EFFECTIVE OF USE RAIN AND SNOW WATER

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ABSTRACT

Due to the need for fresh water in our lives, and in order to create new gardens on lands that are not currently used, scientists of the Andijan Institute of Agriculture and Agrotechnology have conducted a certain amount of research.

Keywords: *Irrigation, crops, water resources, modern technologies, farms, orchards.*

АННОТАЦИЯ

В связи с необходимостью пресной воды в нашей жизни и с целью создания новых садов на землях, которые в настоящее время не используются, ученые Андижанского института сельского хозяйства и агротехнологии провели определенное количество исследований.

Ключевые слова: *Орошение, посевы, водные ресурсы, современные технологии, фермы, сады.*

АННОТАЦИЯ

Ҳаётимизда чучук сувга бўлган эҳтиёждан келиб чиққан холда ҳамда хозирги кунда фойдаланилмай турган ерларда янги боғлар ташкил қилиш мақсадида Андижон қишлоқ хўжалиги ва агротехнологиялар институти олимлари томонидан маълум бир хажмда илмий тадқиқот ишлари ўтказишга эришган.

Калит сўзлар*: Суғориш, ўсимли,сув ресурслари,замонавий технологиялар, фермер хўжаликлари, боғ узумзорлар.*

INTRODUCTION

The main amount of water in nature is used for irrigation when growing plants. It is known that 800-1000 m3 per hectare of land is used for 1 watering of plants. Of

course, the plant is not satisfied with a single watering. The plant is watered at least 3–4 times a year. This means that at least 4000-6000 m3 of water is used per hectare per year.

It is no coincidence that the first President of Uzbekistan Islam Karimov spoke about the Aral Sea tragedy - the Aral Sea tragedy is a tragedy not only in Central Asia, but also in Europe and the whole world. Since the 1950s, more than 1,200 joint initiatives have been taken on transboundary water bodies, and about 150 agreements have been signed in this area. Around the world, about 8 million hectares of land were irrigated in the early 19th century, 40 million hectares in the early 20th century, and 100 million hectares in the middle of the century. By the XXI century, irrigated agriculture has exceeded 280 million hectares.

LITERATURE REVIEW

Over the past 50 years, the world's population has grown 2.2 times to 6.5 billion. The demand for water has increased 2.6 times, of which 80% (2504 km3) is used for agricultural purposes. Today, there are 2 billion people in the world. the population suffers from water shortages. By 2025, 7.5 billion. Researchers point out that the population is suffering from water shortages and a 25 percent reduction in grain and legume production in agriculture. After the end of World War II, the beginning of a peaceful life, the development of large areas, the development of industry, a sharp increase in population began to require large-scale use of water resources, almost all water resources were used, the question arose.

RESEARCH METHODOLOGY

Of particular importance is the development of measures such as more economical use of water resources, development of agricultural lands, search and use of water resources that lead to an increase in water resources, prevention of the negative impact of water on the environment. Today, we have information on television and in the press that the prices of food products are rising in many foreign countries.

Therefore, as a result of these changes in life, the Farmers' Movement is facing new challenges. In other words, the regions are working on new projects to create high-yielding, disease-resistant, fast-ripening varieties suitable for these conditions, water-saving, introduction of modern technologies to increase soil fertility, development of diversified farms, training of new generation farmers. requires. For example, in recent years, the area under water-intensive crops such as cotton and rice has been reduced, and replaced by cereals, vegetables and melons, and orchards and

vineyards. The growing need for fresh water in our daily lives is making many people think. At times like these, we are forced to look for various other reserves and opportunities.

One such possibility is the use of rain and snow water, as statistics show that rain and snow water can fall at a height of 10 cm to 80 cm per m2 per year in the world. For example, in the territory of Andijan region, rain and snow water can fall at a height of 220-240 liters, or 22-24 cm, according to the average ten-year statistics per square meter per year. It looks invisible, but the amount of water is 220-240 liters per square meter. Consider that in the territory of the Republic there are a lot of unused areas. Such unused areas in Andijan region alone are about 120 thousand hectares. Now imagine the amount of rain and snow that falls on so many thousand hectares of land during the year, that is, one billion two hundred million. imagine that it is a square meter. Does that mean about 300 million cubic meters of water.

ANALYSIS AND RESULTS

Due to the need for fresh water in our lives, and in order to create new gardens on lands that are not currently used, scientists of the Andijan Agricultural Institute have managed to conduct a certain amount of research.

It concludes with the development of technology for the efficient use of rain and snow water in nature and how to collect it, chemical analysis of collected water in the laboratory and whether it depends on the seasons and their quality levels.

In late autumn 2019, on the territory of the T. Mirzaev massif of Andijan region, a specially designed rain and snow water accumulation device was installed and experimental work began. The rain and snow water collection area of this device is 5 square meters, and the accumulated water storage tank is 0.5 tons. The thickness of the rain and snow water collection area is 0.3 mm, and the collection tank is 0.4 mm. made of white zinc. The accumulator was buried underground to a depth of 0.5 m. The aim was to ensure that the collected water was not heated by sunlight and that the temperature was always kept constant (Figure 1).

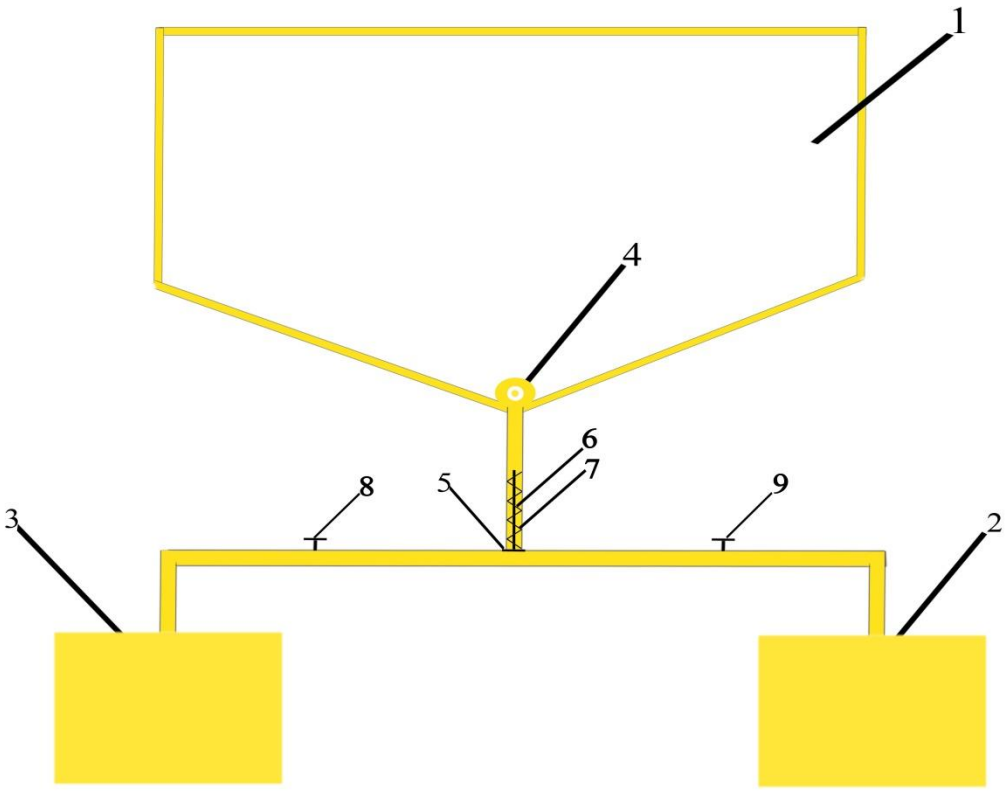

Figure 1. Reverse technology for collecting rain and snow water.

1. Flat surface covered with rain and snow, 3.5 m^2; 2. A reservoir used for trees and shrubs; 3. The reservoir used for Istemol; 4. A pipe that directs stored water to a reservoir on a flat surface; 5. The valve is made of steel; 6. Valve core; 7. Purging the valve; 8. The rhizome used for Istumol is the ventel; 9. Rosourvoir vent used for irrigation.

By the end of 2020, our reservoir was filled with rain and snow. After that we had to take 300 liters of water to another container. The rain and snow water collection area of the device is hermetically connected to the accumulation tank. Equipped with a special valve. For this purpose, the evaporation of accumulated rain and snow water is generally measured.

From the early spring of 2021, several pumpkin seeds were harvested using rain and snow water collected in the device. Also, 30 almond seedlings were planted on 2 hundred hectares of unused land. The bride uses the collected rain and snow water to irrigate the pumpkin and almond seedlings.

CONCLUSION AND RECOMMENDATIONS

1) If rain and snow water is suitable for consumption, it can be used for two different purposes. The first is to irrigate and plant trees where it is not possible to remove water during the summer. The second is the result of in-depth experiments

and their comprehensive analysis, which can be used in pharmacies and other relevant places.

2) This is because when it starts to rain and rain, it first carries with it dust and other particles in the atmospheric air for a certain period of time. It is therefore necessary to make the accumulation tanks in two separate ones. For this purpose, we have developed a reversible technology for collecting rain and snow water over time (Figure 1).

3) From the above it can be concluded that. It is useful to create new gardens in unused areas of our territory and to put into practice the proposed device in the formation of water reserves in areas where it is impossible to withdraw water.

REFERENCES

1. Ostonakulov TE, S.X.Narzieva Basics of fruit growing. Textbook for students of agricultural universities T. 2010.
2. Ikramov R.K. Methods raschetnogo obosnovaniya orositelnyx norm i regima orosheniya selkhoz. culture. // Orosheniya mode and monitoring techniques. Project: "Management of soil and water resources for the creation of sustainable agricultural systems in Central Asia." Taraz, 2002. p. 9-30.
3. Giyazov S.N., Shamsiev K.Sh Vegetative propagation of pistachios // J. Gardening. - 1976. - № 5. S. 33 - 34.
4. Ablaev S.M., Mirzaboev B.K Forms of chronological formation of pistachio trees in dependence on the density of razmeshcheniya.// Nauch. tr. Tash SXI. - 1988. - № 7. S. 45-49.
5. Trosko I.K. Reconstruction of pistachio trees and pistachio culture in Central Asia. - Tashkent: 1947. - 55 p.
6. Popov K.P Biomorfologicheskie i ekologicheskie osobennosti pistachka nastoyashchey // Bot. jur. -1974 - №2. - S. 186.