EU CAP Network seminar
Robotics and Artificial Intelligence in farming and forestry

Field visits

Update 09/02/2025

19-20 February 2025 | **Utrecht, The Netherlands**

Seminar on Robotics and AI in farming and forestry: Field visits

There are four options for field visits. Each visit will include two locations.

Flevoland - Arable farming and forestry

1. ERF BV, Zeewolde

ERF BV is the largest private organic agriculture company in the Netherlands, cultivating a variety of crops across approximately 1,000 hectares of land in Flevoland. This land can be repurposed for city expansion, nature conservation or other uses at any time. ERF and its partners develop new techniques and cultivation methods in the organic sector and they communicate their results to inspire others. They have implemented the Agbot, an innovative all-round autonomous vehicle. Investing in this lightweight vehicle and associated software contributes to preventing soil compaction and saving water during cultivation. The vehicle combines the latest technology with the application and integration of smart farming methodologies (supported by CAP funding). Additional innovative solutions may also be showcased.

Exhibition of a selection of robots:

- Andela Robot Weeder
- Eox tractors: Electric tractor
- Odd.bot Maverick: Weed robot
- Fieldworkers BV: Colorado beetle catcher, autonomous weed harrow
- Trabotyx: Automated weed control
- Qlobel: Seeding drones

2. Clear Timber Analytics

Clear Timber Analytics empowers both foresters and urban environment managers with precision tools through their globally accessible data analytics platform. They will showcase the latest advancements in precision forestry during a demonstration in a forest in Zeewolde. They apply the cutting-edge technology LiDAR - Light Detection and Ranging - a remote sensing method used to examine the surface of the Earth. Using this technology, they have collected and analysed data to identify trees that meet the specific requirements of both the sawmill's and the forester's management plans. This data-driven approach supports modern thinning regimes, promoting sustainable forestry practices.

Foodvalley - Intensive livestock

1. Family Jan en Gerda Van den Heuvel, Putten

The modern stables of family Van den Heuvel house 2500 white and rosé veal calves that are fed with two different versions of the FEEDR® feeding robot by SIEPLO. The calves are held in 6 different age groups that have different diets. Van den Heuvel has a feeding kitchen that composes the feed from 12 different ingredients automatically.

As they are situated close to a vulnerable nature area they have to produce with as little nitrogen emission as possible. To prevent ammonium synthesis the manure is separated into a solid and a liquid fraction. Currently they are working on a project to develop a housing system that meets all legal (environmental) requirements. This is possible with support of the province of Gelderland. In this future system the manure will be taken out and processed automatically on a daily basis which is also better for the air quality in the stable and so for animal welfare.

The SIEPLO company will explain their hydraulic and robotic feeding systems for goats, sheep, white veal calves, rosé veal calves, bulls and dairy calves and heifers. The system comes as close to the natural eating behaviour as possible, though still giving good economic returns.

2. Vereijken Hooijer BV, Ede

Vereijken was originally known for its solutions for housing systems for farrowing sows. They traded in several countries in Europe and beyond. They started to work together with the French cooperative Cooperl (2600 pig producers) a few years ago and finally were bought by Cooperl. This means Vereijken also markets all products of Cooperl in the Netherlands, Belgium, Germany and Denmark. These include smart farming solutions for manure and feeding. At the same time, the original Vereijken products are exported worldwide with Cooperl, to the UK, Canada and China.

Vereijken will present their overall history and product lines and then focus on the smart farming solutions they offer, for example:

- A working prototype of a manure robot
- Optiscan, to measure the weight of meat pigs using a hand scanner
- Manure slide, currently a prototype, that will be constructed under the floor
- F10 smart feeder, that gives every meat pig its optimal daily menu

Betuwe - Fruit cultivation

1. VOF Verstegen, Opijnen

Sander Verstegen is a fruit grower with a lot of interest in new technology to improve his production. He and his family grow 60 hectares of pears. He joined several programmes on precision agriculture. Currently he is taking part in The Next Fruit 4.0 Fruit Next 4.0.

The Verstegen family use a robot root cutter which is a system for tree specific root cutting and fertilisation. The robot works with data input from cameras that detect the growth of the fruit trees and the number of flowers and fruits.

Aurea Imaging is a technology provider for fruit growers and breeders. They combine innovative deep learning, sensor technology and agronomy to enable variable rate applications in the orchard. They worked with Verstegen to adapt a system which is adapted to their orchards. During the visit, they will explain their drone and camera systems.

2. Proeftuin Randwijk Randwijk

Proeftuin Randwijk is an experimental centre for fruit production. The visit will be to their fields and to see a robot for pruning redcurrant. Furthermore, information will be provided on:

- How Proeftuin channels research needs from projects such as Fruit4.0 and Next Fruit 4.0
- Visuals of research on robots and preliminary results

South Holland - Dairy and horticulture

1. Certhon Innovation Centre, Poeldijk

Certhon provides advice and develops turnkey, tailor-made concepts for high-tech horticultural projects. They started in 1896 as a family business and are now a partner of DENSO, a market leader and pioneer in robotics and automotive technologies, systems and products. They will present different solutions such as a tomato picking robot Artemy (DENSO and Certhon introduce Artemy®: smarter tomato harvesting) or GRONOS a fully automated indoor tomato growing system including testing for different varieties of dwarf tomato (Gronos for Tomatoes - Indoor Farming - Certhon).

2. Demonstration farm Het Lansingerland, Bergschenhoek

Het Landsingerland is a farm that is open to the public, and currently converting into organic farming. The farm also has an event venue with a meeting room, a restaurant with terraces, care farming, a campsite and a farm product shop.

Concerning robotisation, the farm is equipped with a milking robot, a manure robot and a drinking machine for calves. They also have a feeding Robot LELY Vector can feed up to 500 cows. In a special ‘feeding kitchen’ up to 200 kinds of feed can be taken and mixed with into the best combination the cows’ needs. The robot can be programmed for 3 days. During the visit, the Lely company will also present solutions for dairy farming based on AI and robotics. This will include a demo-version of the Exos grass mowing robot.

You can find information on this seminar on the event webpage