

2011 CMDC

Science Behind High Yield Soybean Production

Wortmann

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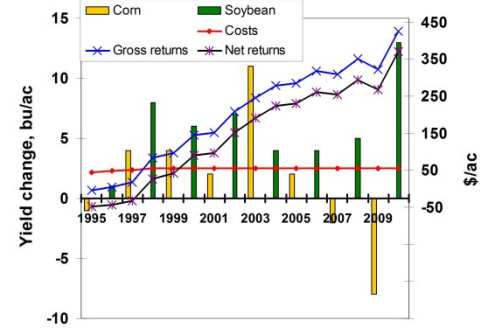
High yield alternatives

1. Starter N
2. Foliar application of N-P-K-Zn-Fe-Mn-Mg
3. Breaking apical dominance for more branching (clipping or herbicide (Cobra) application)
4. Seed inoculation (Optimize 400)
5. Seed anti-oxidant treatment (Bioforge) for improved tolerance to stress

Background of tillage, >200,000 seed/acre, 20" rows, irrigation as needed beginning in R3, strobilurin application. No manure applied. Four locations (SMFD sites).

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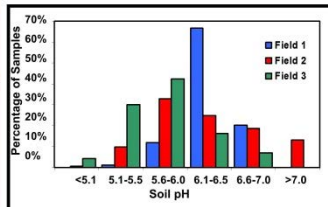
Lime use to amend acid soils



In 2010, soil tests with and without lime applied were: Mehlich-3 P 25 and 12 ppm; pH 6.0 and 5.4, and Zn 1.1 and 0.8 ppm.

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Lime use to amend acid soils



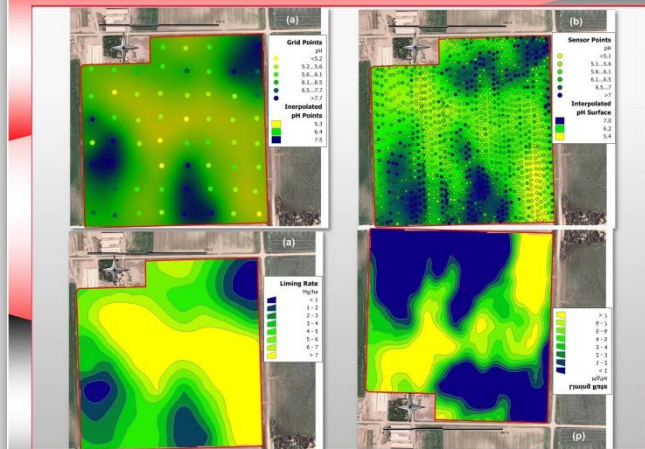
Determine the variability in soil pH. Is variable rate or site-specific application justified?

How should lime be applied?

- blanket application
- management zones
- grid sampling
- on-the-go sensor mapping?

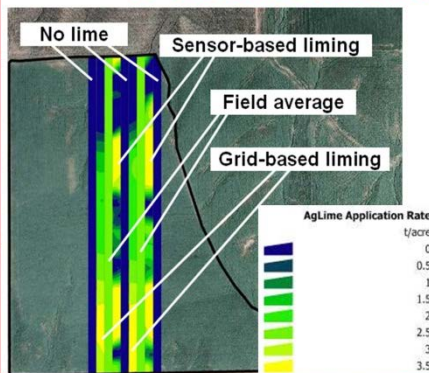


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The agronomics and economics of variable rate liming



Trials in
Nance,
Saunders,
and Wayne
Counties

4 treatments

2 reps

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