

Article

Growing and Development of the Common Pumpkin in Uzbekistan

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Citation: Elmurod kizi U. U. Growing and Development of the Common Pumpkin in Uzbekistan. American Journal of Biology and Natural Sciences 2026, 3(2), 161-164.

Received: 16th Nov 2025

Revised: 23rd Dec 2025

Accepted: 15th Jan 2026

Published: 19th Feb 2026



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Abstract: The article presents information about the agrotechnological processes of growing large-fruited pumpkin (*Cucurbita maxima* Duchense) in the conditions of the Samarkand region - planting dates, scheme and action of biostimulants against the background of mineral fertilizers.

Keywords: Feed, Field Crops, Zucchini, Growth and Development, Growth Periods.

Introduction

Pumpkin occupies an important place in the food industry and feed production. Therefore, the use of this crop in feed production, due to its biological, economic, and technological potential, is of great importance from a scientific and production point of view. However, the agronomic practices of pumpkin varieties used as fodder and the possibility of using their fruits as carotene-rich fodder have not been studied in the Samarkand region [1], [2], [3], [4], [5].

Materials and Methods

The field experience is considered to be 3-factorial, the number of returns is 3. Depending on the structure of the experiment, there are 18 options, and the experimental planting is carried out on 2 varieties of pumpkins: Stofunovaya and Bahadurskaya. The planting dates for regular pumpkins are 3-5 April, 15 April, and 25 April, and the planting pattern for 2 seedlings is (290x70):2x90 and (290x90):2x90, application rate of 3 fertilizers-N100P100K50 (background), background+Avangard start, and background+VL-77 [6], [7], [8], [9], [10].

Results and Discussion

Sowing scheme for ordinary pumpkin of the Hundred-fruit variety on April 5 (290x70): at 2x90 N100 P100 in the K50 (background) variant, seed germination occurred 7 days after sowing the seeds, with the same variant, when sown on April 15, this indicator was 5 days, and when sown on April 25-6 days.

The positive effect of the N100 P100 K50 biostimulants on the growth and development of the common pumpkin was observed during the flowering period of the currant. It was noted that both biostimulants studied in the experiment, Avangard Start and VK-77, have a similar effect on the growth and development of plants from a practical standpoint.

In the regular pumpkin (290 x 90): 2 x 90, it was also noted that the difference in the variants was the same as in the first studied scheme. The effect of biostimulants on the growth and development of the plant was observed 5-7 days after spraying the plant at different times and in different schemes.

Their effect on plant growth and development was particularly noticeable during the sowing period on April 15. In the variants that were sown later, on April 25, the effects of the biostimulants were relatively less effective. This can be attributed to the reduced capacity of the plants to absorb the biostimulants due to the warmer weather conditions. The effective action of biostimulants against the background of mineral fertilizer was noted in the planting scheme of the common pumpkin at the time of planting on April 15 (290 x 90): 2 x 90. At the same time, the oblique flowering of the plant after sowing the seeds was on the 31-33 day. This indicator shows that on the 7-8 day, the growth and development of the plant was accelerated in comparison with the control option.

The oblique flowering of the plant when the seeds were sown later than April 25 corresponded to 35-36 days after sowing the seeds according to the above scheme.

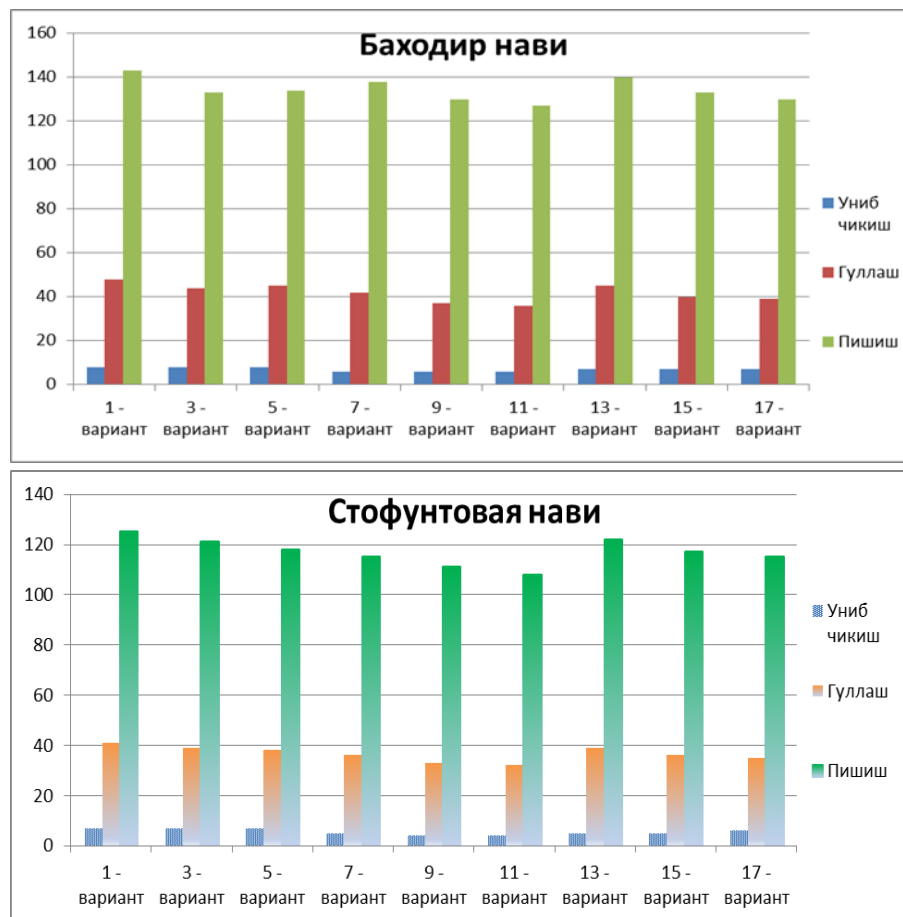


Figure 1. Ripening periods of a common pumpkin.

The timing and pattern of sowing of regular pumpkins, the use of biostimulants against the background of mineral fertilizers (Vanguard start and VK-77), led to a slight reduction in the ripening period of the plant's fruits, and this indicator was noted at the sowing time of 5 April and (290x90):2 x 90, compared to the control scheme, it was reduced by 15-16 days. The results in this direction were

also obtained in the Bahadur variety of regular pumpkin. However, it was noted that the numerical indicators were slightly different [11], [12], [13], [14], [15].

Conclusion

The positive effect of biostimulants based on mineral fertilizers (Avangard start, VK-77) on the growth and development of plants in terms of planting dates and planting schemes of common pumpkin has been revealed. Although the difference between the options in terms of planting dates depends on the air temperature, it has been observed that the effective action of biostimulants decreases with an increase in air temperature. It has been established that sowing seeds in mid-April according to the scheme (290 x 90):2x90 and the use of biostimulants against the background of mineral fertilizer N100 P100 K50 have a positive effect on the growth and development of the plant, as well as on the ripening period of the crop.

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