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Evaluation of Environmental Quality in Vineyards Târnave and Murfatlar

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SUMMARY

The agrochemical characterization of the grape-growing soils, nutrient monitoring and identification of potential or existing hazardous substances represent another segment of the traceability structure for the quality manual in the grape-growing production. The thorough study of the critical points regarding vine fertilizing, the way it affects the grape-growing environment and the danger of transferring the hazardous substances into the soil-plant-food system is necessary, because it also outlines that using an appropriate fertilizing system can be a way to ensure the removal of negative effects upon wine products ((Dejeu, 2004; Pop, 2003; Iliescu, 1997). Soil, leaf and grape samples from the grape-growing farms situated in the two culture areas were gathered for the study. The farms applied chemical fertilisers on the vines leaves and roots. The concentrations of mineral elements in the soil and plant were dosed using plasma emission spectrometry. The soils from the Târnave and Murfatlar vineyard have been chemically and agro chemically characterized by using main fertility parameters (table 1). By respecting the fertilizer dosage recommended by research units for the Târnave and Murfatlar vineyards, the danger of polluting the soil and the plant with inorganic hazardous substances is avoided. Keeping the fertilizer dosage within the recommended limits also ensures that the plant receives the nutritive elements necessary for a constant production. The chemical composition of the grapes shows that the grapes do not contain inorganic hazardous substances that come from the root and leaf fertilizing.

Tab. 1

The chemical characterization of viticultural soils in the Târnave and Murfatlar vineyard, total elements (mg/kg, average 0-60 cm)

Soil type	Tarnave				Murfatlar			
	pH	Phosphorous total	Potassium total	Copper	pH	Phosphorous total	Potassium total	Copper
Entricambosol	7.4	391	3300	8	7.5	1163	5221	102
Entiantosol	7.9	186	1327	12	7.6	563	2934	48

Keywords: grape vine, mineral elements, fertilization, yield quality

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