Service ID **S00295**

Location At user's premises, Belgium,

Crop Dataset Generation

Provider service

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

Link to content

https://agrifoodtef.eu/catalogue-of-services/crop-dataset-generation

Type of Sector

Arable farming, Greenhouse, Horticulture, Tree Crops, Viticulture

Accepted type of products

Data, Physical system, Software or AI model

Type of service

Collection of test data, Provision of datasets

Description

In the Crop Dataset Generation service, we collect large-scale datasets on a frequent basis using drones or autonomous robots. AI and data-driven solutions require extensive data, shifting the focus from limited feature engineering to acquiring large, balanced datasets of images and labels for training convolutional deep-learning networks. We offer flexible data collection options tailored to customer needs. We can use our systems and fields to gather data on crops under various conditions, such as different lighting, angles, growth stages, and soil types. Alternatively, we can use customer-provided devices to collect data for testing and validation, such as evaluating sensor performance in detecting heat in crops or testing robot navigation in crop fields.

How can the service help you

- No need to bother about installing and maintaining a crop field yourself.
- Reduced labour costs due to automated collection
- We assist with choosing the right sensor and setting the right sensor settings to generate a representative dataset.

How the service will be delivered

Location: Our testing field, or other ILVO crop field for larger requirements. Additionally, we can collect data at custom locations as well. Our robots can be moved to an external field using the mobile robot containers. From these containers, the robots can work, charge, and be stored remotely from our site.

Crop: Custom crop type is defined. We also have a lane trees facility where several tree cultivars of different sizes are growing.

Platform: Depending on the goal of the data, images are collected from drones, robots, or tractors. The sensor which is used is also customizable from a range of industrial cameras capturing RBG, multispectral or hyperspectral data, thermal sensors, ... We can also mount your own custom-built sensors to our platforms to provide datasets.

Service customisation

After defining the goal of the required data, the crops are planned into the crop calendar. Depending on the season and weather conditions, we install and maintain the crop field, collect the data, and deliver it in the required format. If more services are bundled, further processing is done.