

## IMPLEMENTATION OF PULSAR IRRIGATION TECHNOLOGY

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### ANNOTATION

Along with the increasing demand for water resources in the world, water shortage is also increasing year by year. Until 2000, a low water season was observed every 6-8 years, but in recent years this process has been repeated every 3-4 years. Such water shortages especially affect the regions in the lower part of the rivers, increasing the demand for the use of economical technologies in crop irrigation. Currently, a number of measures are being implemented to widely introduce pulsar irrigation technology in our republic.

### Introduction.

Taking into account the relative scarcity of water from year to year, methods of economical and more efficient use of water resources are used. One of them is to irrigate crops irrigated using portable flexible pipes. The method of irrigating cotton

using flexible pipes is based on pulsar irrigation technology on an area of 2000 thousand hectares in Pakhtakor district of Jizzakh region. being watered. Even now, the initiative to introduce new technologies in farms is being promoted in the districts. After all, he is one of the entrepreneurial farmers who knows how to get a high yield by spending less water, money, fertilizer and less labor on cotton.

### **Results and discussions**

In the irrigation mode, it is important to determine the limit of moisture reduction before watering, at which the next watering should be carried out. Its correct management leads to the improvement of other factors necessary for plant life: food, air, salt, light, thermal factors[1].

Irrigation of cotton in experimental fields was carried out based on the system adopted in the scientific work program. In this case, the watering periods according to the options were determined based on the moisture content of the soil. When determining irrigation periods, the soil moisture in the germination-flowering phase is 50 sm. from, irrigations in the budding stage of flowering from a layer of 70 sm, irrigations in the phase of ripening were determined by moisture content in a layer of 70 sm[2,3].

Measurement of the amount of water absorbed in the fields and the total time of irrigation, discrete irrigation technology by different methods (irrigation with pulses in each field), studies on the determination of the amount of irrigation water spent on plots the results are presented in Table 1[4,5].

**Table 1.****Water absorption in experimental and control plots**

Options	Experience	Watering time, min	The amount of water consumed, liters
A	Experience ℓb = 100 m I - irrigation (discrete)	42	1188
		64	1863
		94	2646
		136	3807
B	Control ℓb = 100 m I - irrigation (furrow)	56	2160
		80	3024
		110	4032
		149	5616
S	Experience ℓb = 150 m I - irrigation (discrete)	56	2520
		85	3780
		120	5250
		164	7140
D	Control ℓb = 150 m I - irrigation (furrow)	73	3696
		105	5232
		152	7296
		184	8832



**Fig. 1. Photographs from the experimental field**

**Table 1.**

Indicators	Irrigation				Watering system	Seasonal irrigation standards m <sup>3</sup> /ha
	1	2	3	4		
2	3	4	5	6	7	8
<b>Pulsar discrete irrigation</b>						
Watering date	<i>17.06</i>	<i>08.07</i>	<i>31.08</i>	<i>23.098</i>	1-3-0	2637
Day between watering		<i>21</i>	<i>22</i>	<i>23</i>		
Irrigation rate, m <sup>3</sup> /ha	<i>767</i>	<i>604</i>	<i>622</i>	<i>644</i>		
<b>Furrow irrigation</b>						
Watering date	<i>18.06</i>	<i>07.07</i>	<i>28.07</i>	<i>19.08</i>	1-3-0	3740
Day between watering		<i>19</i>	<i>21</i>	<i>22</i>		
Irrigation rate, m <sup>3</sup> /ha	<i>816</i>	<i>1012</i>	<i>1000</i>	<i>912</i>		

Cotton irrigation and watering standards.

### Conclusions

Using new water-saving technologies to irrigate cotton in the alluvial soils of the Jizzakh region, which have been irrigated since ancient times, the following

conclusions can be made based on the study of the irrigation procedure and the analysis of the results:

1. 30-35% saving of irrigation water was achieved by using Pulsar irrigation technology in the experimental field planted with cotton.
2. Pulsar irrigation technology has increased cotton yield and saved river water used in irrigated agriculture. In particular, 30% of water was saved due to the correct selection of irrigation standards.

### References:

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