

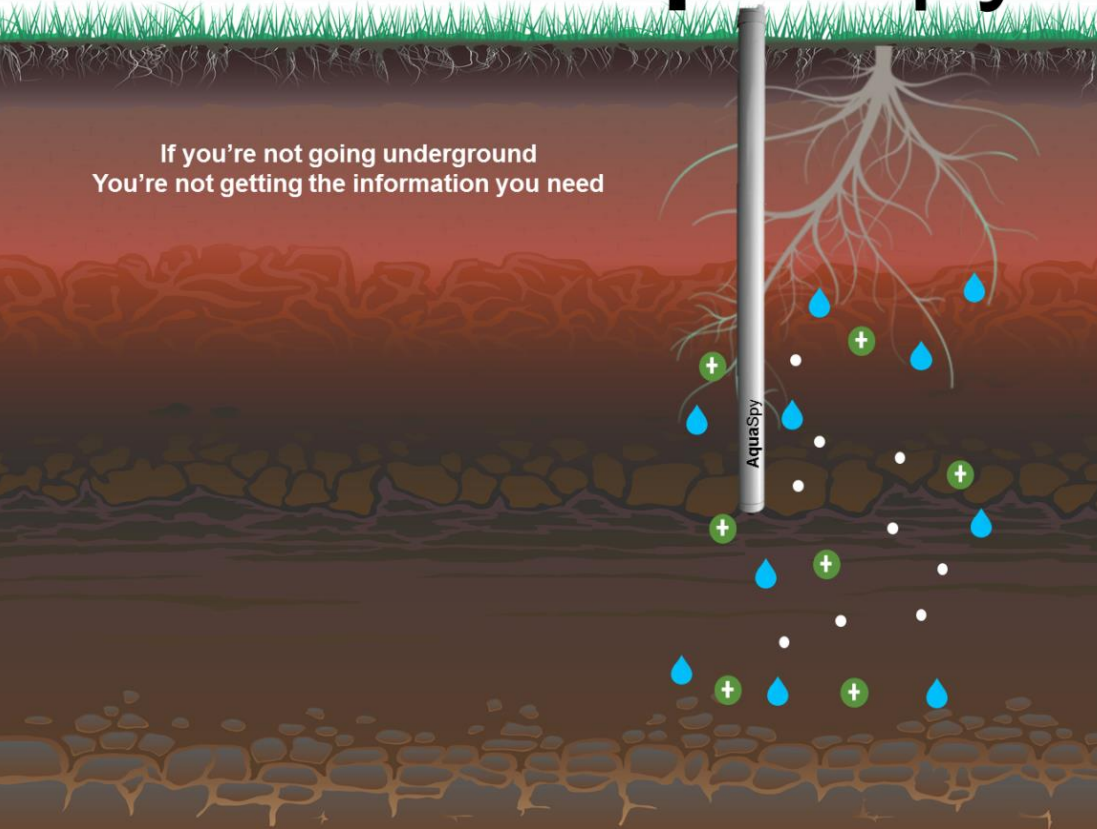
The Earth is Not Flat



Get Vertical  
Go Underground With

# AquaSpy

If you're not going underground  
You're not getting the information you need



# Soil Moisture Probe OVERVIEW

2019  
Louisiana Agricultural  
Technology & Management  
Conference

Russ Hodges  
Regional Sales Manager  
(806)731-2429

# REAL-TIME IRRIGATION DECISIONS

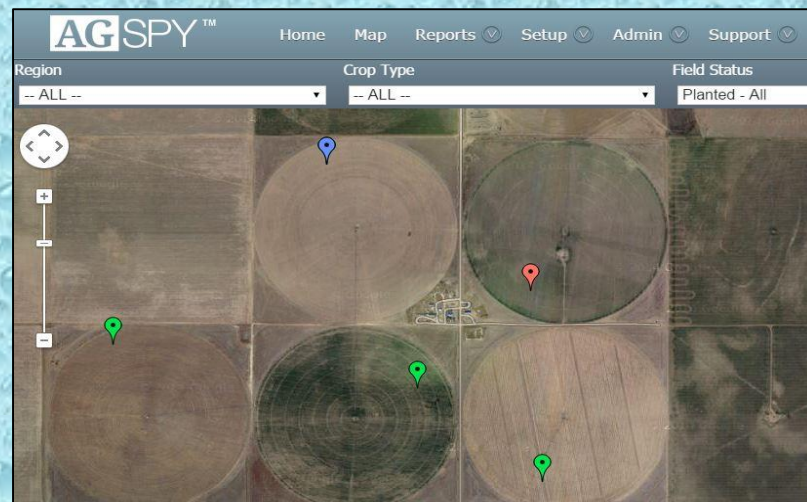
## • Profitable Decisions

- Irr. timing(furrow)/Pivot Speed
- Better use of fertilizer
- Improve irrig. efficiency
- Increase sustainability

## • Measuring...

- Soil Moisture
- EC
- Temperature

Every 4" down the profile



59°F Clear  
Humidity: 24%  
Dew Point:  
Wind: 16 mph WSW  
Growing Days:  
Last Irrigation/Rain:  
09/21/2018 (12")  
Root Depth: 48"

300

Field	Field Name	Irrigation Status
4444	MS-Aqua Spy Farm-Cotton-1-2014	<input checked="" type="checkbox"/>
3880	MS-Aqua Spy Farms-Field 38-Soybean-2014	<input type="checkbox"/>
4196	MS-Aqua Spy Farms-Soybean-1-2014	<input checked="" type="checkbox"/>
4445	MS-AquaSpy Planting Co.-Cotton-2014	<input checked="" type="checkbox"/>
3920	NE-AquaSpy Family LP.-Corn-2014	<input checked="" type="checkbox"/>

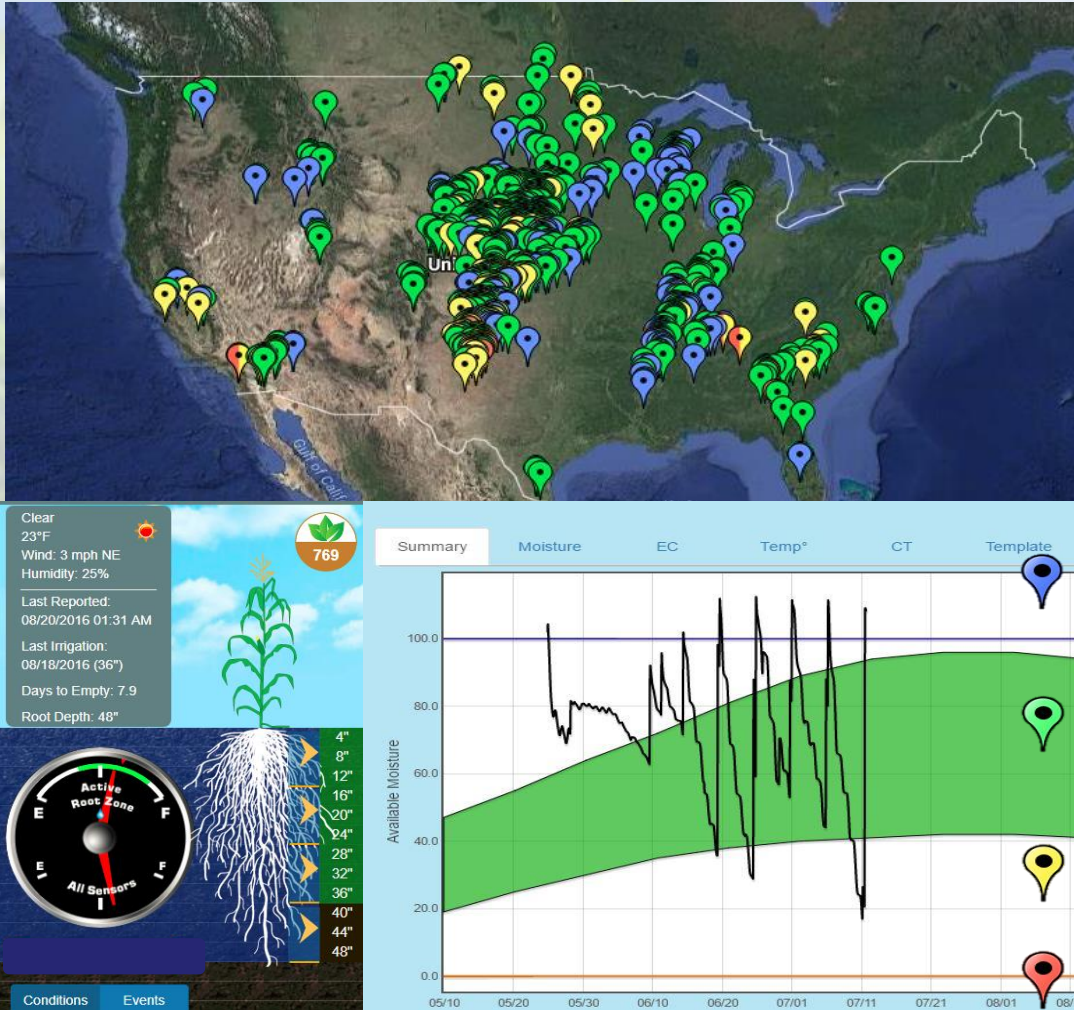


# AquaSpy

Discovering the 'Root of all Yield'

# Our System

Algorithm Driven, Intuitive User Interface



- Map of Fields in Use
- Pin colors indicate current status of field
- Fuel Gauge Provides Simple, Visual Indicator
- Template Monitors Performance Over Time

# MONITORING MADE SIMPLE

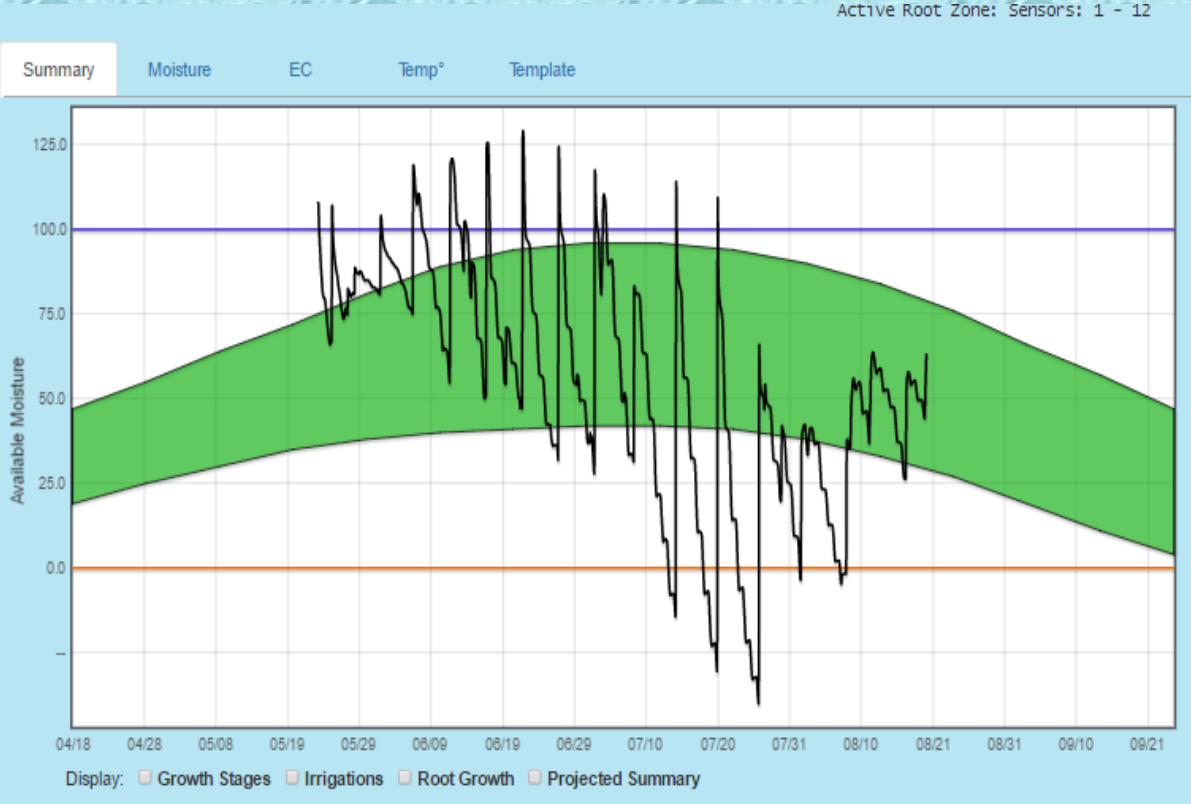
**AG SPY™** TX 5573  
 AS-Corn Site #11  
 Planted 04/18/2016  
 Create New Season

Clouds 61°F  
 Wind: 6 mph WSW  
 Humidity: 43%  
 Last Reported: 08/20/2016 01:48 AM  
 Last Irrigation: 08/19/2016 (8")  
 Days to Empty: 7.7  
 Root Depth: 48"

4"  
8"  
12"  
16"  
20"  
24"  
28"  
32"  
36"  
40"  
44"  
48"

Clay loam

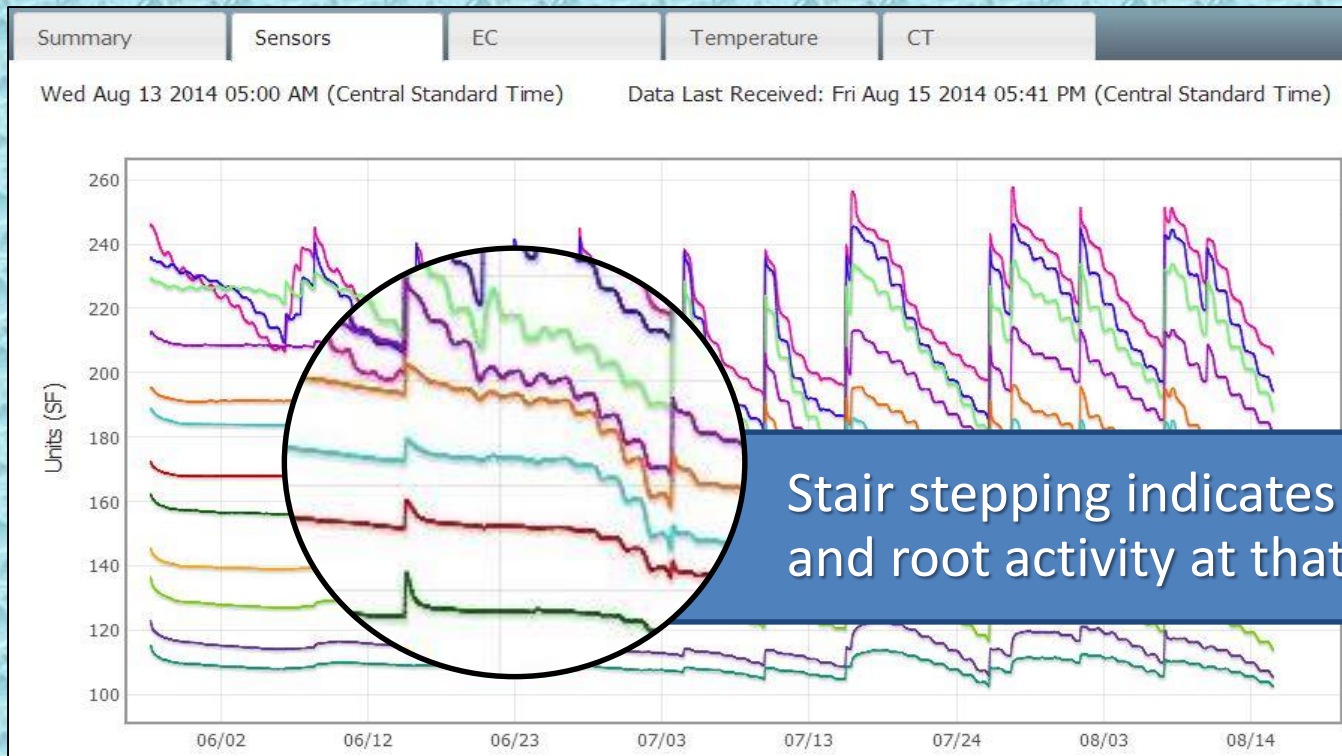
Conditions Events



H<sub>2</sub>O %  
 EC

Adjust Full Point  
 Reset Graph  
 Print

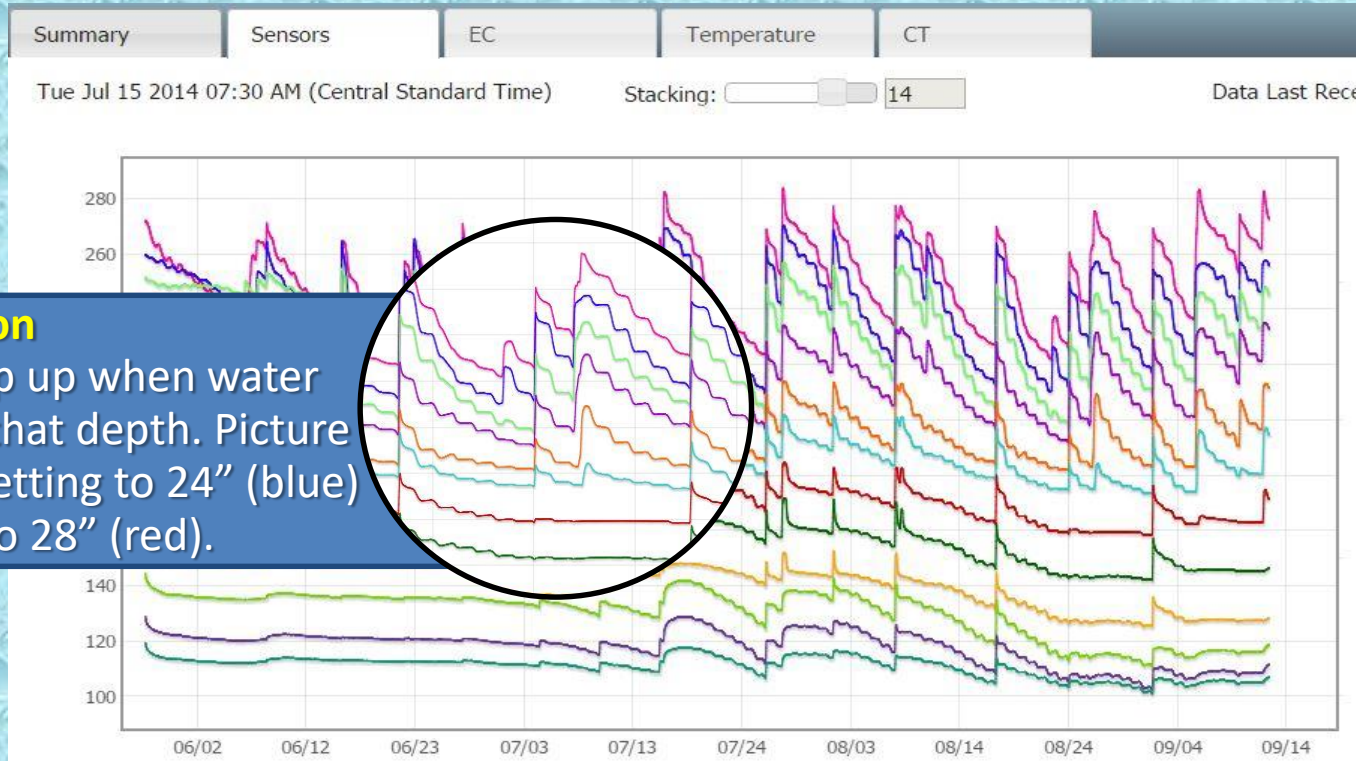
# DEPTH OF ROOTZONE



## Why is root growth so important?

- Deeper roots mean access to great moisture at key times.
- Accurate final irrigation decision based on ACTUAL root depth and soil H<sub>2</sub>O
- Better access to fertilizer and nutrients
- Reduce lodging and better harvestability
- **Better roots = Improved yield**

# WATER INFILTRATION



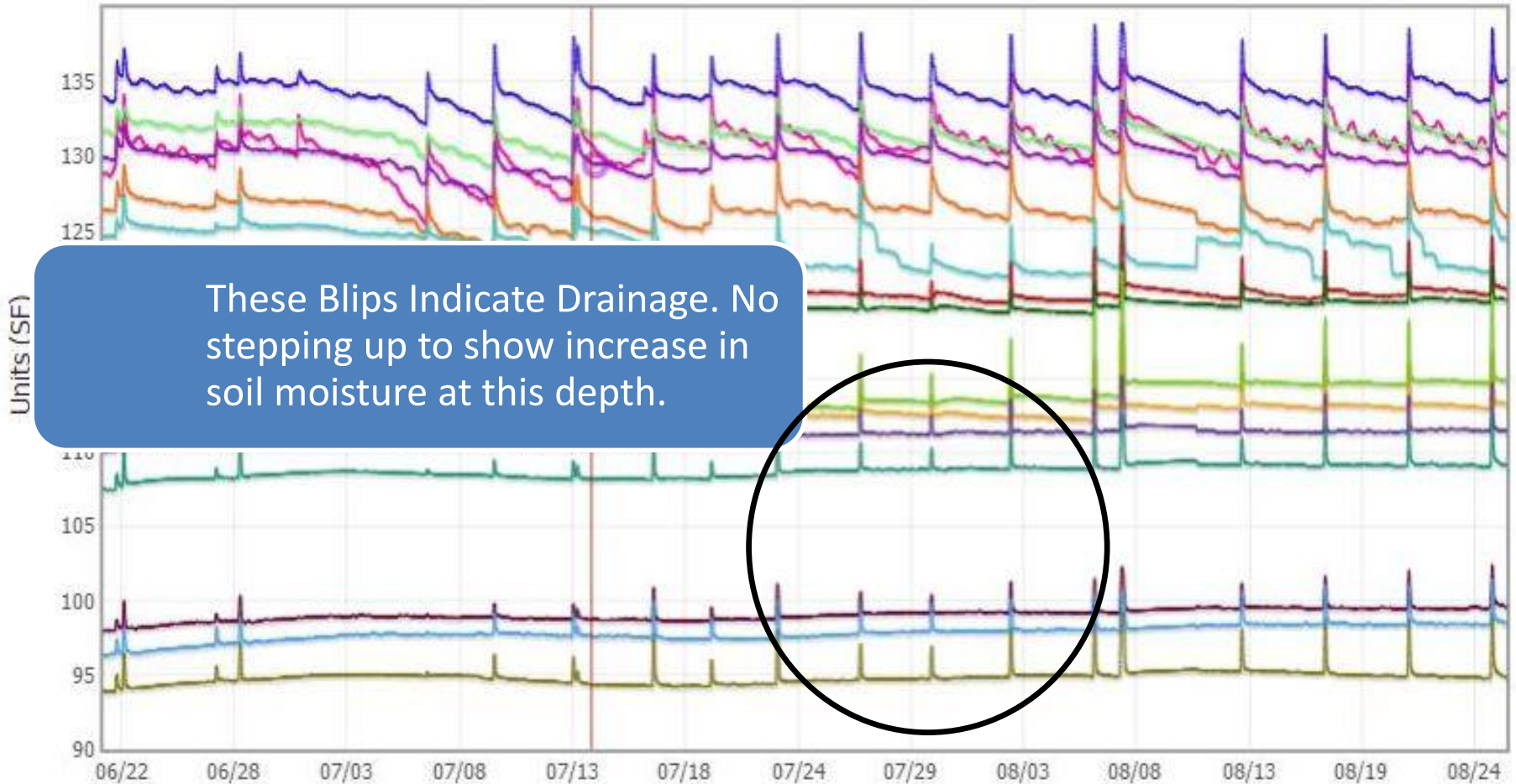
## Infiltration

Lines step up when water reaches that depth. Picture shows wetting to 24" (blue) but not to 28" (red).

## Why is infiltration so important?

- Not wetting deep enough = slow down pivot
- Wetting too deep = speed up pivot
- Place the water only in the active root zone
- Avoid over irrigation
- **Probe data provides a report card on the effectiveness of EVERY irrigation**

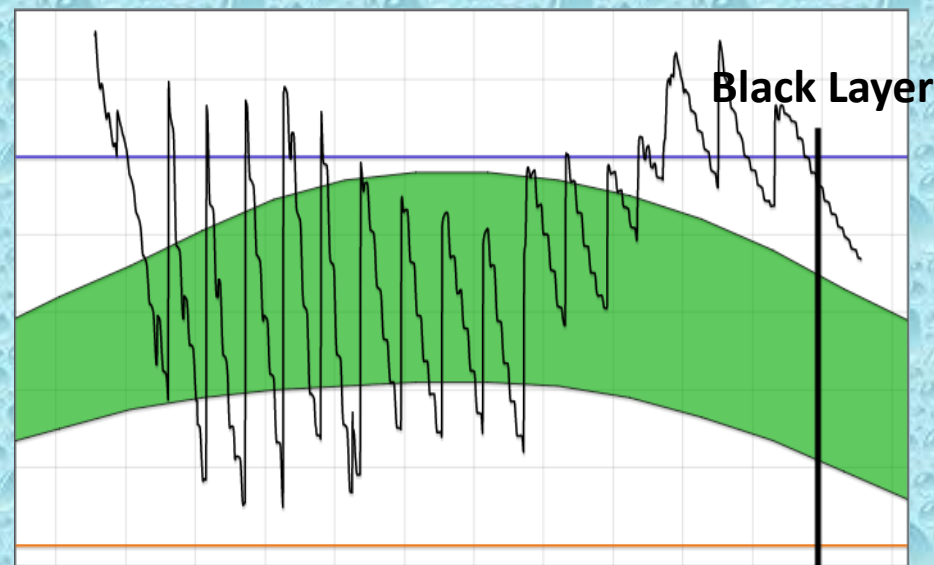
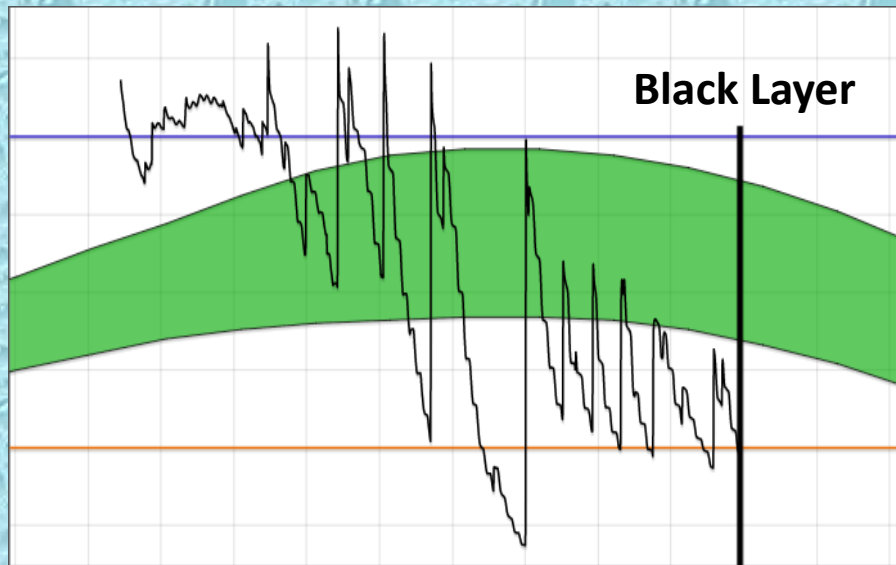
# DRAINAGE



# 4. FINAL IRRIGATION

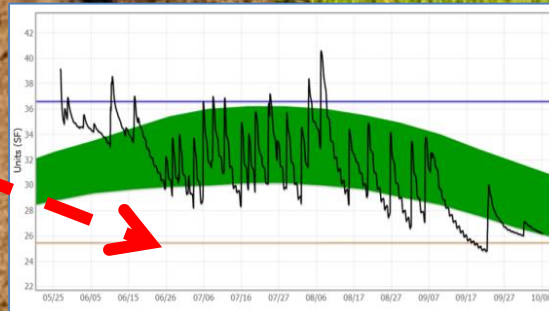
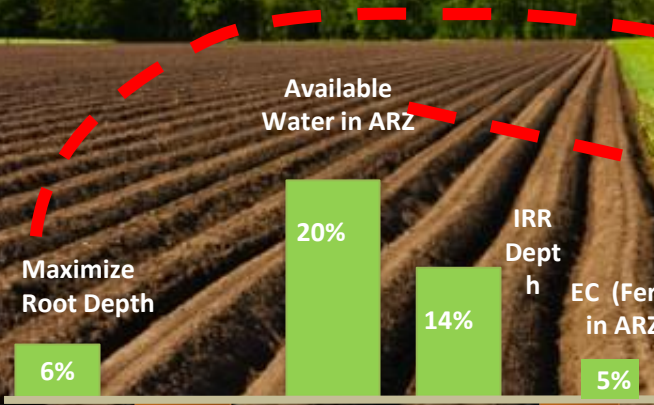
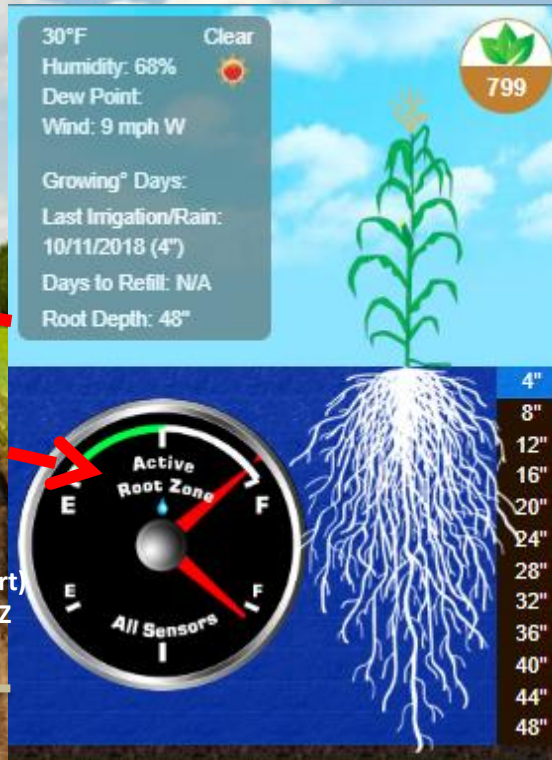
## How do I know when to stop?

- Calculate end date for usage
- Look at consumption
- Observe slow down in usage
- Estimate if you need more water
- Irrigate based on THIS crop in THIS year rather than “rules of thumb”





# The Payback 10 – 40%



**10-40% Yield Increase**

Our data shows the most direct impact to **Superior Yields** is assuring that water and nutrients exist in the active root zone when and where the plant attempts to uptake these vital elements.

Now used on half a million acres, AquaSpy has thousands of fields generating data underground that shows the correlation between roots, energy and superior yield.

