



Mission Statement
The Iowa Learning Farm promotes efficient agriculture production systems that result in agronomic, economic, and environmental improvements through increased awareness and adoption of conservation systems and ethics.

ILF 01 Volume 4 Issue 2 Spring 2008

Rainfall Simulator on the road again

The Iowa Learning Farm's conservation systems rainfall simulator—an educational tool used to illustrate the potential impacts of conservation and land management practices—crisscrossed the state last summer demonstrating at county fairs, field days, conferences and farmers' markets.

The rainfall simulator simultaneously distributes rain on five different surfaces via an oscillating nozzle. The runoff from these different scenarios is collected in glass jars and the results are clearly visible. For example, the rainfall simulator can highlight how keeping various amounts of residue on the land can reduce sediment loss, or the effectiveness of grass buffers to slow or prevent runoff, or how quickly rain runs off an urban parking lot.

“The rainfall simulator delivers a simple but potent message, that if we don't slow the flow, Iowa's rich top soils can be lost to downstream water bodies,” said Matt Helmers, ISU Extension water quality engineer. Helmers is in charge of the simulator and oversees the students who help present this message to audiences during the summer months.

A goal of the Iowa Learning Farm is to build a “culture of conservation,” encouraging the adoption of residue management and conservation practices to improve water quality and reduce nonpoint source pollution. Farmers, researchers and ISU Extension personnel are working together to identify and implement the best in-field management practices that reduce sediment and nutrient loadings from Iowa's farms.

What I did on my summer vacation

Last summer was hectic for Brad Bond, an ISU senior agricultural engineering major. The Centerville native spent his time hauling the rainfall simulator and presenting its message all over Iowa. He, and other ILF team members, presented at 42 events in 33 counties between May and October.

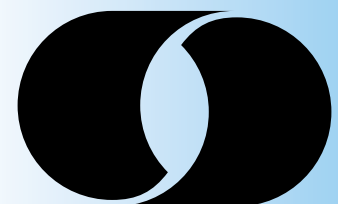
Bond enjoyed interacting with different groups of people from students, to RAGBRAI bicyclists, to farmers who would challenge him with technical questions. “I was nervous the first time I presented, but toward the end of the summer I was able to look at the audience and determine what type of questions they would ask. I could then approach the presentation in a way that would spark the most interest.”

(Rainfall Simulator continued on page 2)



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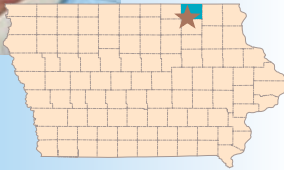
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Max Schmidt



Producer Profile

Iowa Learning Farm cooperater Max Schmidt is a third generation farmer, starting on his own in 1969, near Elma in Howard County. His farm has grown to 3,300 acres in row crops, 40 steers, and a large hog operation.

He has been involved with the Iowa Learning Farm project since it began. This summer is his fourth with continuous corn, comparing acres of baled vs. non-baled corn stalks.

Max says he enjoys experimentation on his land. “I have all these questions and I want to get answers. There is so much we don’t know,” said Schmidt. “We can’t do it ‘because we have always done it this way.’ We need to learn how to apply conservation practices by reducing the penalties. There are all sorts of things we need to figure out.”

Max and his wife, Georgia, raised twin boys and two girls, and all are involved in professional pursuits other than farming. Max’s hope for a family heir lies with his grandchildren. But his outlook toward the future is rosy. “If retirement is defined as doing all the things you want to do, then I have been retired all my life. I am doing what I want to do.”

Max is involved with the national and area Pork Producers, Howard County economic development, and Farm Bureau. He is on his hospital board of directors and is active in his church.

(Rainfall Simulator continued from page 1)

“Many people are visual learners and using the rainfall simulator to show how rainfall effects soil surfaces makes it easier to understand and memorable,” said Bond.

On the road again

This summer will busy again because the simulator is requested regularly by various groups. Bond will relinquish his rainfall simulator duties

to ISU students Scott Jacobsen and Liz Juchems, who will accompany the simulator on its summer rounds. The knowledge of the importance of conservation is inter-generational; Liz is the daughter of ILF cooperater Rick Juchems. Rick is currently the Conservation Districts of Iowa president and has been working with the ILF team on his farm, comparing the impacts of cover crops.

Keep an eye out for the rainfall simulator this summer in your area. It could be at your county fair or an area field day. If you are interested in having the simulator at your nonprofit event, phone 515/294-5429 or complete the request form available at <http://www.extension.iastate.edu/ilf/>.



ISU senior Brad Bond demonstrates the rainfall simulator to RAGBRAI riders last summer. The rainfall simulator will be part of the NRCS Conservation Tent again this year.

Photo courtesy Dick Tremain, NRCS

Rainfall simulator preliminary schedule

Check the ILF web site for updates (events are added frequently)

April 22	E. Pottawattamie Co.	Women Landowner's event
April 24	Greenfield	Adair County Youth Science event
May 1	Allamakee County	SWCD 6th Grade Science event
May 2, 5-7	Eagle Grove	5th Grade Ag Environment Days
May 8	DMACC (Ankeny)	Iowa Children's Water Festival
May 14-15	Carroll County	SWCD Environment Days
May 20	E. Pottawattamie Co.	SWCD 5th Grade Environment Day
May 28	Tama County	Union Grove Watershed event
June 1	Ames	Reiman Gardens Ice Cream Social
June 10	Fayette County	NE Iowa No-Till Field Day
June 11	Muscatine County	ILF Field Day, Doug Nolte farm
June 17	Minden	Western Iowa No-Till Field Day
June 19	Nashua	ISU Northeast Research Farm Field Day
June 20	Boone	Practical Farmers of Iowa Summer Camp
July 8	Millerton	Project Rathbun Lake workshop
July 10	Bloomfield	Davis County Fair
July 15	Corning	Adams County Fair
July 17	Monticello	Great Jones County Fair
July 18	Boone/Winterset	Boone County Fair/Madison County Fair
July 21	Colfax	Jasper County Fair
July 23	Marshalltown area	RAGBRAI-NRCS Conservation Tent
July 23	Webster City	Hamilton County Fair (p.m.)
July 24	Indianola	Warren County Fair
July 25	Burlington	Des Moines County Fair
Aug. 25-28	Boone County	Farm Progress Show 2008

Operation Strip-Till gets rolling

Iowa Learning Farm cooperator Dave Nelson, owner of Brokaw Supply Company, and Doug Seltz, a Webster Soil and Water District commissioner, got together and conceived a way for area producers to try strip-tilling without taking the full plunge. They're calling it "Operation Strip-Till."

Operation Strip-Till is the coordination of a leased tractor, strip-till machine and two equipment operators. The strip-till machine will match up with either 12- or 16-row planter sizes, will be equipped for fall application of anhydrous and dry fertilizer, and use GPS auto-steer so rows will be straight for spring 2009 planting. For a fee (to cover equipment rental only), farmers can have a portion of their acres strip-tilled.

A seminar was held early this spring in Fort Dodge to introduce farmers to this opportunity. More than 75 attended the seminar, hosted by Brokaw Supply and Webster County NRCS, and sponsored by the Iowa Soybean Association, Iowa State University Extension and the Iowa Learning Farm. Producers heard from ISU Extension field agronomist John Holmes and agricultural engineer Mark Hanna. Also presenting were Kevin Kimberley, an independent consultant and farmer who is an industry-recognized expert on the subject, and a three-farmer panel of area strip-tillers who shared their experiences.

"It was so exciting to see the great interest that we had for this meeting," said Nelson. "Everyone reads about strip-till and recognizes the many advantages it would bring to their farm. But strip-till brings many new concepts and levels of management that people are scared to try on their own. By recruiting local experts who have strip-tilled for many years, we can implement their successes and knowledge right from the start."

Nelson said that they received more than 1,900 committed acres by the end of the meeting. Webster County producers interested in trying out the system can call Nelson at 800/362-1640.

Strip-tillage marries the best aspects of conventional tillage with the benefits of no-till. In the fall, the strip-tiller creates strips of exposed soil, broken up by a coulter and shank, and moves surface residue between the strips. In the spring, the strip of exposed soil warms and dries faster than the rest of the field, making this system ideal for some Iowa soil types. The added fertilizer is applied only to the exposed row, keeping weeds at bay.

Nelson and his father, Gary, farm the Smeltzer Trust Demonstration Farm near Otho, in Webster County. This farm is used as a teaching tool, showing many different agricultural practices and conservation techniques, and is one of the Iowa Learning Farm demon-



Brokaw Supply parts manager Mark Licht (right) discusses features of the Blu-Jet strip till bar with attendees at the Operation Strip-Till seminar, held this spring in Fort Dodge. The seminar introduced a way for producers to try strip-tilling on some of their acres without making a full commitment.

stration and research sites. A strip-till field day is being planned for this fall at the farm.

Nelson and Seltz hope to take Operation Strip-Till on the road, teaching others across Iowa how to set up similar programs and, in turn, sparking more conservation farming efforts.

New research help

The Iowa Learning Farm is proud to announce two new researchers who have joined the project.

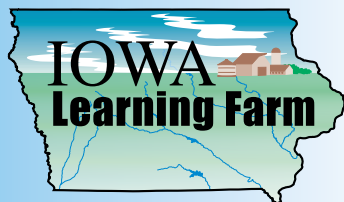
Andy Herringshaw is a research associate working for Mike Duffy in the Economics Department at Iowa State University. He is pursuing a master's degree in sustainable agriculture. His responsibilities are to evaluate economic results of our cooperator experiments, and to analyze erosion estimates through the NRCS program RUSLE2.

Andy earned a B.B.A. in finance and management from the University of Oklahoma. Prior to entering graduate school he worked for several years in the areas of transportation and finance.

Xiaobo "Bob" Zhou is a post doctorate research associate studying water quality modeling, assisting Matt Helmers in the ISU Agricultural and Biosystems Engineering Department. His duties are to simulate the soil erosion process on Iowa's agricultural lands; to investigate the impacts of conservation practices such as reduced tillage systems, grass waterways, vegetative strips, and terracing on reducing soil loss and improving water quality in the different soil regions; and to identify the most cost effective in-field management practices.

Zhou holds a Ph.D. and an M.S. from Virginia Polytechnic Institute and State University, Blacksburg, Va.; an M.S. from Zhejiang University, Hangzhou, China; and a B.S. from Huazhong University of Science and Technology, Wuhan, China.

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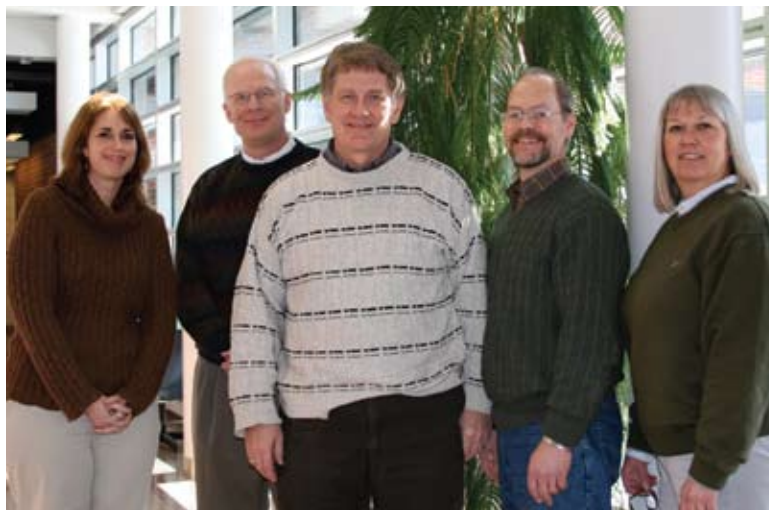
Iowa Learning Farm Newsletter is published by Iowa State University Extension, funded by the Iowa Department of Agriculture and Land Stewardship through the Integrated Farm and Livestock Demonstration Program, in collaboration with Iowa Department of Natural Resources, Natural Resources Conservation Service, Conservation Districts of Iowa, and Iowa Farm Bureau Federation.

To subscribe or change the address of a current subscription, write to Carol L. Brown, 2104 Agronomy Hall, Iowa State University, Ames, Iowa, 50011-1010, call 515-294-8912, fax 515-294-9985 or email: ilf@iastate.edu. Please indicate you are inquiring about the Iowa Learning Farm Newsletter and whether you are interested in a hard copy or electronic version. The newsletter's coordinators are John Lundvall, ILF Field Coordinator, and Jerry DeWitt, ILF Coordinator; the editor and production designer is Carol L. Brown.

... and justice for all

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ILF Leadership



Representatives from the Iowa Learning Farm partner agencies comprise the ILF steering committee. This group meets with the ILF team quarterly, ensuring that ILF is successful in its endeavors. Pictured above (left to right) are ILF steering committee members: Laura Greiner and Dave Beck of NRCS; Dean Lemke, Water Resources Bureau Chief, IDALS; Steve Hopkins, DNR; and Elaine Ilvess, Division of Soil Conservation, IDALS. Other ILF steering committee members are Deb Ryun, Executive Director, CDI; and Rick Robinson, Iowa Farm Bureau Federation environmental policy adviser.