Article about detailed mapping of the soil apparent electrical conductivity for precision agriculture applications

A research article about **detailed mapping of the soil apparent electrical conductivity for precision agriculture applications** has been published in Geoderma [https://authors.elsevier.com/c/1WVLW3p6oB-N6]. The article is titled título **"Apparent electrical conductivity and multivariate analysis of soil properties to assess soil constraints in orchards affected by previous parcelling"** (authors: Asier Uribeetxebarria, Jaume Arnó, Alexandre Escolà y José A.Martínez -Casasnovas). The research was carried out in a plot planted with peach trees, where soils were limited by a petrocalcic horizon at

Veris 3100 ECa surveyor of the University of Lleida used in the research

variable depth. To know the variability of the main soil properties, a detailed survey of the soil apparent electrical conductivity (ECa) was carried out by means of a galvanic contact sensor (Veris 3100). In addition, a computer program for geophysical analysis was used to invert the signal and obtain horizontal cuts of the ECa each 10 cm of depth. The concordance analysis of these layers allowed to segment the soil profile into four homogenous horizons with different spatial patterns of the ECa. Soils were randomly sampled at 20 points at two depths. A multivariate analysis of variance (MANOVA) was performed, i) to better interpret the soil properties that determine the spatial variation of the ECa and ii) to delimit the soil layer and the specific ECa spatial pattern that allows delineating possible areas for differential management. In addition, the analysis of the 3D variation of the ECa made it possible to identify different areas that underwent reparcelling and that constitute one of the main causes of the current variability.

The article is available in open acces till 25th March 2018 at https://authors.elsevier.com/c/1WVLW3p6oB-N6 [https://authors.elsevier.com/c/1WVLW3p6oB-N6]