

**TECHNICAL ELEMENTS OF DRIP IRRIGATION TECHNOLOGY****Mukhriddin Elmurodov***Master's student at National Research University of Tashkent  
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**Annotation:** *This article presents the advantages of drip irrigation methods, the elements of irrigation procedure and technique in drip irrigation technology, water saving, economical innovative irrigation technologies, drip irrigation system*

**Key words:** *drip irrigation technology, irrigation method, water consumption, flow rate, water-efficient, resource-efficient, soil, water, active layer, drip, water saving.*

The available water for agriculture decreases day by day due to the increase in population, industrialization, and short rainfall. It has become essential to use modern irrigation technologies like Drip irrigation, sprinkler irrigation in agriculture. Drip irrigation means providing the required quantity of water directly to Crop plants' root zone through a network of small pipes; this is also called micro-irrigation or trickle irrigation.

Drip irrigation is the most advanced and the most efficient of all irrigation methods. However, its exceptional capabilities cannot be effectively implemented if the user is not familiar with the related knowledge and does not implement it in the current operation and maintenance of the drip irrigation system. In the Drip irrigation system, water supplies to plant roots through a collection of plastic pipes, lateral tubes, and valves. These components, controlled with the help of a dripper and water pump. With the help drip irrigation system, it is easy to provide liquid fertilizer to the plant root system.

Types of Drip Irrigation System: There many types are available in drip irrigation. Only two popular types are explained. Surface drip system-in the surface drip system, the emitter and lateral pipe are placed on the soil surface. This is the most common and popular type of drip system. It is suitable for wide-spaced plants as well as for row crops. It is easy to use a surface drip to observe and inspect, change, clean the emitters, observe surface moisture patterns, and measure individual emitter discharge rates. Sub-surface drip system-in a subsurface drip irrigation system, the lateral is placed below the ground and near the plant root zone area. In this system, water is slowly applied below the surface through the emitters. Sub-surface drip systems have gained wider acceptance due to removing earlier problems of clogging to a large extent. Due to the sub-surface drip method, there is less intervention in agriculture or any cultural practices and possibly more operational life. Sub-surface drip system provides little interference with cultivation or any cultural practices and possibly longer operational life.

Advantages of drip irrigation. Drip irrigation systems are highly flexible. They can be designed for any size and shape of the field. Drip irrigation systems are also easily expandable and can be used even with low water pressure. The drip irrigation method is distinguished among the irrigation methods by its high efficiency that, it is an irrigation method that allows obtaining a stable high yield with low water consumption in the conditions of insufficient water resources. Drip irrigation increases crop yields and quality because drip irrigation systems deliver water at the root zone level, it avoids promoting leaf scalding or humid conditions that can lead to pests, crop disease and reductions in crop quality that reduce harvest yields. How long and how often to water with drip irrigation varies greatly depending upon the soil type, crop and weather conditions, flow rate, and emitter spacing. The design of the site will calculate water flow, pressure and how long drip lines. However, generally speaking, a drip irrigation system will need to run for three to five hours to deliver 1" of water, and most crops will need to be watered at least once, if not multiple times a week.

### CONCLUSION

Water use in food production is a growing problem in the face of climate change and a rising global population. Water is an increasingly scarce global resource, and agriculture is the biggest consumer of our planet's finite water resources. Globally, agriculture uses 70% of the world's fresh water supply and 95% of all water withdrawals in some developing countries. Drip irrigation is the most water-efficient irrigation system, capable of dramatically reducing a farm's water use while increasing crop yields and quality. Drip irrigation technology has a number of advantages compared to other irrigation methods, the main of which are increased crop yield and improved crop quality, saving water resources, reducing material and labor resources spent on agrotechnical activities, the reduction of the amount of spent fertilizers.

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