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
FP7-NMP

Overall budget
€ 10 233 819,40

EU contribution
€ 7 639 008

Closed project

Start date
1 October 2010

End date
30 September 2014

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 targets) 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**

**Programme(s)**

**Topic(s)**

**Call for proposal**

FP7-NMP-2009-LARGE-3

**Funding Scheme**

CP-IP - Large-scale integrating project

**Coordinator**

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<tr>
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<th>Country</th>
<th>EU Contribution</th>
<th>Activity Type</th>
<th>Contact Information</th>
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<tr>
<td>BEN-GURION UNIVERSITY OF THE NEGEV</td>
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<td>FESTO AG &amp; CO KG</td>
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