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Soil management effect on soil quality indicators in vineyards of the Appellation of Origin "Montilla-Moriles" in southern Spain

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The effect soil management on several indicators frequently used in the assessment of soil quality it is not always reflected unambiguously when measured at the field although it is normally assumed that this relation is straightforward. Within the European project VineDivers (www.vinedivers.eu), sixteen commercial vineyards belonging to the Appellation of Origin "Montilla-Moriles" (Córdoba) and covering a wide range of textural classes were selected. These farms were classified 'a priori' under two soil management categories: temporal cover crop and bare soil during the whole year. In each of the vineyards one representative inter-row was selected in order to characterise different physical, chemical and biological parameters to evaluate some aspects related to soil quality. Results indicate that the studied indicators respond clearly to soil textural class and vegetation cover biomass. However, there was no clear difference in above-ground biomass of the two management categories (Guzmán et al., 2016). These results suggest that the interpretation and extrapolation of the indicators evaluated should incorporate complementary information to characterise small variations of soil management intensity among vineyards that are apparently managed under the same management category. The communication presents this analysis based on the number and type of soil disturbance events of all vineyards. The high variability found among vineyards under the same management highlights the relevance of measuring these soil parameters used as quality indicators, instead of extrapolating from other vineyards or agricultural systems, and interpreting them according to baseline levels.
References:
Guzmán G., Cabezas J.M., Gómez J.A. 2016. Evaluación preliminar del efecto del manejo del suelo en indicadores que determinan su calidad en viñedos de la Denominación de Origen Montilla Moriles. II Jornadas de Viticultura SECH. Madrid.