



**Food and Agriculture
Organization of the
United Nations**



Crop Module 2

AquaCrop input requirements

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Day 1: Introduction to AquaCrop

- How do crop models work?
- AquaCrop interface
- AquaCrop: climate, crop, management and soil modules
- Run simulations and interpret results

Days 2: Running your own simulation on standard mode

- Input requirements (details)
- Create/import climatic files on AquaCrop



AquaCrop input requirements: climate information

Climate inputs	Yes/No	Frequency
Precipitation	Yes	Daily, dekadal, monthly
Temperature (max/min)	Yes	Daily, dekadal, monthly
Reference evapotranspiration	Yes/pre-computed	Daily, dekadal, monthly
Relative humidity	+	Daily, dekadal, monthly
Solar radiation	+	Daily, dekadal, monthly
Wind speed	+	Daily, dekadal, monthly
CO ₂ concentrations (RCPs 4.5, 8.5 etc.)	Available	Daily, dekadal, monthly



AquaCrop input requirements: crop information

Crop inputs	Yes/No	Frequency
Planting date	Yes	Once
Plant density	Yes	Once
Planting method (sowing/transp.)	Yes	Once
Maximum canopy cover	Yes	Once
Time to emergence	Yes	Once
Time to & duration flowering	Yes	Once
Start of canopy senescence	Yes	Once
Crop coefficient	Yes	Once



AquaCrop input requirements: crop information

Crop inputs	Yes/No	Frequency
Time to maturity	Yes	Once
Length building up harvest index	+	Once
Crop water productivity	+	Once
Harvest index	Yes	Once
Root depth	+	Once
Time for maximum root depth	+	Once



AquaCrop input requirements: soil information

Soil inputs	Yes/No	Frequency
Soil texture	Yes/Available	Once
Soil water content: SAT, FC & PWP	Available	Once
Effective soil depth	+	Once
Soil coarse material	+	Once
Drainage	+	Once
Electrical conductivity	+	Once
Groundwater table (depth)	+	Once
Groundwater table (salinity)	+	Once



AquaCrop input requirements: management info.

Management inputs	Yes/No	Frequency
Soil fertility	+	Once
Cover & type of soil mulches	+	Once
Height of soil bunds	+	Once
Surface runoff	+	Once
Irrigation method	Yes (if irrigated)	Once
Application depth	Yes (if irrigated)	At each event
Time of irrigation	Yes (if irrigated)	At each event
Salinity of the irrigation	+	Once

Thank you!

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