

Precision agriculture with drones to save 70% in plague and weed control

LOCATION: Cordova

DURATION: 1'40"

SUMMARY: One of the concerns of both farmers and researchers is plague and weed control, in addition to its high cost and the environmental damage. That's why a research group from the Institute for Sustainable Agriculture in Cordova has developed technology based in remote sensing with uses drones which fly over crops to monitor them. Their aim is to administrate the exact dose of product needed depending on the characteristics of each small portion of land.

VTR:

This drone enables us to save 70% in herbicides in Spain. Researchers from the CSIC in Cordova have developed a system able to determine the condition of the crops using infrared remote sensing technology.

JORGE TORRES
Researcher at the IAS

"We can detect in which areas there are weeds, where the use of fertilizers is needed."

Plagues are the biggest concern of agricultural researchers. 40% of the budget coming from the European Union is used to purchase plant protection products and herbicides.

JORGE TORRES
Researcher at the IAS

"Differentiating areas is what precision agriculture is about, not applying the same amount of product, herbicide or fertilizer, to the whole crop."

This also benefits the environment, as we can save 15% of the water used in irrigation when we precisely know the needs of each area. The University of California has collaborated with this project and has already checked its effectiveness.

JOSÉ MANUEL PEÑAS
Researcher at the IAS

"We can take pictures very close to the surface, between 50 and 100 metres high. This wasn't possible before, when we used technology based in satellites or conventional planes."

PLOS ONE, Sensors or Precision Agriculture are some of the prestigious scientific magazines which endorse this research.

JORGE TORRES
Researcher at the IAS

"We compare what the computer says with what we have actually seen in the field. This way we can be certain about the rigor of our analysis; in addition, this type of controls are required by the magazines in which we use to publish our papers."

The project has travelled to Tel Aviv, where it was awarded in 2014 by the European Conference of Precision Agriculture, and to the Expo Milano 2015, where they won the International Award for Projects and Challenges of Sustainable Agriculture.

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