A Web-Based Irrigation Decision Tool For Corn and Soybean Cropping Systems

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Rationale

When making an irrigation decision, an irrigator has to know:

- What's the **soil moisture** status in the rooting zone?
- What **stage** is the crop at?
- How is **weather** going to be for the coming days?

And he/she has to drive to the field to get the info!

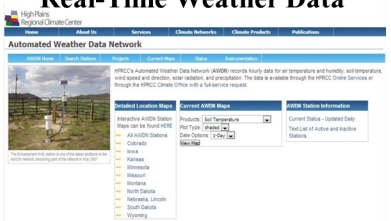
Objectives

- Develop an online corn irrigation decision aid that provides **real-time and field-specific** estimates on crop stage, crop water consumption, and available soil water, as well as **predictions** for the next 10 days.
- Integrate *SoyWater* online irrigation tool with corn tool into *CornSoyWater*.

Method

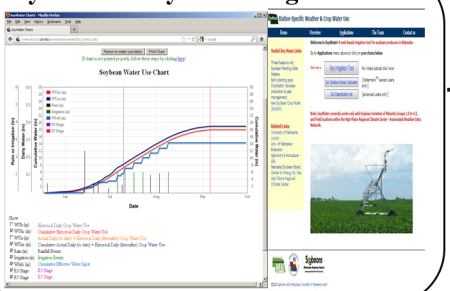
- Crop simulation modeling using real-time weather data in combination with 10-day weather forecast and long-term historical weather record.
- Web-based platform.

Real-Time Weather Data

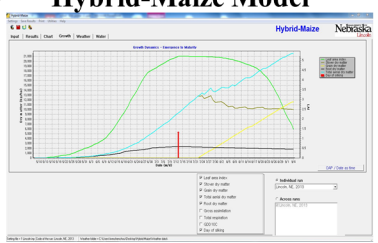


- UNL-HPRCC
- 10-day weather forecast

SoyWater : Soybean Irrigation Web

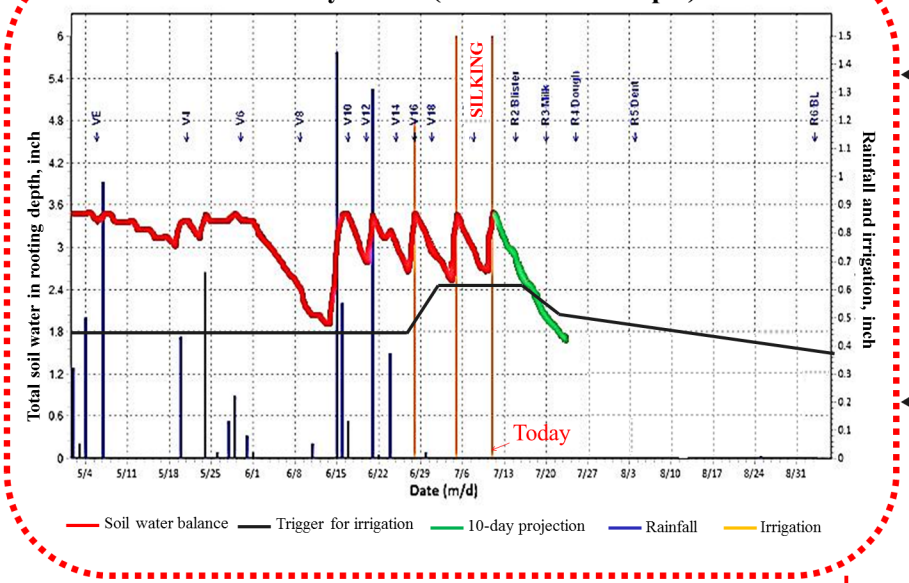


Hybrid-Maize Model

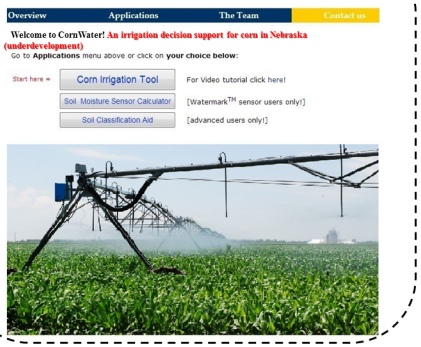


- Corn development
- Corn water consumption
- Soil water balance

CornSoyWater (Corn Field Example)



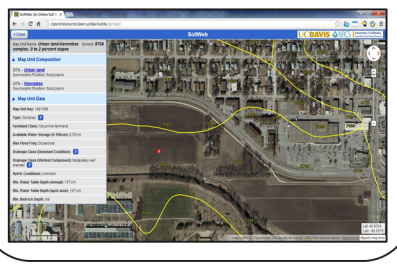
CornWater : Corn Irrigation Web



User Input Data

- Field location
- Crop maturity
- Planting date
- Seeding rate
- Soil moisture at planting

Web Soil Data



Project Timeline

2013: Prototype development and small scale field testing
2014: Program refinement and expanded field testing
2015: Program release

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