

Interactive comment on “Precision agriculture suitability to improve vineyard terroir management” by J. M. Terrón et al.

J. M. Terrón et al.

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Anonymous Referee #1 1-C441-2015 In my opinion the paper is in accordance with the objectives of the Soil journal. The terroir exploitation in wine production is becoming a common topic in the main and bigger farms. At the same time, the precision agriculture represents a complex and useful ensemble of knowledge that should be continuously improved. The paper is a step in that direction. However, it should be noted that some essential aspects for the statements validation have not been adequately detailed in the manuscript. I mention briefly some of them:

Comment 1: Line 83: the soil orography and composition and its relative spatial distribution are missed. Authors reply: Comment accepted. Text implementation Section

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regarded to the soil classification and properties was added in Material and Methods: - Orography description and soil classification of the study area. - Figure with the spatial distribution of some soil physicochemical parameters.

Comment 2: Line 87: Cultivar, rootstock, and age of the vineyard are missed (The growth responses at irrigation treatments could be different in relation even to these variables). Authors reply: Comment accepted. Text implementation Description of the crop and highlighted characteristics was included into material and methods (cultivar, rootstock and age of the crop).

Comment 3: Line 96: sentence too general: Soil management: how is the management? mineral/organic fertilization, deep tilling, under-row weed management, machine passages: alternating rows in the seasons etc. . . Canopy management: how is the management? How many interventions per year? Authors reply: Comment accepted. Text implementation Soil and canopy management was included in the text.

Comment 4: line 143 Potential Vineyard Evapotranspiration (ET): no data were reported related to growing season such as mean low temperature, mean high temperature, mean temperature, mean hourly solar radiation, cumulative degree-days (>10 c). Authors reply: Comment accepted. Text implementation It was included a figure with temperature parameters data recorded by an agro-meteorological station sited nearby the vineyard (mean, max, min and growing degree days).

Comment 5: About the assessment of the vine growth, you have to express this value with analytical parameters such as LAI Leaf Area index, LWA leaf wall area, TRV tree row volume etc. or shoot development that allow a numerical comparison between irrigation rates and soil quality influence. Authors reply: Comment accepted. Text implementation A dispersion plot relating NDVI and LAI of both 2012 and 2013 growing seasons was added. Plot includes trend line and correlation coefficient. Comment 6: In the text there are some repetitions, furthermore some sections are not so clear like the paragraph 3.2. The text needs to be reviewed by a native English speaker for a

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major revision. Authors reply: Comment accepted. Text implementation A dispersion plot relating NDVI and LAI of both 2012 and 2013 growing seasons was added. Plot includes trend line and correlation coefficient.

I believe that the focus of the study is interesting but have to be improved in the contents and deepened. For these reasons, I believe it is not acceptable.

Please also note the supplement to this comment:

<http://www.soil-discuss.net/1/C685/2015/soild-1-C685-2015-supplement.pdf>

Interactive comment on SOIL Discuss., 1, 947, 2014.