Influence of a humic and fulvic stimulator on indicators of productivity and quality of grapes in Mediterranean climate conditions

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Research methodology

Field trials regarding the effectiveness of the application of Lignohumate product were carried out in the period of 2018-2020. The tests were carried out at Abrau-Dyurso LLC (Krasnodar region, Russia) Merlot and Cabernet varieties. Trial plot - 3x1.5, planting age – year 1996 of planting.

Table 1. Effect of Lignohumate product on the yield of Merlot and Cabernet varieties in 2018-2020.

Variants	Average mass of a grape cluster, g	Yield				
		From a bush, kg	From 1 Ha, tons	Increase in comparison to control		Shoot productivity index
				t/ha	%	
Merlot control	90	5,0	11,0	-	-	150
2.Merlot Lignohumate	+119	5,58	12,4	1,4	12,6	162
3. Cabernet Control	97	5,4	11,1	-	-	150
4.Cabernet Lignohumate	+119	5,67	12,7	1,6	14,8	167

Lignohumate product significantly reduced the number of pea-like and diseased berries in relation to control. The introduction of the product contributed to an increase in the average size of berries, which led to an increase in the average mass of a grape cluster up to 24% for Cabernet and 18% for Merlot.

For the varieties Merlot and Cabernet, the sugar content increased by 2.6-3.4 g / 100 cm³ with a decrease in acidity by 0.8-0.9 g / dm³ according to the trial variants conducted.

As a result of field trials, it was demonstrated that the application of Lignohumate had a positive effect on the quality of Merlot and Cabernet grapes. The number of inflorescences naturally increased with a threefold application.