

Service ID S00163

Location France



Evaluation of Automatic Machines and Agricultural Robots

Provider service

ARVALIS

Link to content

<https://agrifoodtef.eu/services/evaluation-automatic-machines-and-agricultural-robots>

Type of Sector

Arable farming

Accepted type of products

Physical system

Type of service

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

Description

We provide in-depth physical testing services for autonomous and semi-autonomous devices designed for agricultural applications such as irrigation, pest management, and weed control, with a focus on arable crops, specifically cereals, forage, flax, and potatoes. Our service evaluates multiple aspects of hardware performance under real-world farming conditions, including accuracy in task execution, reliability and consistency of results, and potential economic impact through cost savings and efficiency gains. Additionally, we assess the machine's behaviour in real-world settings as well as its adaptability to various pedoclimatic conditions and finally its agronomic impact to ensure alignment with sustainable and productive farming practices.

How can the service help you

With this service, customers gain actionable insights to refine their hardware, ensuring greater efficiency and the success of their technology by improving it aligned with end-user needs.

How the service will be delivered

This service is fully customised for each device tested. This service is only available on cereal crops, forage, flax, and potatoes.

Service customisation

Based on the specific application of the device, we establish a tailored protocol that defines key factors such as the testing period, crop type, and the number of repetitions. All of these parameters are discussed and validated with the customer, who is welcome to be present during the testing phase. For example, when testing weed control robots on cereals, we adjust the inter-row distance according to the robot's characteristics, then define the plant's growth stage at which the robot will be tested to evaluate its weed control accuracy. Tests are conducted in our dedicated experimental fields, specifically designed for evaluating innovations, ensuring controlled conditions for accurate and reliable results.