



UNIVERSIDAD DE CÓRDOBA



SIMULATION PERIOD AND INITIAL CONDITIONS IN AQUACROP

THEORY



ITALIAN AGENCY
FOR DEVELOPMENT
COOPERATION

OBJECTIVES



1. Simulation period

2. Initial conditions

OBJECTIVES



1. Simulation period

2. Initial conditions

1. SIMULATION PERIOD

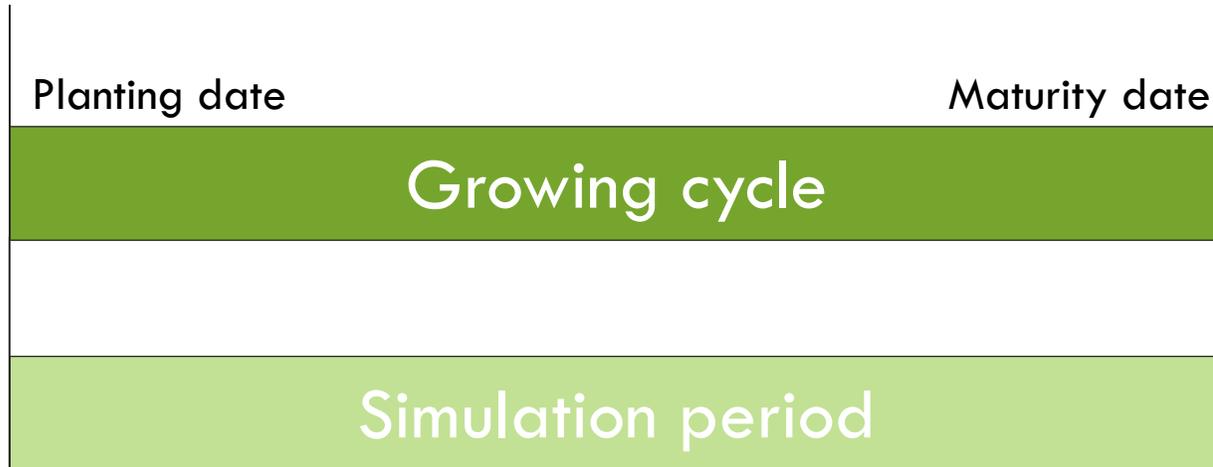


Input files



Simulation

What is the simulation period?



1. SIMULATION PERIOD



Input files



Simulation

What is the simulation period?

Planting date

Maturity date

Growing cycle

Simulation period

1. SIMULATION PERIOD

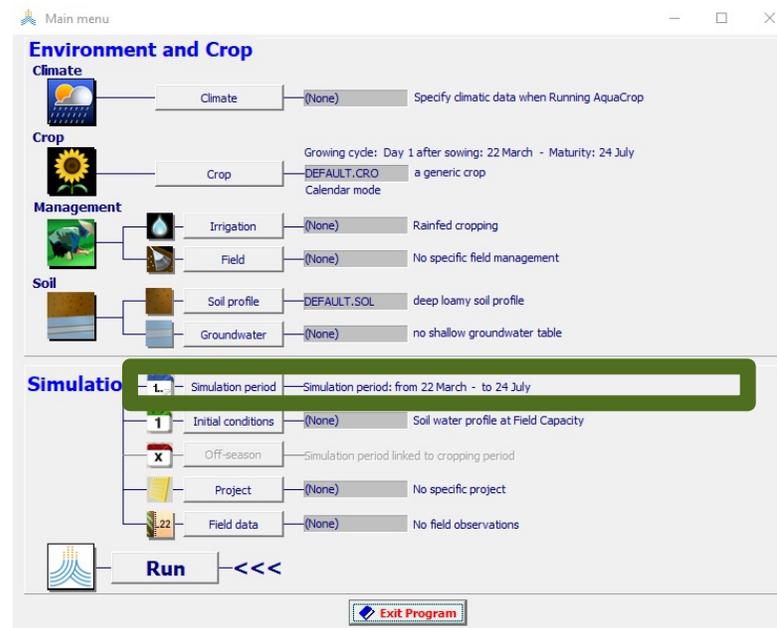


Input files



Simulation

What is the simulation period?



1. SIMULATION PERIOD

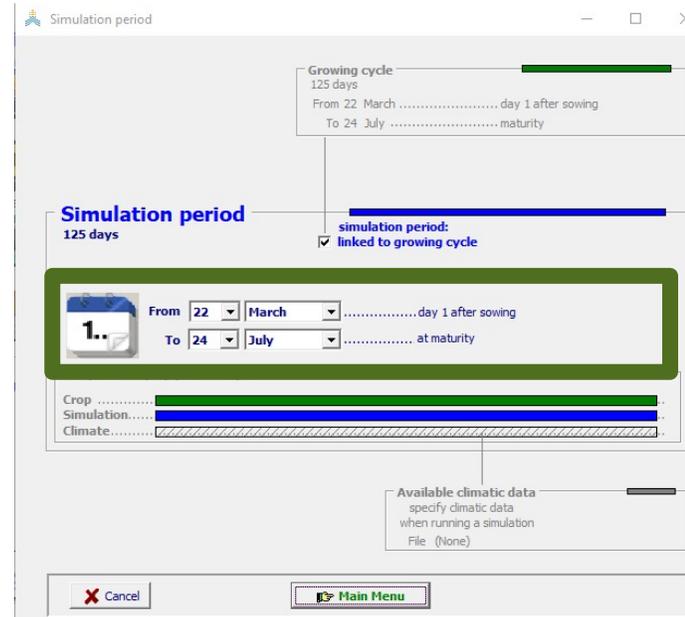


Input files



Simulation

What is the simulation period?



OBJECTIVES



1. Simulation period

2. Initial conditions

2. INITIAL CONDITIONS



Input files



Simulation

What are the initial conditions?

Planting date

Maturity date

Growing cycle

Simulation period

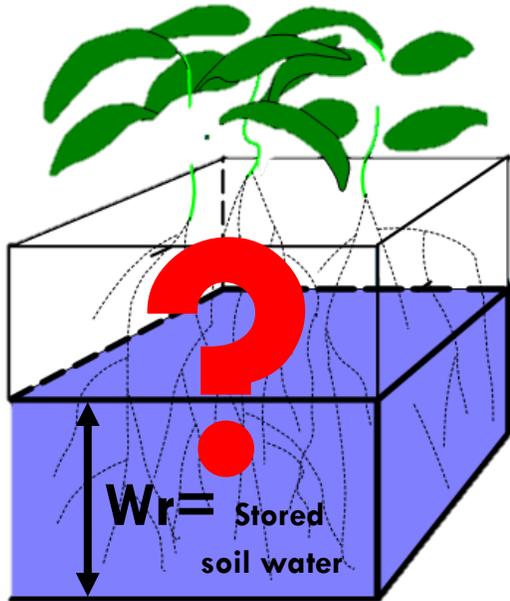
Initial conditions



2. INITIAL CONDITIONS



Initial soil water content



Strongly affects the simulation of CC, Tr, B and Y

Initial conditions

What are the initial conditions?

Planting date

Maturity date

Growing cycle

Simulation period

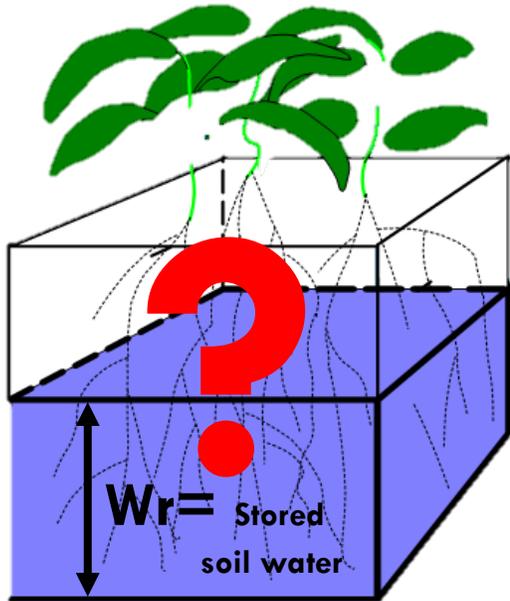
2. INITIAL CONDITIONS



Initial soil water content



- Sampling of the soil profile
- Estimation of initial soil water content
- Keep values from previous run

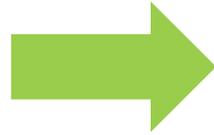


Strongly affects the simulation
of CC, Tr, B and Y

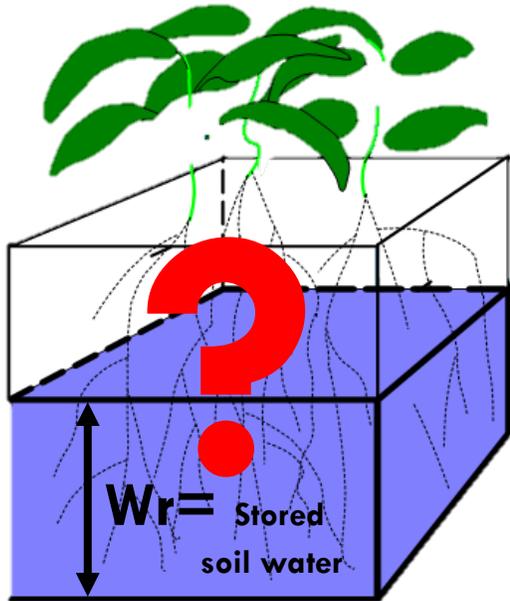
2. INITIAL CONDITIONS



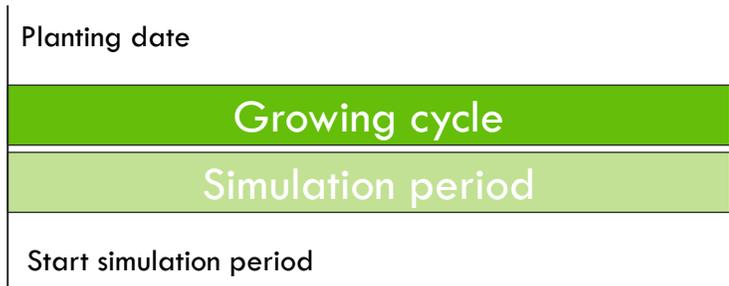
Initial soil water content



- **Sampling of the soil profile**
- **Estimation of initial soil water content**
- **Keep values from previous run**



**Strongly affects the simulation
of CC, Tr, B and Y**

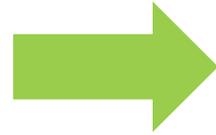


$$SWC_{in} = SWC_{measured}$$

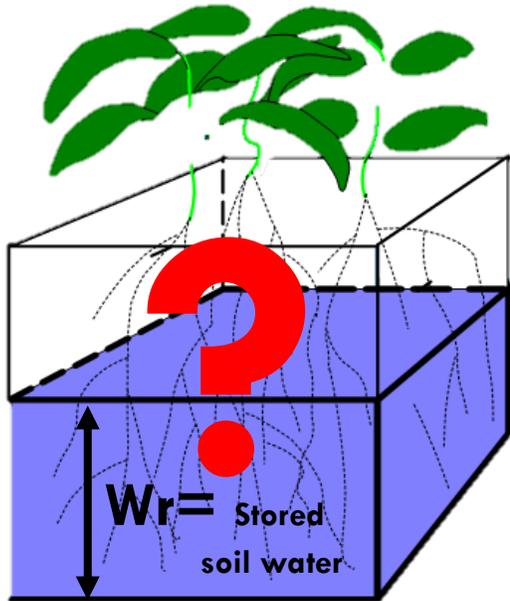
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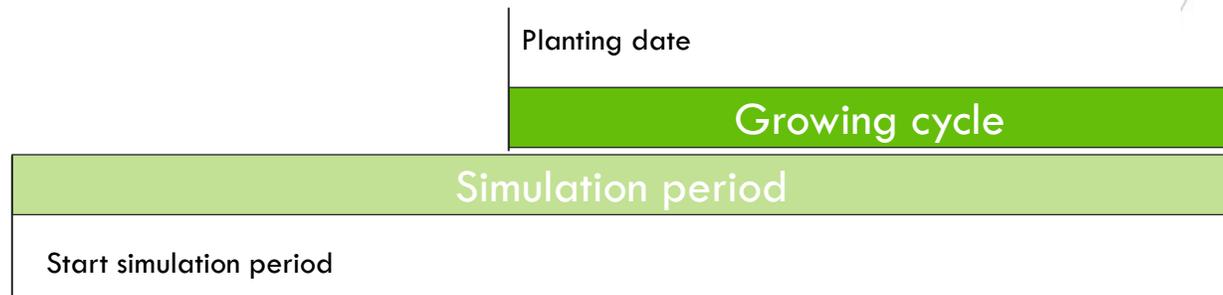


Strongly affects the simulation of CC, Tr, B and Y



Beginning of rainy season $SWC_{in} = SWC_{FC}$

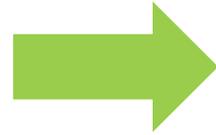
End of dry season $SWC_{in} = SWC_{PWP}$



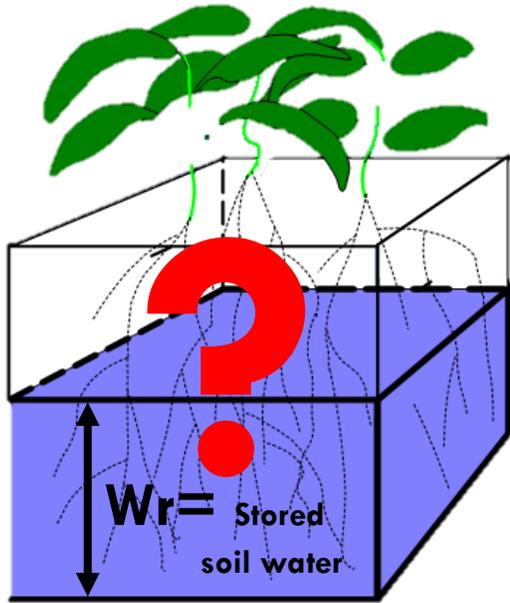
2. INITIAL CONDITIONS



Initial soil water content



- Sampling of soil profile
- Estimation of initial soil water content
- **Keep values from previous run**



Strongly affects the simulation of CC, Tr, B and Y

Initial conditions for: 22 March

Description: Initial soil water and salinity content | Initial crop development and production

Initial soil water and initial soil salinity content

Soil water profile | Soil salinity profile

Soil water profile

Depth (m)	Soil water content (vol %)
0.50	~35
1.00	~30
1.50	~25
2.00	~20

Program settings: Simulation run parameters

Initial conditions at start of a simulation | Soil compartments

New simulation | Inside growing cycle

When starting a new Simulation Default

Initial soil water and salinity content

- KEEP** values from previous simulation run
- RESET** to specified Initial conditions

Timeline: Growing cycle, Simulation period, Simulation period, Simulation period

keep, keep

initial conditions: Soil water and salinity content as specified in **Initial conditions** menu

Cancel | Program Settings