MeasureTek

Agricultural and Environmental Monitoring/Control

Monitoring and Control Systems Integrators

Four Main Parts to Monitoring/Control System

- 1) User Interface
  - A) tractor display
  - B) simple field display/lcd
  - C) computer screen
  - D) Web interface/phone
- 2) Field Smarts/brains & communication modules
  - A) plc-logger
  - B) modems – cell, Ethernet, radio

Four Main Parts to Monitoring/Control System

- 3) Sensors –
  - A) Soil sensors – moisture, tension
  - B) Flow & pressure
  - C) Pond/Water levels
  - D) Weather parameters – temp, etc.
- 4) Controlled Device –
  - A) Valves
  - B) Pump starts
  - C) Fertigation pumps
  - D) Electric ON/OFF Switches

What used to cost hundreds of thousands of dollars…

Now costs much less, and the control room is your phone…

All of us look at field data remotely, how do you check the weather?

All of you, in time, will be turning things on and off remotely:
  * whether it's a manual toggle
  * automatically based on time
  * or based on a monitored variable like temperature, moisture, etc

It simply makes financial sense!

It makes financial sense for three main reasons

- **#1 Labor is the issue** – We've got to get more efficient, reducing windshield time alone can save tens of thousands of dollars. Checking on systems, turning pumps, valves, on/off, etc.

- **#2 Efficiencies of resource utilization- Water, Fertilizer, Pesticides** – If you've got fertilizer's flushed below the active roots, you've just reduced your profit. Easily seen with soil EC sensors. Active use of ET data to schedule irrigations is commonly shown to reduce irrigation by 20%, which in turn means less power use, fertilizers sit higher, …

- **#3 Quality of Grown Product** – Harder to monetize with ROI, but very significant. If Field Manager A consistently yields exceptional results, how can you transfer this to the rest of the organization? With data.

Don't Box Yourself In!

You will learn from your system, you don't know what data you'll want next – make sure the system is versatile

System should allow different sensor types, different sensor manufacturers

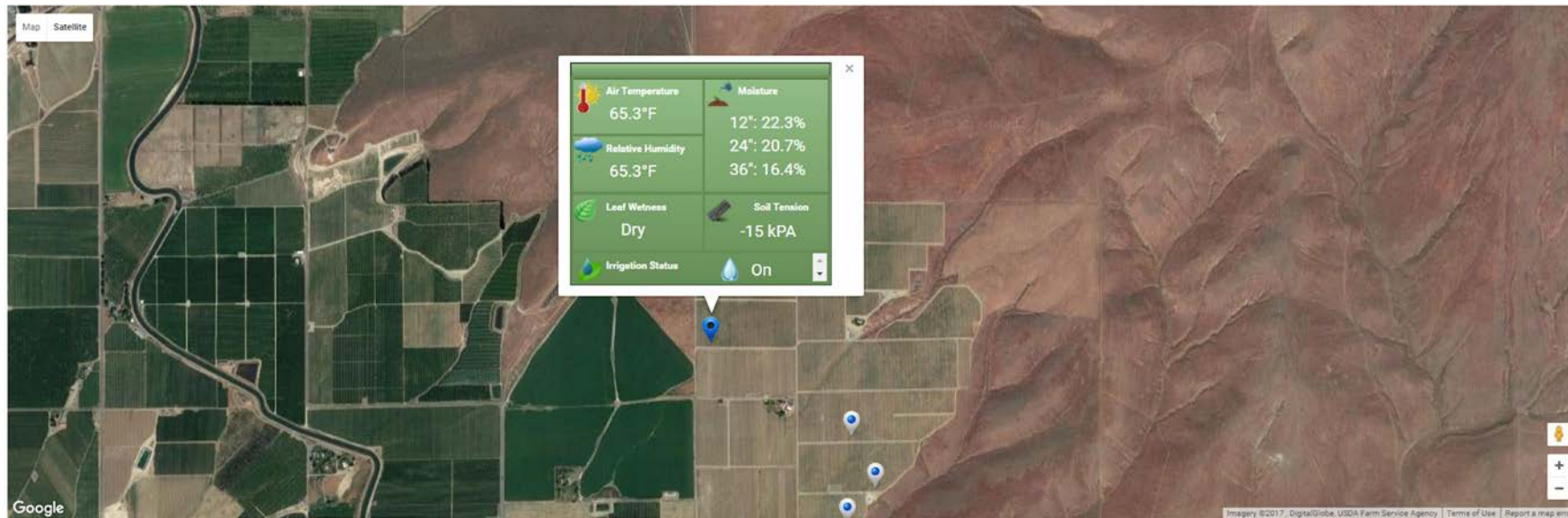# Don't Leave Out Control, you will want to go there…

Non proprietary systems are out there – seek them out!

There is not one company that has all the tools or answers, look for systems that are capable of including many different products, as well as future products we don't even know about yet

User Interfaces –

* Should be travelling with you
* Ease of use – more benefit
* Should do more than just display numbers or graphs

THE Only Real Question

▶ "What value does the system give to your business?"