

Irrigation Water Management (IWM)

A well designed, modern irrigation system provides the water delivery required to irrigate uniformly. The pipelines and valves give you control over how evenly the water is distributed throughout the field as well as the amount and timing of water applied. Installing the hardware is a great start but the decisions you make about when and how much to irrigate may offer an even greater opportunity to increase yields, improve crop quality and stretch limited water supplies.



Modern irrigation systems apply water uniformly.

Irrigation Water Management (IWM) begins with the use of measured soil moisture conditions, plant stress or climate based crop water use data to make irrigation timing decisions. This data is then used to calculate the amount of water to apply. Farmers are increasingly taking advantage of new technologies to collect, store and process data they need to fine tune their irrigation decision making.

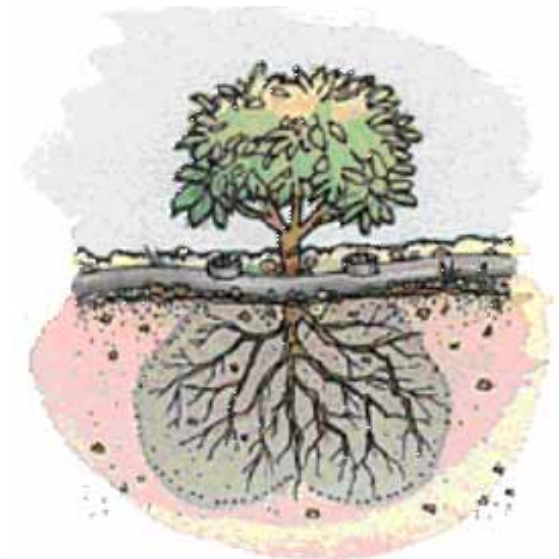


Monitoring and transmitting soil moisture data is one method to track crop water use.

With the advancement in technologies farmers are now able to look at irrigation as a more precise management practice, not just opening the gate and deep wetting the soil. By carefully monitoring and controlling the root zone water content you can:

- provide optimum water availability to the crop
- optimize soil aeration
- minimize disease associated with excess moisture
- minimize nutrient loss

Soil/crop monitoring and targeted application provides peace of mind knowing you are irrigating based on actual plant needs.



Manage your system to achieve desired root zone moisture conditions.

(more)

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Elements of modern irrigation scheduling:

- Monitor (quantitatively) moisture content in the soil/root zone, weather based crop water use, and/or plant conditions.
- Establish desired or tolerable limits (soil dryness/wetness, crop stress levels, etc.) to help decide when it's time to irrigate.
- Determine soil water holding properties to predict how much applied water the soil can hold and how dry it can get before the plant is stressed.
- Determine the amount of water needed to replace water used by the crop, or to achieve the target crop water use/soil moisture condition.
- Measure water applications to establish system application rates and to compare against measured crop water use.
- Record data, use data to make irrigation timing and amount decisions and to evaluate irrigation performance.
- Look back and evaluate past decisions, compare how much water you applied to how much you measured/estimated was used by the crop. Consider changes for next season.



Collecting soil moisture data for monitoring



Monitoring the drying trend and comparing to the limits you've set helps in predicting when the next irrigation will be needed.



When it's time to irrigate, instructions for the gross amount of water to apply are given to the irrigator or controller.

Contact your local NRCS or Resource Conservation District for assistance