Extended core group meeting on AquaCrop

2-3 December 2019, Gammarth, Tunisia

The objectives of the meeting

AquaCrop is internationally recognized as one of the most suitable crop models for simulating the yield response of crops to water, particularly under conditions in which water is a key limiting factor in crop production. Since its launch in 2006, more than 30 international projects with different sources of financing have implemented AquaCrop to achieve their objectives, over 300 research articles dealing with AquaCrop have been published in international journals, and above 50 training sessions have taken place all around the world. During the last decade, the Core Group of AquaCrop has been formulating model improvements and the blueprint for its dissemination.

Presently, the inclusion of new crops into the model database, new model applications and programming languages, as well as the future strategies for the technical support, training and dissemination must be addressed. Given the crucial importance of these next steps, this extended Core Group meeting on AquaCrop is organized in Tunis, Tunisia for 2-3 December 2019. The meeting attempts to set a clear roadmap for the technical improvement and support of AquaCrop, as well as for training and dissemination activities of the model. Special attention will be dedicated to the potential contributions of new partners.

The objectives of the meeting (continued)

The specific objectives set for this extended Core Group meeting are:

1. To assess the State of the Art of AquaCrop and the formulation of a new version as a standard for the near future.

2. To develop a Road Map and a specific proposal for a future Network that will provide technical support for AquaCrop.

3. To propose a comprehensive approach for the training, dissemination, and the development of new applications of AquaCrop in the future.

The meeting at a glance

The extended Core Group meeting on AquaCrop has being organized within the context of the 1st Conference on Improving Water Productivity in the NENA region, hosted by the Collaborative Platform on Water Productivity of the Regional Water Scarcity Initiative (FAO-WSI) for the Near East and North Africa:
http://www.fao.org/neareast/regional-office/north-africa/conference-on-improving-water-productivity/en/

The meeting will take place from 2 to 3 December 2019 at the "Hotel Le Palace" in Gammarth, Tunis, Tunisia.

The meeting is organized in seven different sessions responding to its objectives, and addressing the following topics:

. Overview and background on the state of AquaCrop model (Objective 1)

• Current crop parameter values and new crops in the AquaCrop database (Objective 1)

• Simulation of fodder crops, including perennials (Objective 1)

• AquaCrop v7.0 (Objective 1)

• Software programing and new applications (Objective 1)

• Roadmap towards a future AquaCrop network (Objective 2)
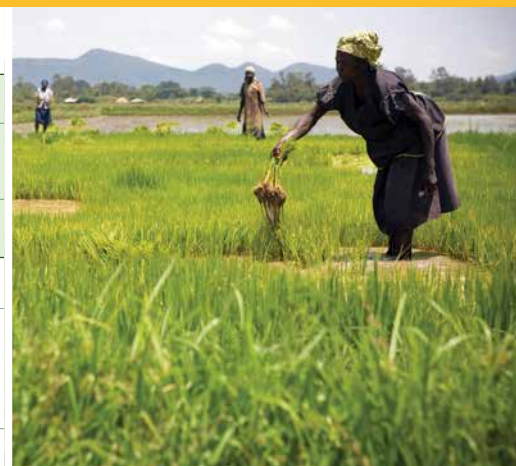
• Training and dissemination (Objective 3)

Agenda of the meeting

Day 1 – Monday, 2 December 2019

Day 1 is mainly devoted to the assessment of the State of the Art of AquaCrop and the formulation of a new version as a standard for the near future (Objective 1)

Time	Presentation
8:30 – 9:45	Registration
8:45 – 9:15	**Opening session** Objectives of the meeting and introduction of its Agenda *Maher Salman* Participants introduction
9:15 – 10:00	**Session 1 - Overview and background (Objective1)** Presentation of the background report on the state of AquaCrop model *Maher Salman & Margarita Garcia-Vila* General discussion
10:00 – 10:30	Coffee break
10:30 – 12:00	**Session 2 - Crop parameters values (Objective 1)** Verification of the current crop parameter values *Elias Fereres & Theodore C. Hsiao* Inclusion of new crops in the AquaCrop database *Margarita Garcia-Vila* Discussion
12:00 – 13:00	**Session 3 – Fodder crops simulation (Objective 1)** New algorithms in AquaCrop: regrowth, natural self-thinning and mobilization and re-mobilization of assimilates *Dirk Raes* Inclusion of alfalfa in the AquaCrop database *Elias Fereres & Dirk Raes* Discussion
13:00 – 14:00	Lunch break
14:00 – 15:00	**Session 4 – AquaCrop v7.0 (Objective 1)** Minor improvements or updates in the software *Dirk Raes* Release plan for the new model versions *Dirk Raes* Discussion
15:00 – 16:30	**Session 5 - Software programming and new applications (Objective 1)** New programming strategy and languages and AquaCrop-OS *Dirk Raes & Timothy Foster* Other new model applications (e.g. mobile apps for irrigation scheduling, etc.) *Dirk Raes* Discussion & Wrap up of the Day

Day 2 is devoted to discuss on the Road Map and a future Network that will provide technical support for AquaCrop (Objective 2) and to design a comprehensive approach for the training, dissemination, and the development of new applications of AquaCrop in the future (Objective 3).

Time	Presentation
8:30 – 9:30	**Session 6 - Roadmap towards a future AquaCrop network (Objective 2)**
	Presentation of work of new members of the core group in relation to AquaCrop
9:30 – 10:30	General discussion on the future of AquaCrop with input of all participants
10:30 – 11:00	Coffee break
11:00 – 12:30	**Session 6 - Roadmap towards a future AquaCrop network (Objective 2)**
	AquaCrop network: Institutions involved and their roles *Maher Salman & Pasquale Steduto*
	Development of mechanisms to structure the network for supporting AquaCrop *Maher Salman & Pasquale Steduto*
	Discussion
12:30 – 14:00	Lunch break
14:00 – 15:00	**Session 7 - Training and dissemination (Objective 3)**
	Training and dissemination programs: Institutions involved, contents, training team and new training approaches *Maher Salman & Lee Heng*
	Platform for the community of AquaCrop users *Maher Salman & Pasquale Steduto*
	Discussion
15:00 – 15:30	**Closure session** Conclusions and closing

Participants

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