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MECHANICAL COMPOSITION OF VINES OF WINE-BEARING VARIETIES

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Introduction

Viticulture is one of the main branches of agriculture in Uzbekistan. Grapes have been grown in our country since ancient times. Favorable soil and climatic conditions of the republic allow to grow grapes, high-quality raisins and a variety of wine varieties. The local grape, raisin and raisin varieties of grapes, as well as desserts and spicy wines are popular both at home and abroad. Today, all types of farms in the country have 113.3 thousand hectares of vineyards, and although the annual gross production of grapes is 114,000 tons, this figure does not meet the demand for grape products.

After gaining independence, the agrarian policy, laws and government decisions of the Republic of Uzbekistan are aimed at implementing radical reforms in agriculture, meeting the demand of the population for food and industrial raw materials through the use of various forms of public and property. In the near future, it is planned to sharply increase the production of all types of grapes by expanding the area of vineyards and increasing its productivity. Despite the high quality of our cultivars, some of them have shortcomings, the elimination of which, studying the mechanical composition of imported varieties and selecting the best and zoning throughout the region, improving productivity and product quality is one of the most pressing issues today. One of the ways to solve this problem is to study the mechanical composition of wine varieties of grapes and improve the agro-techniques of their cultivation.

Research Methodology

The research was conducted in the experimental field of the scientific-experimental enterprise Kibray Sharob. Grape heads, flesh, husks, seeds of wine varieties were measured on an analytical balance and calculated as a percentage, while the size of the grape head was measured on a ruler and calculated according to generally accepted methods.

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Research Results

The results obtained when studying the mechanical composition of the vines of wine-bearing grape varieties revealed that all varieties did not differ significantly from each other (Table 1).

Mechanical composition of vines of wine varieties

Varieties	Head of grapes		Grape weight content,%				
	weight, g	size, cm	shingle	meat	skin	juice	seed
Saperavi (st)	350	25×17	2,4	42,2	2,9	50,5	2,0
Kabirni savinion	440	24,5×15	3,1	28,7	5,1	61,5	1,6
Record	450	23×16	2,6	45,1	4,6	46,3	1,4
Seremskiy zelyonyy	430	18,5×14	2,5	32,0	5,7	58,1	1,7
Aligote	450	30×17	2,4	42,2	2,9	50,5	2,0
Adessi	410	18×13	3,4	26,1	5,3	62,9	2,3
Efendi	370	15×11	2,0	40,6	3,7	52,4	1,3
Garmus	250	22×14	1,5	38,0	2,7	54,6	3,2
Kumshatskiy	520	27×15	3,8	22,8	2,8	67,2	3,4
Mattress	150	14×8	3,4	41,4	4,7	47,3	3,2
Pervomayskiy	170	17×12	5,1	39,9	3,9	47,0	4,1

From the data in Table 1, it can be seen that the smallest number of vines was 150-170 g in Matrasa and Pervomaisky, respectively, while the largest number of grapes was 520 g in Kumshatsky variety. In all other varieties it was around 250–440 g. In terms of linear size, the largest vine was observed in Aligote and Kumshatsky varieties up to 30 × 17 and 27 × 15 cm, and the smallest vine was observed in Matrasa variety. The average size of vines was 22 × 12, 22 × 14 and 23 × 16 cm in Garmus and Recordnav. The remaining varieties were found to be slightly smaller than the others.

In the general structure of the vine, the yield was 1.3-5.3%. In Pervomayskiynavida, the weight of the shingle was the highest at 5.1%, and in the Garmus variety at the lowest 1.5%. The bark on all varieties averaged 3.9%. At the same time, the amplitude of changes in this indicator ranged from 2.7% to Garmus and 5.7% in the Seremsky green variety. The amount of seeds in the vine varied to a small extent and averaged 2.4%. The main weight of the vine consists of juice and meat. Consequently, the highest juice yield was 67.2% in Kumshatsky and 61.5% in Kabirni savinion varieties, while the lowest juice yield was 46.3-47.0% in Record and Pervomaisky. Slightly lower juice yield (50.5–54.6%) was noted in four samples (Fig.1).

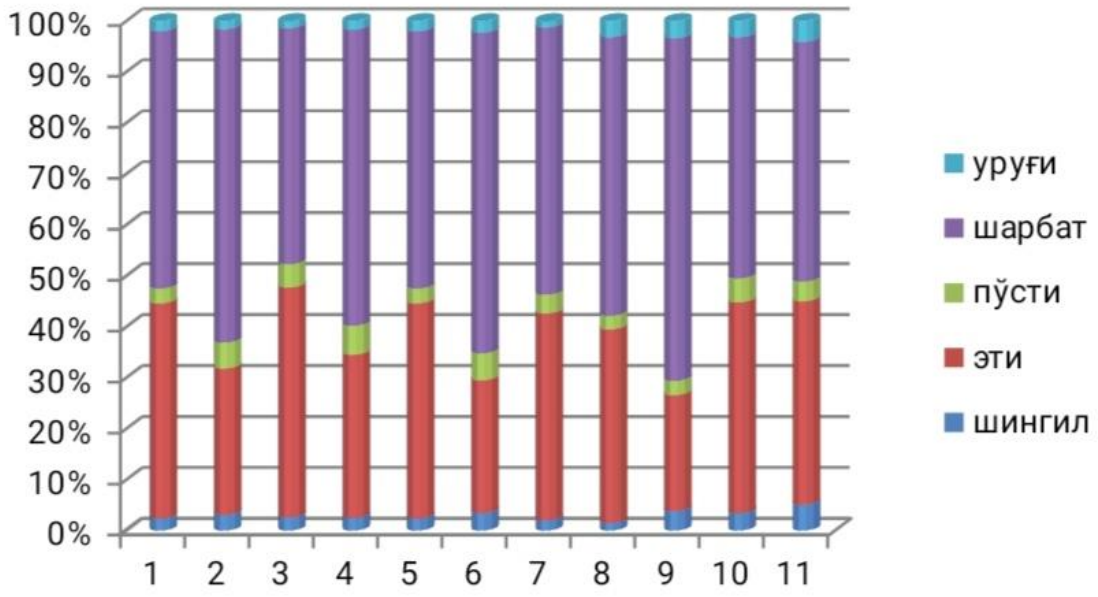

Figure 1. Mechanical composition of wine varieties

It should be noted that the meat content in these studied varieties was the highest in terms of juice content in the lowest recorded varieties. The lowest meat content was in the Kumshatsky, Adessi and Kabirni savinion varieties between 24.8-26.1 and 28.4%. The average meat content in all varieties was 36.2%. In all other varieties, it was observed that the meat content ranged from 32% to 42.2%, respectively. The seeds in the grape heads of the studied varieties accounted for 2.4%, respectively. In this case, despite the fact that the Pervomaisky variety of grapes is the smallest, the content of seeds is also the highest (4.1%). The lowest seed yield was 1.3% in the Efendi variety.

Conclusion

According to the results of the study, Kabirni savinion and Kumshatsky varieties differed from other varieties with the highest juice yield (61.5-67.2%).

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