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INDICATORS SCIENTIFIK AND PRACTICAL RESEARCH OF WATER-SPRINKLER

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In clause the results of scientifik and practical researches water-sprinkler of the machine "Velli 8120" are given.

Key words: sprinkler irrigation, irrigation machines, irrigation equipment, state timer, technical characteristics.

In the current period of obvious water shortages, great attention is paid to the use of water-saving techniques and technologies in irrigation. For example, drip and sprinkler irrigation technologies are being introduced to irrigate cotton and agricultural crops. So far, it has not been well studied what the technology of sprinkler irrigation in the irrigation of agricultural crops will be. No recommendations have been made as to which type of sprinkler machine can be used.

The experience of irrigating crops in foreign countries shows that the use of this method has the advantage of increasing productivity, reducing productivity and maintaining productivity.

Irrigation can be used to irrigate almost all agricultural crops.

With this in mind, in order to get acquainted with the performance of the technology of sprinkler irrigation of cereals, the department of "Irrigation of crops" UzMEI tried to study on the example of a sprinkler "Velli 8120" introduced at the experimental farm "Uzbekistan Five Years" in Quyichirchik district. The Valmont Irrigation Velli 8120 front-end sprinkler from the United States is designed to

uniformly irrigate agricultural crops in rectangular fields. Table 1 shows the technical characteristics of this machine.

The sprinkler system consists of a trolley equipped with a Cummins engine, a Cornell 6RS pump, a control panel, a water pump from a tray, a T-shaped pipe for water supply, intermediate wheels, a guide cable and other parts.

Table 1

Technical description of Velli 8120 sprinkler

№	Indicator	Value
1	Reference cable, m	2700
2	The height of the cable from the ground, m	0,75
3	Coverage width, m	800
4	Operating capacity of the engine, l	5,88
5	Engine power, kW	138
6	Fuel consumption, l / h	28,19
7	Pump FIK,%	88
8	Suction height of the pump, m	1,72
9	Generator output power, kW	20
10	Rotation speed, rpm	1800
11	Diameter of suction pipe, m	0,30
12	Current, A	30
13	Voltage, V	480

As a result of the experiments, the following information can be noted: The Velli 8120 sprinkler is capable of carrying out the technological process of sprinkler irrigation. The technological work process differs from other existing sprinkler irrigation machines in that this machine is designed for frequent watering of crops that require a relatively low water norm.

For example, we found experimentally that when the speedometer is set to 100%, the amount of water supplied per hectare is 66.6 m^3.

According to the recommendations of agronomists, in the case of rain-fed irrigation, at least 500 m3 of water per hectare of wheat fields should be provided. To deliver this amount of water, the machine has to move from one place to another 8 times. These transitions are self-fueling and time consuming. If we reduce the operating speed of the machine, the irrigation rate will increase slightly, but in this case, before the water seeps into the surface, there will be leaks. When we measured the moisture level in the irrigated area, we also saw the ratio of this thing, it is obvious that the moisture is not the same in the layers, the upper part of the soil has become muddy.

When we compared the Velli 8120 sprinkler system with the cost of irrigating through ordinary canals, it became clear that the cost of sprinkler irrigation is four times higher than the cost of irrigation through canals.

Based on the results of the research, we came to the following conclusion: The Velli 8120 sprinkler can be recommended for irrigation of crops that require very little water. In order to irrigate grain crops, we consider it expedient to irrigate them using Voljanka and Dnepr sprinklers. The rainfall intensity, which is the main indicator of these machines, is close to the recommended rainfall rate, and they provide the irrigation norm 1 ... 2 times when they are in position.

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