

**Service ID**

**Location** Belgium



## Testing of Fertiliser Spreaders Based on Vision and AI Methods

### Provider service

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

### Link to content

<https://www.agrifoodtef.eu/services/testing-fertiliser-spreaders-based-vision-and-ai-methods>

### Type of Sector

Arable farming, Greenhouse, Horticulture, Viticulture

### Accepted type of products

Physical system

### Type of service

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

### Description

Centrifugal fertiliser spreaders are widely used in European agriculture but present challenges in achieving uniform fertiliser distribution due to varying machine settings, physical fertiliser properties, and environmental factors such as wind. Misapplication results in economic losses and environmental harm. Our Spreader Calibration Service utilises the computer vision-based SpreadWise system to optimise spreader performance for specific fertilisers and application settings. This service is available for farmers, spreader manufacturers, and fertiliser producers, offering tailored calibration and performance analysis under real-world conditions, including wind influence and sloped terrain. By employing advanced imaging and AI algorithms, we provide precise spread pattern measurements, helping optimise spreading efficiency, reduce fertiliser waste, and enhance crop yields.

## How can the service help you

With our computer vision-based SpreadWise system, manufacturers gain detailed, quantitative insights into how their spreaders perform under various conditions. After our service, they receive experimentally validated recommendations for improved calibration settings, enabling more precise and consistent spreading performance across different fertilizers and terrains. This leads to:

- Better product reliability, ensuring optimal performance under real-world conditions.
- Reduced need for extensive field trials by providing accurate laboratory and field testing data.
- Insights into previously difficult-to-measure factors like wind drift or slope effects on spreading patterns.
- Improved customer satisfaction, as spreaders perform more predictably and efficiently in diverse agricultural conditions.

## How the service will be delivered

- > Tailored calibration settings for different spreader models and fertilizer types.
- > Testing under various field conditions, including wind speed, terrain slope, and different weather scenarios.
- > Customized reporting, including spread pattern visualizations and AI-based analysis.

## Service customisation

- > Mobile Calibration Setup: On-site calibration with a portable system that measures and visualizes spreading patterns.
- > Computer Vision & AI Analysis: High-resolution cameras and AI algorithms detect spread uniformity and recommend adjustments.
- > Report & Recommendations: After testing, customers receive a detailed report with optimized settings and improvement suggestions.