AQUAMAN: a web-based decision support system for irrigation scheduling in peanuts

Title	AQUAMAN: a web-based decision support system for irrigation scheduling in peanuts
Title (native language)	
Category	• Farm Management Information System
Short summary for practitioners (Practice abstract) in English)	Decision support system AQUAMAN for scheduling irrigation by combining procedures from the food and agriculture organization (FAO) guidelines for irrigation scheduling (FAO-56) with those of the agricultural production systems simulator (APSIM) modeling framework to predict crop water use.
Short summary for practitioners	
Website	www.apsim.info/aquaman
Audiovisual material	
Links to other websites	
Additional comments	
Keywords	Farming practice | Water management
Additional keywords	DSS, peanuts, irrigation, evaporation
Geographical location (NUTS)	EU
Other geographical location	Field test conducted in Australia
Cropping systems	Arable crops
Field operations	Irrigation

SFT users	Farmer
Education level of users	Secondary education
Farm size (ha)	50-100

Scientific article

Title	AQUAMAN: A web-based decision support system for irrigation scheduling in peanuts
Full citation	Chauhan, Y.S.; Wright, G.C.; Holzworth, D.; Rachaputi, R.C.N.; Payero, J.O. (2013). Irrigation Science, DOI:10.1007/s00271-011-0296-y

Effects of this SFT

Productivity (crop yield per ha)	Large increase
Quality of product	No effect
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	No effect
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	Some decrease
Fertilizer use	No effect
Pesticide use	No effect
Irrigation water use	Large decrease
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	disagree
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	no opinion
The SFT produces information that can be interpreted directly	agree

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

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