

***Interactive comment on “Influence of  
hydropedology on viticulture and oenology of  
Sangiovese vine in the Chianti area (Central Italy)”  
by E. A. C. Costantini et al.***

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General comments:

we agree with the referee that  $r^2$  below 0.7 does not indicate a strong correlation. Actually, in many research works dealing with the relationships between soil and quality of wine, it is common to see significant but rather low correlation coefficients, as the matter is so complicated and variables are so many. Anyway, in the final version of the paper, we will introduce more caution in the conclusions.

Special remarks:

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Thank you very much for the grammatical corrections

p.1202, l.13: the profile observation did not give us any hint about other factors than compaction might limit root growth. Maximal rooting depth reached by the plants is not uniformly distributed between the soils. In the text is specified that the survey reported in figs 4 and 5 was made when the soils of the vineyards were close to field capacity (p.1207 l.19-21). Therefore, the differences in cumulative soil water content up to the root limiting layer reported in the figures are just mostly due to different rooting depths.

p.1204, l.21-23: you are right, we are aware that the calculation might lead to an underestimation of porosity, we used this methods because of the difficulties encountered in using the core and the filled hole methods in our soils. However, we will underline this aspect in the final text and we will correct the values according to Faybishenko (1995), who suggest to multiply the value by 1.05, to take into account the entrapped air.

p.1209, l.7-22: loss of ferrihydrite in all position of both vineyards was due to both relatively higher temperatures and lower drainage. Our data suggest a certain relationship between temperature and discoloration in all plots. In addition, in the S position of vineyard 1, we also had evidences of poor drainage, given by the particular discoloration pattern (lines 10-14 pag 1209) and the lack of year effect (lines 23-26 pag 1209). However, as we do not have specific information about microbial activity, we will delete in the final text the statement of lines 25-26 of pag 1209.

p.1209, l.22 p.1210, l.24 p.1211, l.6 : we have answered to these remarks in the general comments sections.

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