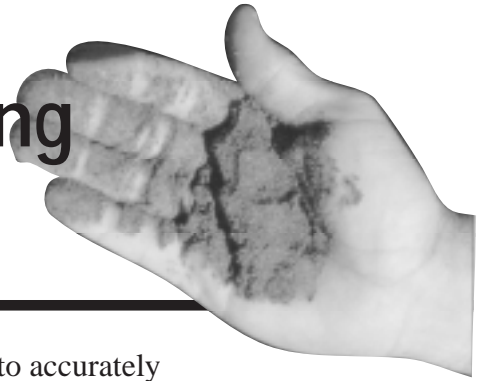


# Simple irrigation scheduling

## Using the “look and feel” method

F. Niederholzer and L. Long



### Why schedule irrigation?

Accurate irrigation scheduling maximizes the benefits of irrigation while minimizing potential negative impacts of over-irrigation or under-irrigation.

#### **Over-irrigation (too much water):**

- Drowns roots, thus stressing plants
- Encourages root diseases
- Reduces nutrient uptake
- Cools soil, thus reducing root growth
- Leaches nutrients and pesticides from the root zone to groundwater
- Reduces crop quality
- Wastes money

#### **Under-irrigation (too little water):**

- Reduces crop yield
- Reduces crop quality (fruit and vegetable size)
- Reduces plant growth
- Weakens plants

Many people schedule irrigation by the calendar rather than by plant need. Calendar-based scheduling can be very inaccurate since plant water needs and the amount of soil water available to plants are affected by factors such as climate, plant size, soil type, and rooting depth.

The goal of accurate irrigation scheduling is to replace soil water lost by evaporation and plant use as precisely as possible. To accomplish this

goal, you need to accurately assess soil moisture content. Then you can determine the need for irrigation and how much water to deliver.

Irrigation scheduling can seem complicated. It doesn't have to be. Anyone can use a simple, effective method known as the “look and feel” (or “soil appearance and feel”) method to determine when to irrigate.

### How does it work?

*This method is based on three simple ideas:*

- Soil is at “field capacity” when it is holding as much water as possible after the excess has drained away. (A wet sponge is at “field capacity” when it holds all the water it can without any dripping away.)
- It's best to irrigate when half of this water is depleted.
- Your goal when irrigating is to return the soil to field capacity.

*So, all you need to know to schedule irrigation is:*

- How much water will the soil hold within the plants' rooting zone when it's at field capacity?
- What does the soil look like when half of that water is gone?
- How much water should be applied to return the soil to field capacity?

*Franz Niederholzer, Extension horticulture agent, Hood River County; and Lynn Long, Extension horticulture agent, Wasco County; Oregon State University. Photos are from Estimating Soil Moisture by Feel and Appearance, and are reproduced courtesy of USDA/NRCS. Special thanks to Mr. Diego León for his excellent work with English/Spanish translation.*



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