results. It is enough to choose the

right type of drip irrigation for the specific conditions of the area and the type of crop grown.

### **Conclusion.**

Based on the introduction of the technology of drip irrigation of agricultural crops, it was determined that the drip irrigation method fully complies with the agrotechnical requirements of cotton growing. However, irradiation of cotton with a mixture of water and fertilizers during the growing season using laser radiation has shown that conditions exist to create opportunities to actively influence the growth, development and yield of cotton.

It was also determined that in the soil and climatic conditions of the republic, agricultural crops are supplied with the required amount of water, on the basis of which it is possible to supply water directly to the plant without wasting water and filtering. The assimilation of all mineral fertilizers is possible due to the fact that fertilizers are applied in solution with water, reducing costs by 60-70% and saving fuel and lubricants.

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