

Assessing soil fertilization effects with near surface geophysics is a very interesting topic and the authors' performed a nice controlled experiment to comprehend the suitabilities of the sensing technologies, especially electromagnetic induction. I am confident this work would benefit the readers of the proximal soil sensing and agrogeophysics communities. I recommend a moderate revision of the manuscript as a figure is missing and I have a few minor suggestions to improve the readability.

Scientific comments:

- 1) Have you considered inverting the ECa data from EMI? Why was this not done when it would improve the overall analysis? Please elaborate. I think it would be nice to show in Fig. 7 along with the ERT and GPR profiles.
- 2) Fig. 10 is missing. So, I did not manage to follow section 3.2.3 completely.

General comments:

- 3) I request the authors' to re-read the manuscript a few times to improve the grammar and correct the spelling mistakes.
- 4) Some of the paragraphs are very big and need to be split into multiple paragraphs to improve the readability. For example, the first paragraph is too big. Please split it in to two. A suggestion is to split where you start discussing about EMI.
- 5) Please abbreviate recurring terms such as apparent electrical conductivity as ECa and use the same terminology consistently.

Specific comments:

- 1) In lines 20-30, please list the important findings with numbers 1, 2, 3. It is slightly confusing with the usage of "On the other hand.." twice.
- 2) In line 97 and 352, "extend" should be "extent".
- 3) In Fig. 2, it would be nice if you include the profile picture of soil sensor installation.
- 4) In line 130-135, please rephrase "Over a time period of 485 days...." sentence. It reads as if the EMI data was collected everyday.
- 5) In line 175, change "followed data inversion" to "following data inversion".
- 6) In line 337, "SCW" should be "SWC".
- 7) In Table 2, replace ECa^{ERT} with EC^{ERT} .
- 8) In Fig. 6, please consider also showing the dates on the top x axis.

All the best!