

**Service ID** S00356

**Location** France



## Evaluation of sensor performance for agricultural applications

### Provider service

ARVALIS

### Link to content

<https://agrifoodtef.eu/services/evaluation-sensor-performance-agricultural-applications>

### Type of Sector

Arable farming

### Accepted type of products

Design / Documentation, Physical system

### Type of service

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

### Description

We provide a service focused on evaluating the performance of a wide range of sensors used in agricultural applications. This includes chemical sensors (for monitoring nutrients and soil pH), optical sensors (for capturing crop health and canopy structure), thermal sensors (for detecting water stress and soil temperature), acoustic sensors (for assessing soil texture or monitoring pests), and electromagnetic sensors (for measuring soil moisture and conductivity). Our evaluation process is conducted under real-world conditions, ensuring that sensors are tested in diverse farming environments and agro-climatic scenarios. The service assesses critical parameters such as accuracy, reliability, durability, and adaptability to different crops, soil types, and operational conditions. These sensors will be integrated into solutions based on AI and robotics to enhance efficiency and decision-making.

### How can the service help you

By leveraging this service, customers gain a clear understanding of their sensor technology's performance, enabling them to optimize and refine their solutions for tasks such as irrigation scheduling, crop monitoring, yield prediction, and soil characterization. This ensures their technology meets the demands of precision agriculture, improving efficiency, sustainability, and overall agricultural productivity.

### How the service will be delivered

Depending on the sensor's purpose, we adapt the testing equipment, facilities, and logistics, including the testing timeline, number of sites, crops involved, and their growth stages. Testing is carried out across diverse agro-climatic conditions to ensure robust and representative results. We require the customer to provide the necessary sensors and related equipment, along with the parameters and configurations needed for the proper operation of the sensors.

### Service customisation

A customised test protocol is developed by our experts to tailor the evaluation to the specific type of sensor and its intended application. This service is available on cereals, potatoes, forage, and flax.