

**THE EFFECT OF PLANTING TIME ON FRUIT WEIGHT, PRODUCTIVITY  
AND MARKETABLE YIELD IN THE CULTIVATION OF CUCUMBER  
VARIETIES AND HYBRIDS AS A REPEATED CROP 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 in 15-day-old seedlings, compared to seedlings of other ages, when planted on June 10, and manifested higher cucumber fruit weight and marketable yield.

**Key words;** 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 m<sup>2</sup>.

The purpose of the research is to study the germinability and acclimatization process of seeds and seedlings of different ages in open field in the cultivation cucumbers as a main crop.

As an object of research, the cucumber variety "Sevinch", "Fantina" F1, "Superina" F1 and "Beit-Alfa" F1 hybrids and cucumber seeds and seedlings of 10, 15, 20- days were selected.

The results of the research. In the cultivation of varieties and hybrids of cucumber as a repeated crop in the open field, the following results were obtained when studying the effect of planting time on fruit weight, productivity and yield marketability. When cucumber seedlings were planted in an open field on June 10, the average weight of 1 ripe fruit of cucumber varieties and hybrids was 90.3 g for Fantina F1 hybrid, 107.2 g for Superina F1, 108.7 for Beit-alfa F1 g, and for Sevinch variety it was 97.3 g. And when the total yield was analyzed on the basis of one hectare, it was 87 760 t for Fantina F1 hybrid, 88 661 t for Superina F1, 88 670 t for Beit-alfa F1, and 88 685 t for Sevinch variety. The share of marketable yield from the total yield was 95.8% for Fantina F1 hybrid, 97.9% for Superina F1, 84.946% for Beit-alfa F1, and 98.1% for Sevinch variety. It was found that the highest indicator among the varieties and hybrids was 98.6% for the Beit-alpha F1 hybrid and 98.1% for the Sevinch variety.

When cucumber seedlings were planted in an open field on June 25 (control), the average weight of 1 ripe fruit of cucumber varieties and hybrids was 91.1 g for Fantina F1 hybrid, 107.5 g for Superina F1, 109,5 g for Beit-alfa F1, and for the Sevinch variety it was 97.7 g, and the total productivity, when analyzed on the average per hectare, was 64 357 t for the Fantina F1 hybrid, 66 457 t for the Superina F1, 67 232 t for the Beit-alfa F1, 66 876 t for Sevinch variety. It was observed that the share of marketable yield from the total yield was 94.7% for Fantina F1 hybrid, 96.4% for Superina F1, 98.3% for Beit-alfa F1, and 97.6% for Sevinch variety. It was found that during our experiments on cucumber seedlings planted in this period, the highest indicator among the varieties and hybrids was 98.3% for the Beit-alfa F1 hybrid and 97.6% for the Sevinch variety.

When the seedlings were planted in the open field on July 10, the average weight of 1 ripe fruit of the cucumber varieties and hybrids was 89.3 g for Fantina F1 hybrid, 108.1 g for Superina F1, 110.1 g for Beit-alfa F1, and 98.8 g for the Sevinch variety. When analyzing the total yield per hectare averagely, it was found that the indicator was 37 725 tons for Fantina F1 hybrid, 38 786 tons for Superina F1, 39 123 tons for Beit-alfa F1, and 38 708 tons for Sevinch variety. It was observed that the share of marketable yield from the total yield was 94.3% in Fantina F1 hybrid, 95.5% in Superina F1, 97.0% in Beit-alfa F1, and 96.7% in Sevinch variety. During our

experiments, it was found that the highest rate among varieties and hybrids of cucumber seedlings planted in this period was 97.0% for the Beit-alfa F1 hybrid and 96.7% for the Sevinch variety.

When 15-day-old seedlings of cucumbers were planted in the open field on July 25, the average weight of 1 ripe fruit of cucumber varieties and hybrids was 97.0 g for Fantina F1 hybrid, 106.7 g for Superina F1, 110.3 g for Beit-alfa F1 and 95.2 g for Sevinch variety. While analyzing total yield in per hectare, it was observed that the total yield was 12 288 t for Fantina F1 hybrid, 13 124 t for Superina F1, 13 681 t for Beit-alfa F1, and 13 253 tons for Sevinch variety. It was noted that the share of marketable yield from the total yield was 90.1% for Fantina F1 hybrid, 89.7% for Superina F1, 90.8% for Beit-alfa F1, and 90.2% for Sevinch variety. It was observed in our experiments that the highest rate among the varieties and hybrids of cucumber seedlings planted in this period was 90.8% for the Beit-alfa F1 hybrid and 90.2% for the Sevinch variety.

The conducted experiments showed that in the cultivation of cucumbers from seedlings in the open field, it was observed that the 15-day-old seedlings planted on June 10 had a higher effectiveness on the viability, growth and development of vegetative and generative organs compared to the control and other variants. From this, it can be said that during our experiments it was found that planting 15-day-old ready-made seedlings of Beit-alfa F1 hybrid and Sevinch variety of cucumber in open fields gives good results.

**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 than the control, i.e. seedlings planted from seeds, and 10-day-old and 20-day-old seedlings. The best performance among varieties was for Beit-Alfa F1 hybrid and Sevinch variety compared to other hybrids. So, planting 15-day-old seedlings of cucumber as the main crop in the open field on June 10, will give good results. In this case, the fruit weight, yield and marketability of cucumber fruits will be high.

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2023: International Conference on Agriculture Sciences, Environment,  
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