

Press release

Mannheim, 22 June 2021

Weed control spot on

Südzucker, Amazone and FarmDroid test innovative solution for the precise application of crop protection agents in sugar beet cultivation.

How can sugar beets be protected as effectively as possible against weeds and pests during cultivation without having to spray pesticides over the entire area – this is the question being addressed in a trial project by Südzucker AG, the agricultural technology company Amazone and the Danish field robot manufacturer FarmDroid. The goal is to be able to reduce the use of herbicides and insecticides to a minimum in the future by using the highly automated, solar-powered FarmDroid FD20 sowing and weeding robot and a special spot-spraying method. Initial, scientifically monitored trials are currently underway on a test field at Südzucker's research farm in Kirschgartshausen near Mannheim.

The FarmDroid FD20 robot is already being used on organic farms for sowing and mechanical weed control in sugarbeets and other crops. The field robot first sows sugarbeet seeds in a precise grid using its high precision GPS sowing system. The robot knows the exact position of the beets and subsequently hoes around this position, i.e. next to and between the rows, when removing weeds. However, in the immediate vicinity of the plant, it is difficult to remove all weeds without touching the beet plant. Amazone utilizes FarmDroids unique knowledge of the plant position, and based on this, Amazone has developed an innovative, precise field spraying system. This makes it possible to apply the herbicide precisely onto or next to the beet – with minimal use of the crop protection agent.

Südzucker is currently testing this new development, which is unique to date, on a trial field covering about one hectare. Dr. Peter Risser, head of the Kirschgartshausen research farm: "Our initial trials are promising and impressively demonstrate the reduction potential of crop protection products when applied with pinpoint accuracy. The results of the field tests on the weeds will have to show whether the effect can keep pace with the standard treatment used today. The technology is also interesting for pest control or for fertilizing with micronutrients via the sugar beet leaf. This is also an exciting, future-oriented possible application for organic farming."

Amazone came up with the idea to utilize the FarmDroid robot also for spot applications. "Sugar beet cultivation is facing great challenges due to the limitation of crop protection agents and the spread of diseases and pests," says Stefan Kiefer, Head of Innovation in Crop Production at Amazone. "With our innovative development, we are helping to make cultivation both more effective and more environmentally friendly. In this context, the Farmdroid is an ideal platform for us to bring our technology into the field and to learn from each other."

"Our robot supports farmers and reduces their costs for sowing and crop care," explains René Jørgensen, CEO of FarmDroid. "The most important thing for us was to invent a sustainable, i.e. CO₂-neutral, ecological and economic attractive alternative to conventional agricultural machinery. This is exactly what we have succeeded in doing with the FD20, which is solar-powered, lightweight, mechanical and fully automatic. The combination of our field robot with pinpoint spot application is a great fit for us, if it means it can contribute to significantly reducing the application of crop protection products in the future."

VIDEO AND IMAGES

Weed control spot on – spot-spraying in sugar beet cultivation: <https://youtu.be/N-zZm01iBQU>

(When calling up the link, you will be redirected to YouTube and your personal data is also transmitted to YouTube. Please note Google's data protection information before calling up.)

Press photos: [Image and media library | Südzucker AG \(suedzucker.de\)](#)

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About the Südzucker Group

Südzucker, with its sugar, special products, CropEnergies and fruit segments, is one of the most significant food industry companies. In the traditional sugar business, the group is Europe's number one supplier of sugar products, with 23 sugar factories and two refineries, extending from France in the west via Belgium, Germany and Austria, through to Poland, the Czech Republic, Slovakia, Romania, Hungary, Bosnia, and Moldova in the east. The special products segment, consisting of the functional food ingredients for food and animal feed (BENEO) division, as well as chilled/frozen products (Freiberger), starch and portion packs (PortionPack Europe) divisions, conducts business in high-growth dynamic markets. The CropEnergies segment is responsible for the ethanol activities in Germany, Belgium, France and Great Britain. The group's fruit segment operates globally, is the world market leader for fruit preparations and is a leading supplier of fruit juice concentrates in Europe.

In 2020/21, the group employed about 17,900 persons and generated revenues of EUR 6.7 billion. Further information: www.suedzucker.de/en

About Amazone

AMAZONEN-WERKE H. DREYER SE & Co. KG, based in Hasbergen-Gaste in Germany, manufactures agricultural and groundcare machinery. The owner-managed company employs around 1,900 people at nine different production sites in Germany, France, Russia and Hungary. The agricultural machinery range includes soil tillage implements, seed drills, fertiliser spreaders and plant protection equipment. Schmotzer Hacktechnik has been part of the AMAZONE Group since 2019. Based on these core competencies, AMAZONE is now the specialist for intelligent crop production in agriculture.

Further information: www.amazone.net

About FarmDroid

FarmDroid develop robots for the greater good of farming by accommodating the expectations of the global society to reduce or eliminate CO₂-emissions and reduce the use of agrichemicals, and hard repetitive work. By taking care of both the seeding and weeding, the FarmDroid FD20 frees up time for other more valuable activities, while at the same time being an attractive investment for the farmer. FarmDroid was founded in 2018 and has commercially entered 10 European countries and in 2021 expanded globally.

Further information: www.farmdroid.dk