

THE EFFECT OF DIFFERENT PLANTING SCHEMES ON THE DURATION OF YIELD PRODUCTION IN THE CULTIVATION OF CUCUMBER IN TRELLIS IN THE OPEN FIELD

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Abstract. The article aims to study the dependence of the germinability of seedlings of different ages on their ages in the cultivation of cucumbers as the main crop. During the experiment, cucumber seedlings of different ages were planted in an open field and their viability and adaptation process was studied. Mainly, 10-, 15-, 20-day-old seedlings were planted in open ground and compared to cucumber seeds as a control. At the same time, it was observed that the best viability of seedlings in the open field was observed in 15-day-old seedlings, compared to seedlings of other ages, when planted on June 10 in the planting scheme $\frac{90+50}{2} \times 30$ cm = 0,21, and this option manifested higher cucumber fruit weight and marketable yield.

The use of an associated vaccine leads to the formation of a stable and intense immunity.

Key word: time, variety, hybrid, cucumber, seed, seedling age, viability, root, leaf, true leaf, temperature, humidity.

Introduction. Today, the demand for increasing the production of cucumbers in the republic is increasing. Therefore, increasing its productivity in the leading cucumber-growing countries remains an urgent task. In our country, in 2022, cucumbers were grown on more than 25,000 hectares, and the total volume of production was more than 853,100 tons. It fully meets the demand of the population. However, the increase in the number of people and the expansion of the volume of product exports will lead to an increase in the demand for the product. Therefore, it is necessary to create new high-yielding varieties of cucumbers and to develop innovative technological elements of growing cucumbers in the open field.

Methods of the research. During field experiments in research, phenological observations, biometric measurements, observations on the field viability of cucumber seedlings of different ages were carried out. Monitoring and calculation were carried out in accordance with generally accepted requirements. Experiments were carried out in 4 replications.

The research was carried out in 2020-2022 in the experimental plot of the information consulting center of the Tashkent State Agrarian University on an area of 200 m².

The results of research. Taking into account that cucumber varieties are constantly being superseded, we studied the dates of planting seedlings of Fantina F1, Superina F1, Beit-alfa F1, Sevinch variety suitable for open ground in 2019-2022 with long stems and good branching, as well

as, we conducted experiments to determine the planting scheme and the number of seedlings per hectare.

In our research, we studied the differences and comparison between the control planting scheme and certain options for determining the optimal planting schemes for growing cucumbers from seedlings in the open field by the trellis method. For this, $\frac{140+70}{2} \times 40 \text{ cm} = 0,42$ planting scheme was taken as a control option, for other options $\frac{90+50}{2} \times 20 \text{ cm} = 0,14$, $\frac{90+50}{2} \times 30 \text{ cm} = 0,21$, $\frac{90+50}{2} \times 40 \text{ cm} = 0,28$ planting schemes were used in the experiment. It can be said that when using these planting schemes, certain differences were noted in the biometric measurements taken during the phenological observations of the growth and development of the cucumber varieties studied in our experiments.

In our experiments, the direct effect of the applied planting schemes on the growth and development of cucumber seedlings was observed. Certain changes in vegetative and generative organs of cucumber varieties and hybrids were determined in accordance with the planting scheme. Although the planting scheme did not have a significant effect on the field viability of the seedlings, it was observed during our experiments that it had a significant effect on the formation of the stems, the condition of the leaves and the quality of the fruit.

From the data in the table, it is known that when the seedlings were planted in the size of $\frac{140+70}{2} \times 40 \text{ cm} = 0,42$ planting scheme in the control option, field viability of seedlings, blooming of maternal flowers, time to harvest and duration of yield were observed in the cucumber plant as follows. Field viability of seedlings was found to be 95% in Fantina F1 hybrid, 97% in Superina F1, 98% in Beit-Alfa F1, and 98% in Sevinch variety. Blooming of maternal flowers of Fantina F1, Superina F1, Beit-Alfa F1, Sevinch varieties was observed after 17-18 days, and up to 75% flowering in all varieties and hybrids. The initial ripening of cucumber fruits was observed 24 days after planting. The deadline for harvesting fruits in the cucumber plant was completed 64 days after planting. The duration of harvesting was 40-42 days on average.

When cucumber seedling were planted in the $\frac{90+50}{2} \times 20 \text{ cm} = 0,14$ scheme, the viability rate of seedlings in all varieties and hybrids was 96-98%, after 17-18 days the flowering was observed in 75% of plants. 24 days were enough for the fruits to mature into the initial picking, and the process of harvesting the last fruits was observed 78-79 days after planting the seedlings. It was found that the duration of the harvest made 54-56 days.

When the cucumber seedlings were planted in the $\frac{90+50}{2} \times 30 \text{ cm} = 0,21$, $\frac{90+50}{2} \times 40 \text{ cm} = 0,28$ schemes, in all varieties and hybrids, there was no significant difference in seedling viability and other indicators compared to the two variants. But the process of harvesting the last fruits was observed 84-85 days after planting seedlings. It was observed that the duration of harvesting lasted 60-62 days. It can be said that during our experiments, the most optimal planting scheme for growing cucumbers in the open field was $\frac{90+50}{2} \times 30 \text{ cm} = 0,21$.

In our experiments, when growing cucumbers in the open field, the effect of the planting scheme on the number of plants per hectare, the length of the stem, the number and total length of side branches, and the number of leaves was studied, the effect of the planting scheme on the changes in the vegetative and generative organs of cucumber varieties and hybrids was determined. Our experiments revealed that the planting scheme has an effect on the number of seedlings in the field, the formation of stems, the condition of the leaves and the quality of the fruit.

Conclusion. When growing cucumbers in open fields as the main crop, better results are obtained from ready-made seedlings than from seeds. It was observed that the field viability of 15-day-old seedlings was higher compared to the control, i.e. seedlings planted from seeds and 10-day-old and 20-day-old seedlings. The best indicator was noted in Beit-Alfa F1 hybrid and Sevinch variety compared to other hybrids. So, if 15-day-old seedlings of cucumber are planted in the open field as the main crop on June 10 in the $\frac{90+50}{2} \times 30 \text{ cm} = 0,21$, planting scheme, good results will be obtained. In this case, the weight, marketability and yield of cucumber fruits will be high.

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