

Partnership Matters



September 2005

RESEARCH BRIEF—

Tillage and cropping systems

What's new. After a number of years in development, fall 2004 saw the initiation of the Iowa Learning Farm. Protecting our most valuable natural resource, the soil, is the driving force behind this new collaborative effort. The Iowa Learning Farm is aimed at promoting efficient agriculture production systems that result in agronomic, economic, and environmental improvements. A focal point of the project is to increase awareness and adoption of conservation systems and ethics within the agricultural sector. The project team consists of several ISU Extension faculty and field crop specialists across Iowa. The project leader for the Iowa Learning Farm is Mahdi Al-Kaisi, assistant professor and extension specialist of soil and water management from the Department of Agronomy.

This is a collaborative effort with Iowa State University Extension and Iowa Department of Agriculture and Land Stewardship (IDALS), Division of Soil Conservation, Iowa Natural Resources Conservation Service, and the Iowa Department of Natural Resources who provided funding for this project. The Conservation Districts of Iowa and the Iowa Farm Bureau also are collaborating in the project planning and communications.

ISU research. Currently, the Iowa Learning Farm is working with 17 farmers located around the state. This number is expected to increase to 30 farmers for the 2006 growing season. As a baseline study, the Iowa Learning Farm is conducting field-scale trials to explore conservation management systems with an emphasis on conservation tillage, cropping systems and nutrient management across Iowa.

These farmers and researchers are studying tillage systems including no tillage, ridge tillage, and strip

—continued



John Holmes, extension field crop specialist (right), checks the stand establishment. (Mark Licht)

RESEARCH BRIEF—

Hub and spokes: A novel approach

What's new. "Hub and spokes" is a different approach to field crop research that began in 2001 as an integral part of the Tri-County (Butler, Floyd and Mitchell counties) Water Quality Project. The idea is to combine both large-scale field trials with small-scale research plots to better understand how combined tillage and manure management practices promote efficient nutrient use while reducing adverse effects on surface water quality. The plot research, conducted at the ISU Northeast Research Farm near Nashua, serves as the hub of the project and accompanying field trials on 16 cooperator farms represent the spokes, which serve to verify results on farms and to disseminate information to the public.

ISU research. The first hub and spokes projects had a common primary focus on examining the role of supplemental commercial nitrogen (N) rates in farm systems where manure was applied and where corn followed alfalfa. Additional studies have examined the effectiveness of various seed treatments (fungicide, insecticide and both), varied planter speeds and combinations of row spacing and population of soybeans.

The information is directly delivered to area farmers, agribusinesses and agency personnel, with the data in 2004 reaching nearly 2,900 individuals. These results and training opportunities are resulting in great interest in calibration of manure application equipment.

What's next. The hub and spokes concept may present opportunities in partnerships across Iowa between the university and Corn and Soybean Initiative partners.

Learn more. Three ISU Extension publications generated by the hub and spokes project are PM 1948, *Calibrating Liquid Tank Manure Applicators*; PM 1901g, *Resource Conservation Practices: Manure and Tillage Management*; and PM 1901h, *Tillage, Manure Management and Water Quality*. These are available from ISU Extension and are downloadable from www.extension.iastate.edu/pubs/ma.htm.

For detailed information on the hub and spokes projects, contact George Cummins, ISU Extension field crop specialist, gcumms@iastate.edu or 641-228-1453 (Floyd County, Charles City).

Tillage and cropping systems, *continued*—

tillage; cropping systems including continuous corn, corn-soybean rotation, cover crop and pasture; residue removal; and nitrogen timing.

What's next. Information gathered from the studies will be used to tailor educational activities toward conserving or improving soil and water quality. The data will help to assess the current conservation practices being implemented within Iowa and highlight areas that need to be developed or improved upon. The project also is evaluating the role of community in advancing adoption of conservation systems, while also determining the economics of the various conservation systems being studied.

Learn more. A website on the Iowa Learning Farm can be found at www.extension.iastate.edu/ilf. It will eventually contain the results of this research.

PARTNER PROFILE —



Palle Pedersen

Assistant professor of agronomy and soybean extension agronomist, Iowa State University

Origin

Born and raised on a hog farm in Køge, Denmark, just 20 miles south of Copenhagen near the Baltic Sea

Training

- Ph.D., agronomy, 2002, University of Wisconsin–Madison
- M.S., agricultural science, 1999, The Royal Veterinary and Agricultural University, Denmark
- M.S., agricultural economics, 1997, Wye College, University of London, England
- B.S., agricultural science, 1996, The Royal Veterinary and Agricultural University, Denmark

At ISU

- Joined the staff in February 2003
- Responsible for the soybean research and extension program

Notable Achievements

- Educated at 3 different universities in 3 different countries
- Conducted field research on 11 different field crops
- Practical production experience with more than 20 agronomic crops
- Nine years of practical experience on grain farm in Denmark

Personal

- Have a great passion for fishing and hunting
- Love to travel and explore

Quotable Quote

“Working closely with farmers, getting them to think outside of the box and encouraging them to challenge themselves are the greatest joys of my job. My research and extension program is



set up to identify and solve soybean production problems to improve the economic well-being of Iowa soybean farmers and to develop information that addresses the needs of Iowa farmers.”

... and justice for all

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ISU BY THE NUMBERS —



ISU Extension Educational Materials and Marketing Services

Professional communicators on staff:	20
Communicators native to Iowa:	18
Degrees earned by staff:	29
Years of experience working at ISU:	318
Market news broadcasts in a year:	3,315
Extension programs on WOI radio in a year:	330
News releases distributed 2004–2005 fiscal year:	579
Estimated number of copies of <i>How a Corn Plant Develops</i> since first printing:	148,500
New extension publication titles printed in 2004–2005:	263
Revised extension publication titles printed in 2004–2005:	161
<i>Gardening in the Zone</i> television segments broadcast statewide in 2005:	35
ISU Extension exhibits managed in summer 2005: (Des Moines Arts Festival, Iowa State Fair, Farm and Field Fest, Clay County Fair)	4
Estimated number of visitors to the four exhibits:	560,000
Hours of live webcam coverage from summer events:	1,023
2005 fall semester student interns:	13
Number of newsletters published by department:	9
Hours of Pesticide Applicator Training delivered via satellite in 2004–05:	16

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