Yield Monitoring and Mapping

“Report Card for Farm Operations”

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www.AlabamaPrecisionAgOnline.com
Recent Precision Agr. Survey

- Over 85% of Precision Ag Practitioners indicated their operation has been more profitable.
  - Average input savings per acre
    - $19/ac for corn
    - $18.50/ac for soybeans
    - Up to $39/ac for cotton
  - Fertilizer savings $4 to $13 per acre depending on crop.
- Top benefits
  - Ability to apply chemicals and fertilizer where needed
  - Greater profitability due to lower input costs
  - Identification of poor producing areas of their fields.

Results courtesy of Precision Ag Institute
Profitability

Growers looking for ideas for cutting costs while increasing yields
Yield Monitors

• You want to understand the potential benefits of start-of-the-art technologies
  – Need more information!
  – Decide whether PA will work for your operation?
• Harvest is when a precision program can shine
  – Yield Monitor
  – Providing geo-referenced yield data for fields
• **Report card** for your management program
Yield Monitoring Systems

- Grain combines
- Cotton pickers
- Peanut combines (R&D)
Benefits of Yield Monitors

• On-the-go yield comparisons
• Make storage decisions based on moisture readings in the field.
• Load trucks/wagons accurately
• In-depth performance analysis
  – High and low yielding areas
  – Magnitude of yield differences across fields
Results

• Rental agreement negotiations
  – Estimate yield potential for potential acres
  – Improved relationship with land owner (pictures!)
• Identify possible management changes
  – Hybrids/variety selection
  – Drainage issues
  – Fertility recommendations
• Support site-specific management
  – Site-specific (zone) management
  – EQIP and other programs
Revealing Suspected Variability

Wheat Yield Map

Soybean Yield Map

Corn Yield Map

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Manage & Record Application Rates

Corn Yield Map

Nitrogen Application Map

Yield Index (Bu/Acre)
- 89.3 to 203.4
- 60 to 89.3
- 70.7 to 80
- 62.1 to 70.7
- 53.2 to 62.1
- 43.1 to 53.2
- 32.5 to 43.1
- 23 to 32.5
- 12.7 to 23
- 4.5 to 12.7
- 0 to 4.5

N Application Rate (Pounds/Acre)
- Red: 35
- Yellow: 77
- Green: 116
Site-Specific Management

Wheat Yield (Prior to liming)

pH Map

Yield Volume (bu/ac)

- 60 to 99.6
- 64.6 to 68
- 62.4 to 64.6
- 59.8 to 62.4
- 56.7 to 59.8
- 52.4 to 56.7
- 46.7 to 52.4
- 38.4 to 46.7
- 23.2 to 38.4
- 1.1 to 23.2
- 0 to 1.1

pH Index

- 6.6 to 6.8
- 6.3 to 6.6
- 6.0 to 6.3
- 5.8 to 6.0
- 5.7 to 5.8
- 5.5 to 5.7
- 5.3 to 5.5
- 5.1 to 5.3
- 4.9 to 5.1
- 4.7 to 4.9
Site-Specific Management

Wheat Yield (Prior to liming)

Wheat Yield (After liming)
Use yield data to target seeding rates

Lint Mass Yield (lb/ac)
- 985.61 - 1,953.00 (25.85 ac)
- 767.00 - 985.61 (28.05 ac)
- 43.35 - 767.00 (23.11 ac)

Target Rate (Count) (sds/ac)
- 30,000 (25.85 ac)
- 28,000 (28.04 ac)
- 26,500 (23.11 ac)
Some AgGIS software packages provide the ability to quickly produce profit maps.

Address field variability so that your PROFIT map reflects a positive return!
PA Technology has improved profitability and environmental stewardship.

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