PRECISION AGRICULTURE

TECH FARM

WATER TECHNOLOGY CENTER

NORTHWEST TECH
NORTHWEST KANSAS TECHNICAL COLLEGE

The Precision Agriculture Technology Department Vision

To sustain agricultural economic viability in Western Kansas through workforce development , and focus on increased adoption of innovative technologies and sustainable practices.

WATER TECHNOLOGY FARMS

Goals and Objectives

THE PROJECT WAS A CRITICAL COMPONENT IN PROMOTING IRRIGATION WATER MANAGEMENT ADOPTION IN NORTHWEST KANSAS ON SEVERAL FRONTS.

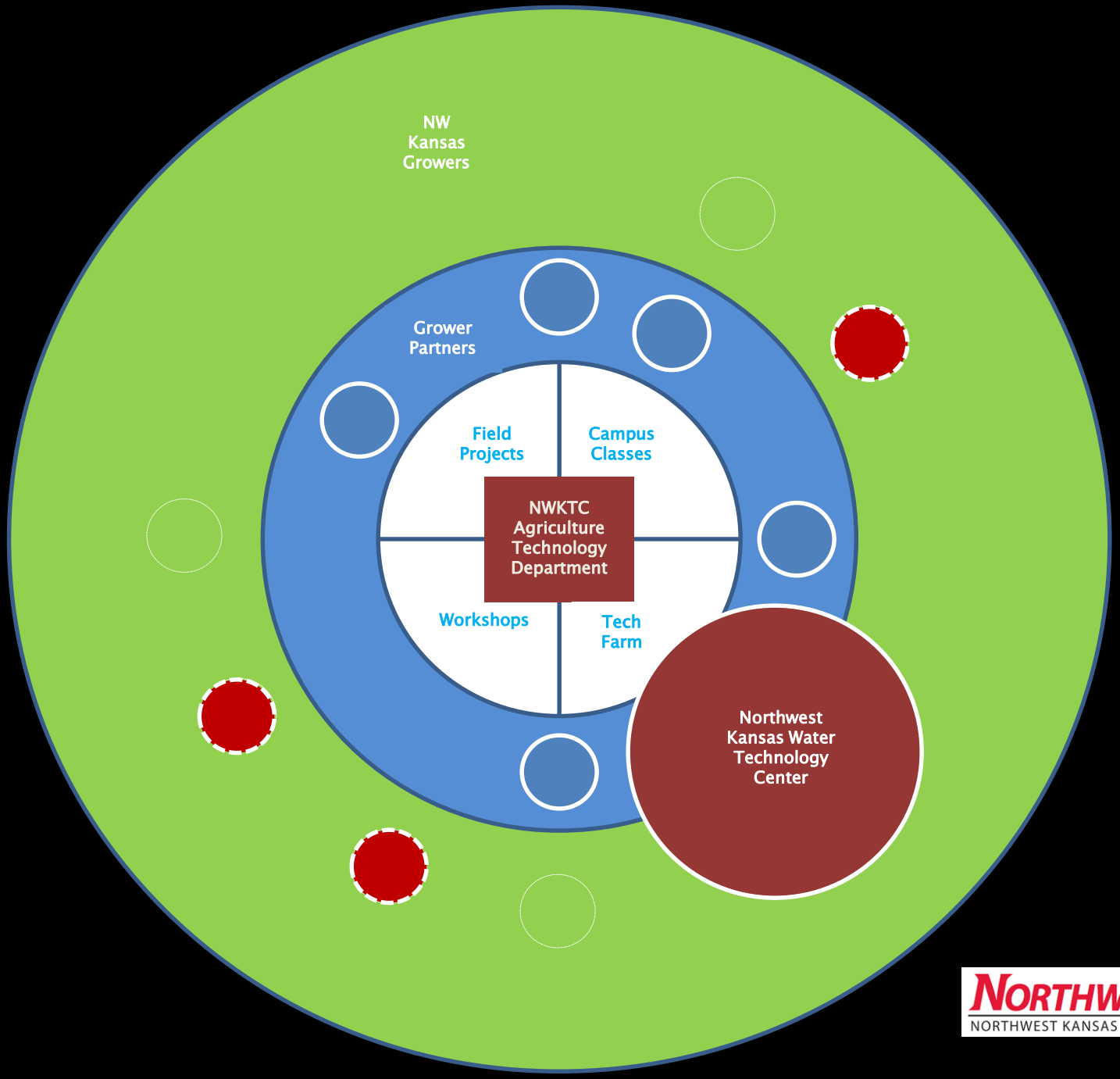
- The project aided in acquainting previously unexposed growers to available irrigation water management technologies that they might not have otherwise explored.
- The project helped several other growers continue their efforts to effectively utilize irrigation water management technologies.

WATER TECHNOLOGY FARMS

Goals and Objectives

- The project promoted workforce development within the irrigation water management sector by securing several paid internships with regional water technology dealers.

- The effort overall was a monumental stride forward for the Precision Agriculture Technology program at Northwest Tech as the department was able to rapidly develop its irrigation water management curriculum, tools, equipment and relationships.



NORTHWEST TECH
NORTHWEST KANSAS TECHNICAL COLLEGE

WATER TECHNOLOGY FARMS

Tech Farm

WATER TECHNOLOGY FARMS

Water Technology Center

WATER TECHNOLOGY FARMS

Summary

2017

- 10 PARTICIPATING LANDOWNERS AND OPERATORS
- 18 FIELDS COMPRISED OF 2,046 ACRES OF IRRIGATED CROP LAND

2018

- 1 NWKTC TECH FARM
- 5 PARTICIPATING LANDOWNERS AND OPERATORS
- 11 FIELDS COMPRISED OF 1,134 ACRES OF IRRIGATED CROP LAND

WATER TECHNOLOGY FARMS

Summary

A WIDE VARIETY OF TECHNOLOGIES, CONVENTIONS AND SERVICES

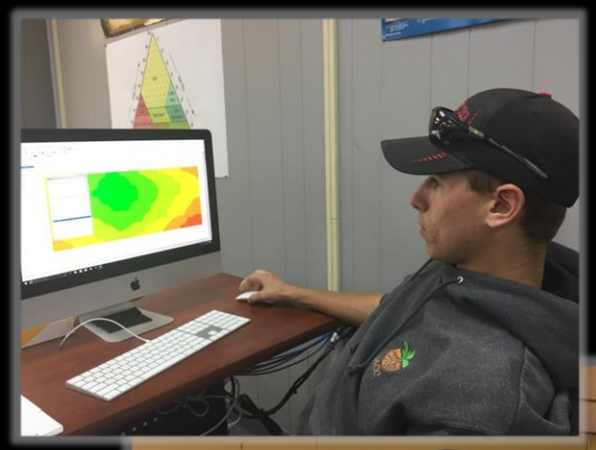
- Soil moisture probes
- Irrigation controllers
- Variable rate prescription speed tables
- Electro-conductive soil mapping
- Soil sampling
- Weather stations

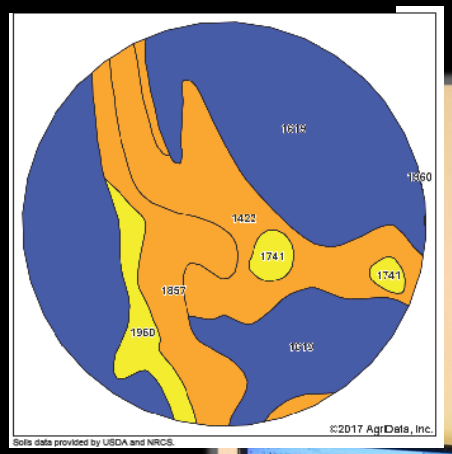
WATER TECHNOLOGY FARMS

Data Collection

WATER TECHNOLOGY FARMS

Processing and Planning





WATER TECHNOLOGY FARMS

Training

WATER TECHNOLOGY FARMS

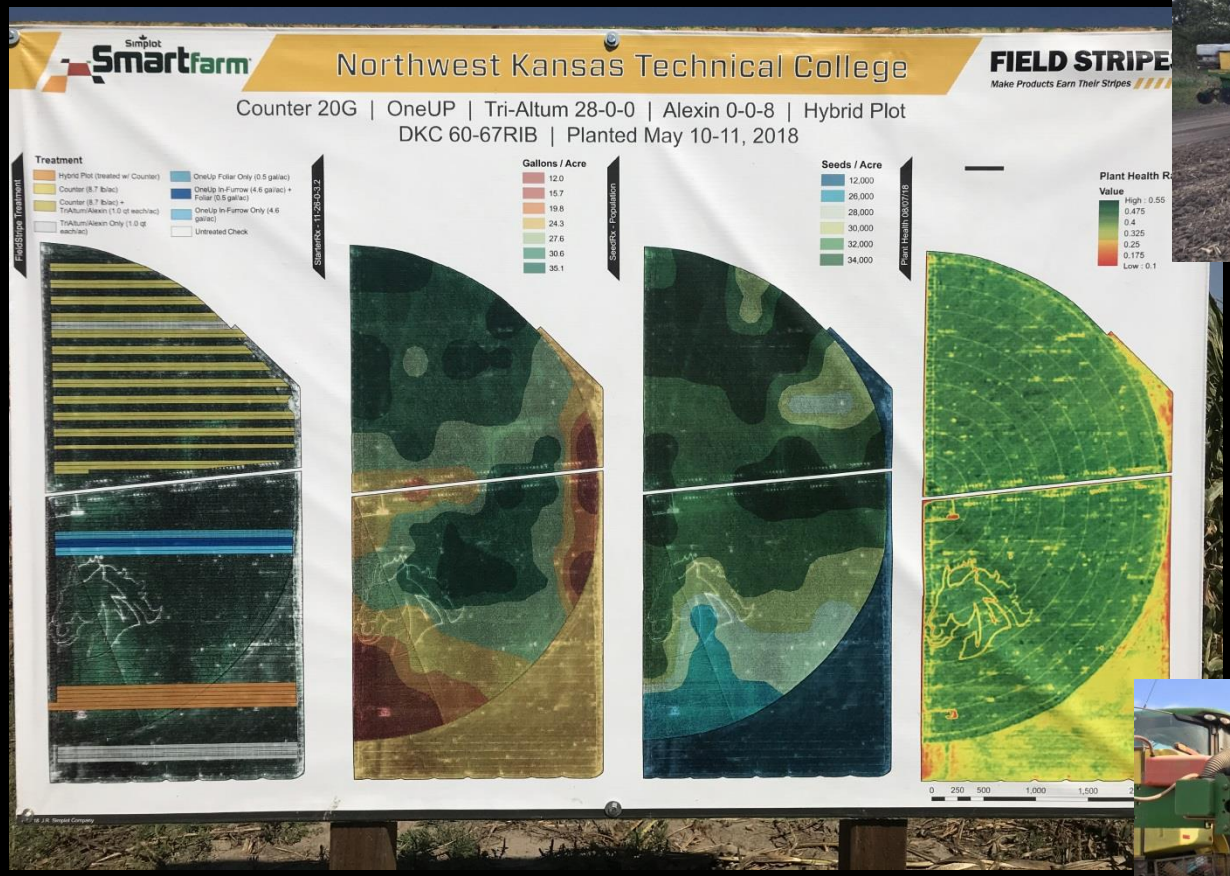
Training

WATER TECHNOLOGY FARMS

Training

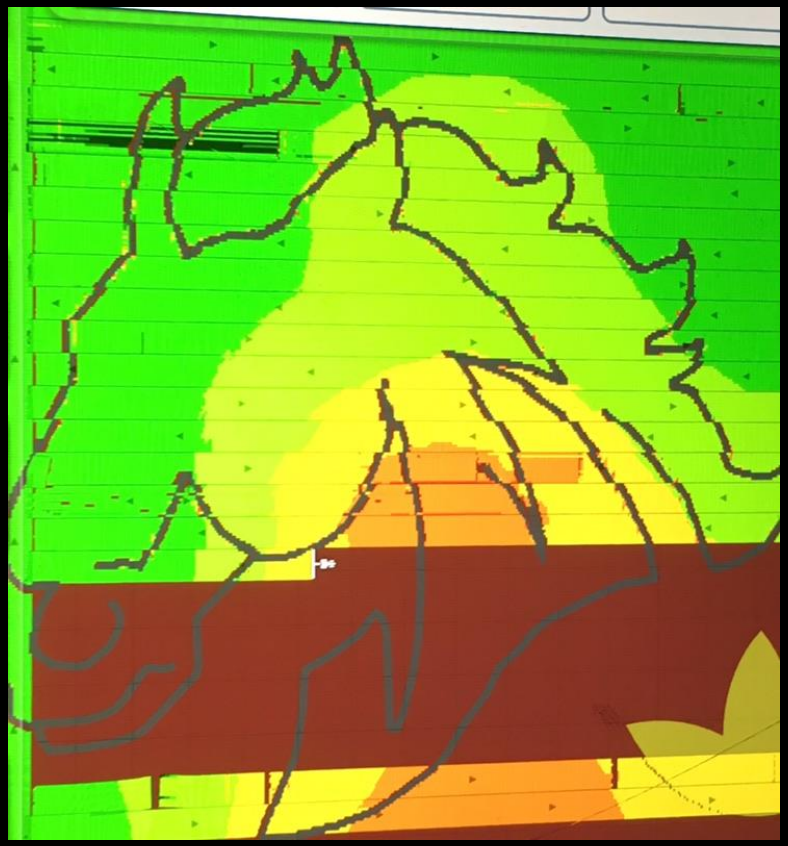
WATER TECHNOLOGY FARMS

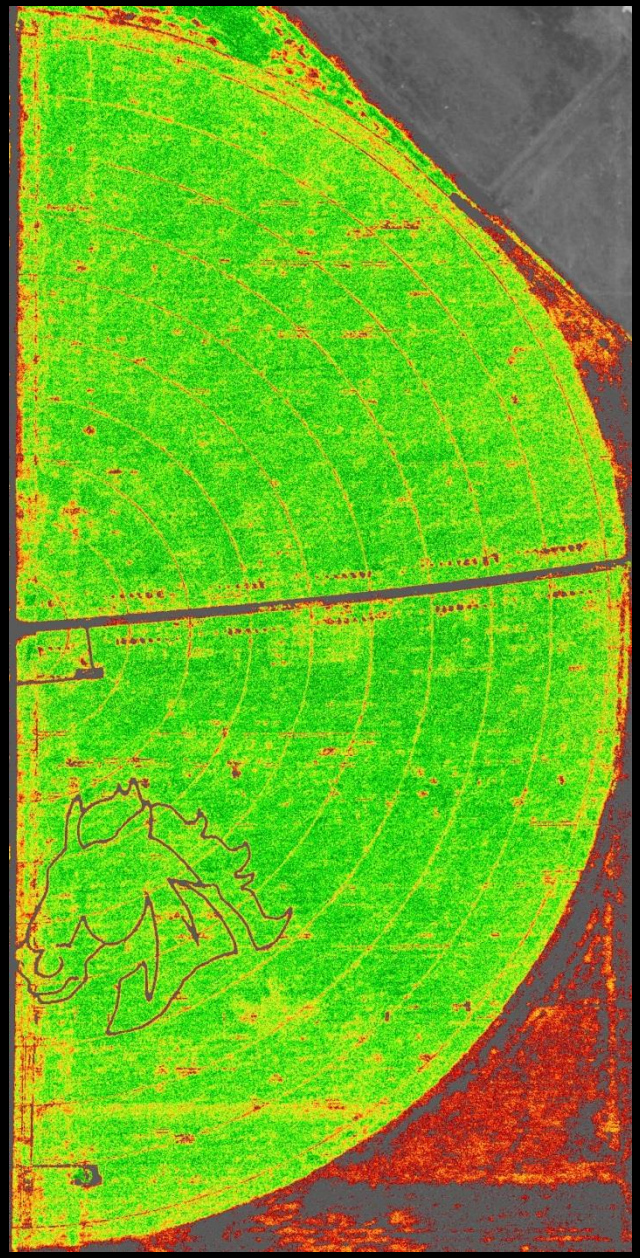
Planting



WATER TECHNOLOGY FARMS

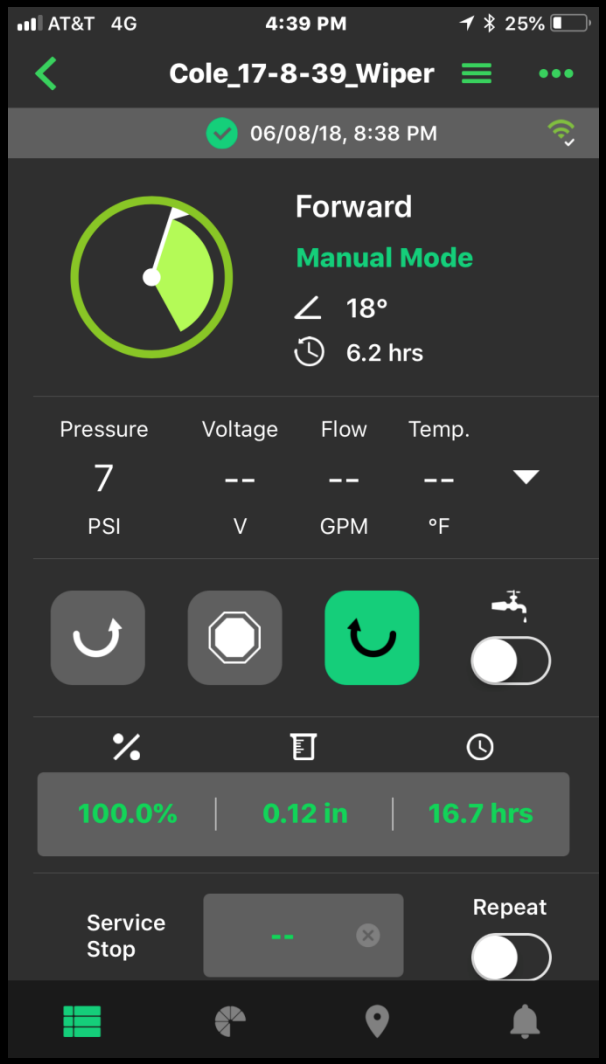
Planting





WATER TECHNOLOGY FARMS

Equipment Installation



WATER TECHNOLOGY FARMS

Operations

WATER TECHNOLOGY FARMS

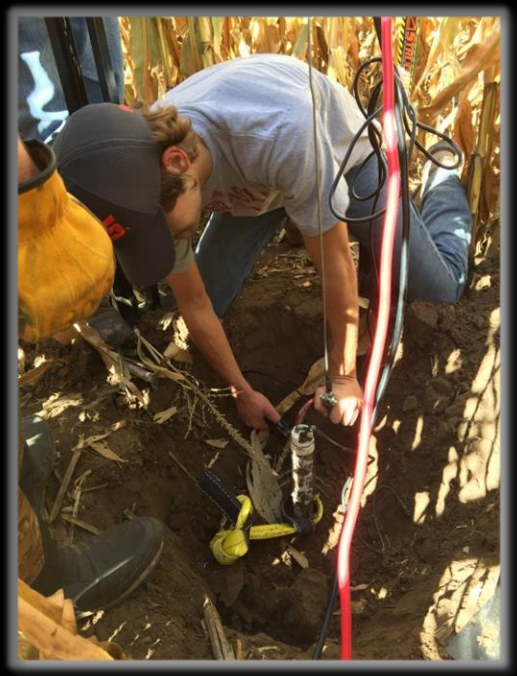
Equipment Installation

WATER TECHNOLOGY FARMS

Equipment Installation

WATER TECHNOLOGY FARMS

Equipment Installation

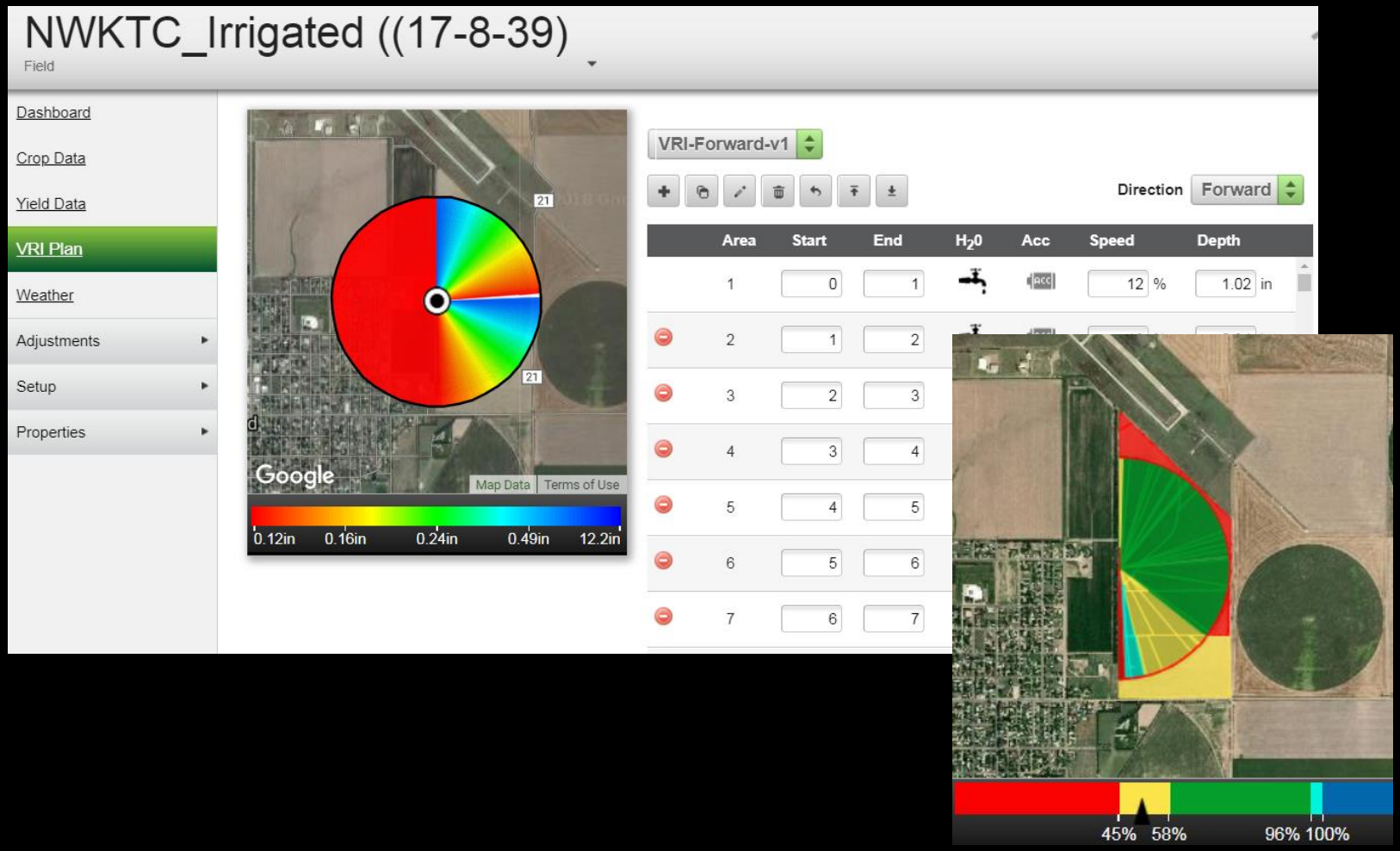


WATER TECHNOLOGY FARMS

Equipment Installation

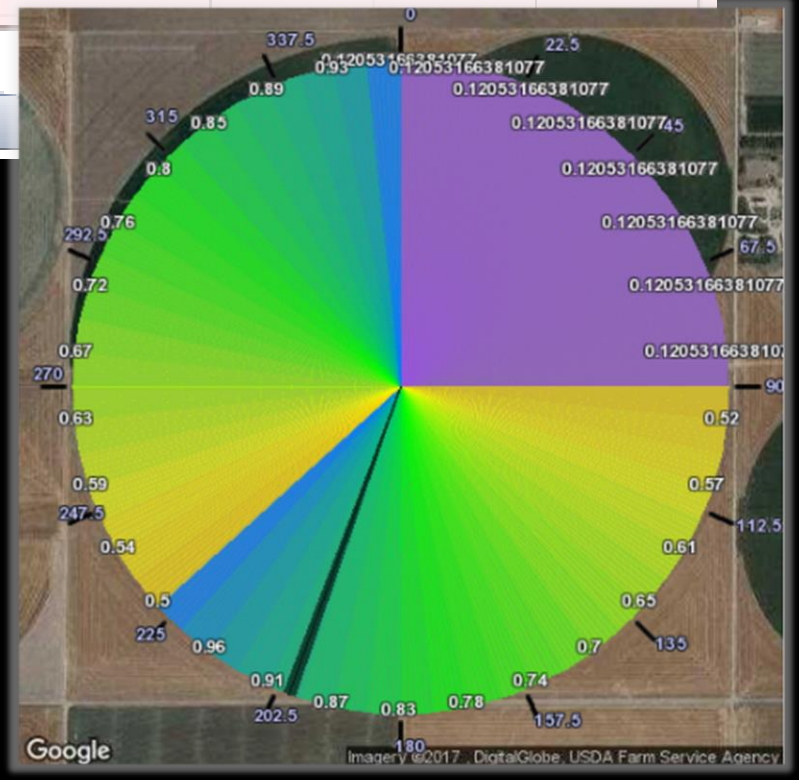
WATER TECHNOLOGY FARMS

Operations



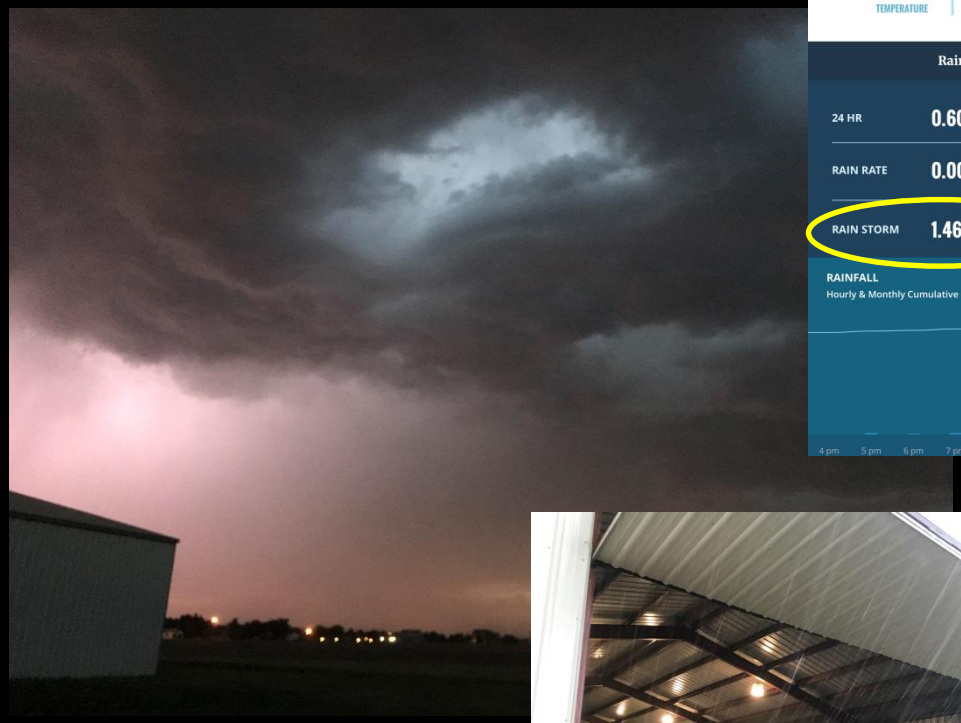
WATER TECHNOLOGY FARMS

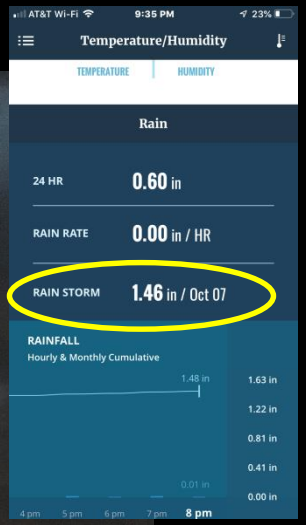
Operations

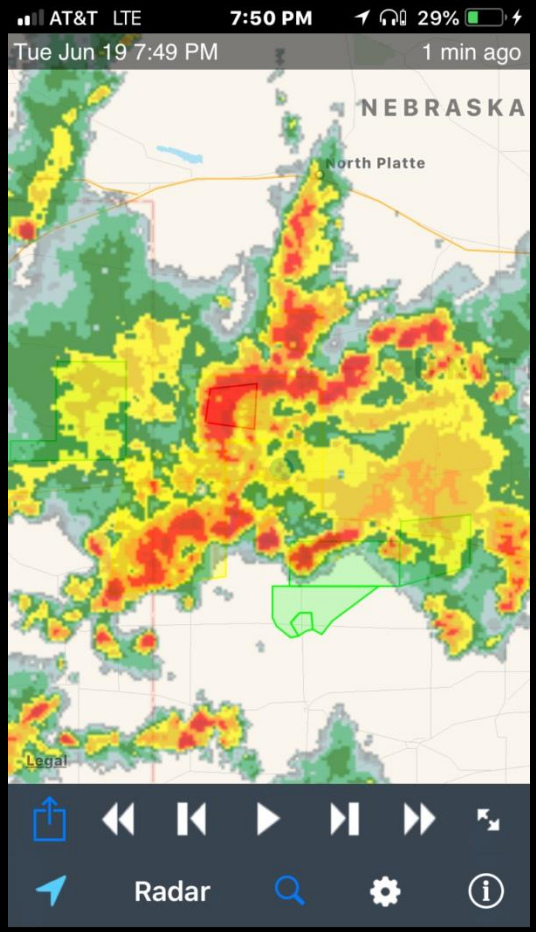


WATER TECHNOLOGY FARMS

Weather







WATER TECHNOLOGY FARMS

Weather

WATER TECHNOLOGY FARMS

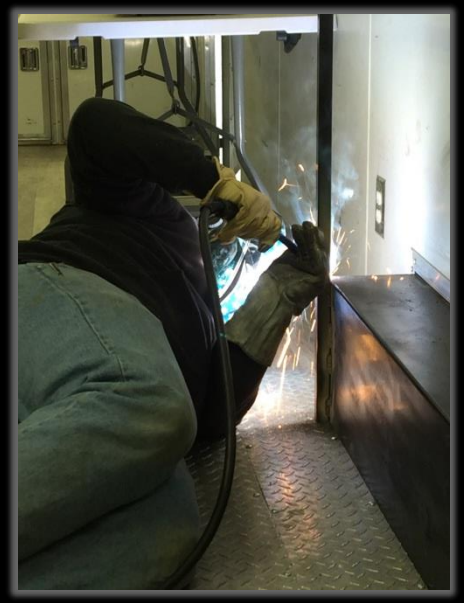
Drip Irrigation System

WATER TECHNOLOGY FARMS

Drip Irrigation System

WATER TECHNOLOGY FARMS

Water Tech Mobile Classroom

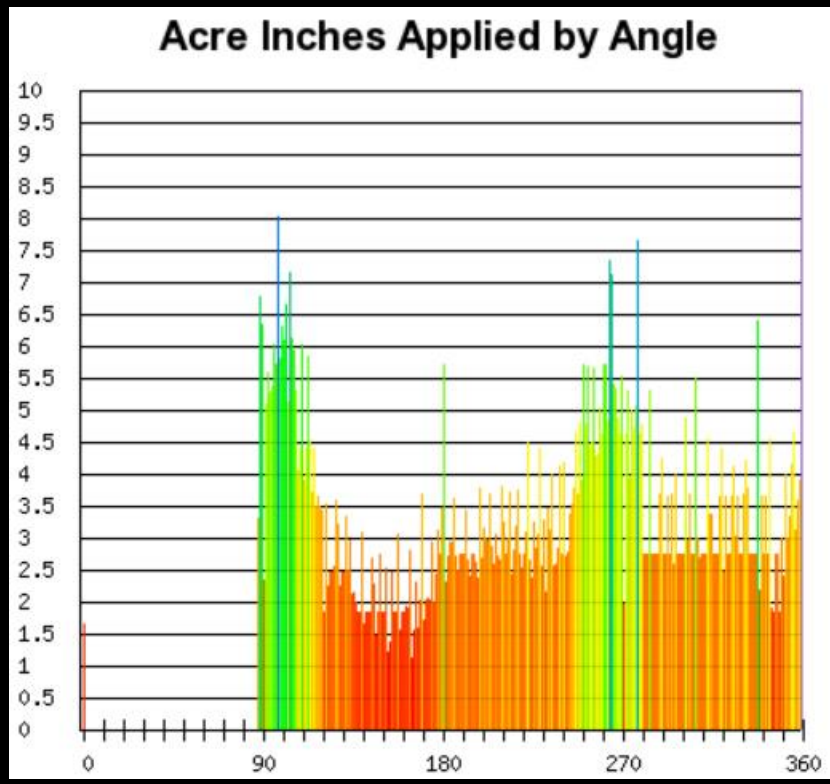


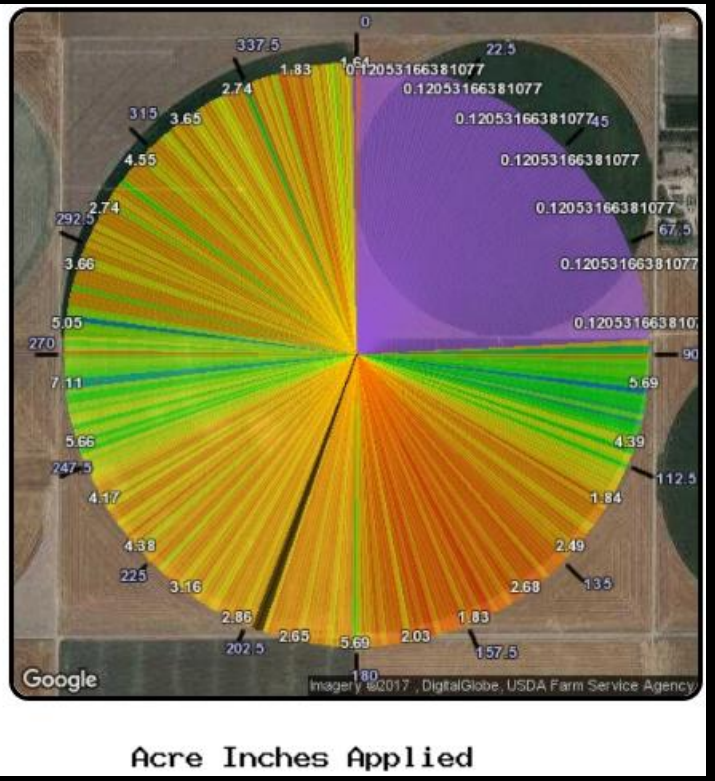
WATER TECHNOLOGY FARMS

Water Tech Mobile Classroom

WATER TECHNOLOGY FARMS

Data and Results



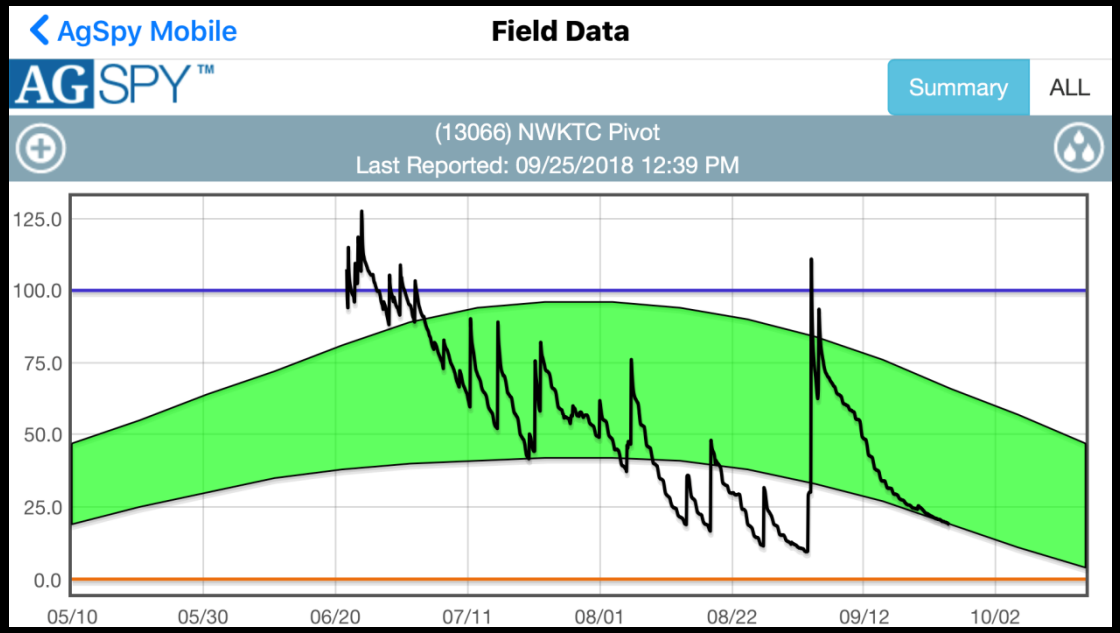


WATER TECHNOLOGY FARMS

Data and Results

WATER USE – NWKTC Tech Farm

- 9.4 inches of irrigation water used
- 11.73 inches of rain received
- GMD4 LEMA allocation - 15.7 inches



WATER TECHNOLOGY FARMS

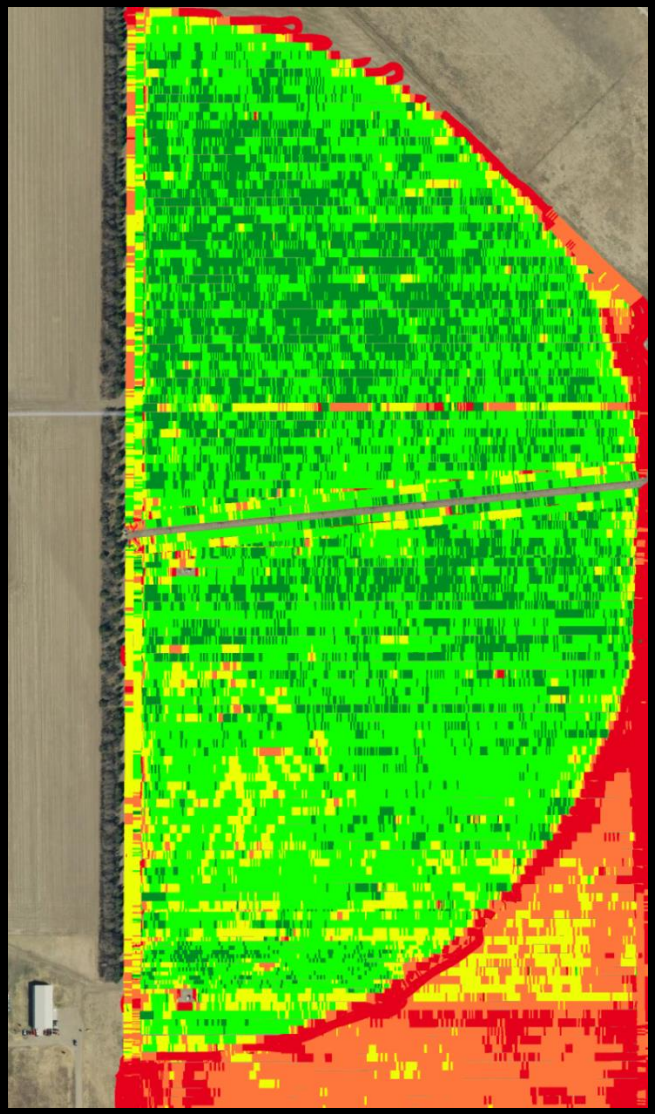
Data and Results

YIELD – NWKTC Tech Farm

- 236 bu/ac average

ROI – NWKTC Tech Farm

- $12,323 saved



WATER TECHNOLOGY FARMS

Moving Forward

EXHIBITS

WATER TECHNOLOGY FARMS

Summary

DEALERSHIP SUPPORT

CropMetrics™
Yield Optimization Technology

HORTAU
SIMPLIFIED IRRIGATION

VALLEY

LINDSAY™
CORPORATION

AquaSpy®

AGSENSE®

servi tech

Ag Solutions
OnTarget

WOOFTER
CONSTRUCTION
& IRRIGATION
COLBY / LEOTI, KS