

**Service ID** S00302

**Location** Netherlands



## Test and experimentation of robotic and AI solutions in field crops

### Provider service

Wageningen University WUR

### Link to content

<https://www.agrifoodtef.eu/services/test-and-experimentation-robotic-and-ai-solutions-field-crops>

### Type of Sector

Arable farming, Horticulture, Tree Crops

### Accepted type of products

Design / Documentation, Physical system

### Type of service

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

### Description

The core business of Wageningen Research - Field Crops is to design and create experimental plots (e.g. at the Farm of the Future) and to collect objective data on crops, weeds, diseases, pests and quality and effectiveness of robotic and AI solutions, in which we provide statistical reliable datasets. Examples of experiments are e.g. testing the accuracy and quality of handsfree harvesting solutions, weeding robots and path following of autonomous implement carriers in field crops. We offer for example the following measurements : -Provide measurements on effectiveness of solutions on control of weeds, pests and diseases (e.g. effectiveness of a weed robot) -Provide timeseries of vegetation indices (drone) -Provide yield measurements (quantity and quality) -Provide plant measurements (emergence, flowering, senescence) -Provide weed countings (including species determination) -Provide sensor data (soil moisture, insect monitoring, etc.) Furthermore we have common agricultural machines and implements available. We can cover different field crops, but we also are specialized in new crop farming systems that are based on agro-ecological principles. Think of strip and mosaic farming. Get in touch to discuss the possibilities for your experiment or test question.

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

Companies developing robotic systems and AI have a need to test their prototypes in real farming conditions. If the test is performed in a controlled experiment, the trust in the robotic solution increases. The customer gets useful data on how the solution performs in field crops and gets feedback and recommendations on how the solution can be implemented on a farm.

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

It is expected that every time customisation might be needed.

## **Service customisation**

In personal contact with the customer, a project plan for the tests or experiments is made. Due to the growing season, which starts in April, a project plan for the experiments has to be agreed on before March. The service can take until November following the growing season of the crop, depending on the crop and goal of the experiment. In personal contact with the customer, we agree on what we deliver: a report with statistical analyses and recommendations, datasets, or others. The customer is responsible for providing his product/solution in time. The experiment can be done in several locations within the Netherlands, covering different soil types and agricultural regions.