

EGUSPHERE-2024-1587 | Reply to Referee #2

The use of geophysical methods in the field of agriculture is gaining in popularity, as this article demonstrates. The authors compare two geophysical methods: Electrical Resistivity Tomography (ERT) and the Frequency Domain Electromagnetic Method (FDEM), to assess the state of the soil as a result of agricultural practices that increase its compaction and compromise its hydromechanical properties. Knowing the state of agricultural soil is of paramount importance to better understand how to manage future cultivation, especially in terms of irrigation and nutrients. I thank the authors for this important work that demonstrates how geophysical techniques can be of great support in evaluating agricultural practices and especially in knowing the state of the soil, in order also to reduce water wastage without compromising the physical state of the soil.

The article is well structured, and I find it suitable for the special issue on Agrogeophysics.

Congratulations on a job well done and all the best!

Some suggestions:

Comment	Reply
Emphasize in the abstract the importance and innovative aspect of the work.	Thanks for the comment, we rephrased the abstract highlighting the innovative aspects of the work (LL 14-24)
Improve Fig1, showing in the legend the meaning of everything in the figures.	All the elements in the subplots of Fig. 1 are already present in the legend, so we added further information in the description (LL 100-103)
Indicate in the figure the transects on which the FDEM surveys were carried out.	Fig. 1 already shows the location of all FDEM transects acquired with bright purple color, which is exactly the same as ERT transects. We made this explicit in LL 177-179, and included more details in the description of Fig. 1 as suggested.
Line 230-235 Sure FDR? The volumetric content was measured with a TDR sensor.	Corrected, thanks (L 234).