

## Cherry Phenological Phases Flowering and Ripping Periods

*Kimsonova Kholida Azamovna*<sup>1</sup>, *Tursunboyeva Mastura Khusanboy's daughter*<sup>2</sup>

**Abstract:** Creating a garden, creating fruit varieties with high productivity and resistance to various diseases and pests is one of the urgent tasks facing fruit growers today. We are carrying out scientific research in order to create orchards based on intensive technology by selecting suitable clone grafts for cherry fruit.

**Keywords:** Cherry, nematode, graft, disease, cherry, plum, intensive technology, plants, resistant, clone graft, selection, fertility, plants.

The growth and development of plants depends on the genetic, agrotechnical and ecological conditions of the place where they grow. It is known that sexually propagated plants have a much longer development period in ontogeny compared to vegetatively propagated plants. In this, the development of the above-ground part and root system of plants is significantly different. In the life of tree-like (fruit) plants, there is a large development cycle - the period of life (ontogeny) from seed to natural death, and small annual cycles - phenological phases. The big cycle, that is, ontogenesis (individual development of plants) was mentioned above. A description of the small cycle - phenophases is given below.

In the long historical development of cold and temperate-warm climate plant forms, climate complexes and soil formation processes alternate with each other, changing life processes in them, and the periodic pattern of the formation (formation) of wintering buds. It has developed the ability to adapt to the external conditions that change every year by shedding its leaves before frost. In the annual cycle of fruit and berry-fruit plants in zones with a temperate climate and close to it, two periods of growth and a period of relative rest are clearly visible. The first, i.e., the growing season corresponds to the most favorable (optimal) temperature for the above-ground and underground parts of the plant to grow and produce. This period begins in spring and lasts until autumn. The second period, that is, the period of relative rest, corresponds to the time when the temperature drops. This period begins in late autumn, continues throughout the winter, and stops in the spring. Morphological signs and physiological functions of fruit trees change during the change of external conditions and the periods of growth and rest associated with them. These phenomena related to plants are called phenological phases or phenophases. They are repeated every year. Growth and rest phenophases are usually distinguished. In spring, for example, a leaf bud develops on a leaf-bearing branch, stops growing by the end of May, continues to grow again in late summer - August and September, and stops growing in late autumn. In the last fall, the branch turns into a bud and remains dormant until spring. The leaves are green in early spring, turn yellow in autumn, and change in shape, size, and other characteristics. At the same time, other morphological signs of the plant can also change. In addition, plants change anatomically during the year. Cells gradually differentiate (differentiate in form and function). Some are leaf buds, others are flower buds, and others are cambium, lobules, wood, bark, etc. become cells. Physiological functions of fruit plants in the annual cycle are not constant. The growth of the branches is observed at the same rate, the quantity of compounds such as sugar, acid, starch, protein, fats and mineral salts in them changes. The processes of respiration, photosynthesis, and transpiration in plants are different throughout the year.

<sup>1</sup> Andijan Institute of Agriculture and Agrotechnologies, assistant of the department "Fruit and vegetable growing and viticulture"

<sup>2</sup> a student of "Fruit and vegetable growing and viticulture"



The same plants growing in temperate-warm zones are formed in the process of phenogenetic development and are adapted to get out of winter well every year (they shed their leaves until the autumn-winter frost). This group of deciduous plants includes most of the fruit and berry plants currently grown. Other groups of plants in tropical climates are adapted to grow without shedding leaves all year round. This includes citrus, tea and olive plants. But plants do not have evergreen leaves. They live for three to five years and even more, then they die and new ones appear in their place. Evergreen plants grow only in southern latitudes. They are even found in the tundra. Maean, cranberry, cranberry, cranberry, etc. All phenophases and phases require certain external conditions - temperature, soil, air humidity and others.

They take place in plants in a certain order according to the historical composition of external climate conditions, temperature, length of day, etc. Before flowering, the bud swells and opens, and flowering prepares fruiting and other phases. The end of one phenophase coincides with the beginning of the second. Sometimes several phenophases (root, fruit growth, differentiation of fruit buds, etc.) occur partially at the same time. Phenophases can also be opposite. Maean is one of the fruit sacs that have won the first phase of differentiation vegetative (growing) branches, not flowers, can develop when the feeding conditions change sharply. In one year, some of them, for example, repeated growth of branches, repeated flowering and fruiting can be repeated. Phenophases can also be shifted in time under the influence of external factors, because each of them requires conditions in relation to each other.

The growth time and length of the phenophases are influenced not only by the characteristics of the plant variety, but also by the graft and the general condition of the plant, as well as climatic and ecological conditions, and agrotechnical methods aimed at plant care. Maean, the growth period of old trees is shorter than that of young trees; those of sick people are shorter than those of healthy people, and they are longer in fertile soils than those in dry soils. The same agrotechnical method can be beneficial at some times and harmful at other times. Nitrogen fertilizers applied in early spring enhance the growth of branches and help the emergence of grains. Nitrogen fertilizers applied to wet soil in autumn slow down the growth of branches in hot weather, the branches do not ripen and can be affected by frost in winter. With agrotechnical methods, it is possible to regulate not only the growth time and duration of certain phenophases, but also the intensity of phenological processes in the direction that is necessary for humans. A harvested tree goes through the following phenophases throughout the year: bud formation and flowering, vegetative growth, emergence and formation of flower buds, fruit growth and ripening, tissue maturation, storage of nutrients. accumulation and phasing.

The writing of buds and the flowering of plants. This phenophase begins in early spring, when there is a certain air temperature and soil moisture for all species and varieties. In all types of fruit trees, the growth period begins at a temperature of 5°C (this temperature is considered biological zero), and the active growth period begins when the temperature is around 10°C (seed fruits). Some fruit plants (cherries, almonds, apricots, peaches and other fruit trees) bloom before leafing. In some cases (cherries, pears, quinces, dates, figs, etc.), it is the opposite. The beginning of flowering and its duration depend on the characteristics of the species and varieties of fruit trees, external environmental conditions and agrotechnical measures. Some types of fruit trees bloom in Uzbekistan in the following order: Cherry, plum, cherry, varieties belonging to the same species bloom at different times. Depending on these characteristics, they are divided into early, average and late bloomers. The beginning of flowering depends on the temperature (around 8°-12°), as well as the relief of the place and the agrotechnics of garden maintenance. The formation and flowering of buds is independent of last year's nutrient supply and the direct influence of the root system at this time. Flower buds formed early on the tree bloom early in the spring. How long the flowering time is often depends on the weather conditions, it can last from 3 days to 2 weeks, and the flower lives from 2 to 6 days, even more in mountain conditions. When the weather is hot and dry, the flowering time is shortened, and when it is cool and rainy, it is extended. When the dryness of the air is high (20%), the beak of the sower dries up and fertilization (fertilization) does not occur. When the weather is excessively wet (fog, strong wind, etc.), the plant is not pollinated well, because such conditions prevent bees from



flying. Bud formation and flowering do not occur simultaneously on one tree. Fruit plants are divided into two groups based on the nature and results of pollination: self-pollinating and external pollinating. Self-pollinated plants are pollinated by the pollen of one flower falling into the beak of this flower (autogamy) or with the pollen of a neighboring flower of this variety (geitonogamy). Foreign-pollinated plants are pollinated with the pollen of another variety. Fruit plants can be cross-pollinated due to dichogamy - in avian flowers, the anther and seed tube do not mature at the same time. Plants with an early ripening tip of the flower seed are called protegenic, and those with an early ripening of pollen are called proterandrian plants. The varieties of the first group, i.e., self-pollinating varieties, even if they are grown alone or if trees of the same variety are planted. The varieties of the second group, that is, pollinated from outside, give a good harvest only when planted together with pollinating varieties. In this regard, all varieties of fruit plants are divided into two groups: self-fruiting (self-fertilizing) and non-self-fruiting (self-fertilizing). Self-fruiting plants produce fruit when they are self-pollinated. Although some varieties of fruit plants are self-pollinated, the crop is better when cross-pollinated. In this case, plants selectively use dust that is biologically favorable, and therefore, the fungi differ in their high vitality and adaptation to the changing conditions of the external environment. In this kind of doldrums, the fruit skin develops well, since the fruit actively uses the nutrients that come to it. Therefore, when building a garden, the interaction of pollinating and pollinating varieties is taken into account, and they are placed accordingly. All cherry varieties and most cherry varieties do not produce fruit by themselves. During and after flowering, flowers, fruit buds, and then fruits are abundantly shed. This is repeated three times. The first time is during flowering. Not all flowers develop equally on a tree. Some of them have incompletely developed stamens or seeds, and such flowers usually do not fertilize. Due to the lack of nutrients during the formation of flower buds, flowers do not develop well. As a result, the pollen is infertile or the egg cell is dead. Infestation of flower buds with pests and diseases can also cause the flowers to not fully develop. The second shedding of fruit nodes occurs two weeks after the first and lasts for two weeks. Here, some flowers are not pollinated due to the influence of rain, bad flying of bees, black frost, etc., or due to lack of dust falling on the seeds. The third shedding is observed one month after flowering and is referred to as June or physiological shedding in the literature. This shedding is mainly caused by lack of nutrients and poor tree care, as well as moisture deficiency in the soil during monsoons. At this time, fruits that are not fully fertilized, have few seeds, and are unable to stay on the tree until ripening are also shed.

### References.

1. O'zbekiston Respublikasi Prezidenti Islom Karimovning mamlakatimizni 2014 yilda ijtimoiy-iqtisodiy rivojlantirish yakunlari va 2015 yilga mo'ljallangan iqtisodiy dasturning eng muhim ustuvor yo'nalishlariga bag'ishlangan Vazirlar Mahkamasining majlisidagi ma'ruzasi Xalq so'zi. 2015 yi
2. Almeyev A.V., SHaripov K.M. Bog'-tokzorlardan yuqori hosil olish omillari. Buxoro, 2010. - B.35-37.
3. Bo'riyev X.CH. Xavaskor bog'bonga qo'llanma.-T. "SHarq" nashriyoti-matbaa AK, 2002 yil 176 b
4. Buriyev X.CH., Boymatov K., Juraev R., «Meva va rezavor meva ekinlari selektsiyasi va navshunosligi», Toshkent, «Mexnat» 2001 yil
5. Soliyeva, M. B., Yuldasheva, K. T., Xatamova, X. K., Kimsanova, X. A., & Isroilova, S. S. (2021). The effect of shelf life of live cocoons on their temperature and quality. *Asian Journal of Multidimensional Research (AJMR)*, 10(3), 254-260
6. Yuldasheva, K. T., Soliyeva, M. B., Kimsanova, X. A., Arabboev, A. A., & Kayumova, S. A. (2021). Evaluation of winter frost resistance of cultivated varieties of olives. *ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL*, 11(2), 627-632.



7. Xatamova, X. K., Yuldasheva, K. T., Soliyeva, M. B., Kimsanova, X. A., & Juraboyeva, S. M. (2021). Methods of preserving subtropical fruits. *Asian Journal of Multidimensional Research (AJMR)*, 10(1), 109-115.
8. Yuldasheva, K. T., Soliyeva, M. B., Xatamova, X. K., & Kimsanova, X. A. (2020). Effect of arbuscular mycorrhiza on micro propagated olive. *ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL*, 10(12), 1491-1498.
9. Bo'riyev X.CH .Xavaskor bog'bonga qo'llanma.-T. "SHarq" nashriyoti-matbaa AK, 2002 yil 176 b
10. Buriyev X.CH., Boymatov K., Juraev R., «Meva va rezavor meva ekinlari selektsiyasi va navshunosligi», Toshkent, «Mexnat» 2001 yil
11. Soliyeva, M. B., Isroilova, S. S., & Abdullayev, A. A. (2022). The Influence of the External Environment on Hatching and Mating of Butterflies. *International Journal of Formal Education*, 1(10), 141-147.
12. Soliyeva, M. B., Israilova, S. S., & Abdullayev, A. A. (2022, October). The Effect of Moisture on the Silk Worm. In *International Conference on Multidimensional Research and Innovative Technological Analyses* (pp. 122-126).
13. Soliyeva, M. B., Isroilova, S. S., & Abdullayev, A. A. (2022, October). Haroratning Ipak Qurti Tanasidagi Fiziologik Jarayonlarga Ta'siri. In *International Conference on Multidimensional Research and Innovative Technological Analyses* (pp. 118-121).
14. Soliyeva, M. B., & No'monov, N. N. (2023). Establishment of Nutritious Mulberries in Our Republic. *Web of Synergy: International Interdisciplinary Research Journal*, 2(2), 145-150.
15. Soliyeva, M. B., & Mirzaxmedova, G. L. (2023). INCREASING THE LEAF YIELD OF THE MULBERRY TREE. *Horizon: Journal of Humanity and Artificial Intelligence*, 2(5), 179-183.
16. Soliyeva, M. B., & Yusufjonov, J. I. (2023). Features of the Construction of Bushes. *Web of Semantic: Universal Journal on Innovative Education*, 2(5), 288-292.
17. Soliyeva, M. B., & No'monov, N. N. (2023). DASTA TURLARI VA ULARNI TAYYORLASH. *Science and innovation*, 2(Special Issue 6), 205-207.
18. Soliyeva, M. B., & Sirojiddinova, M. A. (2023). Chemical Composition of Coir Fiber. *Information Horizons: American Journal of Library and Information Science Innovation (2993-2777)*, 1(9), 102-106.
19. Soliyeva, M. B., & Mirzaxmedova, G. L. (2024). Basics of the Silk Worm Organism Functions and Growth of the Worm Body. *Web of Semantics: Journal of Interdisciplinary Science*, 2(2), 31-36.
20. Soliyeva, M. B., & Sirojiddinova, M. A. (2024). Types of silk worm. *Miasto Przyszłości*, 47, 93-97.
21. Azamovna, K. K. (2024). Effect of Mother Plant Placement Schemes on Seed Yield of Cherry and Plum Grafts. *Miasto Przyszłości*, 47, 148-150.
22. Azamovna, K. K. (2024). Characteristics of Growing Cherry Varieties in the Conditions of Andijan Region. *Miasto Przyszłości*, 47, 535-538.
23. Soliyeva, M. B., Qo'ldashboyeva, S. A., & Uzoqbayeva, D. B. (2024). Effect of Air Temperature on Mulberry Silkworm Activity. *Excellencia: International Multi-disciplinary Journal of Education (2994-9521)*, 2(4), 250-255.
24. Azamovna, K. K., & Khusanboy, T. M. (2024). Studying Methods of Rapid Propagation of Lemon Seedlings from Green Cuttings. *Excellencia: International Multi-disciplinary Journal of Education (2994-9521)*, 2(4), 351-355.

