

# IRRIGATION MANAGEMENT

Central Valley Ag's ACS team can provide you with many advantages when it comes to irrigation management. AquaSystems by ACS uses a Dual EM sensor to map soil texture differences and RTK GPS to map field topography within 1.5" accuracy, providing information needed to determine optimum moisture probe location. This location is based on soil texture, slope, landscape position, areas of water flow and accumulation. These moisture probes coupled with AquaSystems VRI create an integrated irrigation management system backed by experienced, trained agronomists dedicated to efficiency and profitability. This information can also be utilized to variably manage crop inputs such as seed, nitrogen, phosphorus and potash.

## THERE ARE MANY THINGS TO CONSIDER WHEN IT COMES TO IRRIGATION MANAGEMENT

<p><b>YIELD LIMITS</b></p> <p>Rainfall during the growing season is 5" less than needed to maximize yield. Sandy soils it's 6.5" – 8" less.</p>	<p><b>GROUNDWATER</b></p> <p>Pumping restrictions are already in place in 5 NRDs and are being considered statewide, it is not an unlimited resource.</p>	<p><b>OVER-IRRIGATION</b></p> <p>Every inch of excess water leaches 8 lbs. of Nitrogen out of the root zone.</p>	<p><b>EXPENSE</b></p> <p>When fixed and variable costs are included, it costs \$12.00 to pump 1" of water.</p>
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<p><b>Average Cost Reductions</b></p> <p>\$42/A heavy soils</p> <p>\$35/A sandy soils</p>
<p><b>- Annualized Investment</b></p> <p>\$9.75/A/yr</p>
<p><b>= Profit</b></p> <p>\$32.25/A/clay</p> <p>\$25.25/A/sand</p>
<p><b>5 yr ROI to Irrigation Mgmt.</b></p> <p>4.3:1 clay</p> <p>3.6:1 sand</p>

## DID YOU KNOW?

- Each inch of excess water removes 8 lbs. of N from the root zone.
- Average cost of applying 1" of water in NE Nebraska is \$12 per acre.
- The average irrigator applies 4.5" more water than needed.
- AquaSystems Irrigation Management saved an average of 3-4" of water on silt loam soils, 2 – 2.5" of water on sandy soils.
- At field capacity a silty clay loam soil has 3" of water available in 3' for the crop to use but a loamy sand soil only has 1.5" of water available for the crop in the same 3' root zone.
- Roots will not grow into water saturated soil due to lack of oxygen.
- Root mass stops increasing when the plant enters its reproductive stage.

