

EU-funded AgROBOfood project leverages precision technology for pest-control

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The EU-funded agROBOfood project is supporting the Biospray industrial challenge project to adapt Ecorobotix's ultra-high precision technology to meet the needs of biocontrol applications and to conduct field trials for three types of applications.

The ARA Precision Sprayer is a revolutionary ultra-high precision sprayer with an ability to treat plant-by-plant with an unprecedented accuracy of 6x6 cm and a breakthrough in targeted herbicide delivery.

The ultra-high precision technology, combined with its ability to detect, classify and spray individual weeds, reduces costs and enhances sustainability.

ARA's technology can accurately detect, classify, and spray only individual weeds (avoiding surrounding soil and crops), thanks to its AI based plant recognition capability and ultra-high precision (UHP). Ecorobotix's UHP-spraying solution is radically different from conventional and spot-spraying herbicide application, making it more efficient and more cost-effective solution which can be used for both selective and non-selective herbicides.

The Biospray project targeted three crop care applications in sugar beet: selective application of pelargonic acid (organic herbicide), azadirachtin and spintor (two organic insecticides). The field test results across two seasons showed satisfactory weeding results and a reduction of insecticide use. Furthermore, herbicide savings of ~70-95% can be made using ARA's Ultra-High Precision Sprayer. More agronomic tests are needed to validate the exact efficiency of these new biocontrol products and fine-tune machine performance for this use-case.

Although the project started with AVO, an autonomous robot with ultra-high precision spot spraying technology, a change has been made which led to the development of the ARA ultra-high precision sprayer, which is 3x the size of AVO and is towed behind a tractor. "With ARA, AVO's spot spraying technology has been improved with higher precision and faster speed of operation. A towed sprayer is also easier for farmers to use and more economical." explains Steve Tanner.

ARA's Ultra-High Precision Sprayer is considered as a sustainable selective and non-selective herbicide application and is a game-changer for the agricultural industry. The Biospray project has proven its potential, and we are excited to continue working towards the goal of efficient, environmental-friendly and sustainable crop protection solutions.