

The Effectiveness of Farming in Greenhouses Drip Irrigation Method

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Abstract

In the method of drip irrigation, water is given only to the root part of the plant. This allows, first of all, to save irrigation water by up to 40-60% and to obtain a higher yield from crops.

Keywords: drip irrigation, plant, greenhouse, feeding, humidity, productivity, pipe.

INTRODUCTION

The difficulty of growing quality food is also worth trying, hard work. Only by planting and harvesting summer crops, the market racks can not be filled in winter, especially at a time when the number of today's people is growing day by day. This in turn creates the need for farming even in the four seasons of the year.

For this reason, the head of our state adopted a resolution No. 4246 of the PP "on measures for further development of Horticulture and greenhouses of the Republic of Uzbekistan" on March 20, 2019. This was a big turnout in the greenhouse industry. It is necessary to emphasize that greenhouses are being established in all regions of our country. Such compact and efficient greenhouses allow to grow high-quality melons, create a large number of jobs. Measures are being taken to increase the volume of cultivation and export of fruit and vegetable products, increase the efficiency of the use of land and Water Resources, introduce innovative technologies into agriculture in our country. At the same time, the analysis of the real situation shows that the problems that prevent the full use of the potential of greenhouse farms in the cultivation of fruit and vegetable products and export to foreign countries are preserved. In order to achieve an effective result in greenhouses and get a plentiful harvest, the introduction of modern water-saving technologies is required.

What is drip irrigation itself? What are its advantages and what kind of technology does this have. Using this method of irrigation, we create optimal conditions for the growth, development and

harvest of plants. The fact that the cost of the equipment is cheap, and there is an opportunity to automate irrigation, allows you to achieve the greatest efficiency at the lowest cost.

Drip irrigation has been established as the only way that it has severe climatic conditions and does not give the option of selective watering of plants in agriculture of countries with limited water reserves. Since Korea is among these countries, extensive research has been carried out on this method of irrigation.

Since 1960-ies, farmers from different countries have discovered that using drip irrigation can achieve an increase in product productivity, a reduction in the cost of soil treatment, and at the same time, the use of water, saving investigation. By the 80-ies, drip irrigation began to expand increasingly to the countries of the dune, regardless of what the irrigation options were. Drip irrigation is widely used in today's market from drip equipment to agriculture, as well as in landscaping work and in private farmhouses and field yards. Drip irrigation this is the delivery of water slowly, mildly, to the ground where exactly the root of the plant is located. As long as it remains to keep the soil moisture at an optimal level, this method of irrigation also does not allow water to evaporate in the quesh and wind.

Water is not wasted on moistening the soil in an unnecessary place, that is, between the ditches, too, and the optimal level of moisture around the root is maintained. In addition, the soil does not become stiff, which ensures the optimal supply of water and air to the soil around the root.



The fertility of the dropper is determined by the calculation of liters/hour, that is, how much water is extracted from one dropper for an hour. Usually the productivity of the dropper is from one liter to four liters of water per hour. The technology of finishing the DRIP is perfect at this level, the length of which is estimated to be 100 m. the spraying consumption of water through each individual dropper in the water tank is no more than 5-10%.

In the following years, the development of the greenhouse business has accelerated. High-tech greenhouse buildings began to appear. The introduction of drip irrigation technology in greenhouses allows you to also send nutrients in small doses directly near the root during the watering period. When watered in small portions, the plants absorb moisture and nutrients in the most effective way, and also the earth does not harden as hardens. Drip irrigation systems allow you to ensure that water is given evenly (water falls to unnecessary places less than 10%) during normal irrigation, some places are poisoned, let's not think about the fact that plants in other places are not saturated with water. In this way, the labor costs associated with irrigation and processing are significantly reduced, gas, water and fertilizers are significantly reduced (2-3 times), plants effectively absorb fertilizers (up to 80%), at the same time the soil does not salinity, the "quality" of the product (appearance in demand) is improved. All this contributes to an increase in productivity. If an average yield of 200 tons per 1 hectare is obtained in the usual greenhouses, modern greenhouses allow to raise the yield of 374 tons per medium scale.



All of the drip irrigation systems are based on the principle of slow water supply for each plant in need of irrigation. To do this, the contactor with water is placed on the side of the greenhouse at an altitude of 1,5-2 m, transparent black pipes (hoses) with a diameter of 10-11 mm are mounted under a light slope and connected to a single system. In the places where the proposed land falls, make holes and insert into them noses (diameter 1-2 mm). To prevent water from filling, such a system usually uses a dispenser, an automatic sensor or a tap that controls the time when the liquid enters the pipes. Economical and convenient equipment such as a drip irrigation system in a greenhouse on land can be purchased in a store or developed independently, since it does not require special technological skills.

CONCLUSION

Currently, many types of drip structures have been created, which allow irrigation of plants in one Meadow and in the prescribed quantities. Drip irrigation is recommended for use in arid regions with low water resources, in complex relief soils where other irrigation methods can not be applied, in conditions of light coarse, sandy unfertilized soils where irrigation water is fresh or poorly mineralized and water permeability is high.

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Additional advantages of drip irrigation systems can also include the possibility of watering some large areas in comparison with ordinary irrigation. This is very important if your water source has limited access, as well as this method allows watering even in conditions where the water pressure is low. For example, sprinklers are able to dilute the water well, while the pressure is 1,5-2,0 atmosphere. Drip irrigation equipment, however, can work comfortably even under 0,3-0,5 atmospheric pressure conditions.

What we have stated about the drip irrigation system shows that this method can be used for irrigation of various plants effectively and without saving water.

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