

Monsanto Cover Crops Workshop

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Water Quality Matters to Us All - Listening sessions in Iowa with farmers and urban residents – Jackie Comito et al. 2011

Tom Kaspar's interpretation of some of the responses:

- Farmers feel that they “personally” are already good stewards of the land and water quality and that they are already doing “all” that they can do because of constraints of time, money, equipment, or ability to manage.

2011 Iowa Farm and Rural Life Poll Questions about Cover Crops

Jay Arbuckle, arbuckle@iastate.edu

- Lack of time between harvest and winter, lack of knowledge about cover crop management, and lack of necessary equipment to plant cover crops were viewed as the major barriers to cover crops.
- Larger-scale farmers and farmers who plant corn and/or soybeans tend to have less favorable attitudes toward cover crops.
- Farmers with greater knowledge and previous experience with cover crops have more favorable attitudes. But almost all knew the benefits.
- Results suggest that if cover crops are to achieve widespread use more awareness and knowledge-building efforts are necessary. In addition, innovation in planting cover crops in the fall is needed to overcome the time and labor limitations imposed by harvest and climate.

Cover Crop Survey Results

- 3500 producers in IL, IN, IA, and MN (875 in each state).
- 36% overall response rate (Illinois 33.9%, Indiana 33.6, Iowa 42.1, and Minnesota 35.0).
- 18% had ever used cover crops.
- 11% used cover crops within past 5 years.
- 8% planted cover crops on their farm in the fall of 2005 (only on 6% of land). Only 4.8% (2.4, 7.2) in IA.
- Greater use in IL and IN.
- 80% using conservation practices.
- 43% using conservation practices with cost sharing, 57% w/out.

Survey Results Con't

Reasons for not using cover crops included:

- Too much time involved (34.8%).
- Too costly (27.4%).
- Do not have a runoff problem (28.1%).
- Already use no-till practices (38.6%).
- Do not know enough about them (39.5%).

Cover Crop Research Needs

1. Quantify cover crop effects on soil health/productivity
2. Quantify the “value” of cover crops to farmers, landowners, and the public
3. Develop and evaluate novel methods to establish/plant cover crops in corn–soybean systems both before and after harvest
4. Develop and evaluate novel methods to terminate cover crops in corn-soybean systems both before and after planting corn and soybean.



Quantify effects of cover crops on soil health/productivity

- a) Requires long-term research (6+ years) with a “successful cover crop system”
- b) Crop productivity and yield stability – both positive and negative effects
- c) Soil health (water holding capacity, organic matter, nutrient cycling, rooting depth, infiltration, aggregation, reduction of erosion, pests, pathogens, beneficials, macrofauna) – both positive and negative effects – also a need for ICM
- d) Resilience of system to climate variation; including intensive rainfall events

Quantify the “value” of cover crops to farmers, landowners, and the public

- a) Explicitly assign "value" to the longer-term benefits of soil health relative to yield potential, yield stability, yield risk, and resilience to climate stresses
- b) Estimate minimum level of cover crop growth needed to provide “value”
- c) Estimate enhanced value of farmland because of increased protection from erosion and improvement of soil health
- d) Determine value to public of resulting improved water and air quality, wildlife benefits, and reduced erosion.

Develop and evaluate novel methods to establish/plant cover crops into corn-soybean systems before and after harvest

- a) Seeding methods and machinery
- b) Seed treatments
- c) Better decision aids for selecting cover crop species, determining timing of seeding, and estimating potential growth.
- d) Determine impact of residual herbicides

Develop and evaluate novel methods to terminate cover crops in corn-soybean systems both before and after planting corn and soybean

- a) Better/more effective/faster herbicide termination under cold spring temperatures
- b) Self terminating cover crops
- c) Cover crops “extremely sensitive” to specific herbicides
- d) Decision tools for determining timing of termination
- e) Improved methods of mechanical termination

MCCC – Collaborative Actions

The Midwest Cover Crops Council is a diverse group from academia, extension, production agriculture, non-governmental organizations, commodity interests, private sector, and representatives from federal and state agencies collaborating to facilitate widespread adoption of cover crops throughout the Great Lakes and Mississippi river basins (including Indiana, Michigan, Ohio, Ontario, Illinois, Wisconsin, Minnesota, Iowa, Missouri, and North Dakota) – 9 states & 1 province

What we do:

- Sponsor an annual conference – 1 day research – 1 day general
- Maintain a cover crops website
- Support the web-based Cover Crop Selector tool
- Released the Cover Crops Field Guide – pocket guide
- Propose and coordinate regional cover crop projects – both research & education
- Share research results and education material across the region

Midwest Cover Crops Council Website

<http://www.mccc.msu.edu/>



Illinois Indiana Iowa Michigan Minnesota North Dakota Ohio Wisconsin Ontario



WELCOME TO THE MIDWEST COVER CROPS COUNCIL WEBSITE

The goal of the *Midwest Cover Crops Council (MCCC)* is to facilitate widespread adoption of cover crops throughout the Midwest, to improve ecological, economic, and social sustainability.

WHO WE ARE?

The MCCC is a diverse group from academia, production agriculture, non-governmental organizations, commodity interests, private sector, and representatives from federal and state agencies collaborating to address soil, water, air, and agricultural quality concerns in the Great Lakes and Mississippi river basins (including Indiana, Michigan, Ohio, Manitoba, Ontario, Illinois, Wisconsin, Minnesota, Iowa, and North Dakota).

WHY COVER CROPS?

Cover crops are an effective tool to reduce soil erosion and increase nutrient recycling on farmlands, thereby also decreasing the soil and nutrient loads entering lakes and waterways. Cover crops can have numerous other benefits including improvement of soil quality, pest management, fertility management, water availability, landscape diversification, and wildlife habitat.

NEWS

Mark your calendars for the next [MCCC meeting in Windsor, Ontario February 10-11, 2009.](#)

Reflect on 2008 and get ready for 2009 by viewing the newly added [2008 MCCC Meeting reports!](#)

View the MCCC plans for the Cover Crop Selector Tool from the [2008 ASA Posters.](#)

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