The use of moisture probes and PA pastures at Branson Farms.

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BRANSON FARMS
— 1898 —

The Branson's Family Farm

Area: 1200ha

Stockport

Rainfall: 425mm to 525mm

Dryland Farming System

80% Winter Cropping, 20% Merino sheep

Crops Grown (80%)

- **Durum and Bread Wheat**
  - **Malting Barley**

- **Canola**
- **Faba Beans**
- **Field Peas**
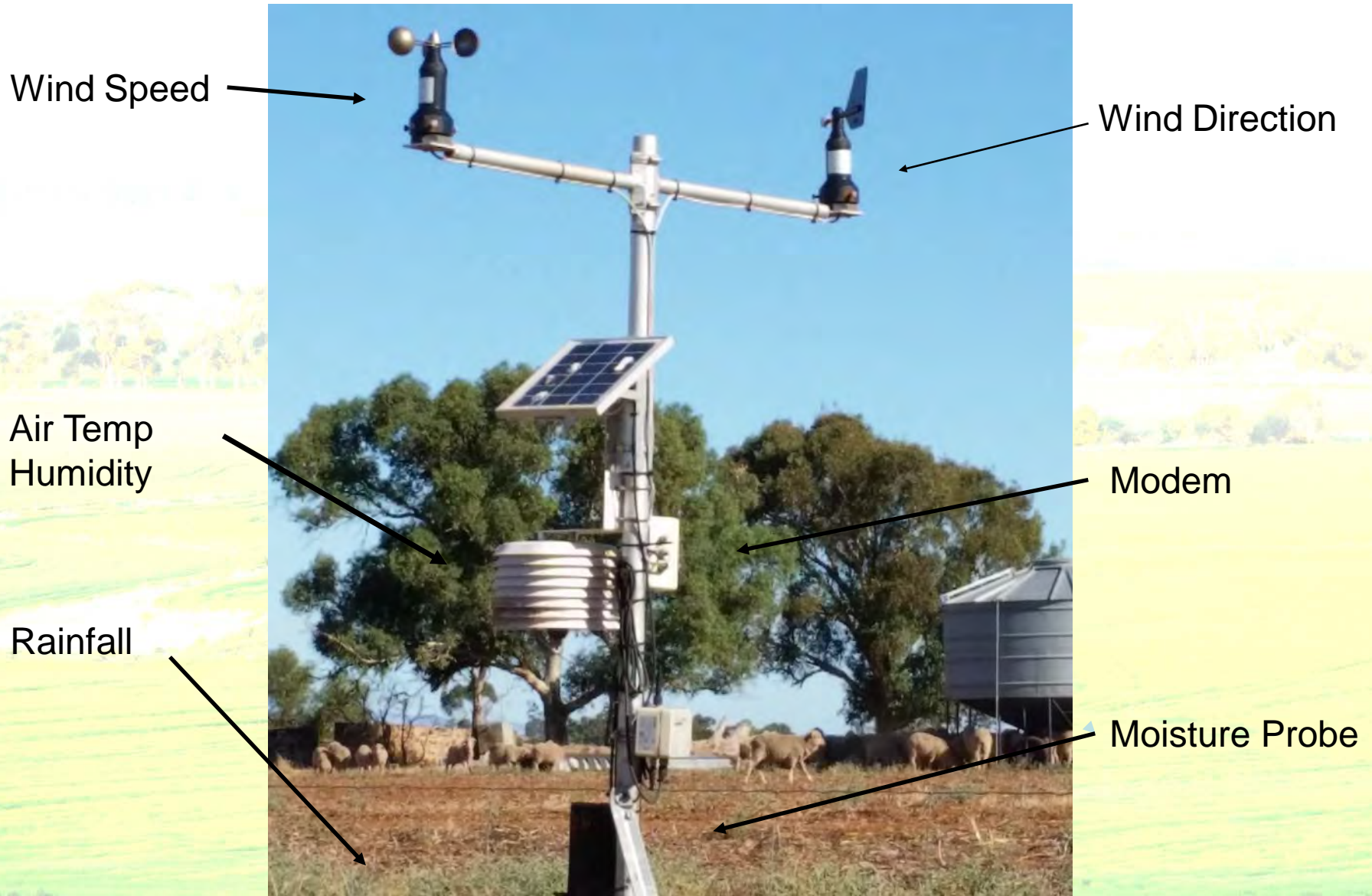 - **Lentils**
  - **Pasture seeds**

Sheep–**(20%)** **Clover and Dual Purpose Cereal Pastures**

Fine Wool Self Replacing Merino Flock

18 micron

Weather Station and Moisture Probe

Wind Speed

Wind Direction

Air Temp Humidity

Modem

Rainfall

Moisture Probe

Weather Station and Moisture Probe

Spray Conditions

Wind Direction
Spray Conditions

Frost
Fire Danger Index
Delta T
Spray Conditions
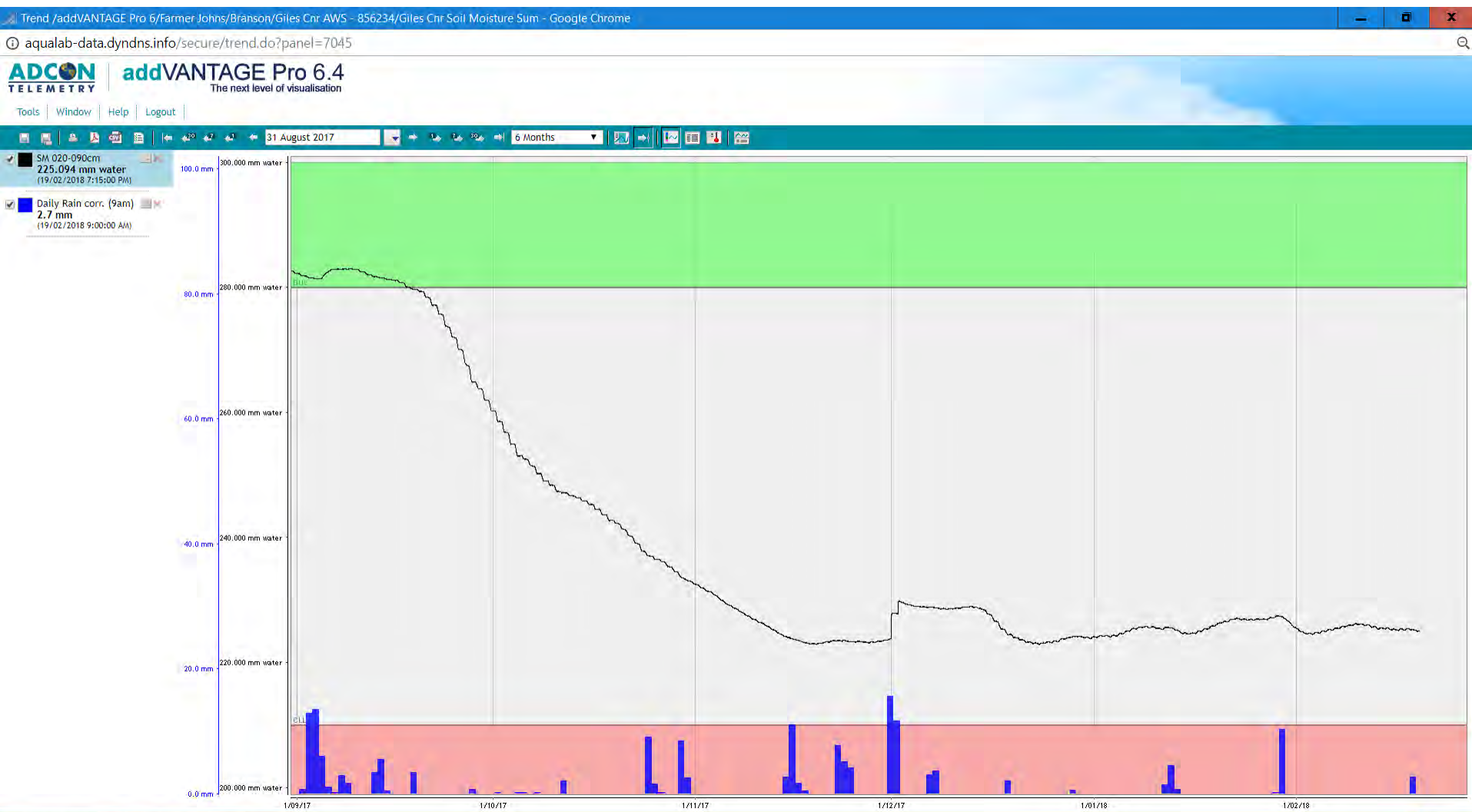
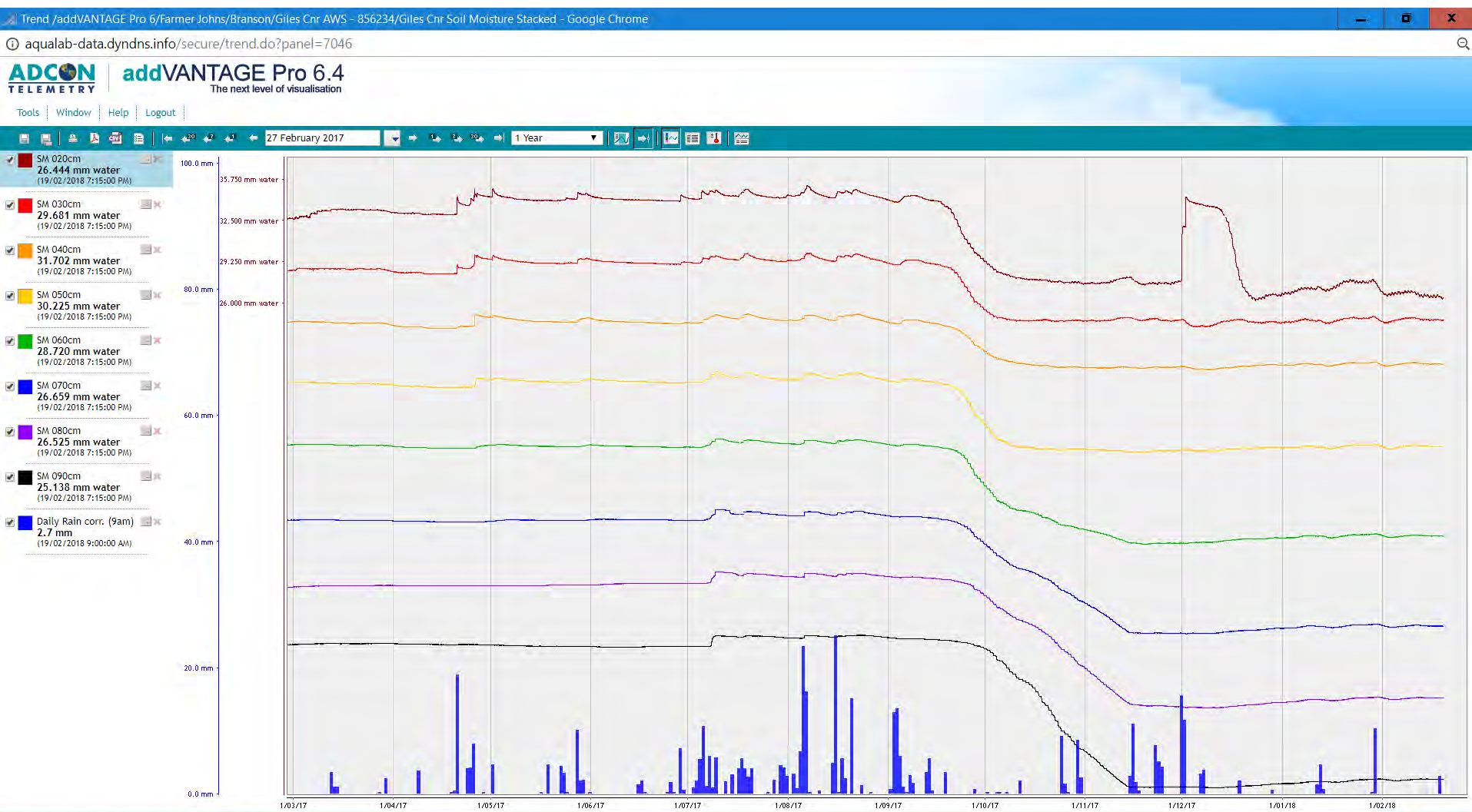Modem
Info Anywhere
Anytime

Rainfall, When
How Much.

Moisture Probe
Drought
Full Profile
Waterlogged
Where roots are

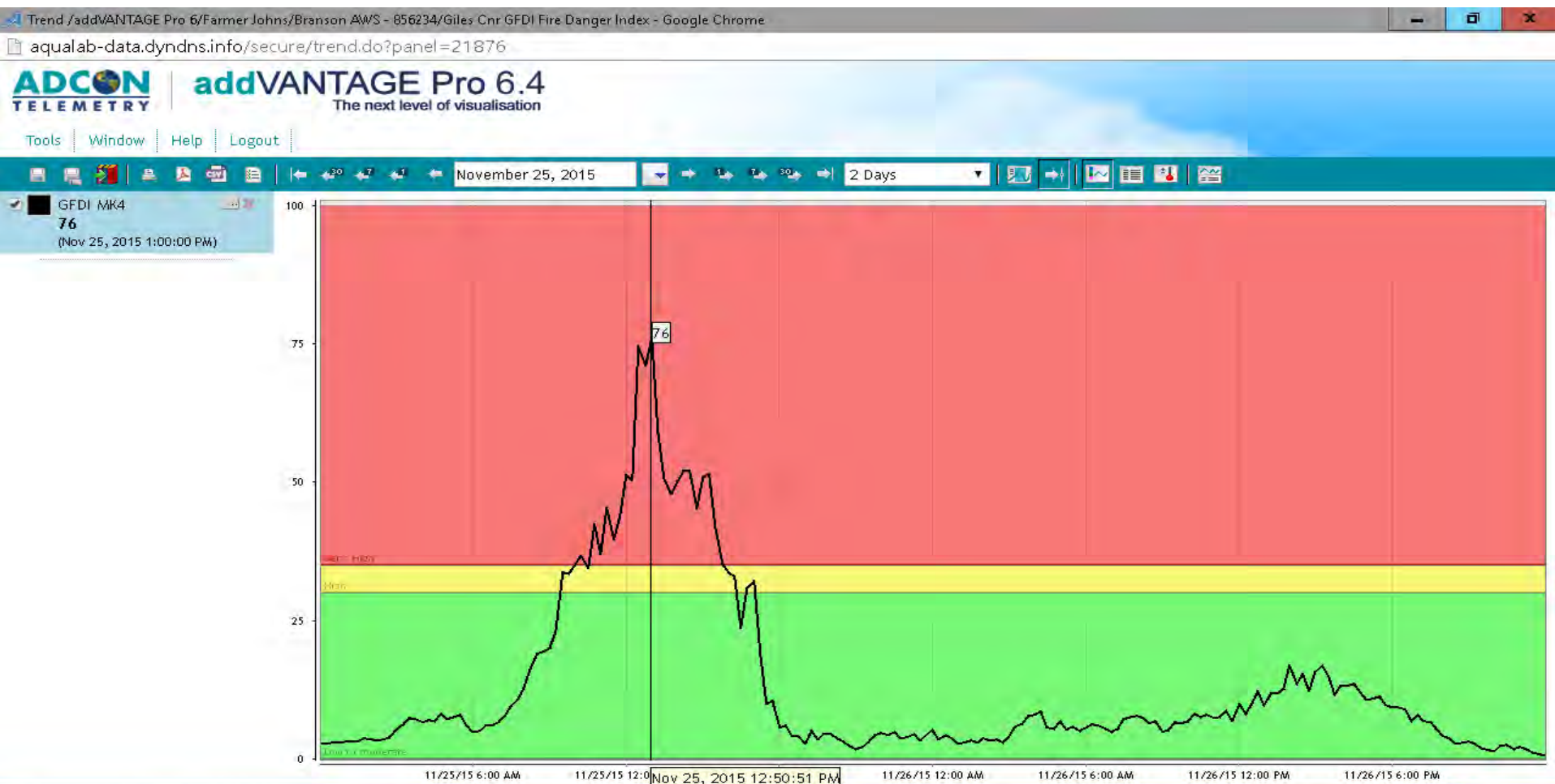# Soil Moisture Probe information

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Weather station and moisture probe in cropping

- Spraying weather information
- Nitrogen management
- PGR application management
- Fungicide applications
- Insecticide management
- Grain or Hay for struggling crops.

Weather station and moisture probe in pastures

- Spraying weather information
- Predicting pasture growth
- Use of PGR to enhance pasture growth
- Nitrogen Management
- Frost detection – effecting pasture growth
- Hay baling conditions
- Need to know Pasture rooting depth for Moisture depth and potential FOO.

Pasture rooting depth, soil depth and pasture species.
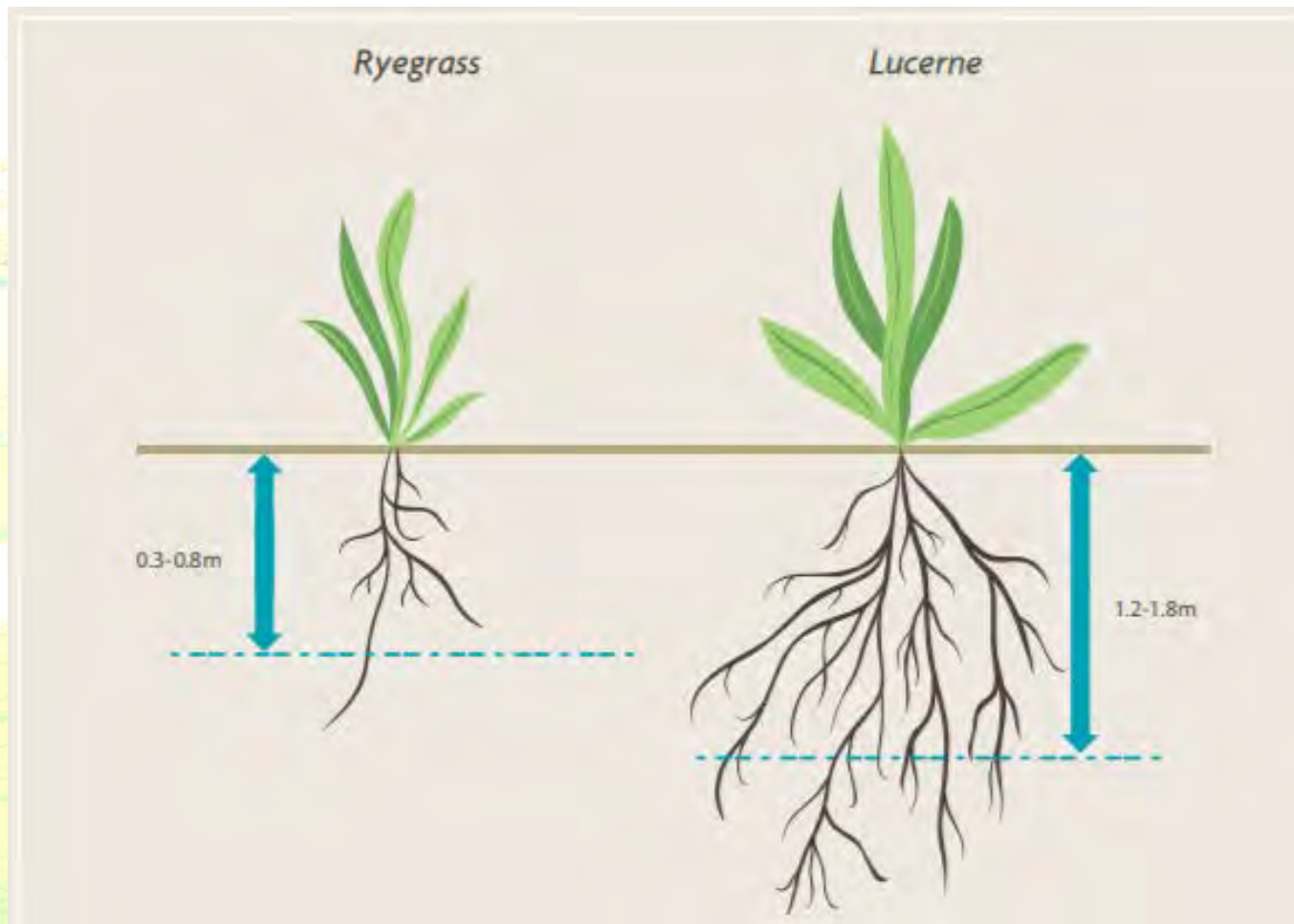
Ryegrass

Lucerne

0.3-0.8m

1.2-1.8m
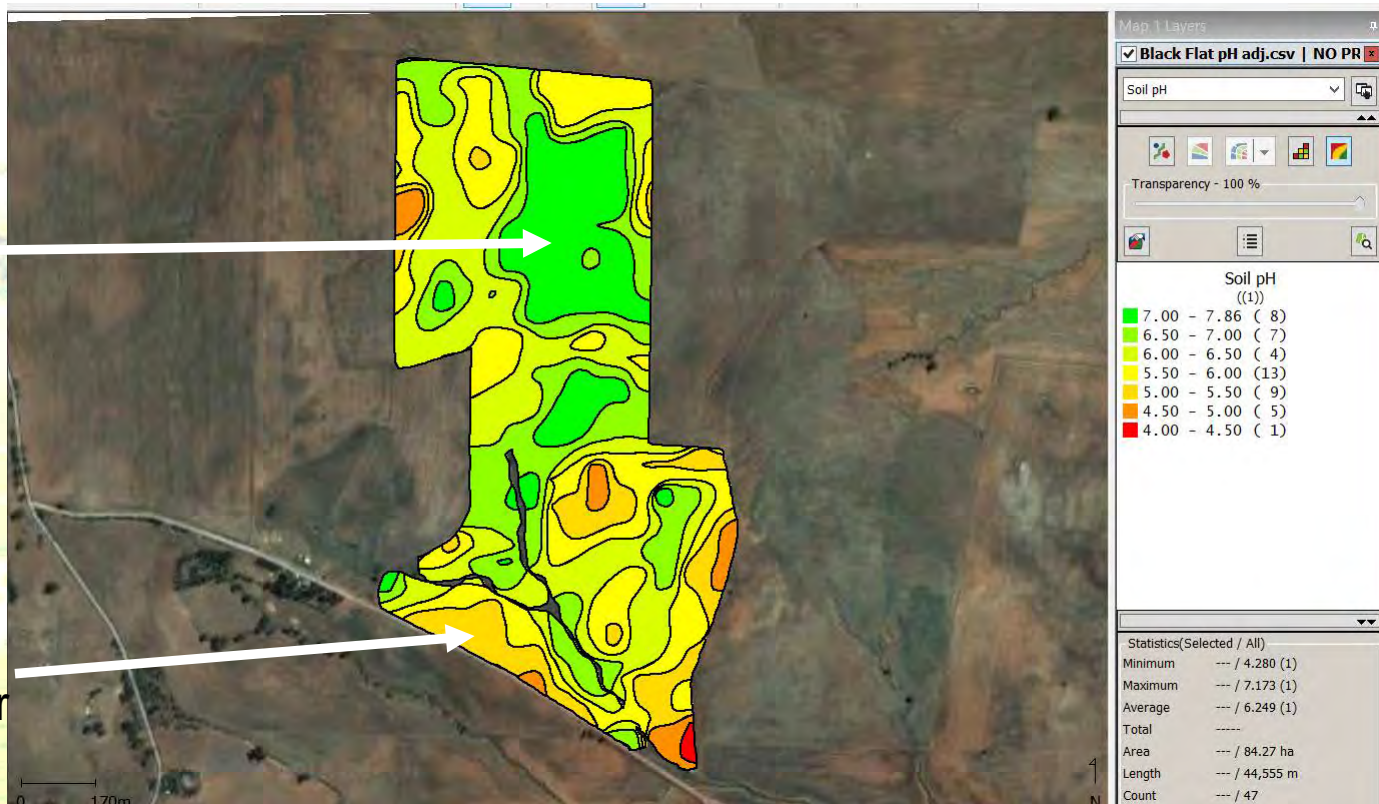
Precision Agriculture Pastures

Know your soils

pH Mapping
Sowing different species according to pH

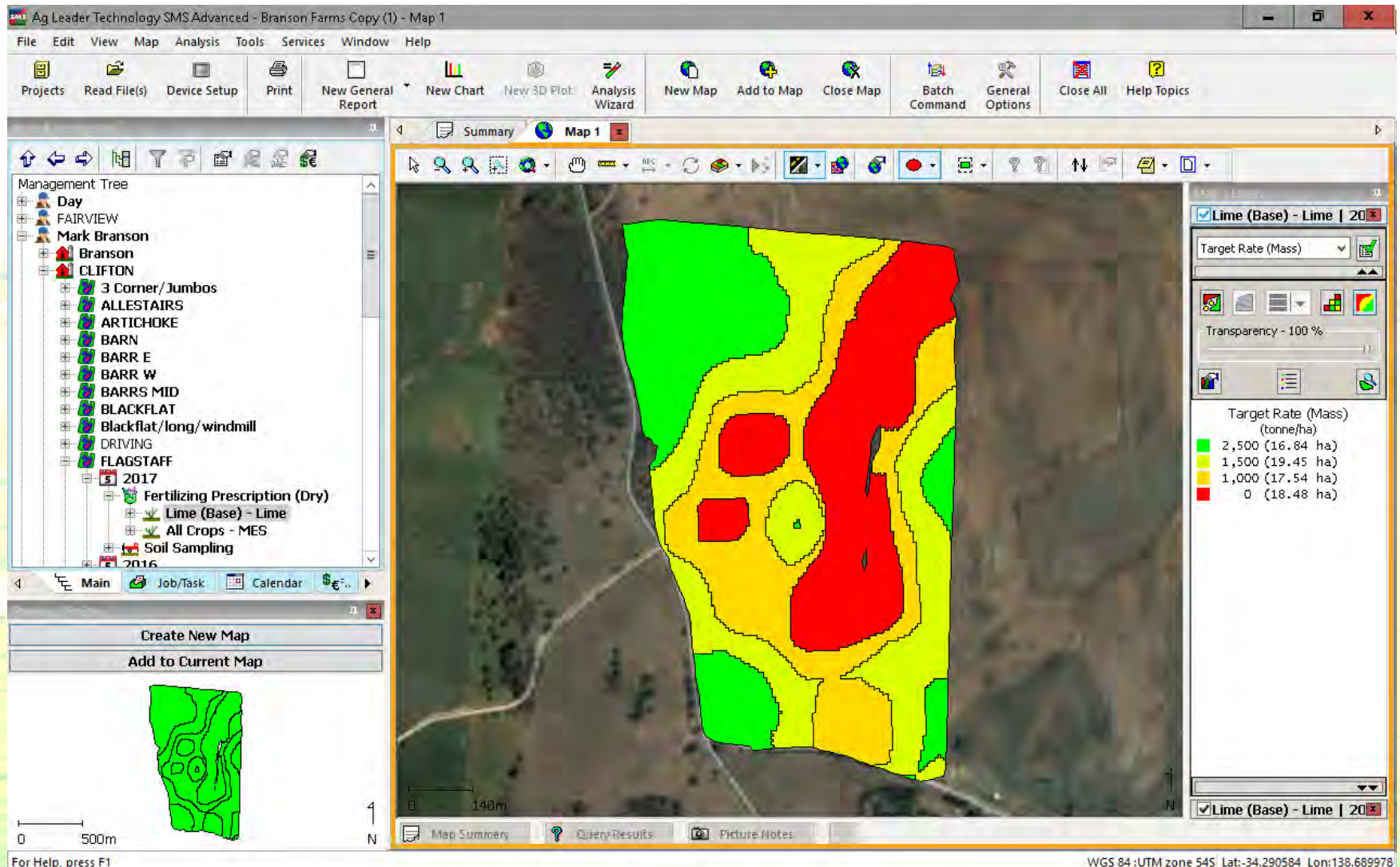

Alkaline Medics

Acidic Sub-Clover

PA Nutrients

Lime/Gypsum

VR Lime
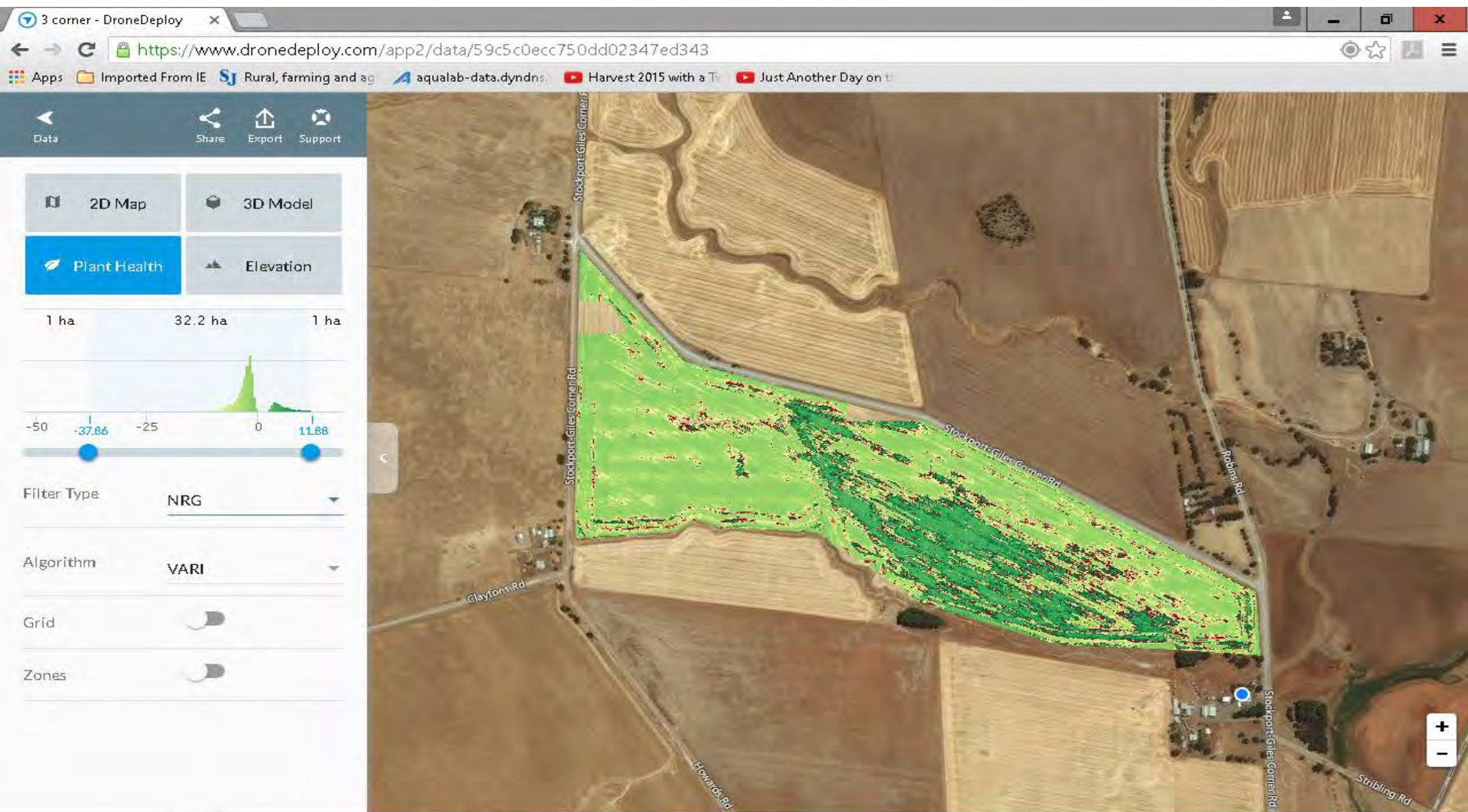## pH mapping to VR Lime application maps

VR Gypsum/Lime

- 16t AgriSpread VR Spreader on 3m steering centres
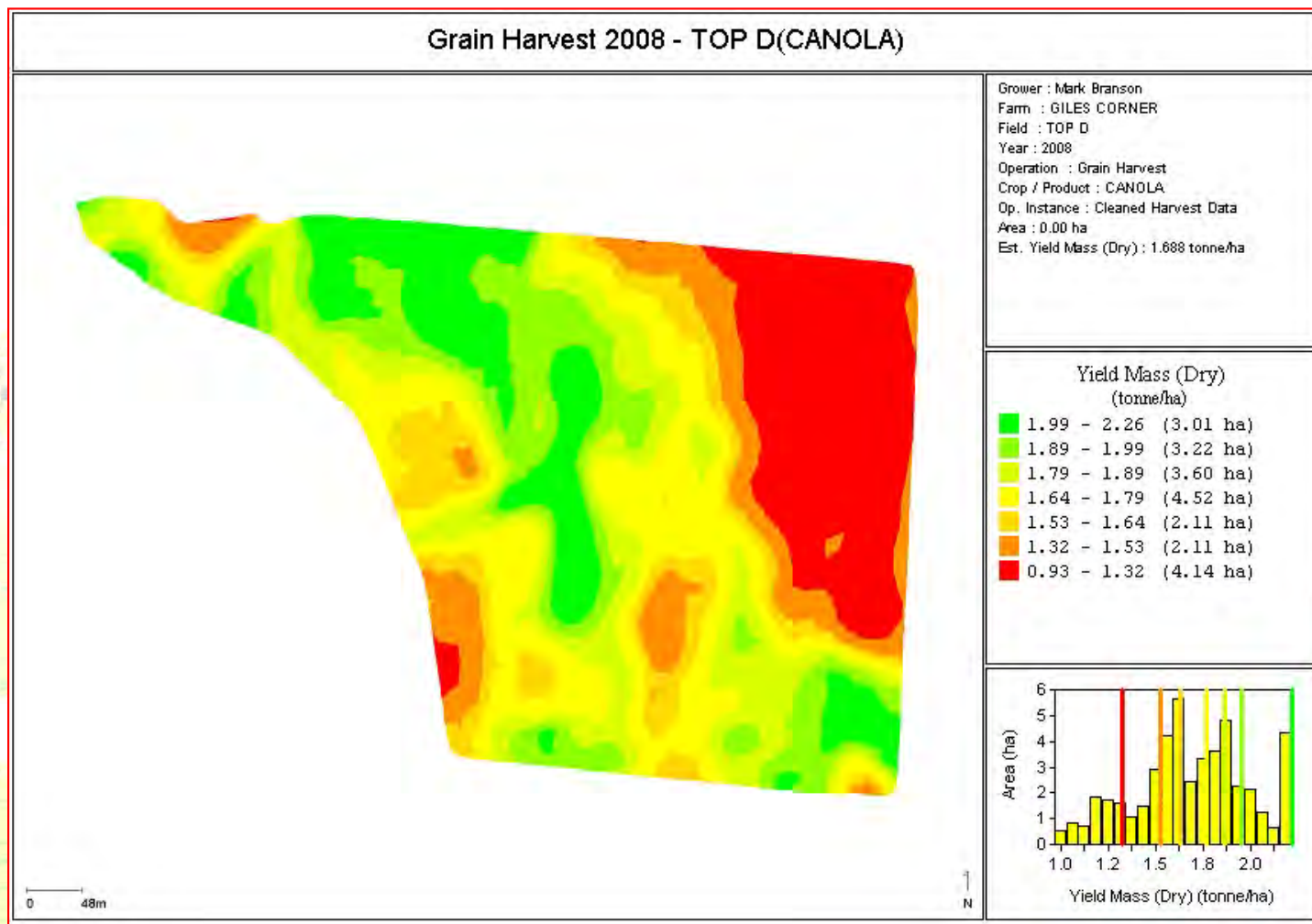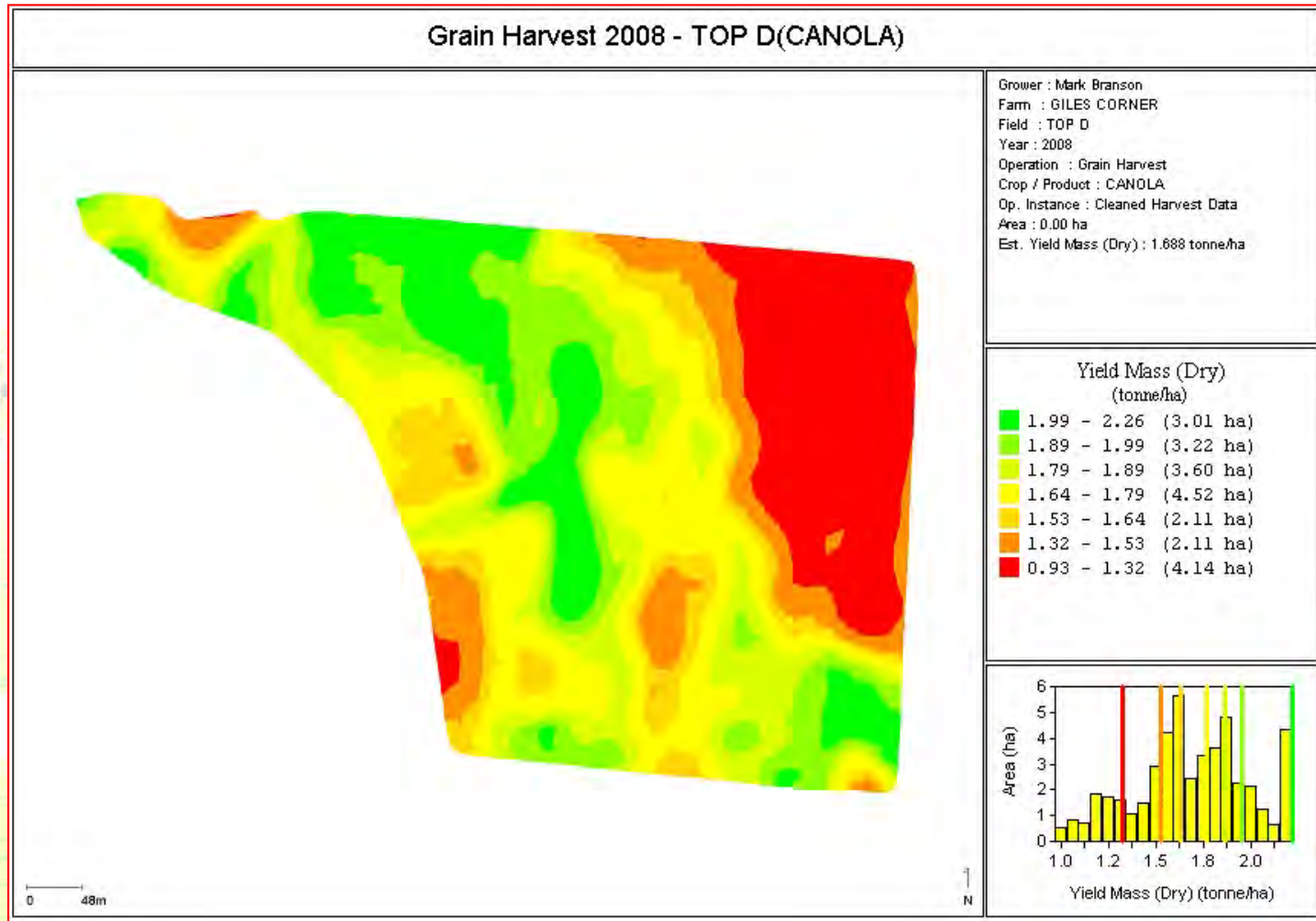- Spreads lime to 14m.
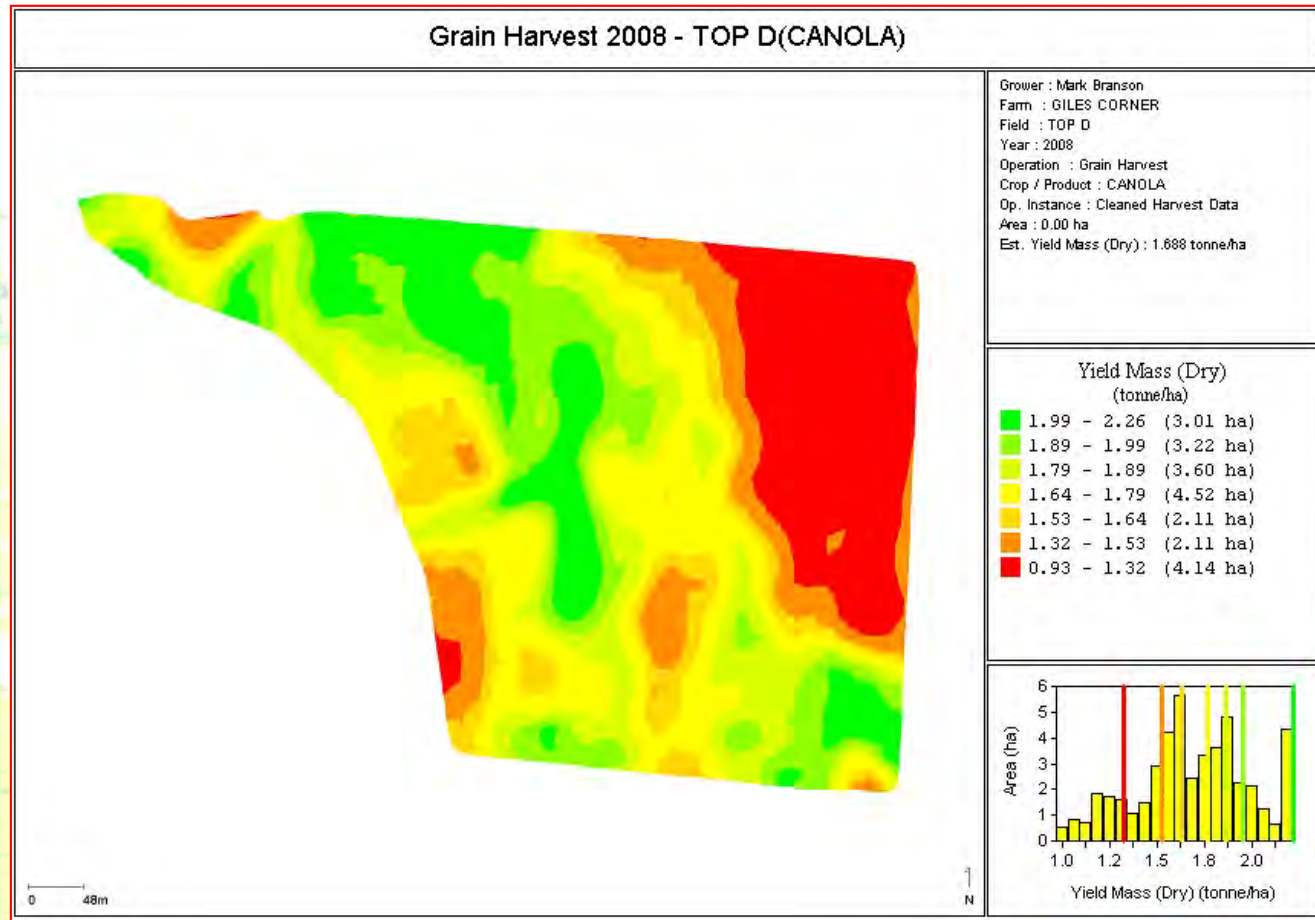
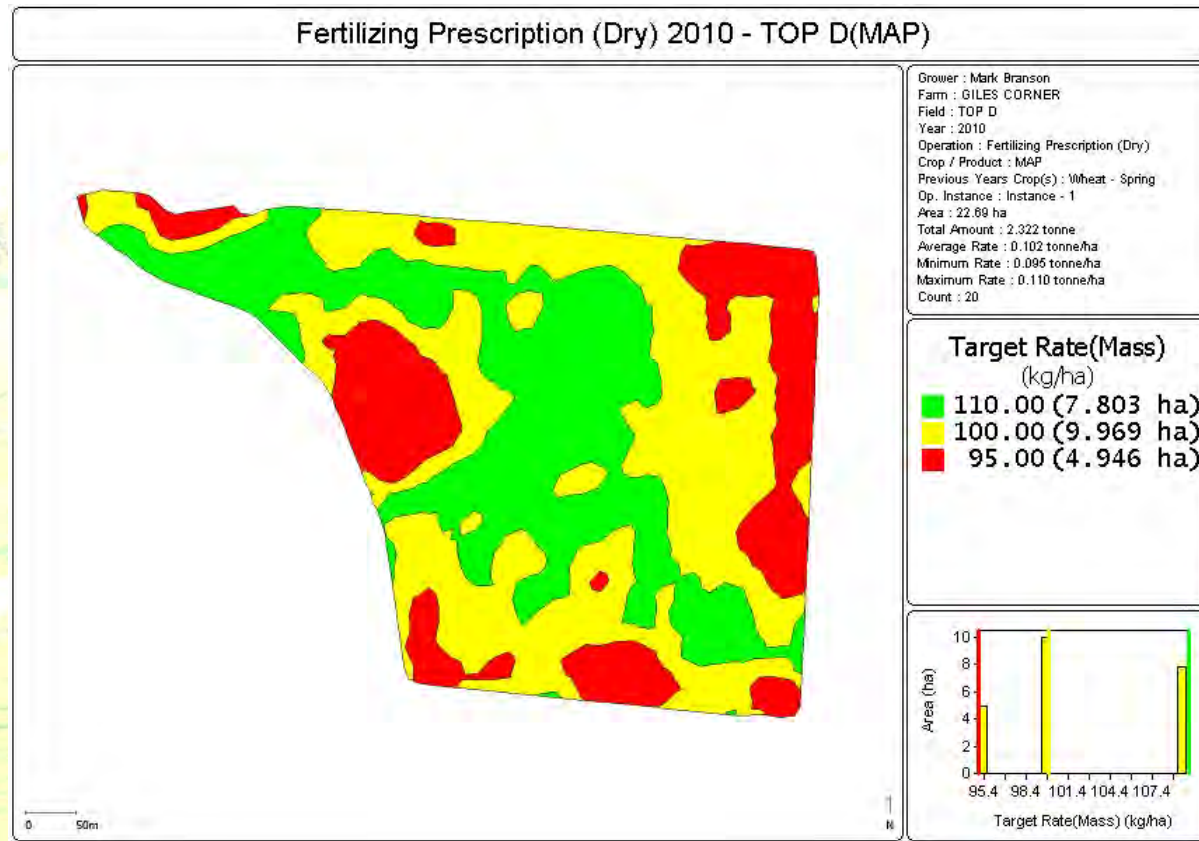# DJI Phantom 4

DroneDeploy

Using Precision Agriculture

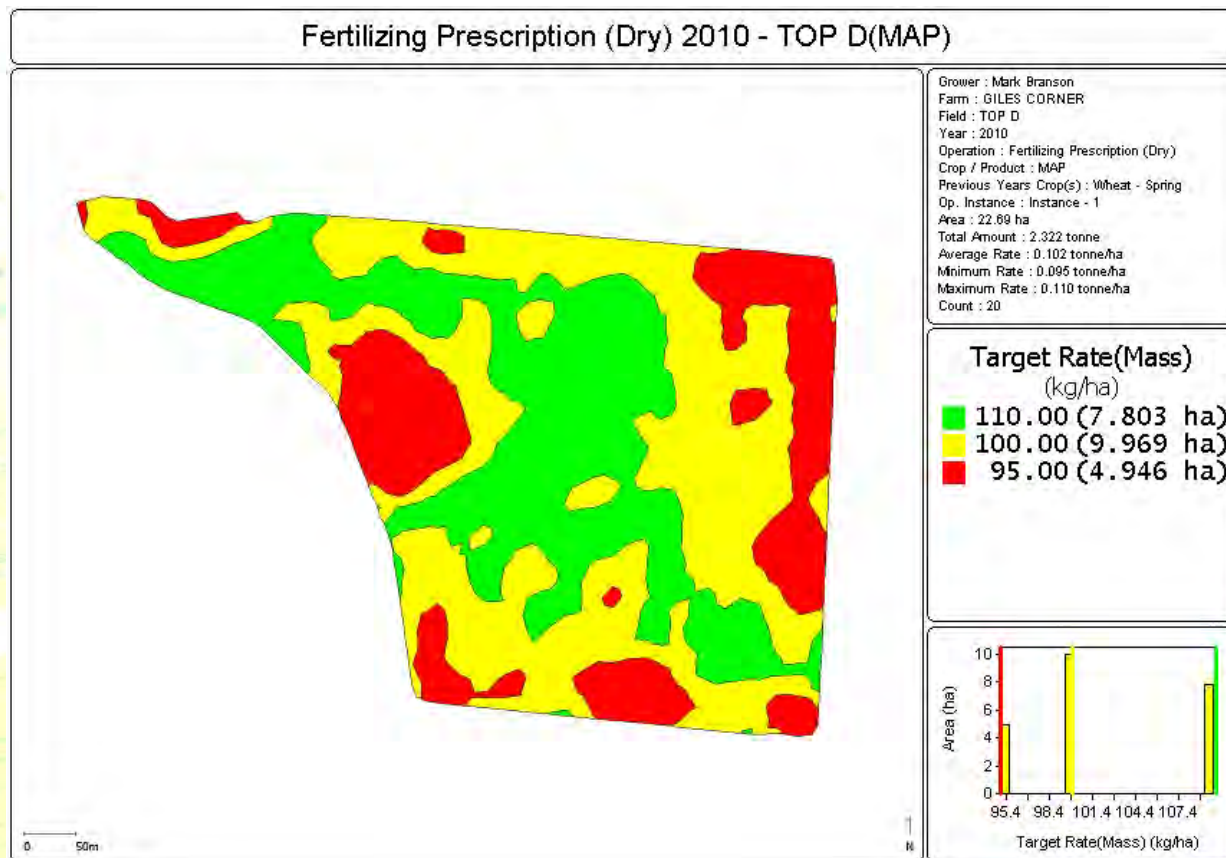# 1. Identify Variability

Grain Harvest 2008 - TOP D(CANOLA)

2. Fix problems that can be fixed

3. VR in areas that cannot be economically changed

4. Only use a PA tool if it will fix a problem.

Fertilizing Prescription (Dry) 2010 - TOP D(MAP)

5. Choose the right tool from the "PA Toolbox"
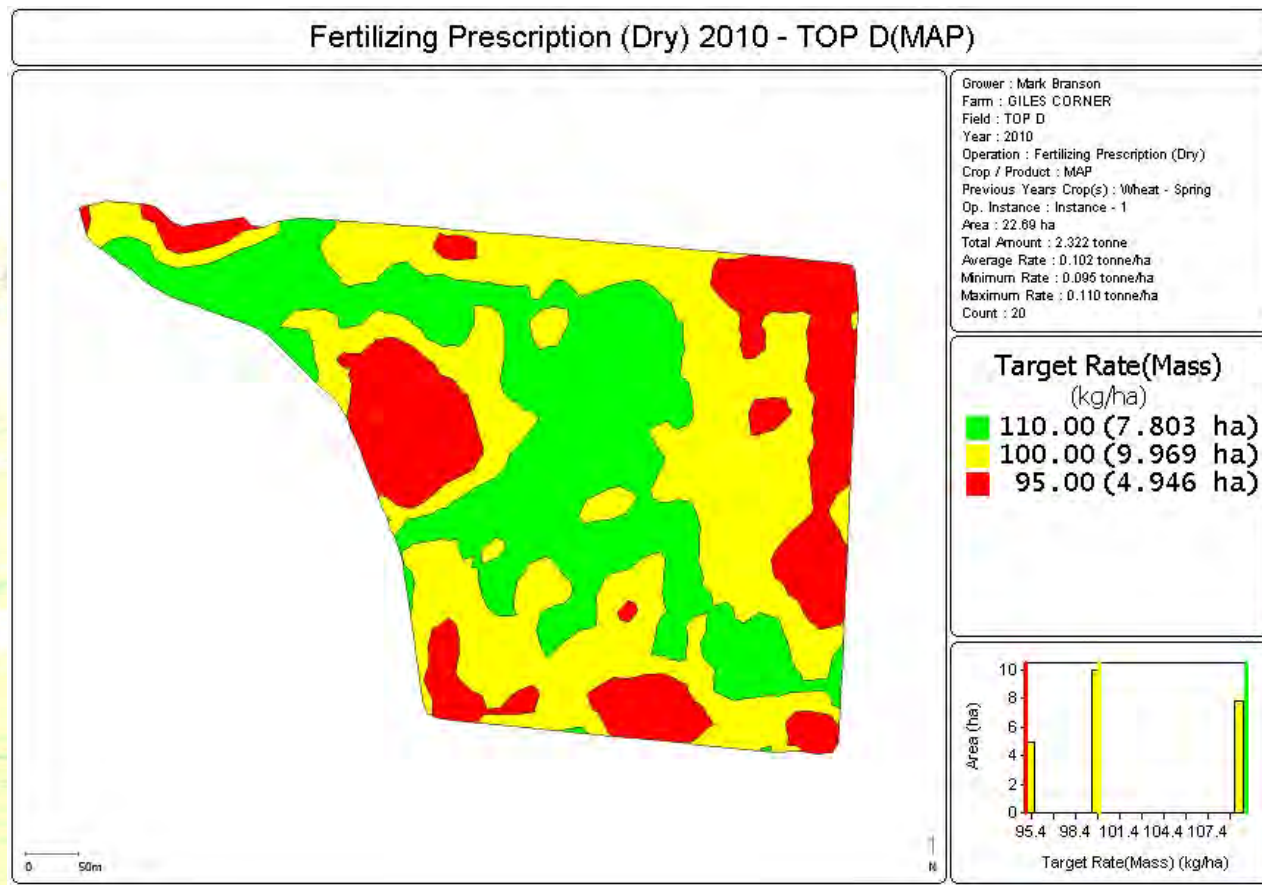
The PA Toolbox

- **Yield Maps** – Yield, Protein, Moisture, Elevation.
- **Soil Maps** – EM, Gamma, Verris, Elevation, Grid sampling.
- **Remote Sensing** – Satellite, Aircraft, Drones.
- **Ground Sensing** – Greenseeker, Crop Specs (Yarra N Sensors), Crop Circle. Pasture Sensor, NVDI, Hyperspectal Sensors, etc.
- **Precision Irrigation**
- Consoles, Desktop Software, GPS, Big Data, ISOBUS Ready, etc.

Take Home Messages

- PA is about solving agronomic problems – NOT buying trendy tools or services

- PA is profitable if you choose the right tools.

- Weather and Moisture Probes are expensive, if they are going to help solve a problem economically, then OK.

- You might look at buying with neighbors to share cost.

Thank You

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