

Service ID S00147

Location Belgium



Evaluation of Crop Protection Equipment

Provider service

Instituut voor Landbouw-, Visserij- en Voedingsonderzoek (ILVO)

Link to content

<https://agrifoodtef.eu/catalogue-of-services/evaluation-crop-protection-equipment>

Type of Sector

Arable farming, Greenhouse, Horticulture, Tree Crops, Viticulture

Accepted type of products

Physical system

Type of service

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

Description

This service assesses the performance of advanced precision crop protection equipment, including map- and sensor-based precision spraying, non-chemical weed and disease control, and robotic applications. Evaluation is conducted both in controlled laboratory settings and real-world field conditions to assess and quantify efficacy, accuracy, and efficiency. The ILVO Spray Tech Lab, one of the world's few ISO 17025-accredited spray technology laboratories, specialises in characterising sprayers and spray nozzles. Additionally, we provide field testing for sensor-based precision spraying technologies and non-chemical solutions (e.g., mechanical, laser, and UV-based weed and disease control). For robotic applications, our robotic framework can be used, ensuring practical deployment feasibility in autonomous precision agriculture applications. The results help manufacturers and farmers optimise their equipment for more automated and effective crop protection tools.

How can the service help you

- > Optimise your crop protection strategy by evaluating equipment performance in real-world conditions.
- > Ensure compliance with sustainability and precision agriculture goals.
- > Improve efficiency of sprayers and nozzles with lab-based performance analysis.
- > Test and validate robotic crop protection solutions, including automated non-chemical weed control.

How the service will be delivered

- > Testing protocols can be tailored based on crop type, field conditions, and specific equipment features.
- > Evaluations can include robotic integrations, precision application efficiency, and non-chemical treatment efficacy.
- > Results are provided in detailed reports with actionable insights for equipment improvement.

Service customisation

- > Laboratory Testing: Controlled evaluations of spray technology, sensor-based applications, and non-chemical alternatives.
- > Field Testing: Real-world assessment of precision sprayers, automated systems, and alternative crop protection solutions.
- > Data Analysis & Reporting: Comprehensive reports on efficacy, drift potential, environmental impact, and optimisation recommendations.
- > Customization: Testing can be adapted to different crops, conditions, and equipment setups based on client needs.