

3rd Annual  
**Midwest Soil Improvement Symposium:**  
2013

*Research and Practical Insights into Using Gypsum*

*March 7, 2013*

***Observations in Advising Growers in Using Gypsum***

***Greg Kneubuhler***  
*G&K Concepts, Harlan, IN*





# Soil Balance – more than N,P, K, & pH

- A soil with the with an exchange of >6 will have optimum structure at the following nutritional levels.
  - Calcium 68-70%
  - Magnesium 12-15%
  - Potassium 3-5%
  - Sodium < 3%
  - Other Bases 5%
  - Hydrogen >5%











# Runoff After Tilled + Gypsum





# Runoff After Tilled No Gypsum



**Where are the Nutrients??**









03/06/2008



# Water Infiltration is the Key: Different Particle Size and Different Reaction With Clay

**O** **Ca++ Flocculates**

**o** **Mg++ Peptizes**



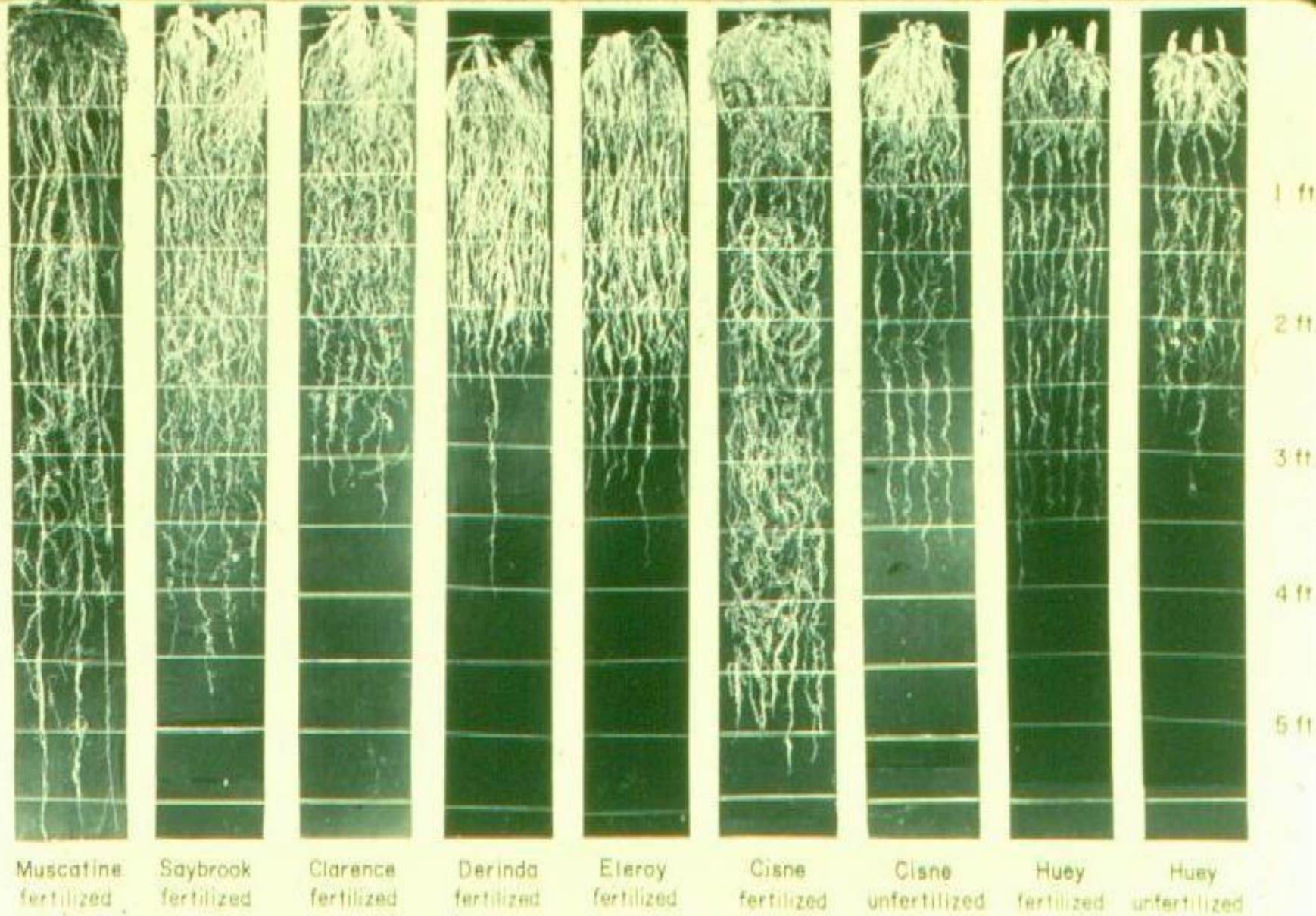
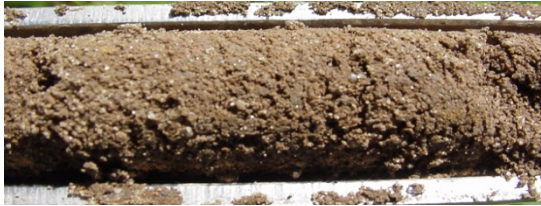


FIG. 3 — CORN ROOTS — from 4 - X 12 - X 72 - inch trays



# Why establish patterns?

- Do you have a coffee cup?



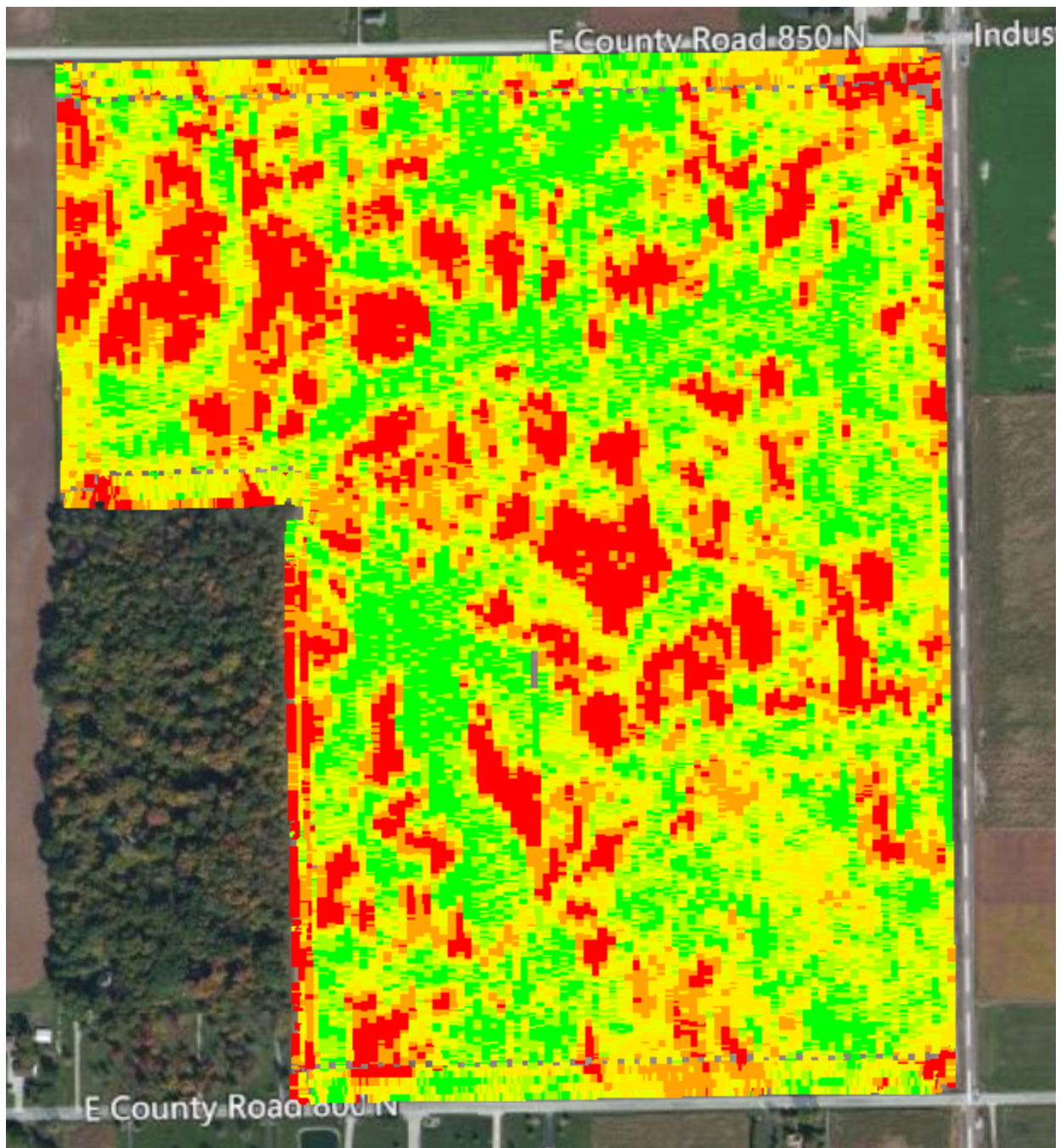
- A 5 gallon bucket?



- Or a 50 gallon drum?









# In Summary

- **Manage Variability**
  - We know it exists
- **Soils are dynamic**
  - Several variables change them
- **It's the foundation that drives everything else**
  - Seeding, Nitrogen, Fertility, Lime, etc.
- **What's the next step ??**



# **Greg Kneubuhler, CCA**

## **G & K Concepts, Inc.**

[greg@gkconcepts.com](mailto:greg@gkconcepts.com)

**260-466-0630**

