Intelligent sensing and manipulation for sustainable production and harvesting of high value crops, clever robots for crops

Fact Sheet

Project Information

CROPS
Grant agreement ID: 246252

Funded under
Specific Programme "Cooperation": Nanosciences, Nanotechnologies, Materials and new Production Technologies

Total cost
€ 10 233 819,40

EU contribution
€ 7 639 008,00

Coordinated by
STICHTING WAGENINGEN RESEARCH
Netherlands

Objective

CROPS will develop scientific know-how for a highly configurable, modular and clever carrier platform that includes modular parallel manipulators and “intelligent tools” (sensors, algorithms, sprayers, grippers) that can be easily installed onto the carrier and are capable of adapting to new tasks and conditions. Several technological demonstrators will be developed for high value crops like greenhouse vegetables, fruits in orchards, and grapes for premium wines. The CROPS robotic platform will be capable of site-specific spraying (targets spray only towards foliage
and selective harvesting of fruit (detects the fruit, determines its ripeness, moves towards the fruit, grasps it and softly detaches it). Another objective of CROPS is to develop techniques for reliable detection and classification of obstacles and other objects to enable successful autonomous navigation and operation in plantations and forests. The agricultural and forestry applications share many research areas, primarily regarding sensing and learning capabilities.

Fields of science

agricultural sciences > agriculture, forestry, and fisheries > agriculture > horticulture > fruit growing
engineering and technology > electrical engineering, electronic engineering, information engineering > electronic engineering > sensors
agricultural sciences > agriculture, forestry, and fisheries > agriculture > horticulture > vegetable growing
social sciences > economics and business > economics > sustainable economy
agricultural sciences > agriculture, forestry, and fisheries > forestry

Programme(s)

FP7-NMP - Specific Programme “Cooperation”: Nanosciences, Nanotechnologies, Materials and new Production Technologies

Topic(s)

NMP-2009-3.4-1 - Automation and robotics for sustainable crop and forestry management

Call for proposal

FP7-NMP-2009-LARGE-3
See other projects for this call

Funding Scheme

CP-IP - Large-scale integrating project

Coordinator
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EU contribution
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