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Periods of Transition of Phenological Phases of Promising Fodder Varieties of Grapes

Fayziev Jamoliddin Nasirovich [1], Pirnazarov Sardor Olimovich [2], Kurbanova Sarvinoz Anvar kizi [3], Shakirova Khabibakhon Khudoyberdi kizi [4]

[1] d.a.sc., s.r.f, Research Institute of Horticulture, Viticulture and Winemaking named after Academician M. Mirzaev

[2, 3] junior research fellows, Research Institute of Horticulture, Viticulture and Winemaking named after Academician M. Mirzaev

[4] Fergana State University, Research Institute of Horticulture, Viticulture and Winemaking named after Academician M. Mirzaev

Annotation: In the article, the periods of transition of phenological phases of the promising fodder varieties of grapes are studied. The duration of the phenological phases of grape varieties such as Kara Jandal, Rizamat, Husayni, Pushti Tayfi, Babo Zakir, Charos, Parkent, Oktyabrsky, Andijan Kara and Guzal Kara, budding, flowering, bunch ripening, full ripening of bunches, and duration of the ripening vegetation period. Done.

Keywords: grape, variety, vine bush, branch, bud, blossom, grape head, shingle, cluster.

Introduction: Knowing the characteristics of vine development throughout the year, in particular, the factors necessary for each phenological phase, and acting on this basis, allows to ensure the stable growth and development of the vine, to manage the cultivation of high and quality crops at the level of demand [4; 8-12 p.]. It includes processes such as the growth, development, and production of the vine throughout the year.

The growth period mainly consists of 6 phenological phases: aphid movement; the growth of branches and inflorescences; bloom; the growth of crowds; the ripening of crowds; shedding of leaves (casonism).

The division of the growing season into such phases allows determining the necessary agrotechnical measures in each phase, harvesting the crop on time, as well as preparing the vine for winter. The beginning and continuation of each phase depends on factors such as external environmental conditions, variety characteristics, age of vines.

The duration of the individual phases of the growth period is also not clear enough, and the differentiation is often described mainly according to the morphological characteristics of the plants. Knowing the periods of transition of the phases of the vine plant's development cycles in certain conditions of the farm is an important economic sign that has not only theoretical, but also production value. After all, the maintenance of the vine is carried out based on the transition periods of the plant's development period and phases. Compliance with these terms will prepare the ground for obtaining a high and quality harvest of grapes.

It should be noted that the issue related to the annual development period of the current has not been sufficiently scientifically studied. For example, the winter dormancy period of the vine and the duration of the bud dormancy period are not clearly defined.

Scientific research method. In order to carry out the research, grape varieties such as Kara Janjal, Rizamat, Husayni, Pushti Tayfi, Babo Zakir, Charos, Parkent, Oktyabrsky, Andijan Kara and Guzal Kara were selected.

Vine bushes were grown in upright cymbaghs, forming a multi-rusted glove-like shape. Planting scheme 3 x 3 m. Counting and observation work was carried out from 10 bushes in each option.

Phenological observations according to the method of Kh. Ch. Buriev et al. [1 64 p.], M. A. Lazarevsky [2 347-400 p.] in all variants of the phenophase, i.e. bud growth, flowering, ripening of fruits, ripening of branches, khazon line on vine branches beginning and ending are noted.

The growth of shoots was determined by measuring the shoots on the bush after each year of leaf falling.

Research results. Scientific research observations were carried out on the study of the transition periods of the main phenological phases in the grape varieties.

The observation of buds budding of grapevine varieties showed that the earliest budding (6/IV-8/IV) of the studied grape varieties was observed in Babo Zakir, Andijan black, and Charos varieties. Depending on the climatic conditions, in some years, the swelling of the buds differs significantly from the specified period, but the above-mentioned tendency was preserved in the section of the varieties. In comparison with other varieties, the budding of the buds was observed a little later (15/IV-20/IV) in the Pushti тонаш, Husayni and Rizamat varieties. Oktyabrskiy, Parkent, Guzal Kora and Kora Janjal cultivars had early bud initiation (10/IV-13/IV) in the range of the indicated cultivars (Table 1).

According to Sh. Temurov [p. 3 3–110], plant vegetation does not stop when the average daytime temperature drops to +10 0C overnight. In some varieties, often the growth of branches and roots can continue without being noticed. The amount of the harvest largely depends on the conditions during the flowering period. The beginning and duration of the flowering phase is different in different varieties, depending on the climatic conditions.

In most areas where viticulture is developed, the flowering phase is observed in June. In the most optimal conditions, its total duration averaged from 8 to 15 days.

Observing the flowering process of studied grape varieties showed that the earliest (10-15/V) flowering was recorded in Babo Zakir, Charos, Andijan Kora and Husayni varieties. Late flowering (22/V-23/V) was noted in Pushti toyfi, Oktyabrsky, Guzal kora and Rizamat varieties. Mid-term flowering (21/V) was observed in Parkent varieties. In terms of flowering time, these varieties took an intermediate place between the indicated groups.

Depending on the climate of the research years, there were certain deviations in the duration of flowering. In this case, early flowering varieties had 6-11 days earlier than average, and 1-4 days late. It is 7-13 days, respectively, in the group of late blooming varieties. In other words, in the same varieties, the average difference in flowering time between years was greater than the difference in budding time. It should be noted that the timing of budding does not correlate with the timing of flowering.

According to the period of the beginning of ripening of the bunches, the studied varieties of grapes were distinguished among themselves and they were conditionally divided into three groups:

early ripening varieties (8/VII-15/VII) – Babo Zakir, Kara janjal, and Parkent;

mid-ripening varieties (17/VII-20/VII) – Charos, Andijan kara, Guzal kara and Husayni;

late ripening varieties (19/VIII-29/VIII) – Rizamat, Oktyabrsky and Pink toyfi.

Observations have shown that the beginning of ripening of the clusters of grape varieties is almost always related to their flowering period.

Varieties were also divided into three groups according to the full ripening of the clusters:

early varieties (3/VIII-15/VIII) - Babo Zakir, Andijan kara and Charos varieties;

medium varieties (19/VIII-27/VIII) – Husayni, Kora janjal, Guzal Kara;

late ripening varieties (4/IX-28/IX) – Parkent, Rizamat, pushti toyfi and Oktyabrsky varieties.

It was found that the deviation of the ripening period in individual varieties is 7-11 days in the first group, 3-5 days in the second group, and 2-3 days in the third group.

Table 1

Transition periods of vegetation phases in seedless varieties of grapes (2021-2023 years)

o/n	Varieties	Swelling of buds	Flowering	The ripening of grape heads	Full ripening of grape heads	Vegetation period duration, days
1.	Kora janjal control	13/IV	21/V	15/VII	21/VIII	157
2.	Rizamat	20/IV	25/V	19/VIII	18/IX	140
3.	Xusayni	16/IV	15/V	20/VII	19/VIII	132
4.	Pushti toyfi	15/IV	22/V	29/VIII	28/ IX	167
5.	Babo Zakir	6/IV	10/V	8/VII	3/ VIII	113
6.	Charos control	8/IV	12/V	17/VII	15/ VIII	125
7.	Parkent	11/IV	21/V	15/VII	4/ IX	147
8.	Oktyabrsky	10/IV	22/V	26/VIII	28/ IX	169
9.	Andijon Kora	7/IV	12/V	17/VII	13/ VIII	127
10.	Guzal Kora	13/IV	22/V	18/VII	27/VIII	163

According to the length of the growing season, from the budding of the buds to the full ripening of the clusters, the grape varieties were conditionally divided into three groups:

quick ripening varieties (113-127 days) - Babo Zakir, Charos, Andijan Kora;

mid-ripening varieties (132-147 days) – Husayni, Rizamat, Parkent;

late ripening varieties (157-169 days) – Kora janjal, Guzal kora, pushti toyfi, Oktyabrsky.

Varieties of grapes during the growing season from budding to full ripening of the clusters Fast-ripening Babo Zakir, Charos, Andijan kora varieties, the average ripening is 19-20 days compared to Husaini, Rizamat, Parkent varieties It was observed that early ripening, late ripening, while the Kara Janjal, Guzal Kara, Pushti toyfi, and Oktyabrsky varieties ripened 22-25 days later than the mid-ripening varieties.

Based on the above information, the vegetation period from the beginning of buds to the full ripening of clusters was 20-25 days among early, mid-ripening and late-ripening varieties.

Summary

1. In the shortest period of time, the duration of full ripening of the grape variety Bobo Zakir was 113 days, the period of full ripening was on August 3, the duration of vegetation of Charos and Andijan kora varieties was 125-127 days, the period of full ripening corresponded to August 13-15.
2. The ripening duration of the mid-ripe table grape variety Husayni was 132 days, the full ripening period was August 19, the vegetation period of the Rizamat and Parkent varieties was 140-147 days, the full ripening period was September 4-18.

3. The most late-ripening grape varieties, Oktyabrsky and pushti toyfi, ripened in 167-169 days, fully ripened on September 28, and Kara janjal and Guzal kora varieties ripened in 157-163 days, fully ripened on August 21-27.

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