

Salinity Management Session Overview

The overall goals of the Salinity Management Session are 1) to present condensed summaries from a variety of experiments that address various aspects of avocado response to salinity, 2) simulate good discussion among panel members and the audience and 3) answer to the best detail possible the following questions.

- a) Do salinity (osmotic) and specific-ion damage (ie chloride and sodium) contribute to avocado's extreme sensitivity to salinity? If so, which process is more damaging? What influence does reducing the Na/Ca ratio have on tree performance?
- b) Can reclaimed waste-water be used for irrigation of avocado? If so, what are the upper limits for EC, Cl, or Na?
- c) What irrigation management strategies can be adopted in avocado orchards to optimize their response to irrigation with poor quality water?
- d) Is there an integrated approach to salinity management in avocado that can be recommended (i.e. irrigation, amendments, shifting to tolerant rootstocks, etc)?
- e) What is the long-term feasibility of shifting to more salt-tolerant rootstocks?

Introduction

10:30-10:45 Stephen Grattan

General overview; Introduction (salinity terms, basic response of trees to salinity)

Session I: Salinity tolerance of avocado; the role of the rootstock

10:45-11:00 Mary Lu Arpaia/Michael Mickelbart

Summary of salinity studies examining various avocado rootstocks

11:20 – 11:40 Nirit Bernstein/Miriam Zilberstaine

Effect of salinity on avocado root and shoot growth

11:00-11:20 Ricardo Cesped

Response of 'Hass' avocado (Persea americana Mill.) grafted on Mexican and West Indian clonal rootstocks to saline conditions

11:40-12:00 Open discussion (Panelists and Audience)

Session II: Feasibility of irrigating avocado with reclaimed waste-water; long term salinity studies

1:10-1:30 Gary Bender

Use of reclaimed water on avocado in San Diego County; problems and solutions

1:30-1:50 Emi Lahav

The response of avocado to salinity and water-fertilizer management

1:50-2:10 Joseph Shalhevet

Avocado sensitivity to salinity revisited

2:10- 2:30 Open Discussion (Panelists and Audience)

Session III (3:00 – 3:30): Irrigation management strategies using saline water

3:00-3:15 Andreas Neahaus

An integrated approach to irrigation and salinity management

- 3:15-3:30 Avraham Meiri
Salinity aspects related to partial soil-surface wetting, Irrigation frequency and leaching timing
- 3:30-3:45 James D. Oster
Water, salinity and chloride effects on productivity of Hass avocado
- 3:45-4:45 Open discussion (Panelists and Audience)**
- 4:45-5:00 Concluding Remarks**