

# **Data Driven Fertility Recommendations**

**The 20 year evolution in  
soil fertility management**

# Surprising Facts You may not know.

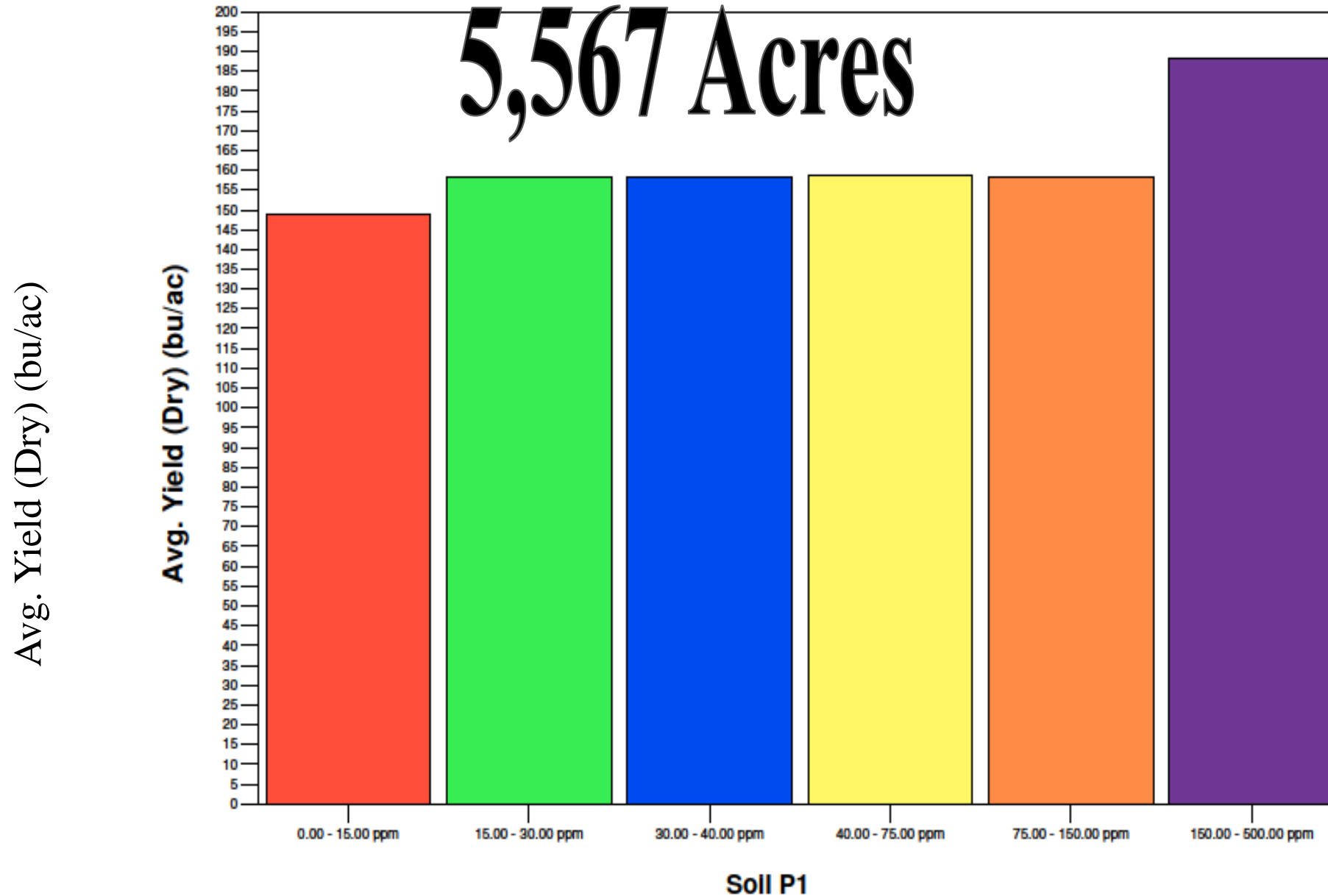
- A 1 pound soil sample represents 2.5 million pounds of soil on a 2 ½ acre grid.
- Soil Test results are not an actual measurement of nutrients, but a number derived from a testing process, then calibrated to yield response.
- pH above 7 can be worse than lower pH .
- For the most part, higher levels of P and K do not equal more yield.
- Less than 15% of the time does low P and K have influence on yield.

# Corn Yield to Phosphorous

rn



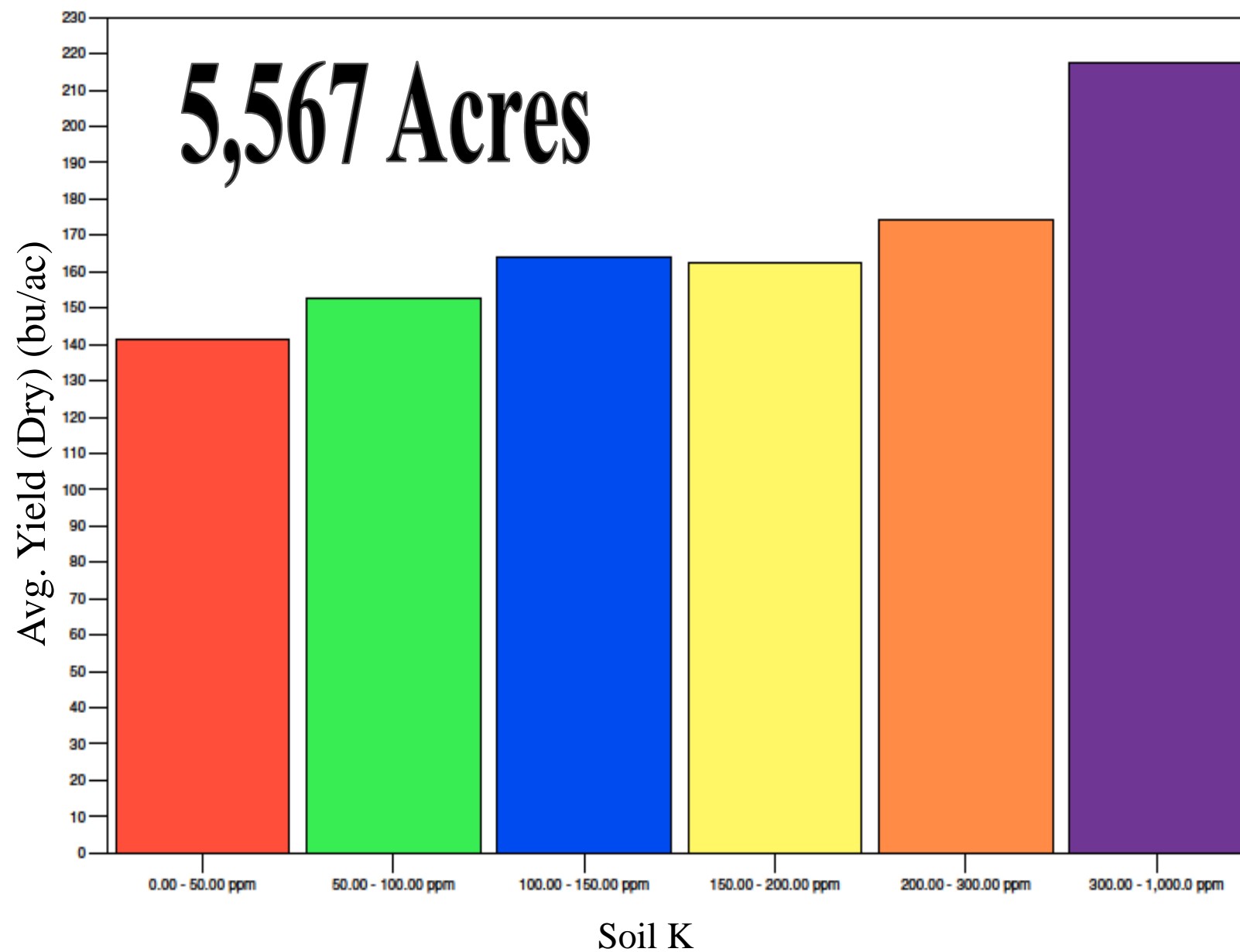
Precision Ag Services, Inc.



# Corn Yield to Potassium



Precision Ag Services, Inc.



# A few things that affect soil test variability and little to do with soil type.

- Distance from the barn.
- Gravel roads
- Drainage
- Poor application of fertilizer/manure
- Tillage/erosion
- Crop removal / history

# Soil Testing Tools

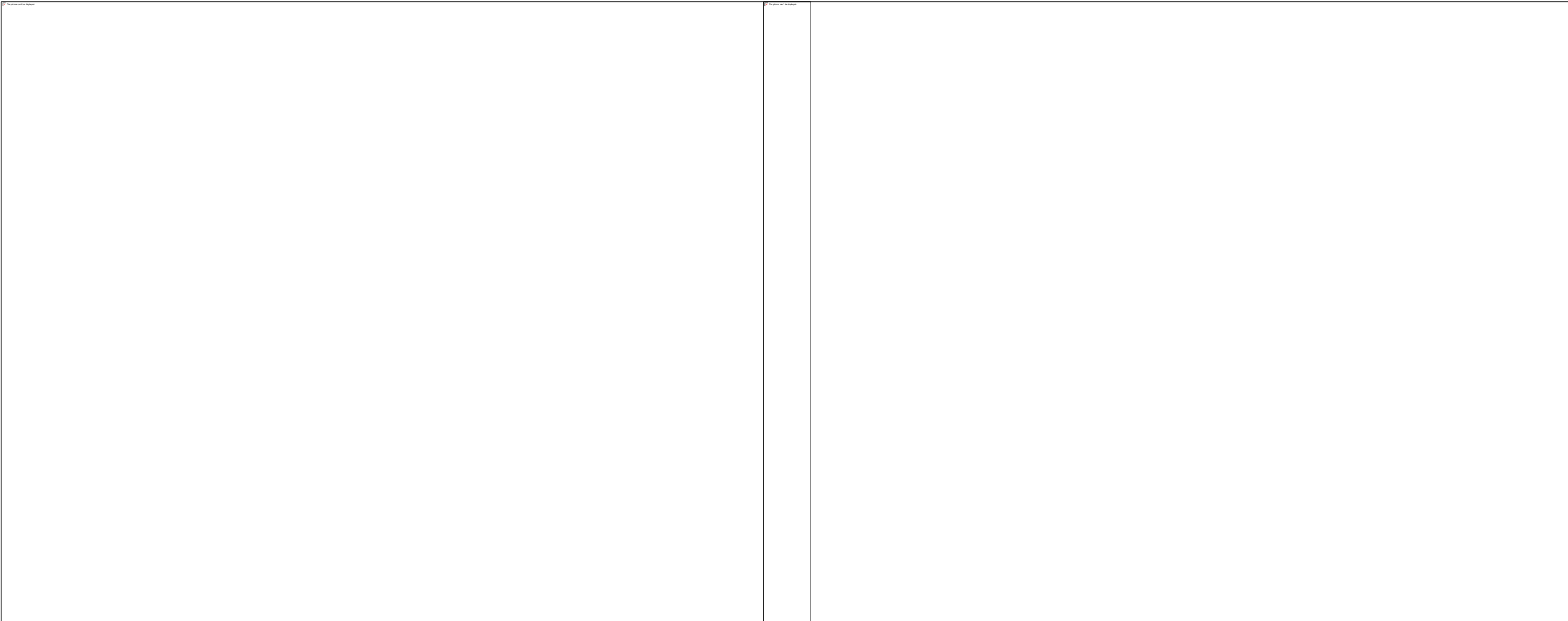
- Probe
- Automatic



Item 6510 - Model HC Soil Sampler



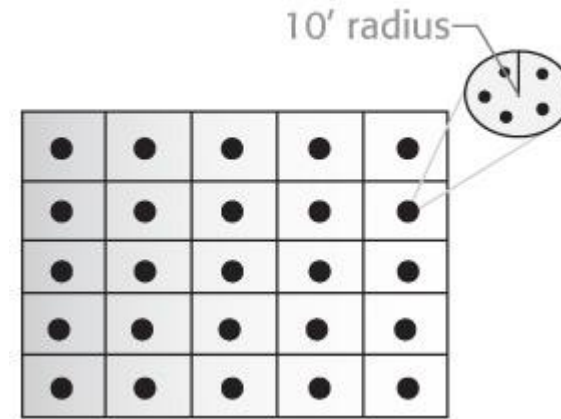
# 2 Different maps from the same data set!



# History of soil testing

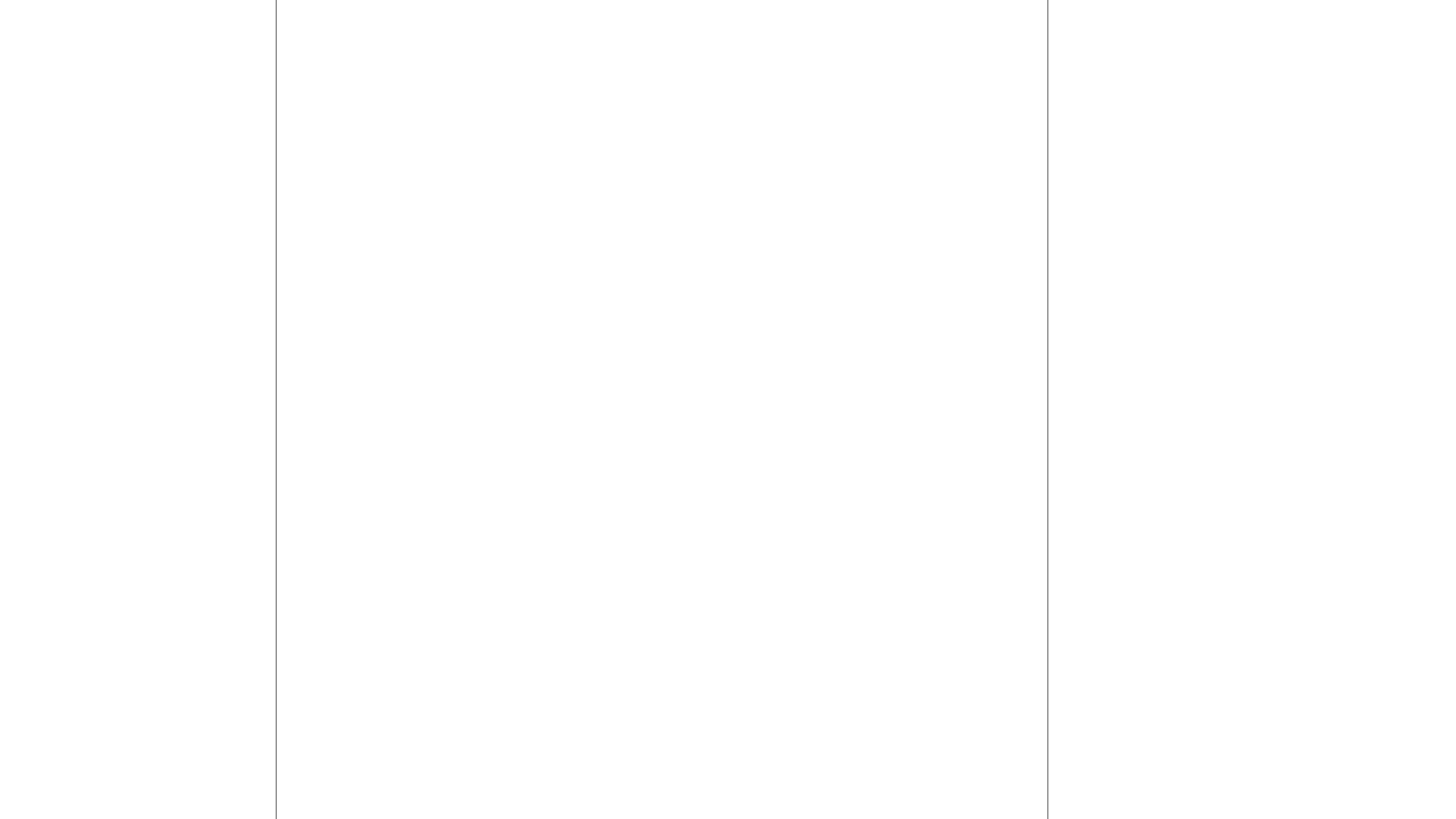
- Whole Field 10 or 20 acre plots
- Soil Type
- Grid Sampling
- Zone sampling
- Directed sampling

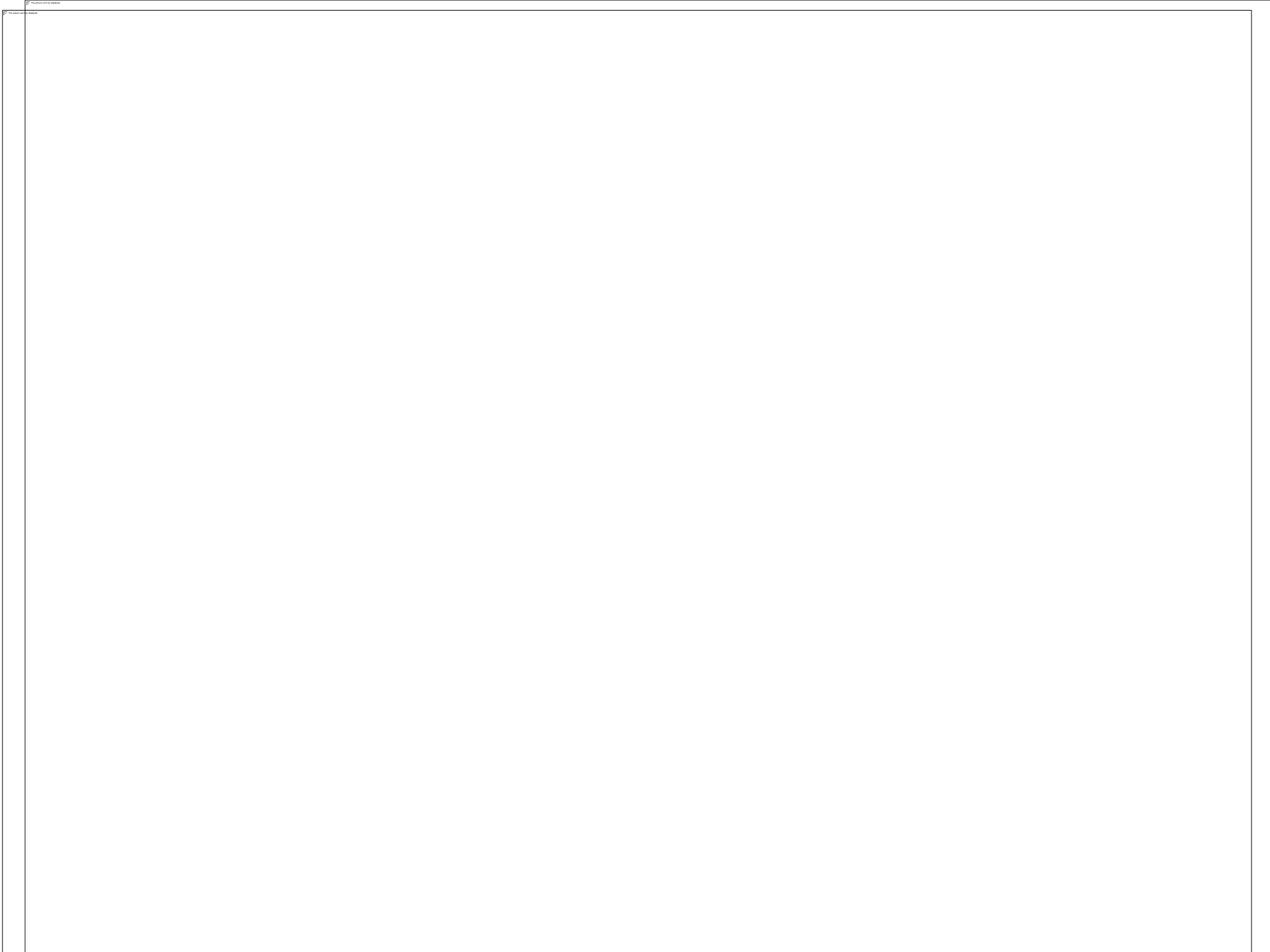
**No Soil Sampling  
system is perfect!**

















2016

97 Lbs. of Potash Average

2010

56 Lbs. of Potash Average

**Red is  
Critically  
Low**

**Green is  
High Yield**



**Red is Critically  
Low Phosphorous**

**Green is  
Higher Yields**

**17 PPM**

70 Points of information

29,342 Points of information

# Farming by the Pixel

Each Pixel represents 20 feet wide by 1 second in time



## Multiple Layer Tooltip

Yld Vol(Dry): 243.42 bu/ac

Moisture: 20.93 %

Elevation: 703.10 ft

Yld Vol(Dry): 70.29 bu/ac

Moisture: 12.62 %

Elevation: 717.26 ft

Soil P1: 34.74 ppm

**141 lbs. per Acre**

**97 lbs. per Acre**

**Potash RX**

**259 Lbs Average**

**161 lbs. Average**

**Map Rx**

# Application Numbers

- Grower A
  - Saved 22 lbs. of map on 460 Acres
  - Used 22 more lbs. of potash on 460 Acres
- Grower B
  - Used 2.7 more lbs. of map on 614 acres
  - Saved 48 lbs. of potash on 614 acres

**That is almost 15 tons!**

# Benefits of Data Driven Recommendations

- More accurate.
- Less wasted fertilizer on unproductive pixels.
- Reward more productive pixels.
- Easily customizable. Add 10% or reduce 10% in tight years.
- Can work on 1 or 2 years data.
- Keeps high yielding pixel fertility from falling to critical levels.

It is my opinion Good Soil Testing and Good Yield Maps will put more Money in Your Pocket and do more for the environment than any of these Products!

- Pop up fertilizer
- Foliar fertilizer
- Phosphorous additives
- Gypsum
- Soil conditioners
- Root enhancers
- Etc.



# Questions?



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