

SPRINKLER IRRIGATION EQUIPMENT AND TYPES OF THEM

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ABSTRACT:

The article is about one of the tenth of the twenty-first century's global problem which is the shortage of water resources has become one of the world's irrigated land area used for agriculture, water resources, economy, improving the efficiency of the use of efficient irrigation technologies used in this area of positive works, advantages of sprinkler irrigation in the country and given recommendations on the application of this method of irrigation.

KEY WORDS: Sprinkler irrigation method, the effective rate, pulsed irrigation and sprinkler irrigation, real sprinkler irrigation systems, small, average and long arms.

INTRODUCTION

In recent years, the country's conditions and sprinkler irrigation the development of the systems, especially in the area of winter grain growing interest in the introduction of sprinkler irrigation systems. The fixed type adapted to local conditions and sprinkler irrigation systems, especially in the countryside. In particular, winter wheat fields and spread the use of arable food crops, drip and sprinkler irrigation water shortage could create opportunities to harvest the crops guarantees [1]. Sprinkler irrigation equipment, construction and performance of the back of the water, according to the principle of rotating around its own axis, the threshold for permanent installation types, such as field sprinkling may be the biggest drop and the least drop, pulse and continuous water sower types.



a) permanently installed in the field are small drops of water droplets b) wide shoulders

Figure 1. Sprinkler irrigation devices

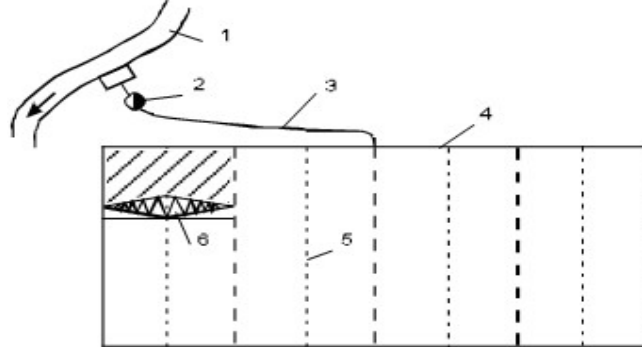
Effective irrigation rate-irrigated area in many part of the disposal of sprinkling the intensity of irrigation.sprinkling or aggregates and technical requirements imposed by this factor should not be less than 0.7. Not irrigated rate much less than the intensity of allowable sprinkling the field is irrigated, and it should not be greater than 0.15.

Sprinkler period and character of the effects of the soil and the plants are divided into: normal and pulse sprinkler irrigation.

Conventional sprinkler irrigation-at 0.5 - 0.6 m of soil. LI comfortable layer of water and improve the microclimate of the surface air layer to ensure the crops will be watered for 6-12 days interval.

Pulsed sprinkler irrigation- humidity of the air in order to reduce the shortage of crops every day, the temperature outdoors most of the time (12-15 hours) and watered frequently.

Sprinkler irrigation systems



1 source; 2 artificial pressure device; 3 irrigation network;
4 horn-stream; 5 temporary stream; 6-sprinkler irrigation device

Depending on the organizational and economic conditions: real and natural, semi-portable and portable sprinkler irrigation systems.

Real sprinkler irrigation systems-the main distribution, water distribution and irrigation pipes, wells, pumping stations and sprinkling the confines of the installation.

Half a portable sprinkler irrigation systems-real irrigation networks and pumping stations, and portable sprinkler irrigation techniques.

Portable sprinkler irrigation systemsAll of the elements of the system from one location to another location rushes.

Distance from the rain drops reach: small, medium, depending on the type of firing and firing away is divided.

Near the firing range0.05-0.2 MPa and running in 4-8 meters of water arrows three nozzles.

Average firing range0.1-0.4 MPa, water consumption of 5 l / s and the radius of 15-36 meters equipment.

How far are small devicesMore than 0.4 MPa pressure, the water consumption of more than 5 l / s of water to throw km 35-100 m. and more[3].

Sprinkler irrigation equipment- Download gather light, portable tubes and yomg'irlatgich three (nozzles), consists of a device.

Sprinkler irrigation machine. This mechanical movement of sprinkler irrigation units, which are set to tractors or irrigation engines installed on their movement across the field. Sprinkler irrigation equipment will be moved to fixed and mobile.



DDN and DDN 70-100 DMU "Fregat" Mon 10 sprinkling dullness DDA-100M and DDA-100

DDA-100M and DDA-100 console sprinkling not greater than 0.003 aggregates- the ramp where the technical, vegetables, cereals and fodder crops to irrigate. Water consumption 100 (130 l / s), using the open source water pump. Open networks - 120 m. The number of service providers: 1-2.

The average small sprinkler irrigation equipment installed in the park:

DKSh-64 "Voljanka DMU" Fregat ", DF-120 "Dnepr", KI-50 "Raduga", Mon-25/300 and others. DKSh-64 "Voljanka" sprinkler pipeline length of 395 m., Diameter 130 mm., Consists of two independent wing, the average water consumption of 0.9-1.0 l / s or 32 small (17-18m) consists of devices[2].

The farther away from the small sprinkler irrigation equipment installed in the park:DDN-70 and not greater than 0.02 DDN-100 ramp to the area of technical, vegetables, cereals and forage crop irrigation. DDN and DDN 70-100 tractors case. 52 and 65 meters of water pressure, water consumption 65 and 100 l / s. 70 in accordance with the water and thrown 80-85 meters. Open source water pump. Open networks - 120 m. They serve a worker.

Summing up, if sprinkler irrigation - water-saving technology, winter wheat, vegetables, cereals and other crops, taking into account the effect, the national water-saving irrigation technology in the forecast parameters of this technology, irrigation equipment and sprinkler irrigation in the list of imported equipment leasing as well as the future of the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers and "Technologist" LLC(Limited Liability Company)' s experience in Uzbekistan is desirable to launch the development of sprinkler irrigation equipment.

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