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Sustainable Corn's News from the Field

Climate and Corn-based Cropping Systems Coordinated Agricultural Project (CSCAP)

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Project Highlights:

- First of its kind research on organic cropping systems.
- 11 institutions across 9 states partner with food and agriculture industry partners in breakthrough organic corn and climate change research.
- Research will increase farmer's capacity to manage organic cropping systems under wet and dry conditions; helping to maximize crop yields while also protecting water and soil.
- Funding for organic research is needed through industry partnerships to build into existing Sustainable Corn network.
- Organic partners include Annie's Homegrown, CROPP Cooperative and Organic Valley, Farmer's Advocating for Organics and the Sustainable Food Trade Association.

We're on the Web!
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In The Field with Dr. Strock

By Lynn Laws, Communications Specialist, CSCAP

Bringing together the best of conventional farming, organic farming and prairie systems to produce food is what makes Jeff Strock, Ph.D., excited to be a part of a 9-state research project in the U.S. Corn Belt, called Sustainable Corn. Strock is a professor in the Department of Soil, Water and Climate at the University of Minnesota.

The University of Minnesota research site has an extended rotation referred to as a Variable Input Crop Management System. The system, which has been in place since 1988, has organic rotations, conventional rotations and restored prairie strips. Two examples of extended rotations being researched with conventionally and organically grown crops are 1) corn, soybean, wheat and red clover and 2) corn, soybean, oats and alfalfa.

"Because we have three types of systems [organic, conventional, prairie], we can ask: Are there management techniques within organic systems that can transfer over to help conventional farming systems and vice versa?" said Strock.

One way Strock's team is looking to transfer wisdom between systems is by examining the tillage, drainage and water management processes used currently within each system to see if anything can transfer over to help improve another.

Over time, Strock and his team have found the most remarkable soil and moisture differences in the prairie strips and would like to find ways to have soil in the conventional and organic systems that more closely mimics the prairie system, which is more resilient in times of drought and flooding.

More about Strock's research in the next issue of Sustainable Corn's News From the Field.

Call to Action: Organic Allies Support Sustainable Corn

In 2011, the USDA funded the five-year Sustainable Corn Project, also known as the **Climate and Corn-based Cropping Systems Coordinated Agriculture Project (CSCAP)**. Sustainable Corn is a trans-disciplinary partnership among 11 institutions, 140 scientists, graduate students and topic-based specialists across 19 disciplines.

The goal of Sustainable Corn is to explore comprehensive strategies to ensure US farmers can continue to meet the "food, feed and fuel demands of agribusiness, industry, and the everyday citizen". Project team members are working to identify cropping systems and practices that have a lighter environmental footprint yet remain highly productive under a changing climate.

The team's analyses and recommendations will equip farmers and policy makers while simultaneously training the next generation of scientists and citizens.

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Project Status:

- Organic industry contributions in the amount of $293,000 are needed to ensure organic systems research.

Lamberton, Minnesota Organic Research Site:

Decagon soil moisture probe with sensors embedded at set increments in the soil profile.

Call to Action continued

Funding and direction by the USDA for Sustainable Corn has focused primarily on conventional corn cropping systems due to the vast amount of land and economic resources currently invested in these systems in the corn belt. Thus, a gap in the research network is the assessment of organic cropping systems and whether their response to changing climatic conditions is similar to conventional cropping and prairie systems.

Funding for organic research is needed through industry partnerships that build into the existing research network, thereby leveraging scientific expertise, research protocols and outreach. Organic and conventional cropping systems will be presented from a holistic and fair stance with emphasis placed on each system's strengths. This approach allows for a comprehensive understanding of sustainability and stewardship.

CROPP Cooperative, one of the nation's leading farmer-owned cooperatives and maker of Organic Valley-brand dairy products, is leading the organic systems fundraising efforts with the Sustainable Corn team. CROPP is encouraging all organic industry partners and allies to support the integration of organic systems research in the Sustainable Corn project.

Funding in the amount of $388,000 is required to include organic systems in this groundbreaking research. Current fundraising efforts have secured $95,000 from industry partners Annie's Homegrown and the CROPP Cooperative Farmer's Advocating for Organics (FAFO) Fund. CROPP and Sustainable Corn are seeking an additional $293,000 to maintain the organic integrity of this critical and timely research.

To contribute to this critical effort contact: Nate Morr, Organic Valley CSCAP Consultant, (831) 588-1856, nater1@sbcglobal.net. To learn more about the research contact: Lori Abendroth, CSCAP Project Manager, (515) 294-5692, labend@iastate.edu.

Sustainable Corn Caught in the Act

Paulo Pagliari, University of Minnesota Assistant Professor, Dept. of Soil, Water and Climate, speaking with Andrea Basche, a Ph.D. student and CSCAP member.

In Sept., Sustainable Corn team members visited David Kline's organic farm in Ohio. Turnips, interplanted in corn, improve the soil and will be used for forage/grazing after the corn harvest.

Sustainable Corn team members Mike Castellano (Asst. Prof. at Iowa State University) and Matt Helmers (Assoc. Prof. at ISU) check out a weather station at a drainage watershed site.

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USDA United States Department of Agriculture National Institute of Food and Agriculture

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