



## DIFFERENCES IN PHENOLOGICAL PHASES IN DIFFERENT VARIETIES OF APPLE

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### ABSTRACT

This article describes the phenological phases of local and introduced cherry fruits, which are being studied in the Republic of Karakalpakstan in 2025. The differences in the passage of phenological phases in the orchards of the varieties "Bahor" (control), "Star Giant", "Nimba", "Dragona Zholtaya" and "Valovoy Sertsya" planted in 4x4 and 4x2 meter schemes are presented, including the processes of bud swelling, bud formation, flowering, fruit ripening and fruit ripening.

**Keywords:** cherry, fruit, variety, flower, bud, phenological phase.

### ANNOTATSIYA

Ushbu maqolada Qoraqalpog'iston Respublikasida sharoitida 2025 yilda Ak. M. Mirzayev nomidagi BUVITI Qoraqalpoq ilmiy tajriba stansiyasida ilmiy izlanishlar olib borilayotgan, mahalliy va introduksiya qilingan gilos navlarining fenologik fazalari yoritib berilgan. "Bahor" (nazorat), "Star giant", "Nimba", "Dragona joltaya" va "Valovoy sersa" navlari 4x4 va 4x2 metr sxemalarda ekilgan bog'da fenologik fazalarining o'tishi kurtak bo'rtishi, kurtak yozilishi, gullashi, meva pishishi va xazonrezgilikkacha bo'lgan jarayonlarini farqi keltirilgan.

**Kalit so'zlar:** gilos, meva, nav, gul, kurtak, fenologik faza.

### АННОТАЦИЯ

В данной статье описываются фенологические фазы местных и интродуцированных сортов черешни, изучаемых в Республике Каракалпакстан в 2025 году. Представлены различия в прохождении фенологических фаз в садах сортов «Бахор» (контроль), «Стар гигант», «Нимба», «Драгона Жолтая» и «Валовой Серца», высаженных по схемам

4x4 и 4x2 метра, включая процессы набухания почек, формирования почек, цветения, созревания плодов и плодоношения.

**Ключевые слова:** черешня, плод, сорт, цветок, бутон, фенологическая фаза.

### INTRODUCTION

Currently, the growing population is causing a sharp increase in demand for food products. The abundance of beneficial properties of fruits for the human body, their healing properties, and, of course, their richness in vitamins and minerals, lead to an increase in demand and supply for them. [2]. This, in turn, means that scientific research is needed to increase the number of existing fruits, create new varieties and hybrids from them, and increase the adaptability of fruits imported from foreign countries to our country's conditions.[4;6].

In recent years, a number of measures have been taken in our republic to improve the quality of fruit products, steadily increase their export potential, further expand the area of intensive gardens, and further improve the agrotechnical measures implemented in them. Our scientists are introducing new fruit species suitable for the climatic conditions of Uzbekistan and applying them to production through scientific research. The Strategy for the Development of Agriculture of the Republic of

Uzbekistan for 2020-2030 aims to "increase labor productivity in farms, improve product quality, and create high added value."...» is defined as one of the strategic tasks. [1]

Among the fruits in our republic, there is a great demand for cherry fruit, which is distinguished by its sweet taste and beauty[3]. Therefore, the peculiarity of cherries, the cultivation of its varieties, which are adaptable to different climatic and soil conditions, is relevant. Phenological observations, which are the basis of scientific research, are their initial stage.[5].

**Research styles.** Conducting phenological observations of different varieties of cherries program I methodology sortaizucheniya plodovix I orexoplodnix kultur (Oryol 1999 g.) style was done richly. During this scientific study, the following results were obtained from the varieties of cherries "Bahor", "Dragona joltaya", "Star giant", "Nimba" and "Valovoy serts".[7].

**Research results.** When phenological observations were carried out on cherry varieties, the phases of flowering and development of the Spring variety initially began in the III decade of March. In the varieties "Nimba", "Star giant", "Dragona joltaya" and "Valovoy serts", it began in the III-decade of March, with a difference of 1-2 days. The opening of shoots in the spring (control) variety of Cherries began on March 29, the bolsa variety "Dragona joltaya" was observed 8 days late compared to the spring (control) variety, Valovoy serts 9 days later, the norvonder Variety 10 days later.

The beginning of flowering has been observed in the spring (control) Variety on April 1, the "Valovoy serts" Variety on April 4, The "Dragona joltaya Variety on April 5, the "Nimba" on April 7, and the black cherry variety on April 8. Full flowering initially occurred in the spring (control) Variety on April 7, in the "Valovoy serts" Variety on April 13, in the "Dragona joltaya Variety on April 14, in the Star giant variety from April 15, and in the black cherry variety at the latest on April 16.



**1-photo. Determining the ripening period of cherry fruits.**

While flowering ended first in "Bahor" (control) on April 12, in "Valovoy serts" it occurred on April 16. The next day, "Nimba" and "Dragona joltaya" were observed on April 19, and "Star giant" was observed last, on April 21. The duration of flowering has been observed to last 14 days in the most abundant "Dragona joltaya" variety, 13 days in the "Valovoy serts" Variety, 12 days in the "Nimba" variety, 11 days in the "spring" (control) and "Star giant" varieties. Cherry fruit ripening began on May 15 in the "spring" (Control), May 23 in the "Nimba", May 30 in the "Dragona joltaya", June 1 in the "Valovoy serts", Star giant Variety on June 5. (See Table 1).

**Flowering of phenological phases in local and introduced varieties of cherries in orchards planted in a 4x4 and 4x2 meter scheme (2025).**

O /n	Varieties name	Bud		Flowering				Fruit ripening				Leaf fall		
		Bulge	Opening	The beginning	Full	End	Duration.	The beginning	Full	End	Duration.	The beginning	End	Duration.
1.	<b>Bahor (nazorat)</b>	25/III	19/III	01/IV	07/IV	12/IV	11	15/V	19/V	25/V	10	10/XI	20/XI	11
2.	<b>Valovoy sertsa</b>	31/III	02/IV	04/IV	13/IV	16/IV	13	01/VI	05/VI	10/VI	10	10/XI	21/XI	12
3.	<b>Dragona joltaya</b>	31/III	01/IV	05/IV	14/IV	19/IV	14	30/V	03/VI	09/VI	11	09/XI	21/XI	13
4.	<b>Nimba</b>	29/III	02/IV	07/IV	15/IV	19/IV	12	23/V	25/V	30/V	8	12/XI	23/XI	11
5.	<b>Star giant</b>	30/III	06/IV	10/IV	16/IV	21/IV	11	05/VI	10/VI	15/VI	11	12/XI	22/XI	11

Full ripening occurred initially on May 19 for "Bahor" (control) and on May 19 for "Nimba".

On May 25, the "Dragona joltaya" variety reached full ripeness on June 3, "Valovoy serts" on June 5, and "Star giant" on June 10. The end of ripening was correct for the dates of may 25 in the "spring" (control) variety, May 30 in the "Nimba" variety, June 9 in the "Dragona joltaya" variety, June 10 in the "Valovoy serts" variety, June 15 in the "Star giant" Variety. The ripening period was 11 days for the Star giant and "Dragona joltaya", 10 days for the varieties "Bahor" (control) and "Valovoy serts", and 8 days for the variety "Nimba". The beginning of leaf fall was initially reclaimed in the "Dragona joltaya" Variety on November 9, in the songra "Spring" (control) and "Valovoy serts" varieties on November 10, at the very end in the "Nimba" and Star giant varieties on November 12. End of leaf fall.

On November 20, in the "Bahor" (control) variety, on November 20, in the "Valovoy serts" and "Dragona joltaya" varieties, on November 21, in the "Nimba" and "Star giant" varieties,

It was observed on November 22-23. The duration of the leaf fall was 11 days in the varieties "Bahor" (control), "Nimba" and "Star giant", 12 days in the variety "Valovoy serts" and 13 days in the variety "Dragona joltaya".

### CONCLUSION

As a result of the scientific research carried out, we can say that when phenological observations were carried out on local and introduced varieties of cherries, tree nesting was initially observed in the spring (control) variety, valovoy serts, Dragona joltaya, Nimba, and songra Star giant varieties. The flowering phase was observed first in the Spring (control) variety, and the flowering phase was observed last in the Star giant variety. The ripening phase of cherry fruits was observed first in the "Bahor" (control) variety, then in the "Nimba", "Dragona joltaya", "Valovoy serts" and "Star giant" varieties.



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