

## Spain: Researchers develop an algorithm to detect weeds

A team of researchers from the High Council for Scientific Research (CSIC) have developed an automatic algorithm for the detection and mapping of early stage weeds inside and outside the crop lines from images taken with unmanned aerial vehicles or drones. The study was published in the Remote Sensing journal.

It is a fully automatic object-based analysis algorithm that combines photogrammetric techniques to generate an image and three-dimensional model of the culture and weeds, and Machine Learning techniques (Random Forest), which use the plants' height as a discriminant variable, to automatically select the samples.

"This algorithm generates treatment maps that could help farmers make decisions to improve crop management through the localized application of herbicides at the optimum phenological moment, allowing them to achieve substantial savings," stated Ana Isabel de Castro Megias, a researcher of the CSIC in the Institute of Sustainable Agriculture, in Cordoba.

The study, which was led by the researcher Francisca Lopez Granados, was carried out by researchers from the imaPing group, the Institute of Sustainable Agriculture of Cordoba, the Institute of Agrarian Sciences of Madrid, and the University of Salzburg (Austria).

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