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Researches on Establishing Measures to Prevent and Dispute Soil Compaction in Vineyards

Maria CONTOMAN

Faculty of Food Science and Engineering, "*Dunarea de Jos*" University of Galati, 47 Domneasca Street; Galati, Romania; mcontoman@ugal.ro

SUMMARY

The research has been conducted in a vineyard from Dealurile Bujorului on Muscat Hamburg grafted on Berlandieri X Riparia Kober 5BB. The soil in the experimented parcel is a mold bill in nitrogen, medium-weak in phosphorus and medium in assimilated potassium. The research took into account 4 maintenance systems: the black soil, green fertilizers, perennial plants and herbicides. Each year, at the end of the vegetation stage, physical and chemical analysis was made in the soil. Biometric measurements were also made on the grapevine and quantitative and quality analysis on the production. Soil compaction was determined using Chirita penetrometer. The results we have obtained indicated that soil biological and chemical maintenance have improved its physical and chemical features by reducing the degree of compaction.The interpretation of the results has been made according ICPA, the Methodology for elaborating pedological studies, part III, 1987. The determination has been made both under the tractor's wheels as well as between the wheels. The average values of apparent density under the wheels of the tractor indicate a moderate soil compaction for black soil and weak for the other variants. Between the wheels of the tractor, the compaction is weak. The values of the compaction degree are correlated with the apparent density and indicate a moderate value under the wheels of the tractor for the black soil. The values of apparent density increase under the wheels of the tractor, especially for the mechanical maintenance of the soil.The soil compaction determines the decrease of the mobility in the nutritive elements of the soil profile. The aeration porosity is in reverse correlation with DA (apparent density). Biological and chemical maintenance of the soil ensures a good aeration, reducing compaction.

Keywords: compacting, soil maintenance, physical features.

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