THE INFLUENCE OF GROWING SUBSTANCES AND MICROELEMENTS ON YIELD AND HARVEST QUALITY OF WHITE SULTANAS

[1]Mahmadiyorov Farrukh Shomurot ogli, [2]Normurodov Davlat Soibnazarovich,
[3]Sanaeva Lobar Mizamovna
[1]Doctoral student of SamSU named after Sh.Rashidov
[2]Candidate of agricultural Sciences of SamSU named after Sh.Rashidov
[3]Master's student SamATI
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Abstract. *This article provides data on the growth, development, productivity and impact of microelements and biologically active substances on varieties of white sultanas.*
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Introduction. The role and importance of the agricultural sector in ensuring the food security of the population in the world is increasing day by day. In particular, it is an urgent issue to provide the population with agricultural products, to further increase productivity and quality of crops, and to introduce scientific achievements into the field, using the resources and opportunities available in our country wisely.

Currently, the need for food is increasing due to the increase in population in the Republic. Therefore, in order to meet the food demand of the country's population and increase the volume of exports, it is necessary to increase the production of fruit and vegetables and grape products by 8-10% per year and to grow more than 1 million tons of additional products.

In this regard, several works are being carried out in our country, including the decision of the President of the Republic of Uzbekistan dated July 28, 2021, No. It was decided to provide the republic with high-quality products, increase the export potential of the industry, increase its investment attractiveness, as well as develop winemaking and agrotourism, with the wide introduction of mechanisms.

In our country, effective work is being done on the development of viticulture, creation of exportable varieties, processing and delivery of quality products to our people. Among them, in

our ongoing scientific research, the aim was to study the effect of micronutrients and growth substances on the quality and yield of the White Raisin grape variety.

Research place, object and methods. Our research was conducted in the fields of the farm "Davronov Qabiljan gold field" belonging to the Urgut district of the Samarkand region. The white raisin variety of grapes, microelements (Su, Zn, Mn) and growth substances (gibberellin) served as the object of research. The purpose of our research was to study the effectiveness of using micronutrients and growth substances on the growth, development and productivity of the grape variety white sultanas. In this case, the most effective and optimal option is the working solution prepared by adding Cu - 0.5 g, Zn - 0.5 g, Mn - 0.5 g and gibberellin 1.0 g to 10 liters of water times were carried out when the mobs were fully formed. Agrobiological characteristics of the white sultanas variety, transition of phenological phases, yield indicators of vine bushes, mechanical properties and biochemical composition of grape heads and bunches, productivity and quality indicators of bunches were determined in the researches. The obtained results were processed using the Excel program.

Research results. The results of the study of the size and morphological characteristics of the grapes of the white sultana variety studied in the experiment showed that the average length of the vines in the studied bushes was 87.2 centimeters, the number of branches was 38.6 pieces, and the number of axillary branches was 4.3 pieces. The total length of the branches in one bush was 39.6 meters, the average length of the branches was 109.7 centimeters, the degree of leaf coverage of the bush was 682 pieces, the number of leaves in each branch was 20.2 pieces, the absorption surface was 13.1 m2.

In this studied white sultana variety, the beginning of budding on April 12, the beginning of flowering on May 24, the beginning of ripening of clusters on August 22, and the full ripening of clusters on September 10. The duration of the vegetation period in this variety was 153 days.

The analysis of the mechanical characteristics and biochemical composition of the white sultana variety showed that the average weight of grape heads is 274.7 grams, the average weight of grapes per head is 5.8 grams, the average weight of clusters per grape head is 268.9 grams, the

average number of clusters per grape head is 181.7 pieces. , the length of the grape head was 242.2 centimeters, the width of the grape head was in the range of 12.1 centimeters.

In this researched white raisin variety, skin was 1.47%, seed rudiment was 0.21%, and fruitiness was 98.32%. The analysis of the biochemical composition of the cultivated grapes showed that the dry matter was 28.8%, the sugar content was 25.7%, and the acidity was 4.2 g/l.

Our research showed that 65-68 percent more grape yield was achieved by using microelements together with growth agents for the White sultana grape variety. A single treatment with gibberellin at the end of flowering of White sultana variety increased the weight and size of grape heads and bunches by 165-168%, and relatively reduced the amount of dry matter and sugar. In addition, it increased the amount of acid, pectin and flavoring substances in the grape fruit. When gibberellin and micronutrients were applied to the white raisin variety twice - the first time at the end of flowering and the second time when the bunches were fully formed, the size of the grape head and bunches increased significantly, ripening was accelerated, and the sugar content increased significantly, and a marketable product was obtained.

Conclusion. Therefore, the effect of micronutrients and gibberellin on the development of grape heads and clusters of the White sultana variety depends on the duration and number of treatments, that is, the best results are obtained when spraying the first time at the end of flowering and the second time when the clusters are fully formed.

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