



## Irrigation Toolbox Chapter 5

### Irrigation Scheduling

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## IRRIGATION SCHEDULING

### Introduction

- The material provided in this section is intended to serve as a framework for irrigation scheduling training.
- Trainers should modify the training material referenced as necessary to achieve the planned skill level for the trainees.
- Trainers are encouraged to include locally developed training materials to complement and/or supplement the referenced material.
- As new training materials are developed by trainers, they are encouraged to furnish copies to the Irrigation ToolBox Manager for inclusion in future versions of the assembled material.

### Suggested Objectives

1. Determine available water-holding capacity of the root-zone (WHC).
2. Determine soil moisture content.
3. Given the Management Allowed Depletion (MAD) and consumptive use rate, determine when to irrigate and how much water to apply.
4. Perform irrigation scheduling using various methods ranging from the feel and appearance method to computer assisted programs.

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## **Suggested Items To Consider**

- Water Holding Capacity (WHC) of soils in root zone.
- Management allowed depletion (MAD).
- Allowable plant stress.
- Soil Moisture Release Curves.
- When to irrigate.
- How much to apply.
- Estimate crop Evapotranspiration rates (ET) - various models.
- Irrigation scheduling methods.
- Soil and crop monitoring.
- Crop water use monitoring.
- Soil moisture monitoring.
- Checkbook method.
- Computerized assisted methods.

***Note: Note all copies of documents that were contained in the original Irrigation Training Toolbox are available electronically.***

***If you are unable to find a hard copy of a document in your state, you may be able to borrow a copy from the Water Management Engineer at your regional National Technology Support Center.***

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## Reference Material

- NEH Part 652: National Irrigation Guide, Chapter 9: Irrigation Water Management.
- National Engineering Handbook Part 623-Chapter 2 Soil Plant Water Relationships.

## Toolbox Material

- Publication "Irrigation Scheduling: A Water Quality Must!", NRCS, Franklin Conservation District, Pasco, WA
- Publication "Scheduling Irrigations: A Guide For Improved Irrigation Water Management Through Proper Timing and Amount of Water Application", SCS, ARS, Cooperative Extension, CO
- Videos "Introducing Irrigation Scheduler", IMC, Michigan State University, MI
- Video "Agricultural Irrigation Scheduling - The Irrrometer Story", Irrrometer Company

## Facilitation Options

- Self-paced,
- Facilitator guided, or
- Formal classroom training.

## Evaluation

- Each state should develop an evaluation procedure which addresses the level of competence desired before and after training is provided.

# IRRIGATION SCHEDULING

## Contents of Toolbox Packets

- Publication "Irrigation Scheduling: A Water Quality Must!", NRCS, Franklin Conservation District, Pasco, WA.
- Publication "Scheduling Irrigations: A Guide For Improved Irrigation Water Management through Proper Timing and Amount of Water Application", SCS, ARS, Cooperative Extension, CO.
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