



smart AKIS
Smart Farming Thematic Network



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AGREEMENT N. 696294

Recognition system of oil palm fruit bunch types



Title	Recognition system of oil palm fruit bunch types
Title (native language)	
Category	<ul style="list-style-type: none"> • Robot or smart machine
Short summary for practitioners (Practice abstract) in English)	recognition system of oil palm types by image processing methods based on texture feature techniques and supervised machine learning.
Short summary for practitioners	
Website	
Audiovisual material	
Links to other websites	
Additional comments	
Keywords	Plant production and horticulture
Additional keywords	Fruit types; Machine learning; Recognition system; Texture techniques
Geographical location (NUTS)	EU
Other geographical location	Oil palm plantations in Malaysia
Cropping systems	Arable crops
Field operations	Harvesting

SFT users	Buyer Processor
Education level of users	
Farm size (ha)	>500

Scientific article

Title	Recognition system of oil palm fruit bunch types based on texture feature and image processing techniques
Full citation	Alfatni, M.S.M.; Shariff, A.R.M.; Abdullah, M.Z.; Marhaban, M.H.; Shafie, S.B.; Saaed, O.M.B. (2013). Advanced Science Letters, DOI:10.1166/asl.2013.5201

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	No effect
Variable costs	No effect
Post-harvest crop wastage	Some decrease
Energy use	No effect
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	No effect
Pesticide use	No effect
Irrigation water use	No effect
Labor time	No effect
Stress or fatigue for farmer	No effect
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.)	No effect
Disease pressure (bacterial fungal viral etc.)	No effect

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	agree
The SFT does not require significant learning before the farmer can use it	agree
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	disagree
Using the SFT requires a large time investment by farmer	disagree
The SFT produces information that can be interpreted directly	agree

[View this technology on the Smart-AKIS platform.](#)

SMART AKIS PARTNERS:



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