

**Service ID**

**Location** Spain



## **Validation of irrigation AI models through soil samples**

### **Provider service**

University of Cordoba (UCO)

### **Link to content**

<https://agrifoodtef.eu/services/validation-irrigation-ai-models-through-soil-samples>

### **Type of Sector**

Arable farming, Horticulture, Tree Crops

### **Accepted type of products**

Data, Physical system, Software or AI model

### **Type of service**

Collection of test data, Data analysis, Performance evaluation, Test design, Test execution, Test setup

### **Description**

This service involves the validation of irrigation optimization systems using intelligent irrigation technologies available on the farm. It includes physicochemical parameters of the soil, variable distribution of water and supplies. Observations are systematic and cover different conditions and crops to verify model accuracy and the effectiveness of site-specific input distribution.

## **How can the service help you**

The validation of the service developed by the customer addresses the critical needs for optimised water distribution and improved agricultural efficiency. Before using this service, companies may struggle with inconsistent irrigation models, leading to either over- or under-irrigation, which can negatively impact crop health and yield. By testing soil moisture values, the service ensures that water and inputs are distributed accurately based on real-time conditions, crop types, and soil properties. After implementing the service, companies benefit from improved system accuracy and enhanced productivity through tailored water and nutrient application across different crops and conditions.

## **How the service will be delivered**

The service will be customised according to customer needs (model, pivot, crop, season...).

## **Service customisation**

It is carried out at the Rabanales Experimental Farm facilities in Rabanales. Due to the need for field sampling and irrigation to analyse its efficiency, the service must be adapted to the crop cycle on which the evaluation is conducted. This crop must be one of those sown in the plots where the irrigation system to be tested is installed. The customer will provide the mathematical irrigation model. The customer will receive a final report with the results of the service.