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DEVELOPMENT OF THE TECHNOLOGY OF GROWING ONION SETS

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ABSTRACT

The article presents measures for tillage when growing onion sets by sowing onion seeds, monitoring daily weather indicators for preparing seeds and onion sets for sowing.

KEYWORDS

Land, seed, onion sets, temperature, soil, Ravnaq, Baharoy, resource-efficient technology, intensive technology.

INTRODUCTION

Onion is a species of the Alliaceae family (*Allium cepa* L.) and is used to improve the digestive system, as a medicine for first degree burns and respiratory problems. The origin of the onion, whose origins go back many years, has also found its place in the Egyptian pyramids [4].

Onion is a two-year plant that produces bulbs in the first year and seeds in the second year. 100 g of onion contains 1.2 g of protein, 0,1 g of fat, 8,9 g of sugar, 8 g

of water, 12 g of dry matter, 30 mg of calcium and 42 calories [2].

In our country, onion is second only to tomato in terms of area and yield. Its share among vegetable crops is 23-24%, 18-19% of the gross product, and the average productivity is 50-60 tons per hectare [1].

Onions grow well in short light days (10-12 hours), but in such conditions, nutrients are not transferred to the reserve (do not circulate), the onion head does not form, the plant does not enter the dormant period, and

the onion remains in the state of a thick false stem. It is important to know this characteristic of onion for the length of the day in choosing a variety and carrying out quality agrotechnical activities [3].

A new variety of onion, Phule safed, developed at Raguri station, India, has higher yield (24,59 and 25,75 t/ha) than the popular variety N-257-9-1, which is grown in large areas, and 7,29 and 5,71 t/ha, respectively gave the product [5].

Onion varieties belonging to different ecological types (in the USA, Iran and Egypt) were tested by planting seedlings in 1 term (seeds were planted on March 18, seedlings were planted on May 6) in the geographical latitude of Moscow [7].

In the following years, the Ravnaq and Bahoroy varieties of onion were created, based on their biological characteristics, the issues of agrotechnics and seed production, and the organization of these activities through resource-efficient and intensive technologies, are not scientifically based [6].

Based on this, the development of the biological characteristics of these varieties, their production and seed technology is one of the important tasks of modern vegetable farming.

Research methods. The research was conducted in field conditions, using the "Methodology of

conducting experiments in vegetable growing, potato growing and potato growing".

Research results. The experiment was carried out in two different (Sariosiyo and Bandikhon) districts of Surkhandarya region on 20 plots of 1 ha. Karatol onion seeds were used as seed material in the experiment. The seed germination rate was 95% and the weight of 1000 seeds was 3.2 g. The experiment was carried out using the observation method.

200 kg/ha of phosphorous fertilizer (Ammafos) was given to the experiment area before planting seeds (03.01.2022). The field experiments were carried out under the following conditions: in the experiment in Bandikhon district, the egates with a row spacing of 60 cm and a ditch depth of 12 cm were taken and placed on 03.03.2022. The amount of sown seeds was 5 kg. In the experiment in the Sariosia district, the rows with a row spacing of 50 cm and a ditch depth of 12 cm were taken and placed on 10.03.2022. The amount of sown seeds was 5 kg. Daily weather data was observed and recorded in a notebook from the day of sowing the seeds until it was ready.

Phenological observations: The first observations were made 10 days after sowing the seeds, the second after 50 days, and the third after 80 days. During the observation, seed germination, development, leaf length, surface, and bulb size were monitored (Table 1).

Table 1

Results of phenological observation carried out in our field experiment in Bandikhon and Sariosia districts (2022)

Territories	Observations	Grass germination (%)	Leaf level (mm)	Leaf length (cm)	Volume of onions *
Bandikhon	I	50	1	5	-
	II	90	2,5-3	12-15	1
	III	90	3-3,5	15	1-1,5
Sariosiyo	I	50	1	5	-
	II	90	3	12-15	2
	III	92	3,5-4	20	3

* caliber indicator

When the observation results were analyzed, the germination of our seeds planted in both districts did not differ from each other, but as a result of the sudden rise in the weather in Bandikhon district, the level and length of the leaves did not reach a sufficient level, and the size of the onion heads did not reach the expected 2-3 caliber (Table 2).

Table 2

The average of the days from the day of sowing the seeds to the 80-day period in the field experimental plots
heat level (2022)

Territories	Observations	The day the observation was made	Weather indicator, °C
Bandikhon	I	23.03.2022	15
	II	21.04.2022	25
	III	21.05.2022	27-30
Sariosiyo	I	30.03.2022	10
	II	28.04.2022	20
	III	28.05.2022	20-22

Looking at the results in Table 2, the heat level in Bandikhon district increased sharply from the second half of April, which had a negative effect on the growth of onion heads. In the Sariosia district, the size of onion heads was 2-3 caliber due to the fact that the weather temperature remained at the same level and the amount of precipitation was high.

CONCLUSION

In conclusion, it is worth mentioning that onion cultivation is one of the most urgent tasks in our country. It was observed that heat level is important in our field experiments in Bandikhon and Sariosiya districts of Surkhandarya region. In other words, it was determined that the temperature between 20-25°C is important for the onions to ripen and be ready.

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