

Landscape elements, field evaluation and perception of stakeholders of the Appellation of Origin “Montilla-Moriles”

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There are many studies assessing the regulating ecosystem services of cover crops in woody crops (e.g. soil fertility or erosion control) but rarely the landscape and their associated cultural ecosystem services have been evaluated, especially in relatively small agricultural areas. The region is in southern Spain and encompass 17 municipalities with a surface of 5052 ha of vines assigned to the Appellation.

Within the project VineDivers, several studies were carried out in the region at different spatial scales (from landscape to vineyard): i) elaboration of an inventory of the landscape elements of one representative municipality (Aguilar de la Frontera) [1], ii) digitization and analysis of landscape buffers corresponding to 750 m circles radius around the centroid of 16 commercial vineyards [2], and iii) field measurements of vegetation inter-rows at the vineyards under a range of soil management intensities [3]. Furthermore, iv) stakeholders were surveyed to study if landscape complexity and soil management practices provide cultural ecosystem services [4, 5].

This communication presents the results obtained from these studies. Numerous possible areas of action have been identified in which the implementation of diversification measures of the landscape elements would be essential for controlling erosion and preserving environmental sustainability. Olive orchards are the dominant landscape elements around the studied vineyards. Our results highlighted the effect of landscape complexity and soil management intensity on cultural ecosystem services provision. In general terms, the interrow management of the vineyards and vegetation typology determines the appreciation of the landscape by the respondents, being aesthetically better valued the cover crop vineyards.

References:

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