Performance Results Enables Stewardship Ethic and Systems Approach to Environmental Protection

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Partners: CSREES, WIRB, Iowa Farm Bureau, Iowa Corn Growers, Region 7 EPA and Farm Operators

Agricultural-Environmental Performance Issues

- Ninety percent of Iowa water contaminants have been attributed to agriculture.
- Farm operators have never been asked to organize and collectively address water quality.
- Watershed residents have demonstrated aggressive local leadership for water improvement.
- Farm operators will change to practices that yield higher water quality.
- Participants find the performance program structure to be practical and profitable, and to have a positive effect on the environment.

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Residents work together as a watershed community on environmental goals.

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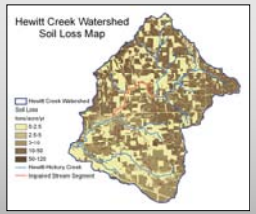
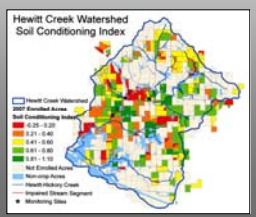


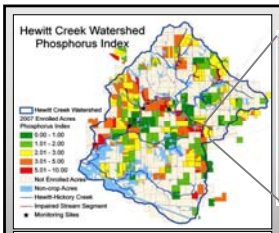
Field by field variables

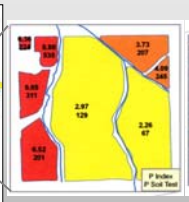
Phosphorus soil test – application
Manure rates – method – timing
Tillage – timing – management
Cover crops – residue cover
Crop rotation – row direction
Nitrogen rates – timing – method

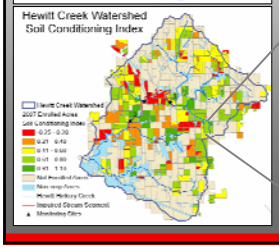


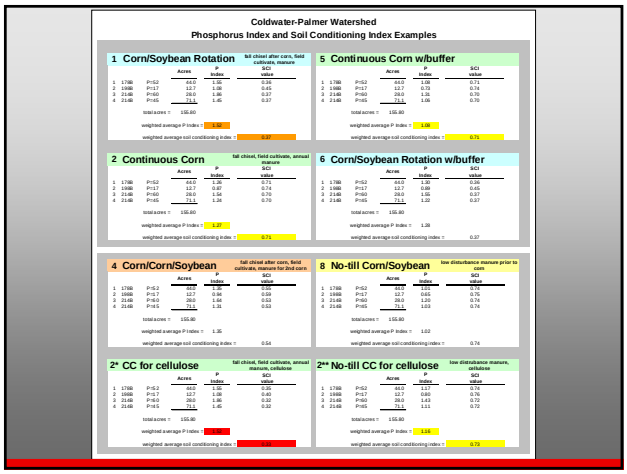
Performance Measures

Phosphorus Index – Risk of P loss
Soil Conditioning Index – Organic matter
Cornstalk Nitrate – Sufficient/Excess N



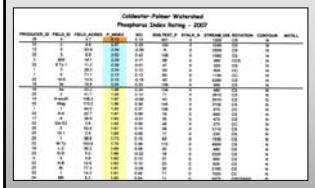


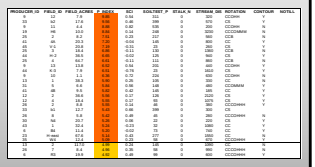


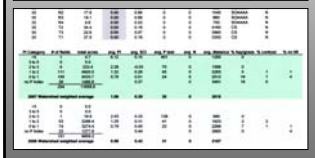


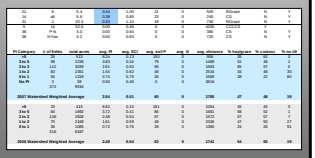
P-Index list – Coldwater/Palmer

P-Index list – Hewitt









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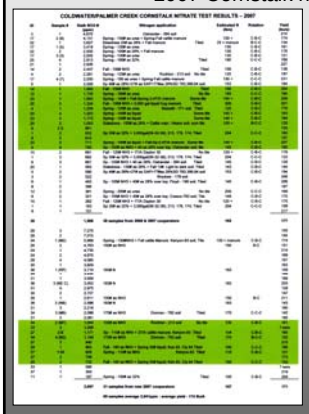
2007 Cornstalk nitrate test results



Program – Client Targeting

- Farm operators: day to day decision-makers
- Low resource and new farm operators
- Livestock producers – manure credits
- Flexibility to select low-cost alternatives
- Neighbor-to-neighbor sharing and peer pressure
- On-farm demonstrations of alternative nutrient, tillage, planting and other management
- Local stakeholder involvement – over 50%

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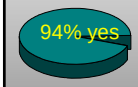
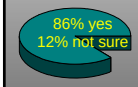
Program Evaluation – Survey

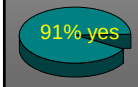
- The performance-incentive program rewards a conservation systems approach.



- Program encourages management changes.



- 86% – program has a positive effect on the environment – 12% not sure yet.



- Program helped make their operation somewhat or more profitable.

Desirable outcomes

Results include an increase in:
- fish population and diversity
- macro-invertebrate population and diversity
- aquatic life, birds and wildlife

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