Effect of deficit irrigation and organic farming on the productive response of major outdoor vegetables in the Mediterranean area.

By

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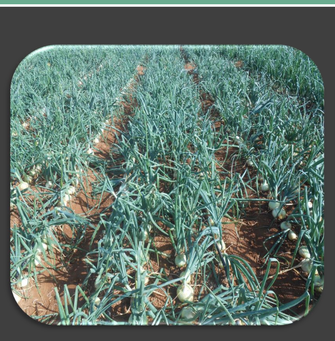
The experiments include two main parts

Objectives

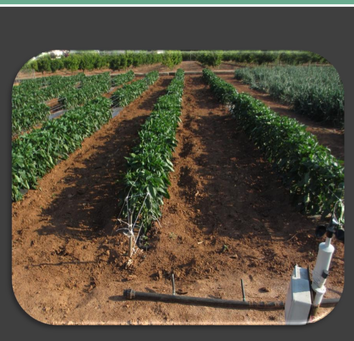
Deficit irrigation strategies

- Impact of regulated and sustained deficit irrigation strategies on yield, growth and product quality of four vegetable crops.
- Irrigation water use efficiency and yield response factor of four vegetable crops under different deficit irrigation strategies.

Cauliflower (*Brassica oleracea*)



Onion (*Allium cepa L.*)



Sweet pepper (*Capsicum annuum* L.)

Watermelon (*Citrullus lanatus*)

Comparison of organic and integrated farming

- Effect of organic farming and integrated production on plant growth, yield and quality for three vegetable crops.

Cauliflower (*Brassica oleracea*)

Onion (*Allium cepa L.*)

Watermelon (*Citrullus lanatus*)

Research development stage

The experiments under implementation at the experimental center of Cajamar.

Year	January	February	March	April	May	June	July	August	September	October	November	December
2015												
2016												
2017												
2018												
2019												

The experimental center of Cajamar, Paiporta, Valencia.

Results

Deficit irrigation strategies lead to:

- Important water-savings.
- Increase irrigation water use efficiency.
- Maintain or even improve product quality.

- Organic farming leads to:
  - Reduce the inputs due to maximizing use of the renewable and local resources in the agriculture system.
  - Maintain yield and product quality.
- Organic farming is a sustainable agricultural system comparable to integrated farming.