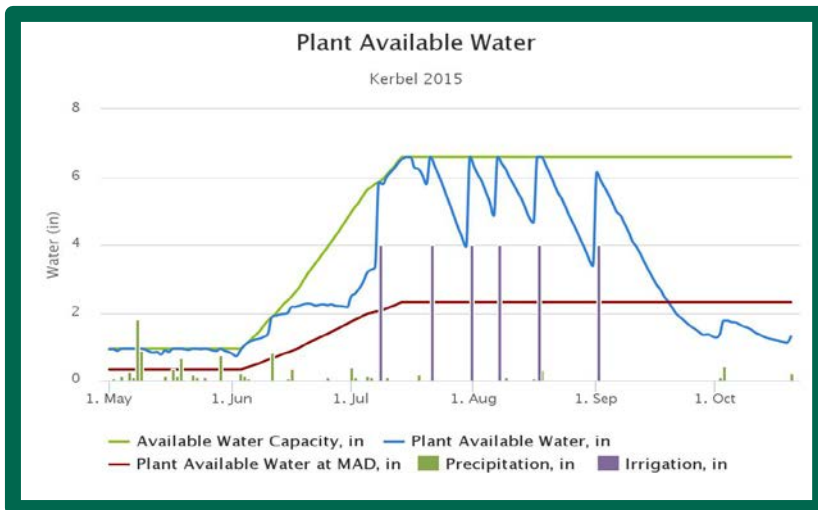


Irrigation Scheduling



DESCRIPTION

Careful irrigation water management is critical to not only water conservation but nutrient management. Matching crop ET requirements closely without crop stress or over irrigating can be accomplished using water balance approaches. Online tools and phone apps have made this approach quick, simple, and more accurate. ET-based approaches to irrigation scheduling should be coupled with field visits to verify soil moisture periodically.

RESOURCES

The WISE Irrigation Scheduler: wise.colostate.edu

CSU Extension, [Irrigation Scheduling: The Water Balance Approach](#).

USING THE WATER BALANCE APPROACH

- A simple method to tracks soil water deficit by accounting for all water additions and subtractions from the soil root zone.
- Crop water consumption or evapotranspiration (ET) accounts for the biggest subtraction of water from the root zone while precipitation and irrigation provide the major additions.
- The soil in the root zone has an upper as well as a lower limit of storing water that can be used by crops.
- As the crop grows and extracts water from the soil to satisfy its ETc requirement, the stored soil water is gradually depleted.
- Crop evapotranspiration can be obtained from the [Colorado Agricultural Meteorological Network \(CoAgMet\)](#) or by using atmometers.

IMPLEMENTATION REQUIREMENTS

Cost= LOW

Operation and Maintenance= LOW

Training= MEDIUM

NUTRIENT IMPACT

Nitrate leaching can be significantly reduced by applying water to the root zone in the correct time and amount.

Phosphorus loading increases with each additional irrigation above requirements, especially in surface irrigation.