

## JIZZAH REGION, THE EFFECTS OF THE EFFECT OF SHOATING CONDITIONS ON PRODUCTIVITY

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### ABSTRACT

*In the article, the determination of water-saving technology in the irrigation of Nafis and Orzu varieties of soybeans in the conditions of hydromorphic, marshy-loose, mechanical composition of light sand, weakly saline soils, seepage water level located at a depth of 2.0-3.0 meters, as well as the growth and development of soybean varieties and the results of the study on the impact on productivity are presented.*

**KEYWORDS:** *Region, Conditions, Shoating, Productivity, Mechanical Composition.*

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### INTRODUCTION

Today, each of the crops that occupy large areas in world agriculture is determined by the crop area based on their versatility. In terms of cultivated areas, soybeans are the second largest crops after wheat, rice, and corn. It can be said with certainty that this plant is of great importance in Asian countries, or it can be said that soy was created for human needs.

More than four hundred different products are prepared from soybean grain and protein and they are used in all sectors of the economy. So far, in terms of the chemical composition of soybeans, we do not have a wider range of crops than soybeans. No matter what sector of the economy it is used in, soybeans are cultivated and the person who uses them has seen a huge income.

Soybean is the only crop that contains up to 45% protein and 25% vegetable oil. It is also valuable because it contains all the essential amino acids found in animal protein. That's why all the animal products can be obtained from soy protein. For example, milk, yogurt, cottage cheese, cheese, various meats, environmentally friendly oil, egg powder (which contains lecithin). Blood plasmas and high-quality contact lenses are obtained from soy protein. In addition, wool gauzes are developed. They are indistinguishable from real woolen fabrics.

According to scientists, soy products are considered the best and most nutritious fodder for livestock. According to the protein content of soybeans, 100 kg of soybeans contain 134.8

nutritional units. This indicator is not found in any other cereal or legume crop. For example, 100 kg of oats, 116 of wheat, 126 of barley, and 133 of corn have been found [4].

Decision No. PQ-2832 of the President of the Republic of Uzbekistan dated March 14, 2017 "On measures to increase soybean planting in the republic in 2017-2021 and organize cultivation of soybean crops" and No. PF-4947 dated February 7, 2017 "Uzbekistan in 2017-2021 Action strategy on the five priority areas of the development of the Republic" and the President of the Republic of Uzbekistan of January 16, 2018 "The country's food.

In the implementation of the tasks established in the order of PF-5330 on the "correction of measures to further ensure food safety", one of the pressing issues of the present day is the production of high-quality and high yield of soybean varieties in lands prone to salinity [1,2,3].

It is known that in the cultivation of abundant crops from agricultural crops on irrigated lands, plowing done at the right time and at a high quality level creates a thorough ground for the next year's harvest. In well-ploughed fields, there is a decrease in weeds, harmful insects, and diseases, moisture is well maintained, and it is important in timely and effective agrotechnical activities such as preparing the soil for sowing and planting in early spring. As a result, the seeds of the sown crops are fully collected, and the seedlings grow well, gather abundant harvest and ripen early [5,6].

Field experiments "Methods of agrochemical, agrophysical and microbiological studies in irrigated cotton areas" (PSUEAITI, 1963), "Methodology of field experiments with cotton" (PSUEAITI, 1981) adopted at the scientific research institute of agrotechnologies of cotton breeding and seed production (Tushkent, 2007) was conducted on the basis of stylistic guidelines, [7,8].

Scientific research was conducted in the field of the scientific experimental station of PSUEAITI in Pakhtakor district of Jizzakh region. Care of Nafis and Orzu soybean varieties was carried out on the basis of the agrotechnical processes used in the region, which has been irrigated and cultivated for a long time.

Soil salinity was determined in summer and autumn by taking soil samples from 0-30, 30-50, 50-70 and 70-100 cm layers and analyzing chlorine, sulfate and dry residue amounts (in 1.3 repetitions).

The water permeability of soybean varieties (for 6 hours) was 1550 m<sup>3</sup>/ha in spring, and it was observed that the irrigations and their rates during the growing season and the transition of the working techniques between the rows led to the compaction of the soil.

In 2019, the water permeability of light soil according to the mechanical composition of meadow-gray to salinity decreased slightly in the fall, and it was equal to 1045-1050 m<sup>3</sup>/ha in the variants of soybean varieties irrigated in the usual way (var.1,4,7,10), laying a film between the it was 1105-1245 m<sup>3</sup>/ha in irrigated (var.3,6,9,12) options.

Thus, during the observation, at the end of the season, it was found that the amount of compost did not significantly decrease from the initial amount, and in the 0-50 cm layer of the soil, it was 0.777-0.787%, and the nitrate form of nitrogen was 70-70 compared to the limited field moisture content. Soybean was irrigated with 60% of all fertilizer and fertilizer (var. 1, 2, 7, 8), 1.8-2.1 mg/kg and soybean was watered with a film layer on the fertilizer (var. 3, 6). 1.1-1.6 mg/kg in

the variants, mobile phosphorus 2.2-1.2, 4.1-1.7 mg/kg in the variants and potassium 17-15.6-10 in the variants mg/kg was observed to decrease compared to the initial dose.

In the one-year observations, in the variants of the Nafis variety of soybeans that were watered with a film (var. 3, 6), the highest number of stem residues was 0.81-0.89 t/ha and root residues were 1.88-2.07 t/ha. if it was done, in the options where the Orzu varieties of soybeans were watered with a film (var. 9, 12), these indicators were equal to 0.78-0.84, 1.69-1.86 t/ha, respectively. Nafis and Orzu varieties of soybeans were planted, and the highest yield was obtained from the variants (var. 6, 12) in which the soil moisture was limited to the field moisture capacity of 75-75-65 percent before irrigation, and the yield was 33.6-31.1 ts. organized /ga.

In the experiment, the least amount of water used for the cultivation of 1 t of soybeans was 8.4 m<sup>3</sup>/t in the option of Nafis soybeans covered with a film (var. 3) and 9.7 m<sup>3</sup>/t in the option 9, where the Dream variety was irrigated with a film. Formed.

In the experimental field, phenological observations were made at the beginning of each month in order to determine the growth and development of the studied soybean varieties. (Table 3.6.1)

From the data presented in the table, it can be seen that, as of August 1, Nafis type of soybeans were irrigated from all sides (var. 1.4), the height of soybeans was 18.4-19.4 cm, the yield was 3.7-3.9 grains, and the number of pods was 2 If it was 1-2.8 pieces, in the variants of soybeans harvested and irrigated (var. 2.5), these indicators are respectively 21.8-23.4, 5.4-5.6, 4.1-4, 6, and in the case of soybeans watered with a film bed (var. 3, 6), it was equal to 23.9-24.7, 6.7-6.9, 5.3-5.4, respectively.

Similar data were also obtained from the varieties planted with Orzu variety of soybeans. In the following months, the influence of the studied factors on the growth and development of soybean varieties became more significant. According to the observations, the best results were obtained in the Nafis variety of soybeans, which were watered with a film (var. 3, 6) and the length of the soybean was 43.5-48.2 cm, the yield branch was 12.9-14.7 pieces, and the number of pods was 38. If it was 9-40.8 pieces, in the variants where the Orzu variety of soybeans were watered with a film (var. 9, 12), the length of the soybean was 40.3-44.2 cm, the crop branch was 11.5-13.2 pieces, and the number of pods was 35.6-37.3 pieces. In the observations made, the difference between soybean varieties and variants was more significant, the productivity according to which is presented in Tables 1 and 2.

**TABLE 1 YIELD OF SOYBEAN VARIETIES ACCORDING TO RETURNS, TS/HA**

Var.t/r	New shade	Refunds			Average productivity
		I	II	III	
1	Elegant	26,9	23,6	25,7	25,4
2		28,1	25,0	27,3	26,8
3		31,3	29,2	32,0	30,8
4		28,2	24,6	27,1	26,6
5		30,3	27,2	29,2	28,9
6		35,1	32,5	33,2	33,6
7		20,2	24,3	22,1	22,2
8		22,6	25,4	24,3	24,1

9	A dream	26,6	28,4	27,0	27,3
10		24,1	26,2	23,1	24,4
11		24,6	26,5	25,5	25,5
12		29,6	32,3	31,5	31,1

**TABLE 2 EFFECT OF IRRIGATION PROCEDURES AND METHODS ON PRODUCTIVITY OF SOYBEAN VARIETIES.**

Var.t/r	New shade	Average productivity, c/ha	Additional yield, c/ha		
			New account chin	Wet mouth to account	For mulching
1	Elegant	25,4	+3,2	-	-
2		26,8	+2,7	-	-
3		30,8	+3,5	-	+5,4
4		26,6	+2,2	+1,2	-
5		28,9	+3,4	+2,1	-
6		33,6	+2,5	+2,8	+7,0
7	A dream	22,2	-	-	-
8		24,1	-	-	-
9		27,3	-	-	+5,1
10		24,4	-	+2,2	-
11		25,5	-	+1,4	-
12		31,1	-	+3,8	6,7

## CONCLUSION

It was determined that the most favorable conditions for the growth and development of Nafis and Orzu soybean varieties in the conditions of the meadow-gray soils of the Jizzakh region were that the soil moisture before irrigation was 75-75-65 percent in relation to the limited field moisture capacity.

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