2006 SMFD

Finding Answers to Your Soybean Production Questions
Finding Answers to Your Soybean Production Questions

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Randomized Complete Block Design
Three or more treatments
(Four blocks required—Five preferred)

Block 1 | Block 2
---|---
A | B
B | A
C | D
D | C

Documenting Yield

- Truck and Scale
- Weigh Wagons
- Yield Monitors

2006 University of Nebraska-Lincoln
Extension SFMD
Benefits of Multi-year Comparisons

<table>
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<tr>
<th>Crop</th>
<th>Year</th>
<th>No Lime</th>
<th>Lime</th>
<th>Prob &gt;</th>
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* Significant at the 90% confidence level
** Significant at the 95% confidence level
*** Significant at the 99% confidence level
ns: Not significant

The Power of Statistics

- Relationship of design and statistics
- Interpreting results
- What is significant?
- What is a confidence level?
- Where can I get help with statistics?

Value = Benefits – Costs

ApronMax  | CruiserMax
---------|---------
74.1P    | 75.9    
77.1     | 78.2    
76.3     | 77.9    
75.7     | 76.3    
73.5     | 75.3    
75.1     | 75.0    
73.3     | 74.6    
75.7     | 77.9    
76.8     | 78.8    

75.3 bu/ac Average 76.7 bu/ac

1.4 bushel yield difference is significant at 99% confidence interval!
UNL On-Farm Research Results
http://farmresearch.unl.edu

Take Home Messages
- On-farm research allows you to test agronomic practices on your farm using your machinery and management system.
- Field comparison layout is key to successful research.
- Today's yield monitors and weigh-wagons make yield data collection convenient.

Take Home Messages
- Good data leads to sound management decisions.
- Decisions should be based on multi-year comparisons.
- What is the cost:benefit ratio for each treatment?
- How will your management plan change based on the results?

The Decision Making Process
“In Production Agriculture it’s what you think you know that you really don’t know that can hurt you”
Randomizing and Replicating

Randomization – ensures that favoritism is not given toward a treatment

Replication – reduces the possibility that results are due to chance rather than the treatments