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SAR 4.0 - Smart Agricultural Robot 4.0

Title	SAR 4.0 - Smart Agricultural Robot 4.0
Title (native language)	
Category	• Recording or mapping technology • Reacting or variable rate technology • Controlled traffic technology • Farm Management Information System • Robot or smart machine
Short summary for practitioners (Practice abstract) in English)	Robots are a part of new precision agriculture revolution. Many farming tasks could be worked by robots autonomously by precision navigate in work mission plan and perform actions at set locations, for example, gathering crop data, picking a fruit, spraying a pesticide, planting a seed, imaging a plant via last technologies on image processing and multispectral sensors. SAR 4.0 is a mobile autonomous system based on Open Source platform. Several image processing methods produce information that is translated into navigation decisions and actions for robot. The potential of SAR 4.0 is a modular Vehicular platform with several skills on Precision Agriculture as Mobile Monitoring & Sprayer Robot and Autonomous Harvest Robot. Transmission via Fuel or Electric batteries, RTK Positioning and image processing are the main features of this powerful farming tool.
Short summary for practitioners	
Website	http://computic.es/
Audiovisual material	
Links to other websites	
Additional comments	
Keywords	Farming equipment and machinery | Soil management / functionality
Additional keywords	Autonomous Farming Robot
Geographical location	

(NUTS)	ES, EU
Other geographical location	
Cropping systems	Arable crops | Tree crops | Open field vegetables | Vineyards
Field operations	Fertilization | Pesticide application | Weed control | Harvesting
SFT users	Farmer
Education level of users	Apprenticeship or technical school education
Farm size (ha)	0-2 | 2-10 | 10-50 | 50-100

Company info

Company name	Computic
Address	CEEI Burgos, CyL Spain, Burgos, Spain
Website	http://computic.es/
Patent status	no patent

Effects of this SFT

Productivity (crop yield per ha)	No effect
Quality of product	Some increase
Revenue profit farm income	No effect
Soil biodiversity	No effect
Biodiversity (other than soil)	No effect
Input costs	Some decrease
Variable costs	Some decrease
Post-harvest crop wastage	No effect
Energy use	Some decrease
CH4 (methane) emission	No effect
CO2 (carbon dioxide) emission	No effect
N2O (nitrous oxide) emission	No effect
NH3 (ammonia) emission	No effect
NO3 (nitrate) leaching	No effect
Fertilizer use	Some decrease
Pesticide use	Some decrease
Irrigation water use	No effect
Labor time	Some decrease
Stress or fatigue for farmer	Some decrease
Amount of heavy physical labour	No effect
Number and/or severity of personal injury accidents	No effect
Number and/or severity of accidents resulting in spills property damage incorrect application of fertiliser/pesticides etc.	No effect
Pesticide residue on product	No effect
Weed pressure	No effect
Pest pressure (insects etc.)	Some decrease
Disease pressure (bacterial fungal viral etc.)	Some decrease

Information related to how easy it is to start using the SFT

This SFT replaces a tool or technology that is currently used. The SFT is better than the current tool	agree
The SFT can be used without making major changes to the existing system	no opinion
The SFT does not require significant learning before the farmer can use it	no opinion
The SFT can be used in other useful ways than intended by the inventor	no opinion
The SFT has effects that can be directly observed by the farmer	no opinion
Using the SFT requires a large time investment by farmer	no opinion
The SFT produces information that can be interpreted directly	no opinion

View this technology on the Smart-AKIS platform.

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