NSSI
The National Soybean Sustainability Initiative
how this tool achieves and promotes grower-led sustainable soybean production

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WHY NSSI

- Producer-driven
  - Not top down, regulatory or market pushed approach
- Complementary to other sustainability programs, not redundant
  - Non competitive, yet complimentary
- Streamline sustainability efforts with customer expectations
  - Lets tell them how we can do it
- Communications Conduit
  - Discuss gains already achieved and changes overtime
What is Sustainability?

- The USDA defines sustainable agriculture as “an integrated system of plant and animal production practices having site specific application that will, over the long term:
  - Satisfy human food and fiber needs;
  - Enhance environmental quality and the natural resource base upon which the agricultural economy depends;
  - Make the most efficient use of non-renewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
  - Sustain the economic viability of farm operations; and
  - Enhance the quality of life for farmers and society as a whole.
Three Elements of Sustainability

**Social Factors**
- Human resources
- Waste management and recycling
- Community involvement
- Maintaining lands in farming

**Energy**
- Knowledge of energy and fuel uses
- Efficiency improvement
- Alternative energy sources
- Bio-energy investment

**Economics**
- Cost of production/net returns
- Working with financial or business advisors
- Insurance and disaster plans
- Farm succession/long-term sustainability

**Value of Product**
- Marketability of product
- Food safety
- Product differentiation
- Preservation of traceability/identity

**Ecosystems**
- Knowledge of general principles
- Invasive species management
- Utilizing ecological science in planning
- Developing ecological restoration sites

**Soil and Water**
- Developing conservation plans
- Fertility management and using best management practices (BMPs)
- Water management/adopting advanced, new techniques

**General Pest Management**
- Scouting for pests/keeping written records
- Accurate pest identification
- Use of biologically-based integrated pest management strategies
- Resistance management

**General Production**
- Record keeping
- Plant health
- Pesticide safety/use of reduced risk materials
- Increased efficiency in productivity
Soybean Sustainability Tool

Found at coolbean.info

National Soybean Sustainability Initiative (NSSI)

The SoyReport

Searchable Database

Video Crop Diagnostics

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Library

Soybean Variety Trial Results

Wheat Variety Trial

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National Soybean Sustainability Initiative (NSSI)

Why is This Initiative Important to U.S. Growers

Whole Farm Assessment Tool

Soybean Assessment Tool
Soybean Sustainability Tool

- Protocol written to harmonize standards questions from other tools
  - As defined from our review of international and national standards
- Worked with UW-Extension Specialists to create research based, best management practices for Midwest region
- Individual specialists evaluated the questions to align them with current outcomes based decision tools
  - All fertility and soil management questions were derived from Snap Plus, which incorporates soil loss predictions from RUSLE2 and nutrient management planning requirements for the state of Wisconsin
Soybean Sustainability Tool

- Can be found online (coolbean.info) or on paper – contact me
Soybean Sustainability Tool - Categories

- Cash Grain Whole Farm
  - Farm Production and Management Decision
  - Soil and Water Quality (soil, fertility, water, irrigation)
  - Scouting
  - Information and Production
  - Pesticide and Fertilizer Handling and Worker Safety
  - Pest Management
  - Resistance Management
  - Ecosystem Restoration - Natural Community
  - Chain of Custody
  - Farm Operations and Sustainability (Economics, Human Resources, Energy/Recycling, Community Outreach)
Soybean Sustainability Tool - Categories

- Soybean Specific
  - Soybean Production and Management
  - Weed Management
  - Insect Management
  - Disease Management
Soybean Sustainability Tool

- Anonymous – can’t be track to specific grower
  - We do ask for state and county
- Not intimidating to grower
- No scoring
- Does NOT ask for specific field records
  - No pesticide applications
  - No fertility applications
  - No tillage
  - No specific energy or fuel requirements
- DOES ask to choose practices which can or have been implemented to affect change
- Can be printed off so grower maintains their data for comparisons overtime
Examples

Pesticide and Fertilizer Handling and Worker Safety Section

5A Is the person who makes pesticide applications on your farm a certified applicator (can be private or commercial)?
(Check only one)
- Yes
- No

5B Was your spray equipment (or the custom applicators’ equipment) calibrated before this crop season (e.g., each nozzle with same flow and coverage rate)?
(Check only one)
- 4 times per year
- 3 times per year
- 2 times per year
- 1 time per year
- Not at all

5C Is all personal protection clothing and equipment used during pesticide applications appropriate for worker safety?
(Check only one)
- Yes
“Soybeans from XYZ are more sustainable than soybeans from the United States”

- How can this be said?
  - Simply, they have industry system in place to document on farm

- We need data from growers to develop the US baseline

- Can be used to refute other claims and use on-farm data for verification
  - Will not pit grower against grower OR region against region
How NSSI Sustainable?

- Encourage continual improvement
- Use as educational tool
- Work in conjunction with local “experts” and research-based faculty
- Give credibility to current ag programs and to prioritize new research
- Document improvements already made
  - Look back at past 5-10 years and use this as public and market tool
- Consolidate sustainability documentation and surveys
- Document economic sustainability by determining key drivers and cost of changes and implementation
We are working on developing sustainability protocols “WITH” growers, not “FOR” growers.

Bottom up approach so growers can capitalize on changes that have already happened, and strive for practices that will effectively create changes in the future.

Use the researchers to determine exact measureable changes which occur from the different practices that growers are doing.

Lets effectively communicate the message.