

SEA LEVEL RISE AND WATER BMP'S (Part I)

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Plant nursery in south FL

SOUTH FLORIDA AGRICULTURE

- Quality of irrigation water is important for plant nurseries in Florida.
- High salinity levels on main irrigation systems can cause stress on plants in the ornamental industry.
- Best Management Practices (BMP's) can avoid/mitigate damages caused by higher salinity levels of irrigation water in nurseries.

OBJECTIVE

To identify levels of salinity that can possibly cause short- and long-term injuries on specialty crops such as ornamentals.

METHODOLOGY

Location: UF/IFAS TREC; Homestead, FL. USA

Crops: We evaluated two economically important nursery crops: Hibiscus and Mandevilla.

Experiment: July to September 2019.

We used 4 plants per treatment: One control of irrigation water and three higher salinity levels (*).

Control: EC=0.5 dS/m T1: EC=1.0 dS/m

T2: EC=1.5 dS/m T3: EC=2.0 dS/m

(*) Read our next fact sheet on higher EC values Part II



Hibiscus Treatments



Mandevilla Treatments

RESULTS

- Both Hibiscus and Mandevilla survived during the six-week experiment and showed slightly differences in height (not significant).
- Plants irrigated with salinity (1.5 dS/m) showed a higher height than other treatments.
- All plants showed no salt damage in their foliage under these treatments.

DISCUSSION

- To our knowledge this is the first report of evaluation of salinity levels and how they may affect nursery crops.
- Further applied research is needed to establish safe thresholds and BMP's for nursery crops during presence of high salinity in irrigation water.

