3rd Annual

Midwest Soil Improvement Symposium: 2013

Research and Practical Insights into Using Gypsum

March 7, 2013

Gypsum User Panel

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THE OHIO STATE UNIVERSITY

GYPSOIL™ BRAND GYPSUM

CTIC CONSERVATION TECHNOLOGY INFORMATION CENTER

2013 Midwest Soil Improvement Symposium
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Farming Since 1869

RULON

ENTERPRISES

www.rulonenterprises.com

Our Cropping System:

PRODUCTIVE & SUSTAINABLE

-100% No-Till since 1989

-90% CB Rotation, 10% CAC

-1 acre grid fertility management w/ VRT

-Systematic prescription based Gypsum

-Aggressive cover crop management

-Conservation is the best economic model

-There is no yield drag with No-Till

-We are accountable for what leaves our farm

We are a Legacy Farm

What we do to manage soil Quality:

- Continuous No-Till – not rotational
  - Eliminate catastrophic tillage events
  - Allow soil to build structure and biology
  - Manage soil as a finite resource

What we do to manage soil Quality:

- Drainage – Foundational to No-till and soil quality

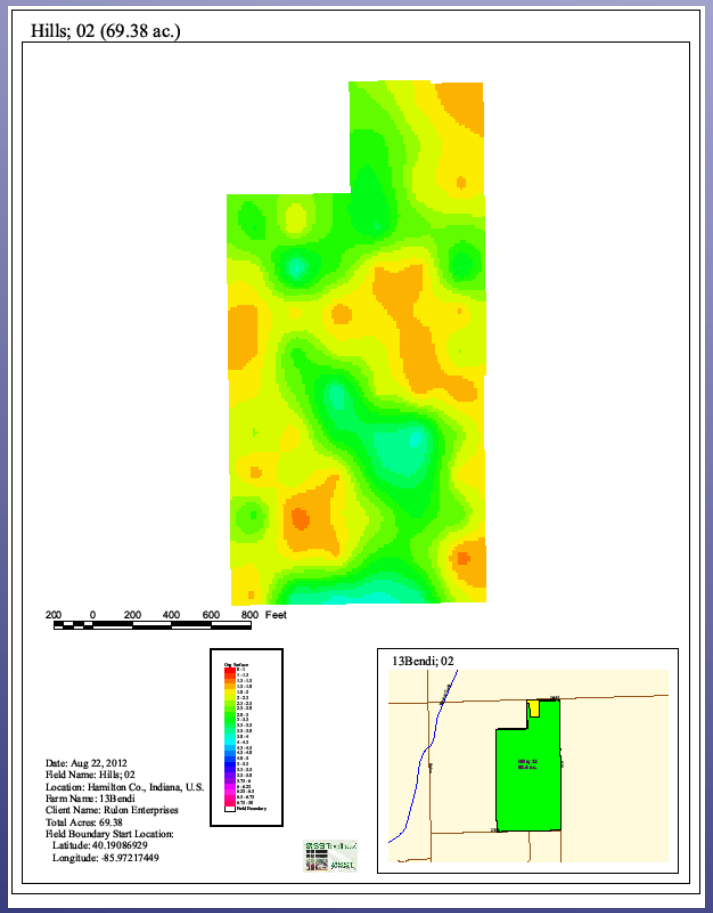
What we do to manage soil Quality:

- Cover Crops
- Manage for long term soil health-FAST

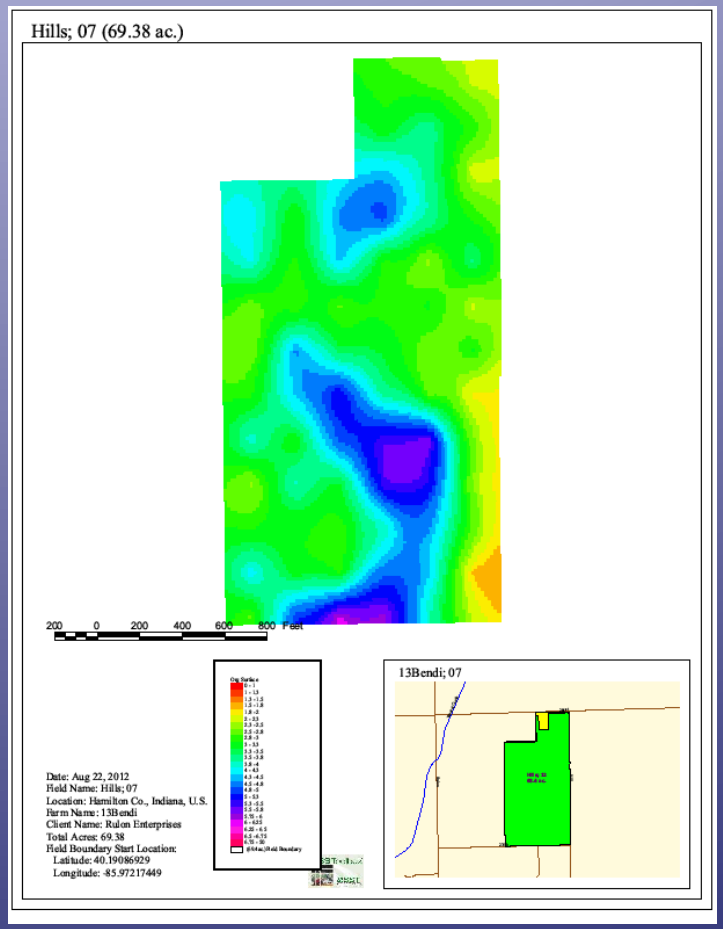



Organic Matter 2002 Vs. 2012

2.4 (1.4 to 4.0)



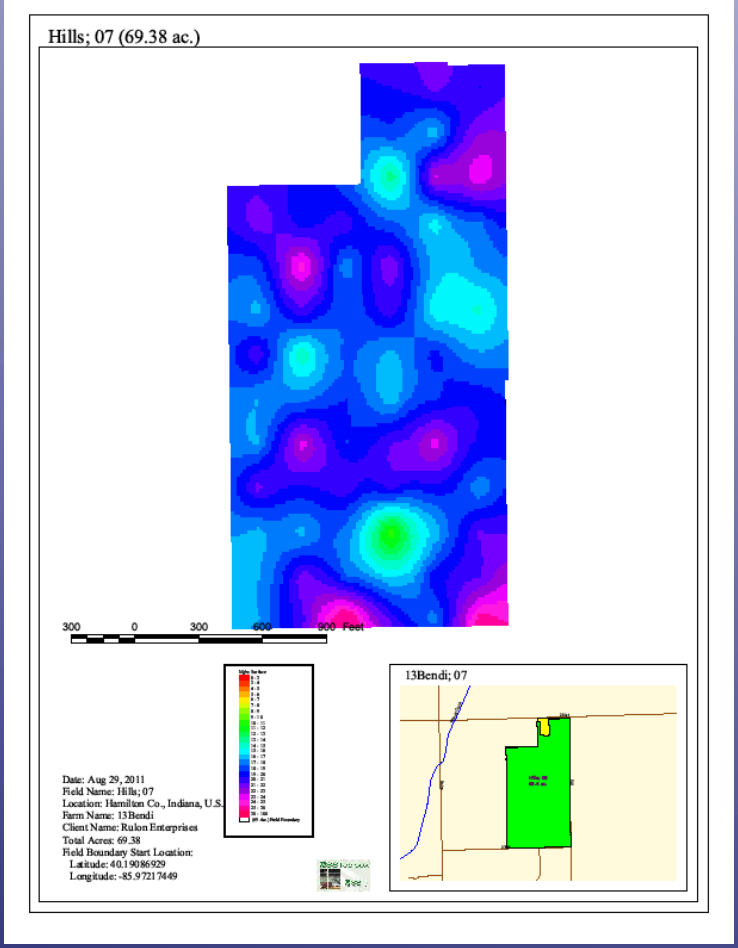
3.5 (1.7 to 6.1)

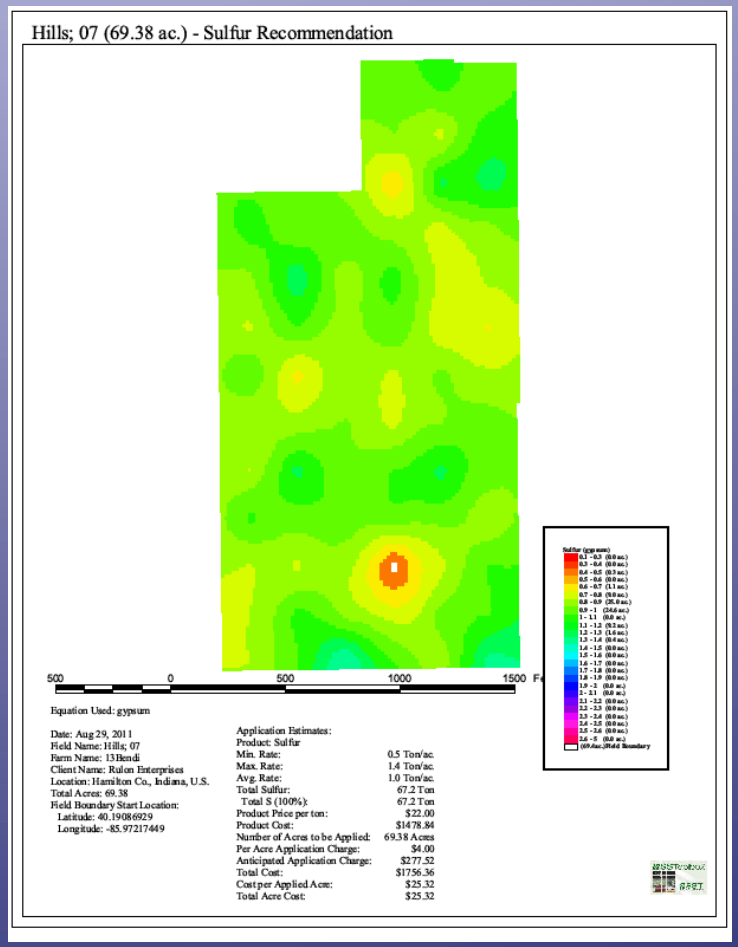


What we do to manage soil Quality:

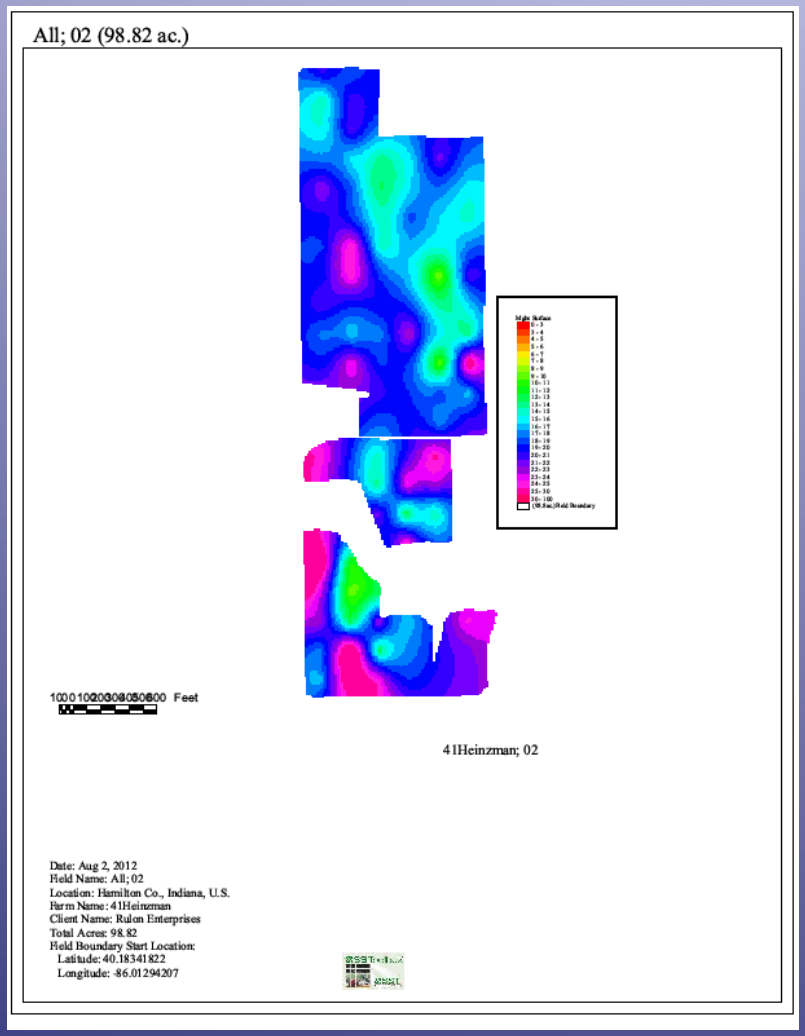
- 1 Acre grid Fertility (Spring sample/Fall App)
- Hi-Cal Lime + Gypsum
- Balanced Soil is More Stable

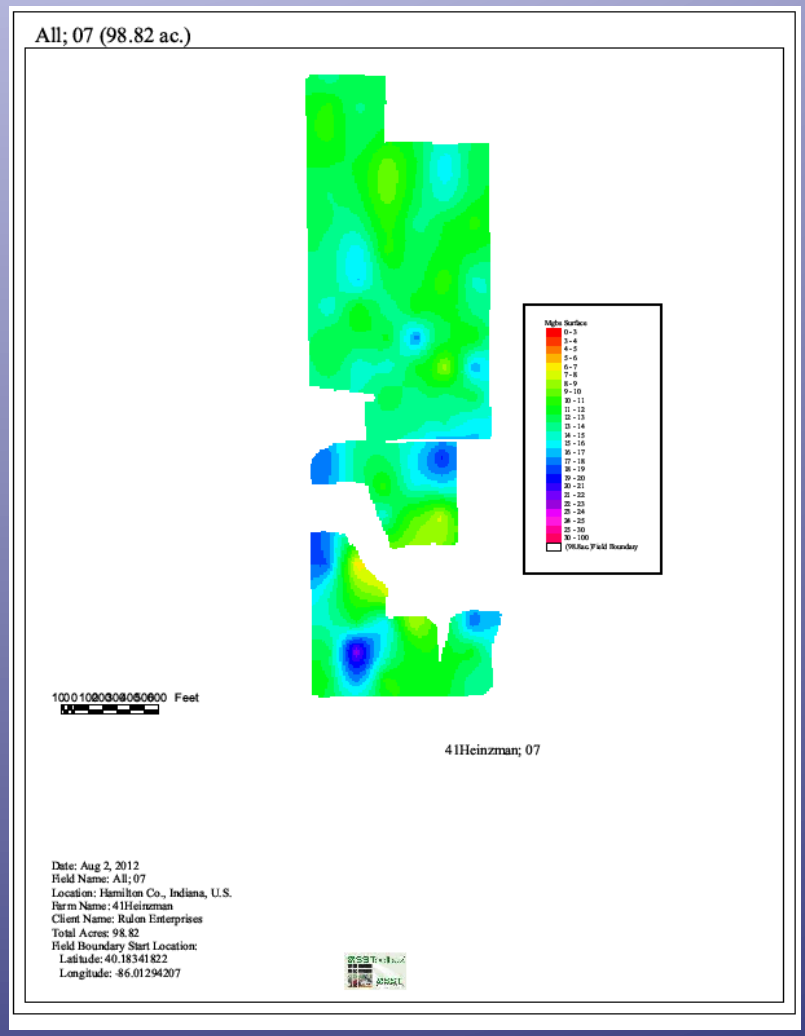
MGBS and Gypsum





Magnesium: Before and After Gypsum





The Equations

Gypsum

([Mag] >=25) : (1.4)

([Mag] <25) and ([Mag] >=23) : (1.3)

([Mag] <23) and ([Mag] >=21) : (1.15)

([Mag] <21) and ([Mag] >=19) : (1.0)

([Mag] <19) and ([Mag] >=17) : (0.9)

([Mag] <17) and ([Mag] >=15) : (0.8)

([Mag] <15) and ([Mag] >=13) : (0.7)

([Mag] <13) and ([Mag] >=11) : (0.5)

([Mag] <11) and ([Mag] >=0) : (0)

Also need to consider

Sulfur needs (Crop+Bio)

Minimum CABS

Min/Max MGBS

CEC/Crop Available Nutrients

Subsoil Characteristics/Needs

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Parting Thoughts & Questions

Thank you for coming!

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