

## ***Interactive comment on “The use of soil electrical resistivity to monitor plant and soil water relationships in vineyards” by L. Brillante et al.***

**L. Brillante et al.**

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### **Reviewer 3**

#### General Comments

The second part need to be improved due to lack of details related to materials and methods used for the experiments. The second part is not very clear, figures have to be improved, as well as the captions.

*A material and method section has been inserted. Figures have been improved.*

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#### Specific Comments

**P.679, L.3** The aim of the work is not clear.

*Introduction has been submitted to great changes now it would be clear.*

**P.679, L.14** Which are “these phenomena”?

*They are plant-soil-atmosphere water relations. It has been changed.*

**P.679, L.3** The paragraph 2 is too long and redundant in the first part.

*It has been shortened*

**P.680, L.8-13** Are there effects of water on phytopathology?. For example, could water stress reduce Botritis? This aspect is not mentioned in the paragraph. I suggest to improve line 8-13 page 680.

*I'm sorry, but I'm not aware of such a study, that you do not mention anyway. I cannot understand the way I should improve line 8-13 which is a sentence were several case study are cited. These are works where has been shown that the terroir effect is mediated through a moderate water stress. For sure it is not exhaustive, but I think is long enough (7 works).*

**P.685, L.9** Change this sentence “The magnitude of such variations in soil moisture has rarely been studied and their impact on vine physiology has rarely been taken into account (among few, Bauerle et al., 2008)” with “The magnitude of such variations in soil moisture and their impact on vine physiology has rarely been studied (among few, Bauerle et al., 2008).”

*CHANGED*

**P.685, L.7** . delete the “(“

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CORRECTED

**P.685, L.9** This sentence is a repetition

*We do not agree. It is the first time that ERT and EMI are word appear in the text, and reference for those acronym are given here.*

**Paragraph 4.1** Add bibliography after “The relationship between Electrical Resistivity (ER) and Soil Water (SW) has been observed in many studies, by many authors and in many different settings”

*This section is just an introduction to the following parts, where bibliography citations about this subjects are abundant. To honour this remark we will introduce a reference to the subsection 4.3 where the argument is expanded and citation largely given.*

**P.688, L.20** Which are the other soil characteristics.?

*They have been specified : “However, the electrical resistivity is also dependent on other soil characteristics, such as for example the amount of gravels and clay, salinity and temperature. This last because of kinetic effects on ion mobility in pore water.”*

**Section 5** Miss information of the model to predict the Fraction of Transpirable Soil Water. How was managed the soil? When the measurement were carried out? To understand the figure and the last part of the manuscript a very short material and method is necessary. For instance, the measurement (28) of the figure 3 are not clear, as well as the explanation in the text.

*Material and method section included. All these question would find an answer there.*

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**Figure 3** The dot in figure 3 has the same meaning of the figure 2? Add the title of ordinate in the figures.

*Caption improved, title inserted.*

Change the conclusion. It is too similar to abstract

CHANGED

Please also note the supplement to this comment:

<http://www.soil-discuss.net/1/C547/2015/soild-1-C547-2015-supplement.pdf>

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Interactive comment on SOIL Discuss., 1, 677, 2014.

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