

Interactive comment on “Geospatial variation of grapevine water status, soil water availability, grape composition and sensory characteristics in a spatially heterogeneous premium wine grape vineyard” by D. R. Smart et al.

Anonymous Referee #1

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The paper shows a good multidisciplinary approach to the grapevine studies and grape quality, but the structure of the text, the explanation of the results and the discussion are poor. The introduction is very long and hard to read, moreover it introduces many concepts of the terroirs that are unuseful for this work. It seems like a complete review of terroir concept and of relationships between grape quality - vine physiology - soil, but the results of the work are related to a case study in a vineyard. From the introduction, the reader doesn't understand the real aim of the paper. This part should be reduced and more related to that you will explain in the paper. You reported many

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references, but no data found in this works. For example, which are the grapevine water stress levels reported in the literature? Which are the studies about grape sensory analysis and which are the results of these works? RESULTS: The results lack some important information like climate of the two vintages 2007-08 and morphology of the vineyard (please report a topographic map or a DEM of the vineyard in a figure). Moreover, they are very hard to follow for a reader, mainly because the figures and tables do not summarize and do not show the results clearly. There are some technical errors in statistics like "r2" instead "R2" and "P" instead "p". You reported a list of data (lines 494-521) that can be summarized in a table. DISCUSSIONS: The discussions are long, not easy to follow and sometimes not supported from the results. At lines 764-769, there's a big confusion between wilting point of soil water potential and leaf water potential. Often, you explain the results of previous works (see lines 822-846) but you don't discuss about your results and about the relationships between your results and the previous works. You decided to report a summary of the work instead the conclusion, and it can be acceptable. In any case, you should report somewhere (discussion? summary?) the conclusions, the "take home messages" of your work, otherwise the paper is only a description of your work. Considering the interesting multidisciplinary approach of the study, the amount of data, the novel approach to grape sensory analysis, I advise the authors to correct the paper on the basis of the referees comments and to resubmit the paper. Best regards.

Please also note the supplement to this comment:

<http://www.soil-discuss.net/1/C310/2014/soild-1-C310-2014-supplement.pdf>

Interactive comment on SOIL Discuss., 1, 1013, 2014.