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Periods of Transition of Vegetation Phases of Khoraki Varieties of Grapes in Khorezm Region Conditions

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Abstract: In this article, the phenological phases of grape varieties such as Charos, Tharini, Tayifi and Rizamat were observed, and the phenophases of these varieties, such as budding and growth of branches, flowering, ripening of fruits, ripening of branches, and the beginning and end of the Khazon phase in vine branches. Studied through field observations.

Keywords: phase, crowding, shingle, movement of sap, sugar content, horaki variety, flowering, fruit, branch.

Viticulture is one of the most ancient and profitable branches of agriculture in our republic. Viticulture, as a field of plant science, deals with the cultivation of grapes, as a science, it develops various methods of managing its growth and development based on scientific theory and advanced experiences, and as an educational subject studies them.[4]

The annual development period of the vine includes the period of growth and rest. The growth period, in turn, consists of 6 phenological phases, which are as follows: the first phase is the movement of sap (the movement of sap begins on the vine and continues until the period of opening of the buds, that is, until they are written); The second phase lasts from the recording of buds to flowering; the third phase of flowering (begins with the opening of the flowers and the shedding of the calyx caps and continues until the shedding of the inflorescences); The fourth phase is the birth and growth of clusters (beginning with the appearance of cluster nodes and continuing until their ripening); ripening of clusters of the fifth phase (from the beginning of ripening of clusters until they are fully ripe); The sixth phase is the shedding of leaves - autumn (lasts from the full ripening of the clusters to the shedding of the leaves). [3; 382].

The purpose of studying the phenology of a stream is to describe the means that cause different changes under the influence of various events. In viticulture research determines the duration of annual growth stages. [9] They can be used to design a vineyard and plan the various human, material, and economic resources needed to develop a planting. Knowing the characteristics of the vine's development throughout the year, in particular, the agrotechnical measures necessary for each phenological phase, and acting on this basis, it allows to ensure the stable growth and development of the vine, to manage the production of high and quality crops at the required level. [2]

According to A. M. Negrul and Ye. I. Mokhova, who have dealt with issues of transition of vine growth phases at different times, in order to know the biological characteristics of the varieties, their requirements for the environment, each viticultural. It will be necessary to carry out phenological observations. [3]

Materials and methods. Phenological observations Kh.CH. Buriyev and others, M.A. In all variants of the Lazarevsky method, the beginning and end of the phenophase, i.e. The growth of buds, flowering, ripening of fruits, ripening of branches, and the beginning and end of the phason line in vine branches are recorded. The growth of the branches was determined by counting the branches on the bush every year after hazonrez. [1,2]

Results and discussion. It is very important to study the phenophases in certain conditions in vineyards to determine the best fodder varieties of grapes. It was carried out through field observations in the study of the phenophases of grapevine budding and branch growth, flowering, fruit ripening, branch ripening, and the beginning and end of the khazon phase in vine branches. [5]

The issue related to the annual development period of the current has not been sufficiently scientifically studied. The duration of individual phases of the growth period is not clear enough and the differentiation is mostly characterized by the morphological features 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. The passage of development phases in the vine also depends on meteorological factors and it allows to calculate the dates of their beginning and completion, to determine the suitability of placing different varieties of grapes in certain conditions of the external environment, and to determine the main directions of agrotechnics of these varieties.

Table 1. Transition periods of vegetation phases in grape varieties

(2022-2023)

T/p	Variety samples	Swelling of buds	Flowering	Ripening of the crowd	Full ripening of the gourds	Vegetation period duration, days
1.	Charos	18/IV	25/V	24/VIII	29/VIII	138
2.	Rizamat	15/IV	19/V	20/VII	15/VIII	135
3.	Toyifi (st)	17/IV	23/V	25/VIII	9/IX	157
4.	Xirmoni	18/IV	20/V	23/VIII	5/IX	143

The information on the beginning and end periods of each main phenological phase of the development of grape varieties is presented in Table 1.

As can be seen from the data in Table 1, the durations of budding in the bushes of the studied varieties of grapevine differ from each other. Bud swelling was observed in Rizamat and Toyifi varieties at the earliest on April 15-17. And in the threshing and charos varieties, budding was observed on April 18 at the latest. There was a slight difference in the flowering period of the grape varieties, the earliest flowering of the Rizamat and Xirmoni varieties was on May 19-20, 4-3 days earlier than the control variety.

The flowering period of the varieties studied in the rest of the experiment did not differ from each other. It was observed that these varieties bloom on May 23-25. It was studied that the earliest ripening of grape heads was on July 20 in the Rizamat variety, and the latest was on August 25 in the control variety Toyifi. The earliest complete ripening of clusters of grape heads was distinguished by the earliest ripening on August 15 in the Rizamat variety.

In the rest of the varieties studied in the experiment, it was found that the full ripening of grapes occurs from August 29 to September 9. The vegetation phase of the tested varieties, from budding to ripening, was 135-157 days. It can be noted that the ripening periods of fodder varieties differ from each other, therefore the technical and full ripening periods of export fodder grape varieties also differ from each other.

Conclusions.

1. By determining the phenological phases of khoraki grape varieties, it was observed that the phenophases of these grape varieties differ from each other, such as budding and growth of

branches, flowering, ripening of fruits, ripening of branches, and the beginning and end of the fall cycle in vine branches.

2. In the bushes of khoraki grape varieties, the budding periods differed from each other. Bud swelling was observed in Rizamat and Toyifi varieties at the earliest on April 15-17. In the case of Charos and Xirmoni varieties, budding was observed at the latest on April 18.

3. It was studied that the earliest ripening of grape clusters is July 20 in the Rizamat variety, and the latest is August 25 in the control variety. The earliest complete ripening of clusters of grape heads was distinguished by the earliest ripening on August 15 in the Rizamat variety. In the rest of the varieties studied in the experiment, it was found that the full ripening of grapes occurs from August 29 to September 9.

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