Pivotal Choices

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2012 Cotton Management Seminar

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www.guessirrigation.com

Pivot Points!

- Uniform Stand
  - Allows water to help with a uniform emergence
  - Reduces replant percentages
- Water activation
  - Resistant pig weed pre-emergent activated by H2O
  - Ability to chemigate with high dollar chemicals efficiently and activate on demand
- Growing season
  - Better able to manage cotton maturity for timely harvesting
  - Timed watering for different growing strategies

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Pivot Points Continued…!

- Reduce Stress on crop
  - Dry streaks in the summer time
  - Cool down effect on crop
- Add moisture to soil for planting
- Ability to plant cotton after winter crop.

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Design/Install Process

- Meet Grower and Map Field
- Design pivot spans to match desired length based on circle drawn on map
- Calculate acres – water application purpose
  - 27,154 gal/ac-in
  - Design to max water requirement (Tasseling corn)
  - 6.3 GPM/Acre for a 1 in/72 hour application
- Price Pivot
- Give proposal to Grower
- Grower orders pivot
- Pivot delivered/Dealer installs

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Cotton Summary

Summary of South Georgia Crop Enterprise Estimates, 2012
UGA Extension Economists, Department of Agricultural and Applied Economics

	Conventional Tillage		Strip-Tillage	
	Irrigated	Non-Irrigated	Irrigated	Non-Irrigated
Expected Yield	**1200**	**700**	**1200**	**700**
Expected Season AVG Price	$ 0.90	$ 0.90	$ 0.90	$ 0.90
Gross Return	**$ 1,080.00**	**$ 630.00**	**$ 1,080.00**	**$ 630.00**
Variable Cost				
Seed	$ 88.00	$ 88.00	$ 97.00	$ 97.00
Cover Crop Seed*			$ 30.00	$ 30.00
BWEP	$ 1.58	$ 0.92	$ 1.58	$ 0.92
Fertilzer & Lime**	$ 157.00	$ 120.00	$ 157.00	$ 120.00
Chemicals	$ 75.00	$ 71.00	$ 85.00	$ 81.00
Custom App/Hand Weeding	$ 15.00	$ 15.00	$ 15.00	$ 15.00
Scouting	$ 10.00	$ 10.00	$ 10.00	$ 10.00
Fuel and Lube***	$ 48.00	$ 46.00	$ 42.00	$ 41.00
Repairs and Maint.	$ 23.00	$ 23.00	$ 20.00	$ 20.00
Irrigation****	$ 96.00		$ 84.00	
Labor	$ 26.00	$ 26.00	$ 24.00	$ 23.00
Insurance	$ 22.00	$ 28.00	$ 22.00	$ 28.00
Interest on Operating Capital	$ 18.00	$ 14.00	$ 19.00	$ 15.00
Gin & Warehouse(net after cottonseed)	$ (10.00)	$ (6.00)	$ (10.00)	$ (6.00)
Total Variable Cost	**$ 570.00**	**$ 436.00**	**$ 596.00**	**$ 475.00**
Return Above Variable Cost	**$ 510.00**	**$ 194.00**	**$ 484.00**	**$ 155.00**
Breakeven Price	**$ 0.48**	**$ 0.62**	**$ 0.50**	**$ 0.68**
Fixed Cost				
Machinery and Equipment	$ 111.00	$ 110.00	$ 98.00	$ 98.00
Irrigation	$ 110.00		$ 110.00	
Misc. Overhead	$ 29.00	$ 22.00	$ 30.00	$ 24.00
Total Fixed Costs	**$ 249.00**	**$ 131.00**	**$ 238.00**	**$ 122.00**
Total Cost EXCL Land & MGT	**$ 819.00**	**$ 568.00**	**$ 835.00**	**$ 597.00**
Return to Land and MGT	**$ 261.00**	**$ 62.00**	**$ 245.00**	**$ 33.00**
Breakeven Price (Total Costs)	**$ 0.68**	**$ 0.81**	**$ 0.70**	**$ 0.85**
Breakeven Yield	**910**	**631**	**927**	**663**

*Value only if the cover crop is not harvested, i.e. wheat for grain, etc.

**Expected fertilizer $/lb. of nutrient are as follows: N = $0.71 P = $0.54 K = $0.58

***Average of diesel and electric irrigation application costs. Electric is estimated at $7/appl and diesel is estimated at $17/appl when diesel cost $3.70/gal.

****Diesel Fuel Price of : $3.70 per Gallon

Can be found at http://www.ces.uga.edu/Agriculture/agecon/new.html

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Pivot FAQ's…

- How much will it cost?
  - Look at cost/acre vs. "sticker shock"
- How much water will I need?
  - Always plan for most crop requirement regardless of what crop is currently being planted
- How big of a well and how much will it cost?
  - Depends on amount of water requirement
  - Well drillers estimate the well

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Pivot Technology

Base Station 2SM

Soil Moisture
Sensor Equipment

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Irrigation Questions

- When do I irrigate?
- What application do I apply?

Soil Moisture Sensor Technology

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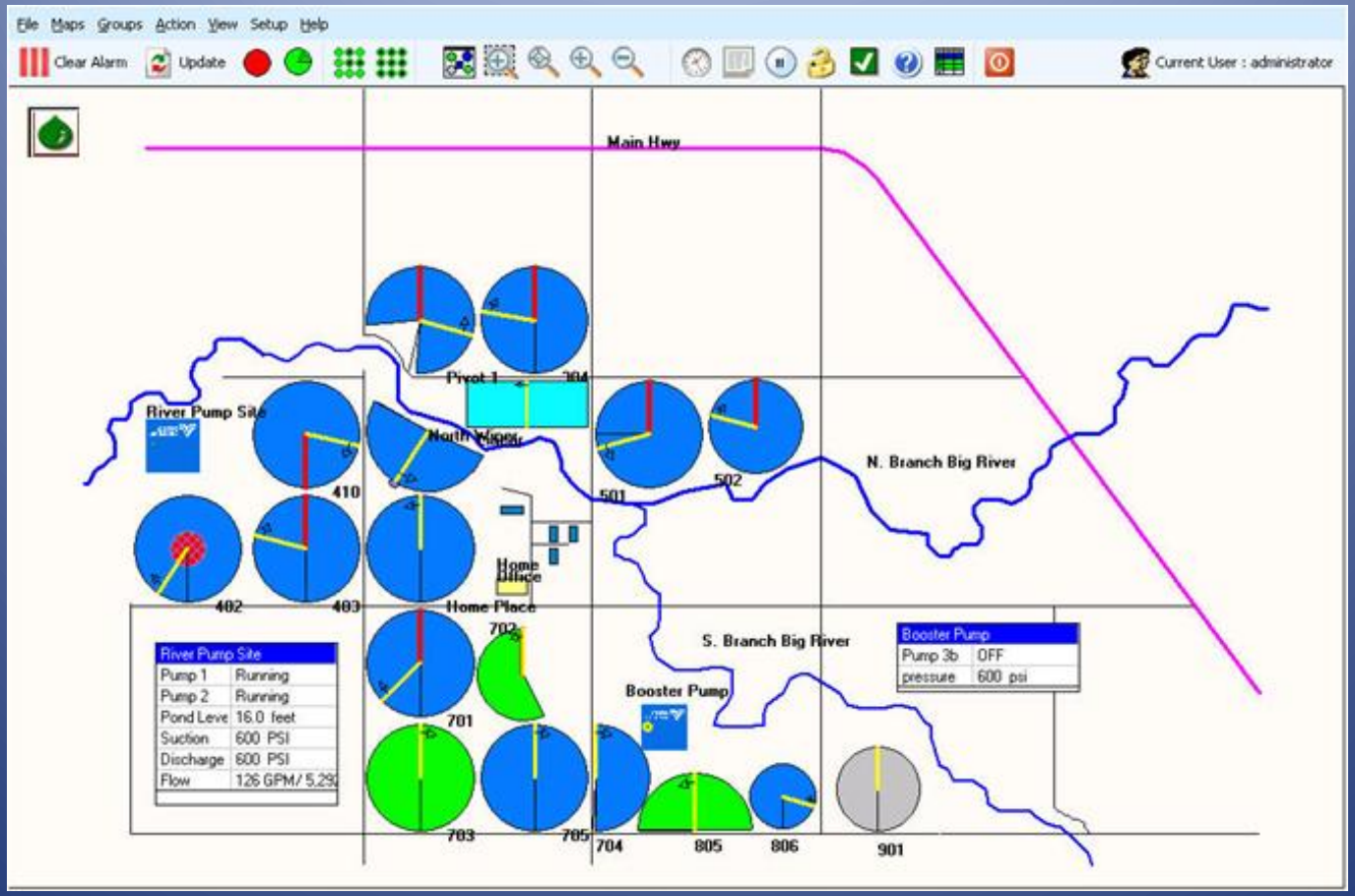
Utilizing soil moisture data in your irrigation management decisions



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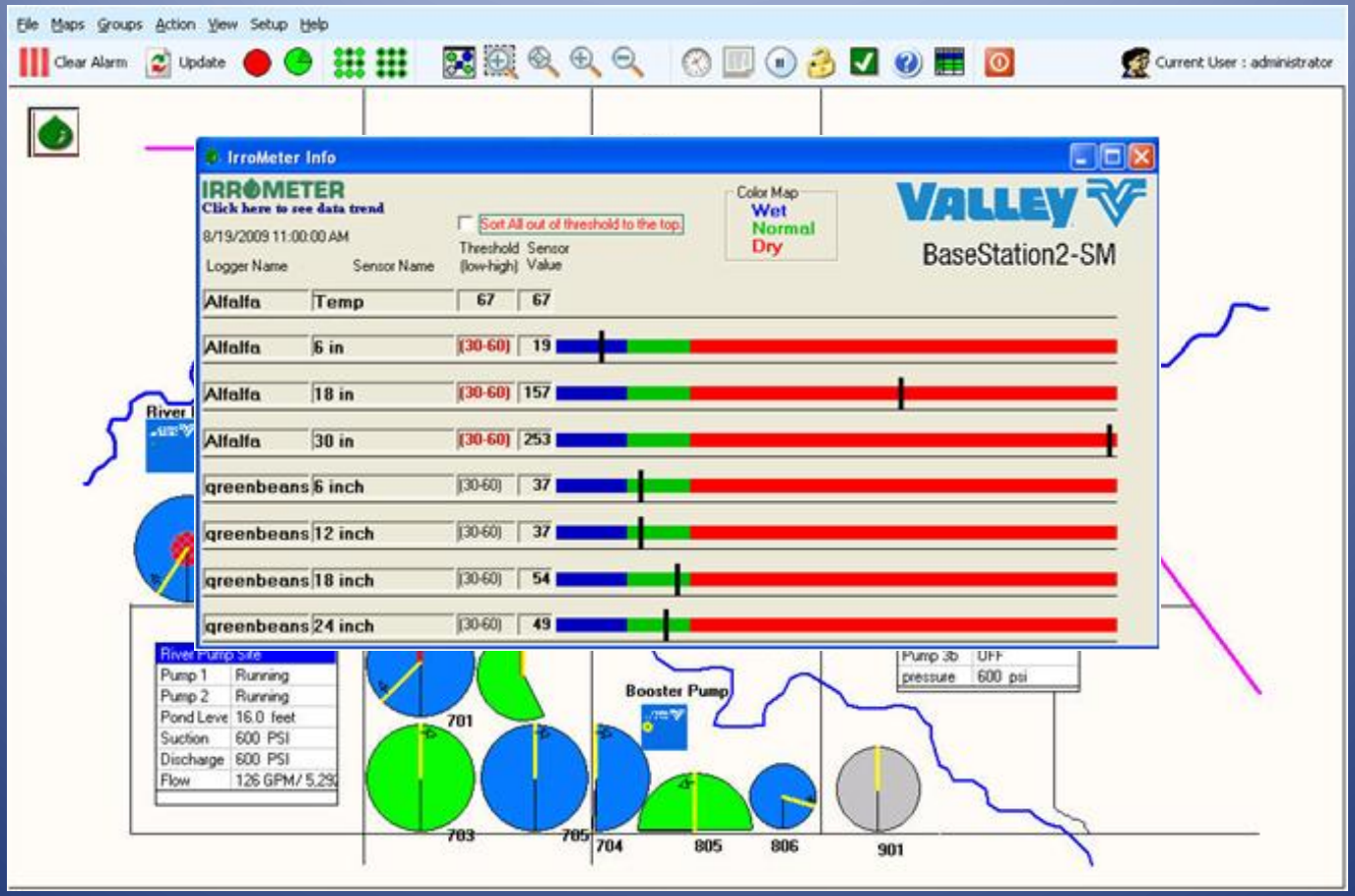

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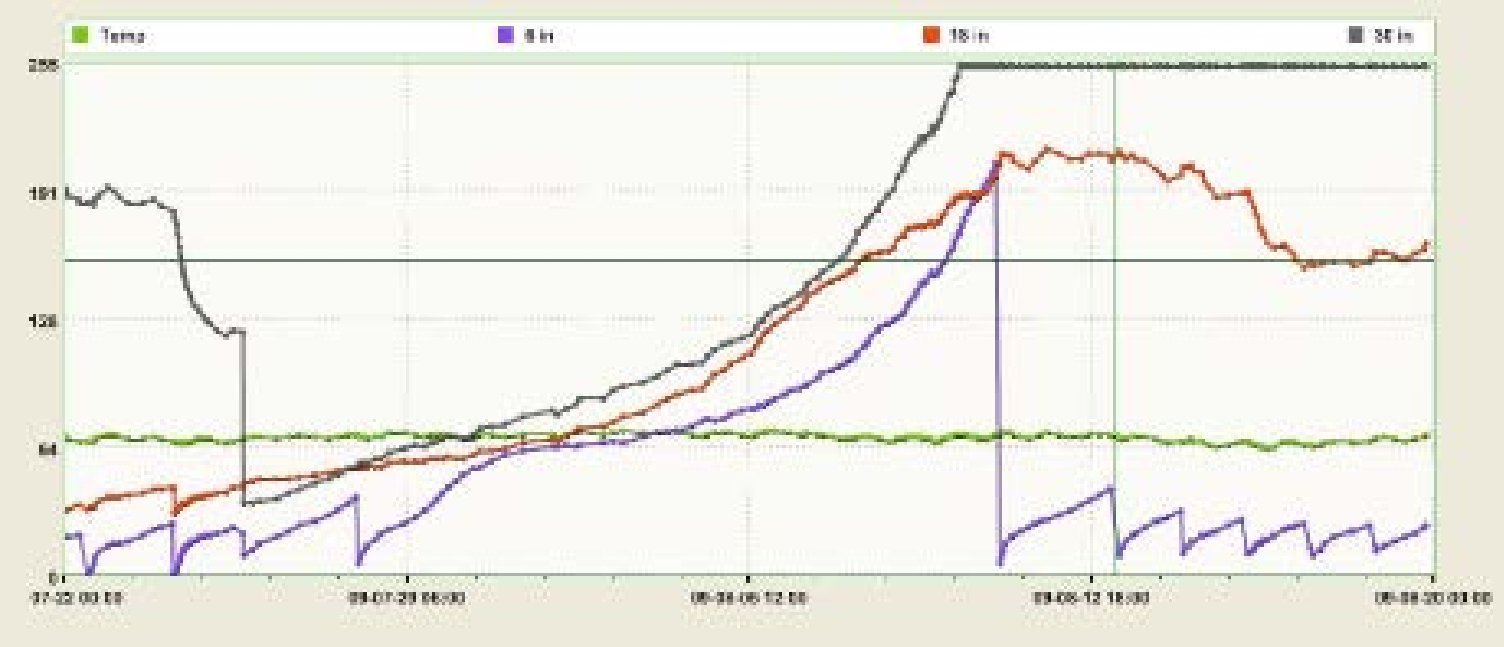

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Benefits of Base Station SM2

Benefit	Feature
Convenience	• Remotely manage irrigation equipment • Monitor pivots, linears, and pumps
Remote Monitor/Control	• Monitor and control the same functions of the control panels.
Increased Profit	• Save time and labor costs • Reduce fuel costs • Save water • Reduce Energy costs
Valley Support	• Backed by Valley Service/Support Valley you have come to trust

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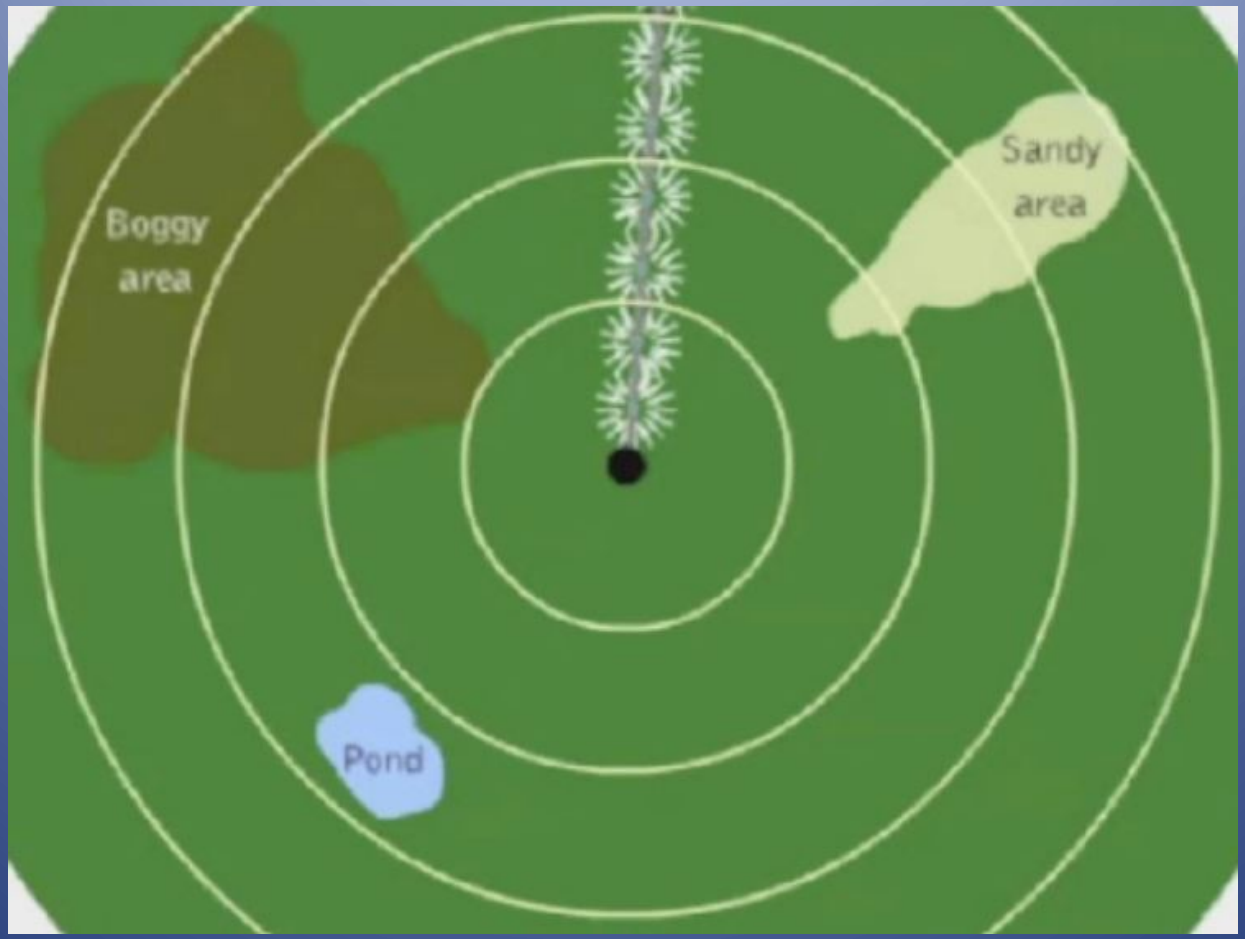
Pivot Technology – Variable Rate Irrigation



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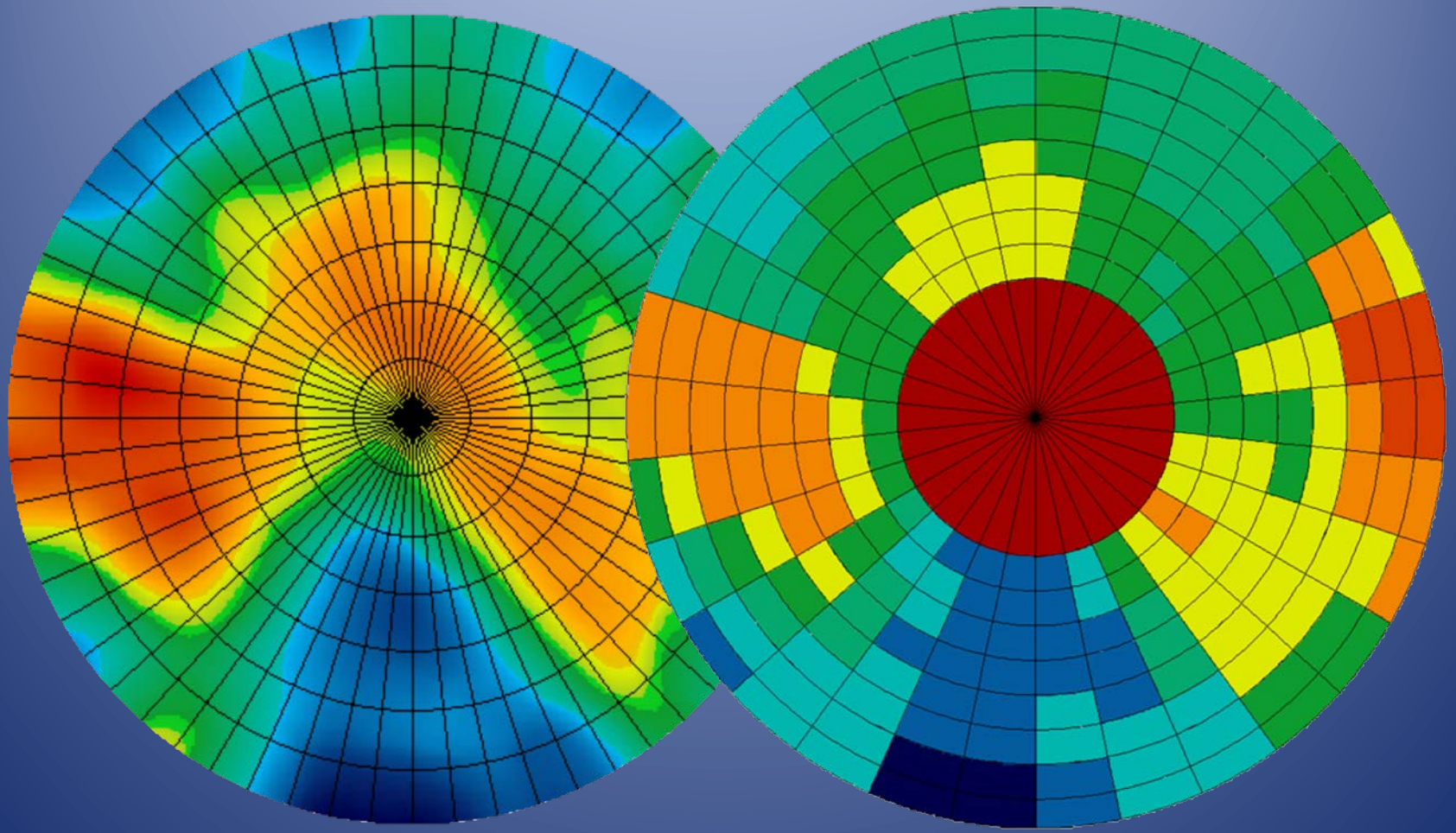
Pivot Technology – Variable Rate Irrigation



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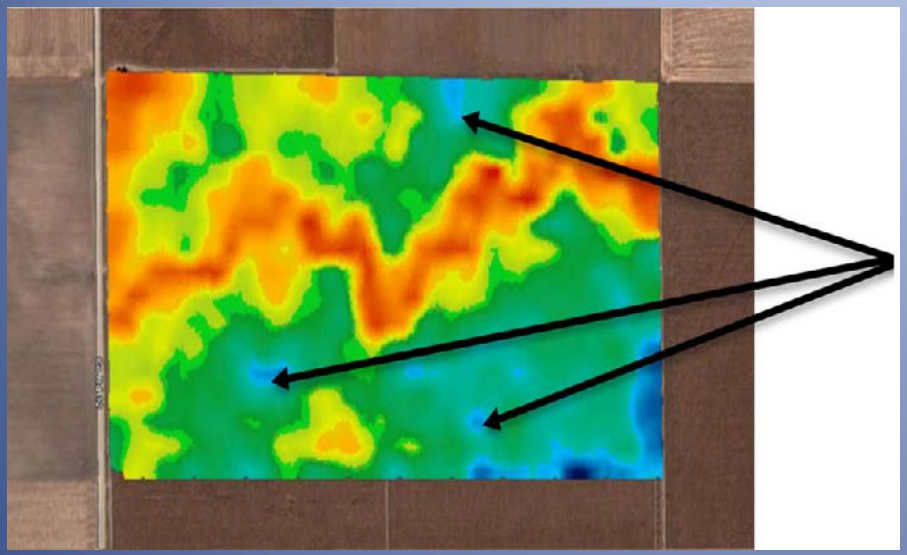
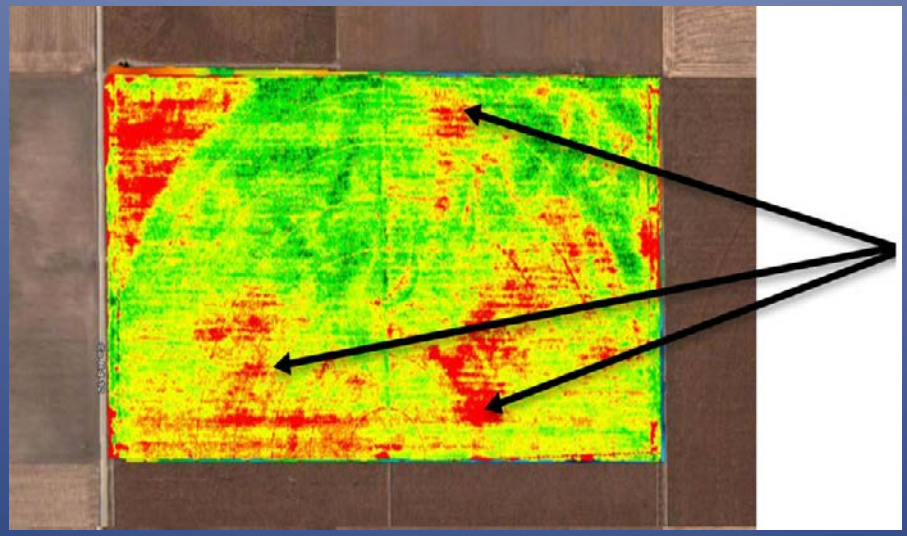
Effects of Over-irrigation



Blue color from EM data layer indicates heavier soil with greater water holding capacity



Red color from NDVI data layer (aerial image) indicates areas with high crop stress or low plant health

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Just because a little is good…doesn't mean a lot is better!

Pivot Summary

- Pivot budget variables
  - Size of pivot
  - Full circle or part circle
  - Well location
  - Pipe size
  - Electric wire size
- Estimated Cost/Acre
  - $1000 - $2500

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Where Are We Headed?

- Irrigation Sales
  - Steep increase in last 3 years and climbing
  - Grain prices
  - Stability and guarantee of crop
  - Banks pushing irrigation
  - Lower risk, higher payoff
- BUY PIVOTS!

"You can make money at farming,
I've been farming for 40 years and
I made money one year!"

– 70 yr old farmer

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