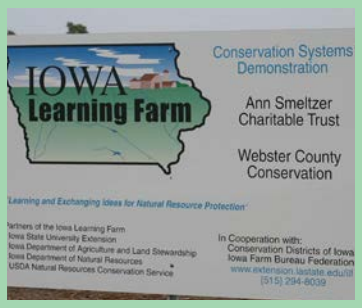
Iowa Learning Farms
10 Year Report



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Iowa Learning Farms Partners

Iowa Department of Agriculture and Land Stewardship (IDALS)
Iowa Department of Natural Resources (DNR) (United States Environmental Protection Agency)
Natural Resources Conservation Service (NRCS)
Iowa State University Extension and Outreach (ISUEO)
Leopold Center for Sustainable Agriculture (LCSA)
Conservation Districts of Iowa (CDI)
Iowa Farm Bureau
Iowa Water Center
Practical Farmers of Iowa

This cooperative project has been funded in part through Section 319 of the Clean Water Act.

Introduction

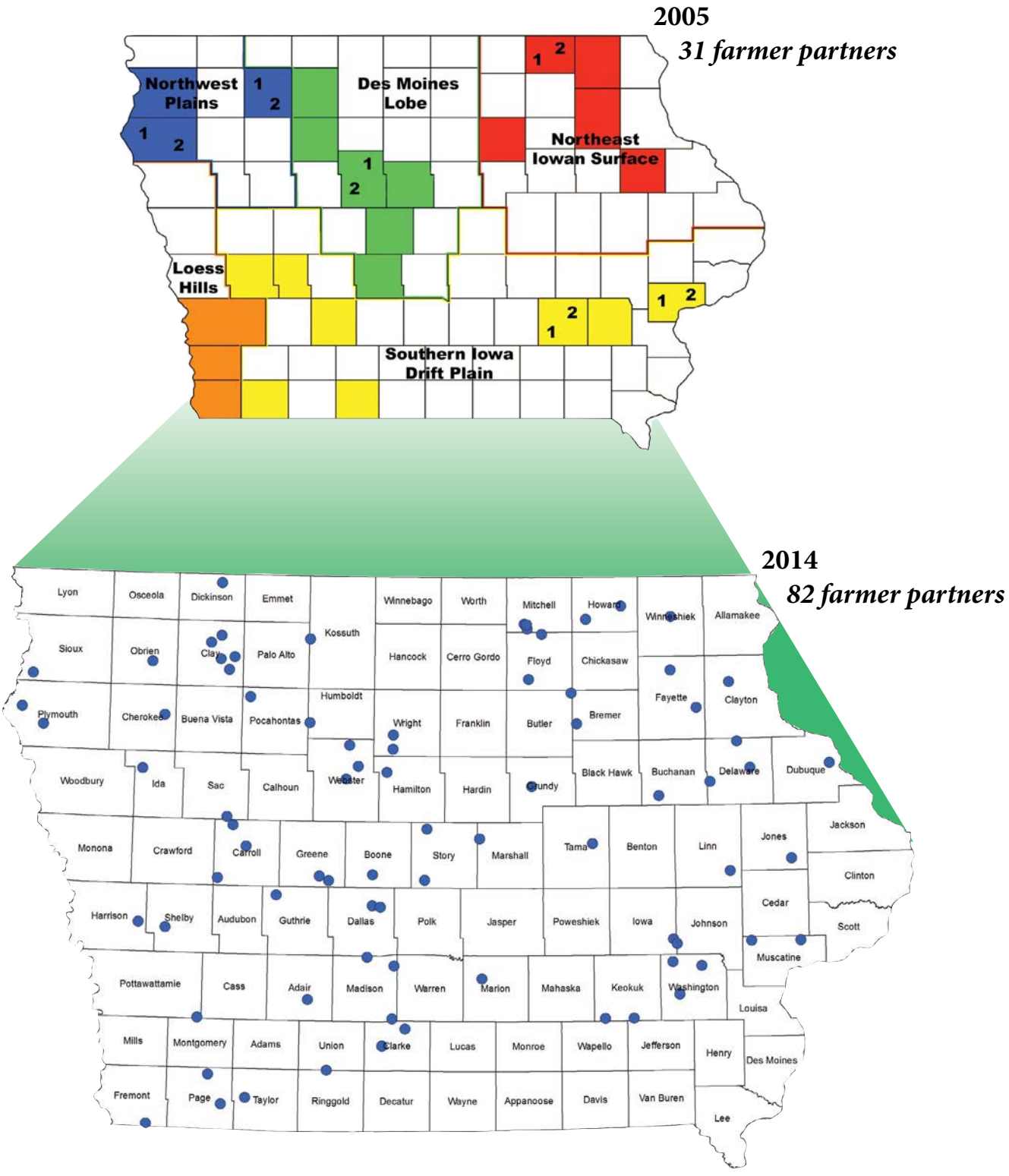
In 2004, the Iowa Learning Farms (ILF) started with a simple idea: Building A Culture of Conservation. The ILF Steering Committee wondered if they helped facilitate a network of farmer partners across the state who were demonstrating various practices on their land, including reduced tillage, terraces, waterways and cover crops, would they influence other farmers to do the same? The ultimate goal of ILF is to help producers recognize resource problems and to implement conservation systems leading to improved soil and water quality through the reduction of sediment and nutrient loads to water. ILF was established to serve as a model for learning and exchanging ideas among government agencies, farmers, scientists, agribusiness and the general public.

For 10 years, Iowans have turned to Iowa Learning Farms for reliable information about conservation, soil health, and water quality. ILF strives to reach a diversity of Iowans—farmers, landowners, rural and urban residents—with their conservation message through a variety of means: field days, workshops, Conservation Station events, print publications, fact sheets, videos, webinars, podcasts, a website, and social media.

While the program utilizes many different outreach approaches, the importance of farmer-to-farmer, person-to-person outreach cannot be overstated. Field days and farmer workshops have been at the heart of the Iowa Learning Farms since its inception. In 10 years, ILF has hosted 151 conservation-centered farmer field days/workshops across the state of Iowa. These farmer events reached 8,158 attendees, averaging 54 people per event.

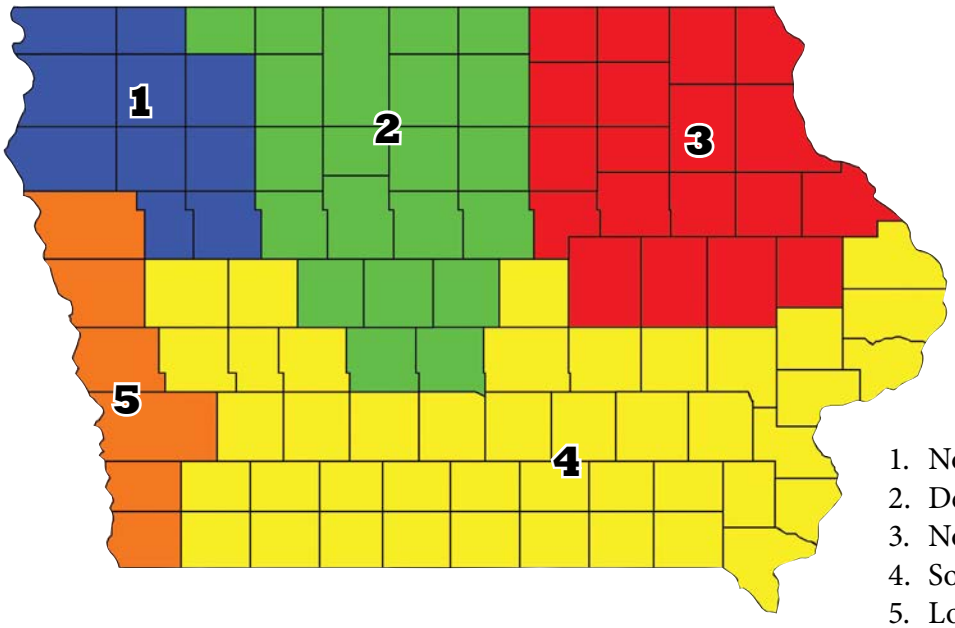
After all those field days and all those attendees it is time to assess whether the simple idea that established the Iowa Learning Farms 10 years ago works. This 10 year evaluation of the Iowa Learning Farms will look specifically at the statewide and regional demographics of those 8,158 attendees and the location and scope of the 151 field days. Are we reaching our target audience? Did we sufficiently cover the five major soil regions in the state? The second half of this report answers the question of whether the Iowa Learning Farms program has built an effective statewide network of farmers and is meeting its goal of facilitating increased conservation across the state of Iowa.

ILF Farmer Partners



Part 1: Statewide and Regional Farmer Outreach

In 2004, Iowa Learning Farms was organized around five major geographic regions in Iowa based on soil formation and landscape differences. We started doing outreach in 2005 with field days.



1. Northwest Iowa Plains
2. Des Moines Lobe
3. Northeast Iowan Surface
4. Southern Iowa Drift Plain
5. Loess Hills

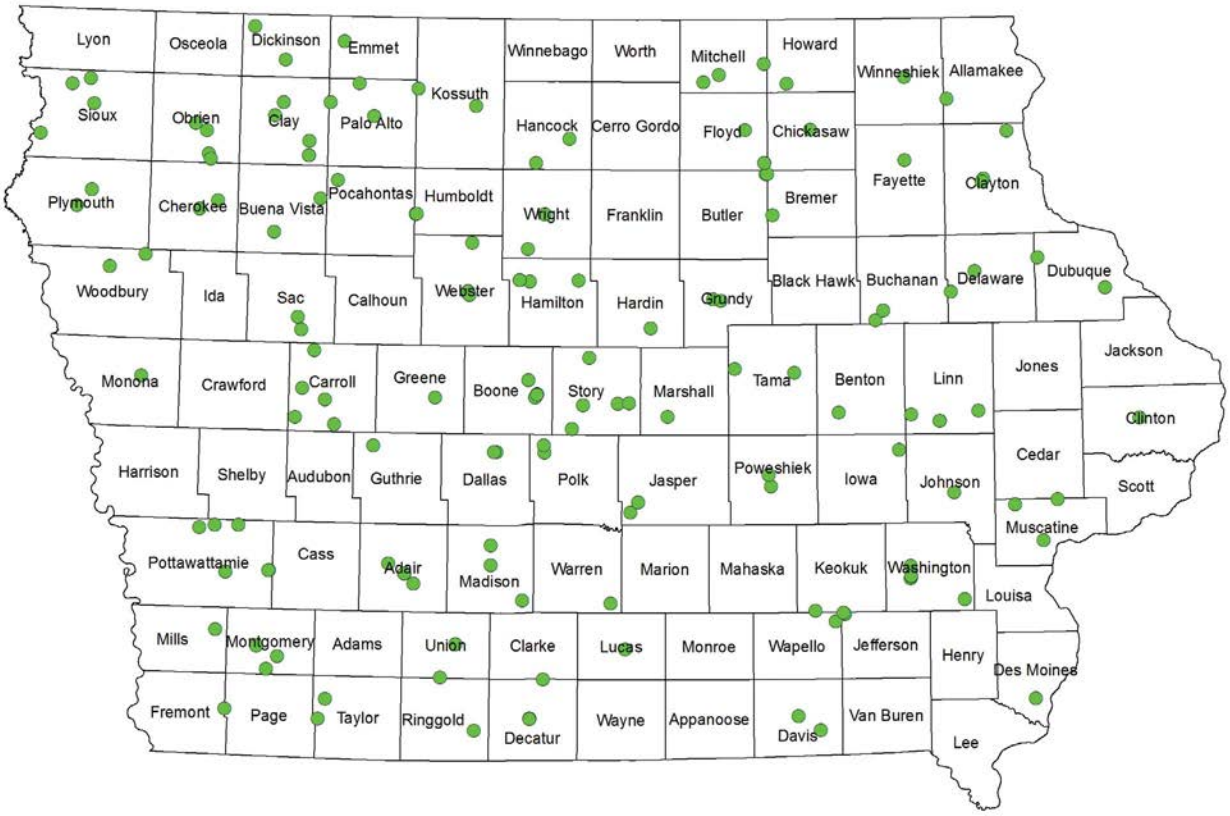
The goal of the regional approach was to make certain that we were reaching farmers across the state and addressing the conservation challenges of their specific areas. The Iowa Learning Farms' approach to field days is to feature one or two farmers alongside a scientist or agency personnel.

Field day/workshop summary 2005-2014:

- 151 field days/workshops
- 8,158 attendees
- 54 = average attendance

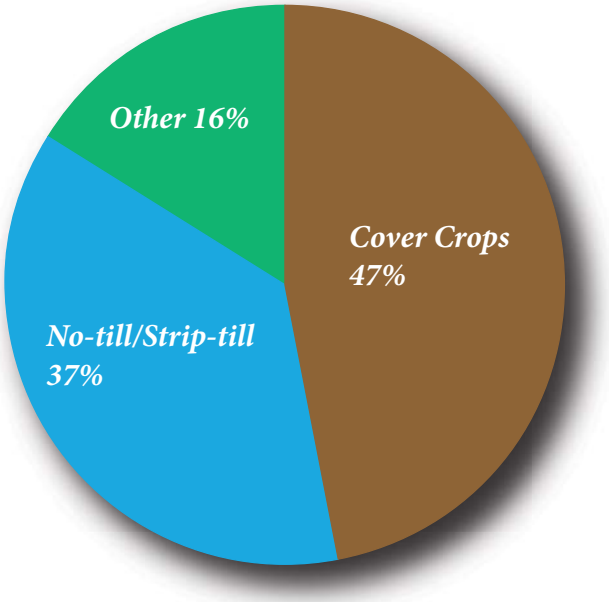
Year	# of field days/ workshops	Attendance
2005	5	120
2006	5	303
2007	7	342
2008	7	450
2009	13	758
2010	11	938
2011	25	1,293
2012	23	1,024
2013	32	1,995
2014	23	935
Total	**151**	**8,158**

Iowa Learning Farms Field Days 2005-2014



Since the beginning, ILF farmer outreach events have focused on conservation. At first the emphasis was on no-till and reduced tillage. By 2010, along with our partners, we were educating on a whole suite of conservation practices: cover crops, strip-till, nutrient management, grassed waterways, grazing/pasture improvement, CREP wetlands, bioreactors, biofuels and prairie strips.

Primary Field Day Topics

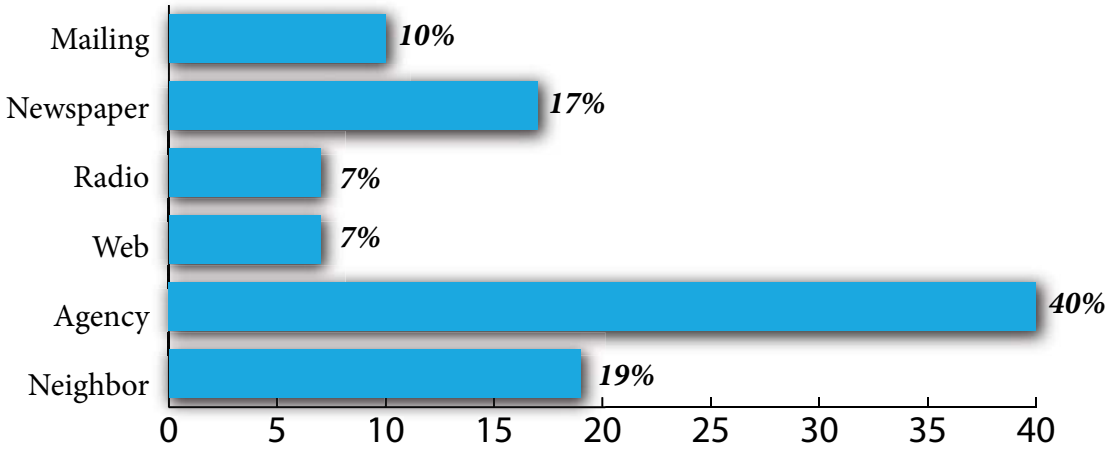


Field Day Promotion

Through the years, we have taken a multi-faceted approach to field day promotion, including a news release sent to newspapers in the county of the event as well as all surrounding counties and agricultural media. The news release and promotional 8.5x11" flyer are also sent to the Soil and Water Conservation District/Natural Resources Conservation Service and ISU Extension and Outreach offices in the same counties. We ask that the field staff print out the flyers and post them where they regularly place flyers in their communities and encourage their clients and visitors to attend. We also encourage the commissioners to come to the event to greet attendees and welcome them. Additionally, an e-mail is sent to the Iowa legislators in the territory of the event, letting them know about the field day and extending an invitation to come.

Also, several weeks prior to the field day or workshop, postcards with details about the event are printed and sent to the host farmer for them to mail to neighbors and other interested people they know and/or to mailing lists acquired from the host county EQIP enrollees or other existing list(s). In addition, the events are posted on the ILF website, Twitter, Facebook and our blog.

Success of Event Promotion



ILF Field Day Attendee Demographics Statewide

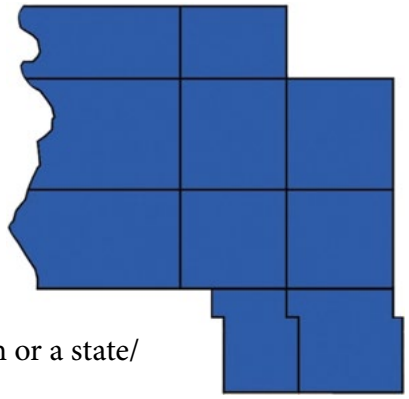
We are primarily reaching our target audience. The majority of event attendees reported that they were farmers or landowners. We are also appealing to younger farmers and landowners.

Average Age*	**50 years**
Age Range	
30 & Under	18%
31-45	18%
46-55	47%
66+	17%
Identity (could select more than one)	
Farmer	59%
Landowner	32%
Government Agency	18%
Other	16%
Student	3%

*Started collecting this demographic in 2010

Region 1: Northwest Plains

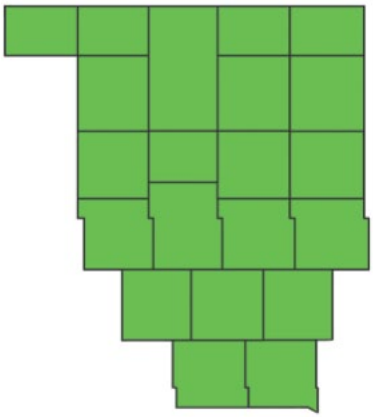
Counties: Lyon, Osceola, Sioux, O'Brien, Clay, Plymouth, Cherokee, Buena Vista, Ida, Sac



- Field days/workshops = 19
- Field day topics:
  - Cover Crops = 8
  - Strip-till/No-till = 10
  - Watershed = 1
- Field day/workshop attendees = 1,277
- Average attendance = 67
- Average age of attendee was 46, the youngest of any region
- 61% identified as farmer, 31% identified as landowner
- 50% say they heard of the field day from ISU Extension and Outreach or a state/federal agency, the highest of any region

Attendee Identification[1]				
Farmer	Landowner	Government	Other[2]	Student
61%	31%	18%	14%	3%
How They Heard About Field Day				
Word of Mouth	Local ISUEO, DNR, NRCS, IDALS Staff	Newspaper	Mailing	Radio
13%	50%	13%	5%	10%

Region 2: Des Moines Lobe



Counties: Dickinson, Emmet, Palo Alto, Pocahontas, Calhoun, Greene, Dallas, Polk, Boone, Webster, Humboldt, Kossuth, Winnebago, Hancock, Wright, Hamilton, Story, Hardin, Franklin, Cerro Gordo, Worth

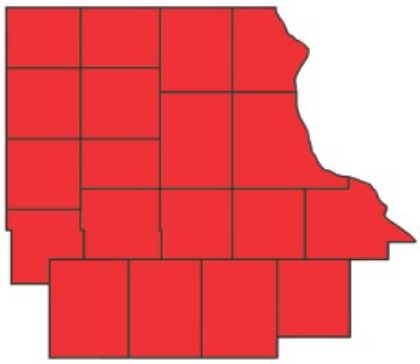
- Field days/workshops = 36
- Field day topics:
  - Cover Crops = 14
  - Conservation Tillage = 15
  - Other (STRIPs, CREP Wetlands) = 7
- Field day/workshop attendees = 2,105
- Average attendance = 59
- Average age of attendee = 52

Attendee Identification[1]				
Farmer	Landowner	Government	Other[2]	Student
57%	27%	19%	16%	5%
How They Heard About Field Day				
Word of Mouth	Local ISUEO, DNR, NRCS, IDALS Staff	Newspaper	Mailing	Radio
21%	38%	18%	10%	9%

[1] Sum is more than 100% as attendees could choose all categories that applied
[2] Other includes, but not limited to: press, seed sales/agronomists, retired, commercial applicator, etc.

Region 3: Northeast Iowan Surface

Counties: Mitchell, Floyd, Butler, Grundy, Tama, Black Hawk, Bremer, Chickasaw, Howard, Winneshiek, Fayette, Buchanan, Benton, Linn, Delaware, Clayton, Allamakee, Dubuque, Jones

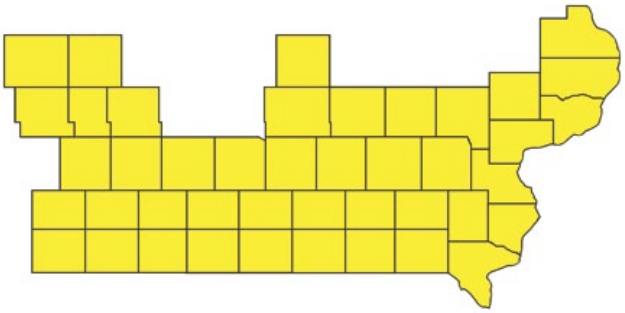


- Field days/workshops = 35
- Field day topics:
  - Cover Crops = 16
  - Conservation Tillage = 14
  - Other (STRIPs, CREP Wetlands, Nutrient Reduction) = 5
- Field day/workshop attendees = 1,796
- Average attendance = 51
- Average age of attendee = 49
- 63% identified as farmer with 31% identified as landowner
- 38% say they heard of the field day from ISU Extension and Outreach or a state/federal agency by a government agency

Attendee Identification[1]				
Farmer	Landowner	Government	Other[2]	Student
63%	31%	15%	16%	4%
How They Heard About Field Day				
Word of Mouth	Local ISUEO, DNR, NRCS, IDALS Staff	Newspaper	Mailing	Radio
21%	39%	19%	10%	6%

Region 4: Southern Iowa Drift Plain

Counties: Crawford, Shelby, Cass, Montgomery, Page, Taylor, Adams, Audubon, Carroll, Guthrie, Adair, Union, Ringgold, Decatur, Clarke, Madison, Warren, Lucas, Wayne, Appanoose, Monroe, Marion, Jasper, Marshall, Poweshiek, Mahaska, Wapello, Davis, Van Buren, Jefferson, Keokuk, Iowa, Johnson, Washington, Henry, Lee, Des Moines, Louisa, Muscatine, Cedar, Scott, Clinton, Jackson



- Field days/workshops = 53, the most of any region
- Field day topics:
  - Cover Crops = 29
  - Conservation Tillage = 13
  - Other (STRIPs, CREP Wetlands, Pasture Improvement) = 11
- Field day/workshop attendees = 2,394
- Average attendance = 45
- Average age of attendee = 49
- 55% identified as farmer, 37% identified as landowner
- 37% say they heard of the field day from ISU Extension and Outreach or a state/federal agency

[1] Sum is more than 100% as attendees could choose all categories that applied
[2] Other includes, but not limited to: press, seed sales/agronomists, retired, commercial applicator, etc.

Southern Iowa Drift Plain continued...

Attendee Identification[1]				
Farmer	Landowner	Government	Other[2]	Student
55%	37%	20%	17%	2%
How They Heard About Field Day				
Word of Mouth	Local ISUEO, DNR, NRCS, IDALS Staff	Newspaper	Mailing	Radio
20%	37%	17%	10%	6%

Region 5: Loess Hills

Counties: Woodbury, Monona, Harrison, Pottawattamie, Mills, Fremont

- Field days/workshops = 8
- Field day topics:
  - Cover Crops = 4
  - Conservation Tillage = 4
- Field day/workshop attendees = 586
- Average attendance = 73, the highest of any region
- Average age of attendee = 52, the oldest of any region
- 73% identified as farmer, the highest in any region; 37% identified as landowner
- 20% said they heard of the event through a mailing, twice that of the other regions

Attendee Identification[1]				
Farmer	Landowner	Government	Other[2]	Student
73%	34%	15%	14%	0%
How They Heard About Field Day				
Word of Mouth	Local ISUEO, DNR, NRCS, IDALS Staff	Newspaper	Mailing	Radio
18%	45%	21%	20%	7%

[1] Sum is more than 100% as attendees could choose all categories that applied
[2] Other includes, but not limited to: press, seed sales/agronomists, retired, commercial applicator, etc.

Part 2: Approach To 10 Year Evaluation

Methodology

In the fall of 2014, we developed a Conservation Evaluation Survey to help us conduct a 10 year evaluation of the Iowa Learning Farms. You can find the survey at the end of this report. This survey was sent to two distinct groups:

- ILF Group: Farmers and landowners who attended an ILF field day in the last 10 years
- Control Group: Rural residents from similar geographic areas who did not attend an ILF field day

Each group received the one-page survey in early January 2015.

The mailing database for the ILF Group was compiled using the comment card registration system in place at each ILF field day. Unfortunately, we don't have comment cards available for 2005-2007 (17 field days) because this evaluation process wasn't established until 2008. The number of comment cards rarely matches the number of event attendees because we only give out one comment card per household. For this mailing, we eliminated all the attendees that were government employees. The survey was sent with a return envelope. There was no follow up to the initial survey. The total mailing for the ILF Group was 2,438. ILF Group had 635 surveys returned, a response rate of *26%. This is a fairly decent response for a one-time mailing.

To create the mailing list for the Control Group, addresses were entered into a mailing list using plat map databases from counties in and near where ILF field days had taken place. The total size of this group was 26,147 addresses. Due to the large size, every sixth person sequentially was selected and we did a single mailing to 4,280, hoping for a 10 percent response rate to this survey. The Control Group had 267 returned surveys with only a *6% response rate. The unreliability of the mailing list is one possible explanation of the low response rate. Many of the recipients live in rural Iowa but might not farm. The point of the Control Group was to give some context from which to compare the ILF Group. We must be cautious in drawing too many conclusions from the sample.

10 Year Survey

ILF Group	Control Group
Farmers & landowners who attended an ILF field day	Farmers & landowners in the same geographical area who did not attend an ILF field day
Surveys mailed = 2,438	Surveys mailed = 4,280
Survey Responses n = 635	Survey Responses n = 267
Response Rate = *26%	Response Rate = *6%

Results

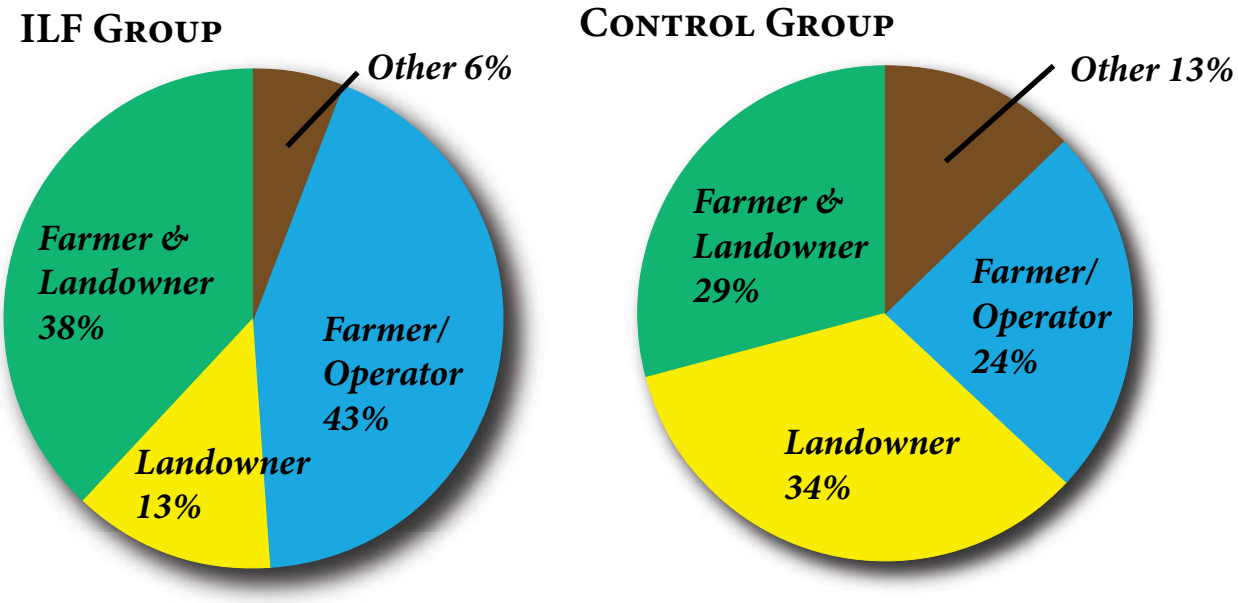
The remainder of this report is focused on summarizing the results of this survey. Part Three compares practices and perceptions of the ILF Group and Control Group, based upon responses to the mailed questionnaire, including demographics, land practices, number of field days attended, networking among other farmers/landowners, and interest and barriers to implementing conservation practices.

PART 3: A Portrait of ILF Farmer Event Attendees Compared to Their Local Peers

In this section, we compare and contrast the folks who attended an ILF field day over the past 10 years (ILF Group) with rural residents in similar geographic areas who did not attend one of our field days (Control Group).

Summary of Evaluation Participants

Both the ILF Group and Control Group consist primarily of farmers and landowners. For the ILF Group, we know that the "Other" category primarily consists of agribusiness people such as crop consultants, seed dealers, etc. It is unclear who the "other" category represents in the Control Group; however, all the respondents were involved in some sort of agricultural practice.



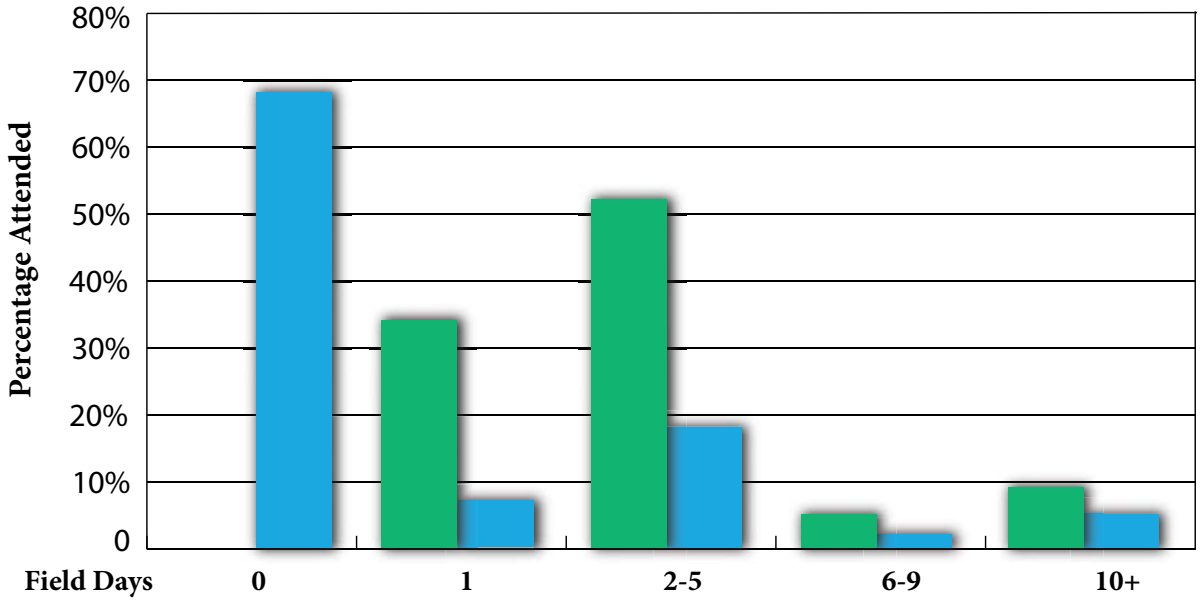
Field Days/Workshops

Field days and workshops provide farmers/landowners information and support needed to implement and sustain conservation practices. Within the ILF Group, the greater number of field days they attended, the more likely they have planted cover crops or increased residue practices. The Control Group attended significantly fewer field days since 2009. In fact, 68% of the Control Group had not been to a field day in the last six years, while 66% of the ILF Group reported participating in two or more field days.

Average number of field days/workshops attended since 2009

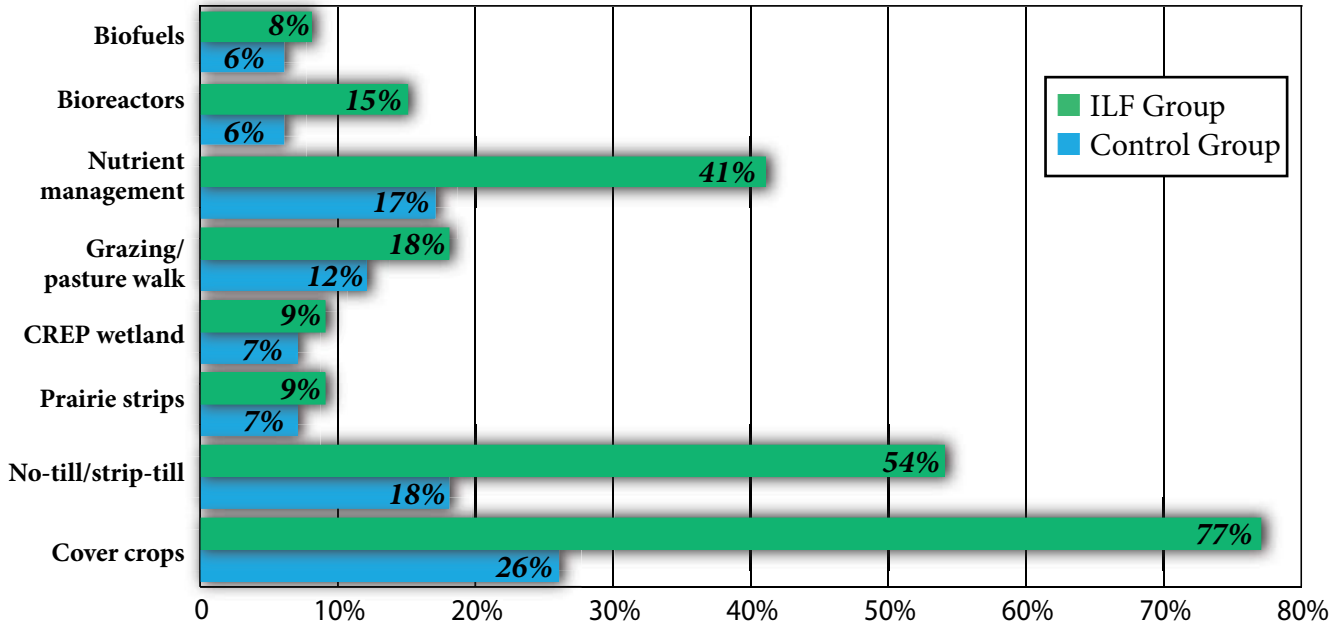
ILF Group (n=635)	Control Group (n=267)
4	**1**

Number of field days/workshops attended since 2009



	0	1	2-5	6-9	10+
ILF Group	0%	34%	52%	5%	9%
Control Group	68%	7%	18%	2%	5%

Which topics were presented at the field days/workshops? (check all that apply)



It is no surprise that so few of the respondents in the Control Group have adopted cover crops or no-till/strip-till practices on their farms compared to the ILF Group. A significantly fewer of them have attended field days on those two conservation practices.

Cover Crop Implementation

The introduction of the Iowa Nutrient Reduction Strategy has placed a high emphasis on adding cover crops to corn and soybean production. Almost 60% of the ILF Group used cover crops in 2014 compared to only 25% of the Control Group. ILF field day attendees are reporting more cover crops on their land in comparison to their peers and that number goes up the longer they use them. Perhaps the key to planting cover crops and then expanding and sustaining their use rests in field day attendance.

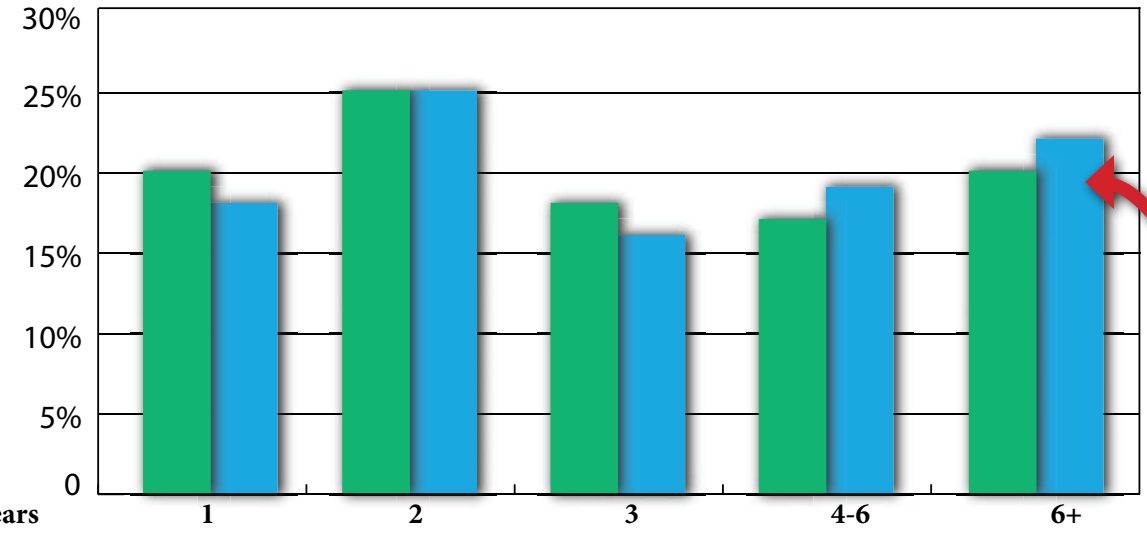
	ILF Group n=635	Control Group n=267
I fall seeded cover crops on some of my acres in fall 2014	59%	25%
Cumulative # of acres in 2014	*68,423	5,363
Average # of acres per respondent who said they were putting more acres into cover crops	198	99
Was cost-share used?	Yes: 58% No: 42%	Yes: 36% No: 64%

*One-fifth of all cover crops planted in 2014.

Types of cover crops planted? (check all that apply)

	ILF Group n=344	Control Group n=55
Cereal rye	81%	71%
Wheat	6%	11%
Oats	19%	13%
Radish/turnips	31%	18%
Other	11%	5%
Single species	57%	74%
Mixtures	43%	26%

Years of planting cover crops



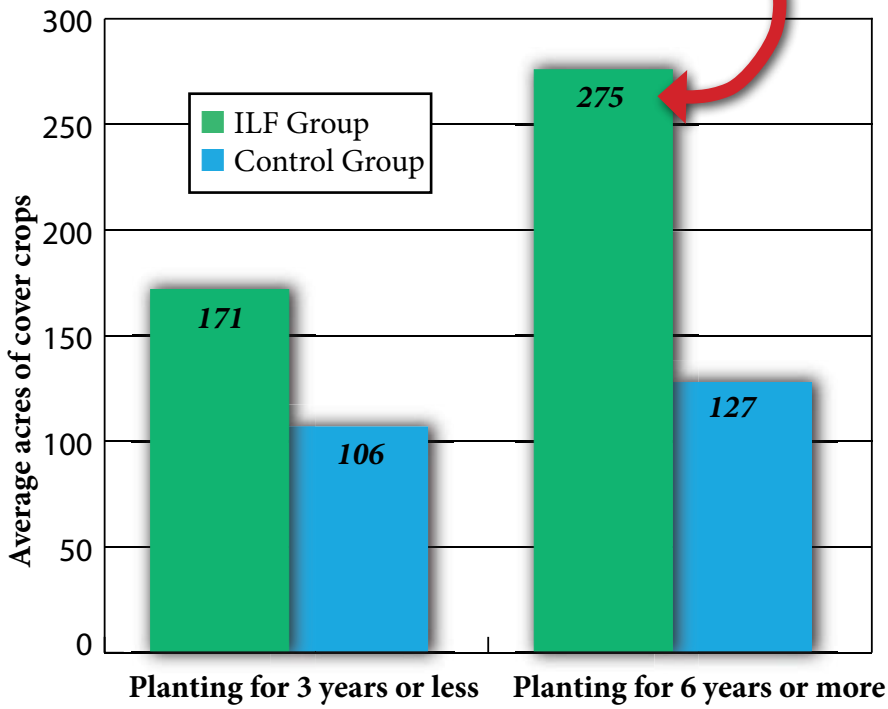
ILF Group	20%	25%	18%	17%	20%
Control Group	18%	25%	16%	19%	22%

While the Control Group's longevity of planting cover crops is similar to the ILF Group, the ILF Group's acres grew significantly over time.

The ILF Group had 63% report that they have been using cover crops for 3 years or less with an average of 171 acres of cover crops. Those who have used cover crops for 6+ years have an average of 275 acres of cover crops.

The Control Group had 59% report that they have been using cover crops for 3 years or less with an average of 106 acres of cover crops. Those who have used cover crops for 6+ years have an average of 127 acres of cover crops.

Within the ILF Group, responses to the remainder of the survey questions varied based upon whether or not the producer utilizes cover crops in his/her operation.



No-till/Strip-till Adoption

Unfortunately, we did not ask the respondents to indicate how many acres they had in no-till/strip-till. These numbers only represent the number of new acres of no-till/strip-till in 2014. These numbers suggest that ILF field day attendees are more likely to utilize these conservation practices on their farms than their peers that don't attend field days.

	ILF Group n=635	Control Group n=267
Increased use of surface residue management (no-till or strip-till) on some of my acres	50%	33%
Cumulative # of acres in 2014	113,005	15,379
Average # of acres per respondent who were putting more acres into no-till or strip-till	454	267

Implementation, Interest, and Barriers

ILF field day attendees are more conservation-minded than their local peers as evidenced by the information below.

What other practice(s) are you currently using? (check all that apply)

	ILF Group n = 635	Control Group n=267
CREP wetland	7%	7%
Buffers/prairie strips	47%	30%
Bioreactor	2%	0%
Miscanthus/biofuels	6%	4%
Rotational grazing	18%	18%
Nutrient management	53%	28%
Terraces	52%	33%
Grassed waterways	81%	63%

We asked this question to gage the interest in conservation practices beyond cover crops and no-till/strip-till. If the Iowa Nutrient Reduction Strategy is going to succeed, it is going to take a suite of practices. The low level of interest in practices such as buffers/prairie strips could be discouraging. However, six years ago, when ILF first started promoting cover crops, these field days were not well attended and the interest was low. A good strategy for discussing one of these other topics at a field day is to couple the practice with cover crops or no-till/strip till discussion.

What other practice(s) are you interested in using? (check all that apply)

	ILF Group n=635	Control Group n=267
CREP wetland	5%	5%
Buffers/prairie strips	12%	10%
Bioreactor	12%	4%
Miscanthus/biofuels	8%	3%
Rotational grazing	8%	8%
Nutrient Management	18%	9%
Terraces	6%	7%
Grassed Waterways	10%	10%

Forty-five percent of the respondents in the ILF Group are already implementing six or more conservation practices on their farms. It is no wonder that the cost of implementing additional conservation practices is their number one barrier. On this question "n" is lower because we only considered the question from the perspective of farmers and landowners and dropped the "other" category.

What are the biggest barriers to implementing additional conservation practices? (check all that apply)

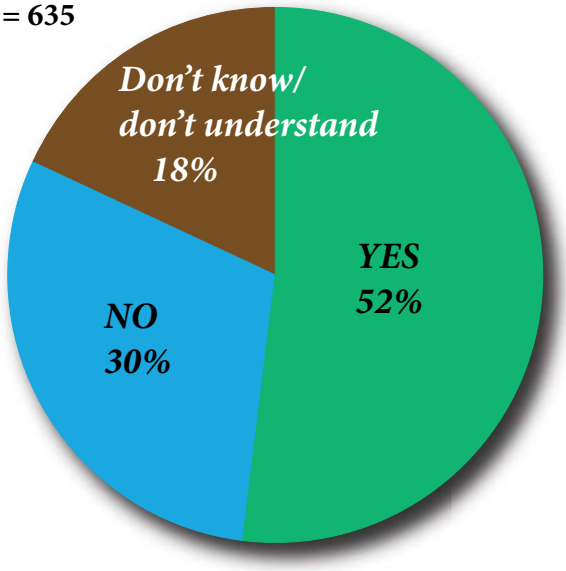
	ILF Group n=596	Control Group n=231
Cost of implementation	59%	52%
Concern of yield impact	32%	26%
Landlord	13%	9%
Knowledge	25%	28%
Equipment	29%	31%
Labor/time	33%	24%

Iowa Nutrient Reduction Strategy Perspectives

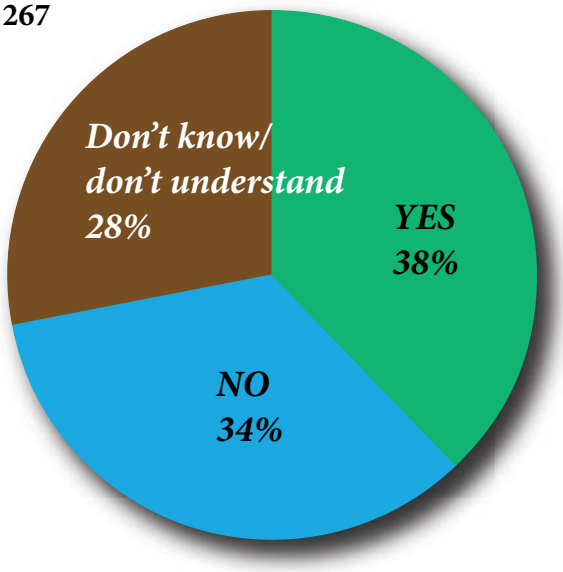
It can be easy to assume that all farmers are aware of the Iowa Nutrient Reduction Strategy because those of us doing outreach and education on it can be in a bit of an echo chamber. There is a direct correlation between respondents who had a high level of conservation on their farm and their confidence in the success of the Iowa NRS. The "don't know/don't understand" category was keyed in one of two ways: 1) the respondent wrote in that they didn't know, or 2) the respondent answered every other question but left that one blank. We received several calls from respondents asking us to explain this question. Regardless, for the ILF Group 48% either didn't respond to this question or responded negatively. For the Control Group, 72% either didn't respond or responded negatively. Clearly there is still need for education on not only the practices suggested by NRS but the science about water quality and its causes.

The Iowa Nutrient Reduction Strategy calls for reductions in nonpoint source loads: 41% for nitrogen and 29% for phosphorus. Based on your knowledge of the local area, is this achievable?

ILF GROUP
n = 635



CONTROL GROUP
n = 267



Farmer-to-Farmer Outreach

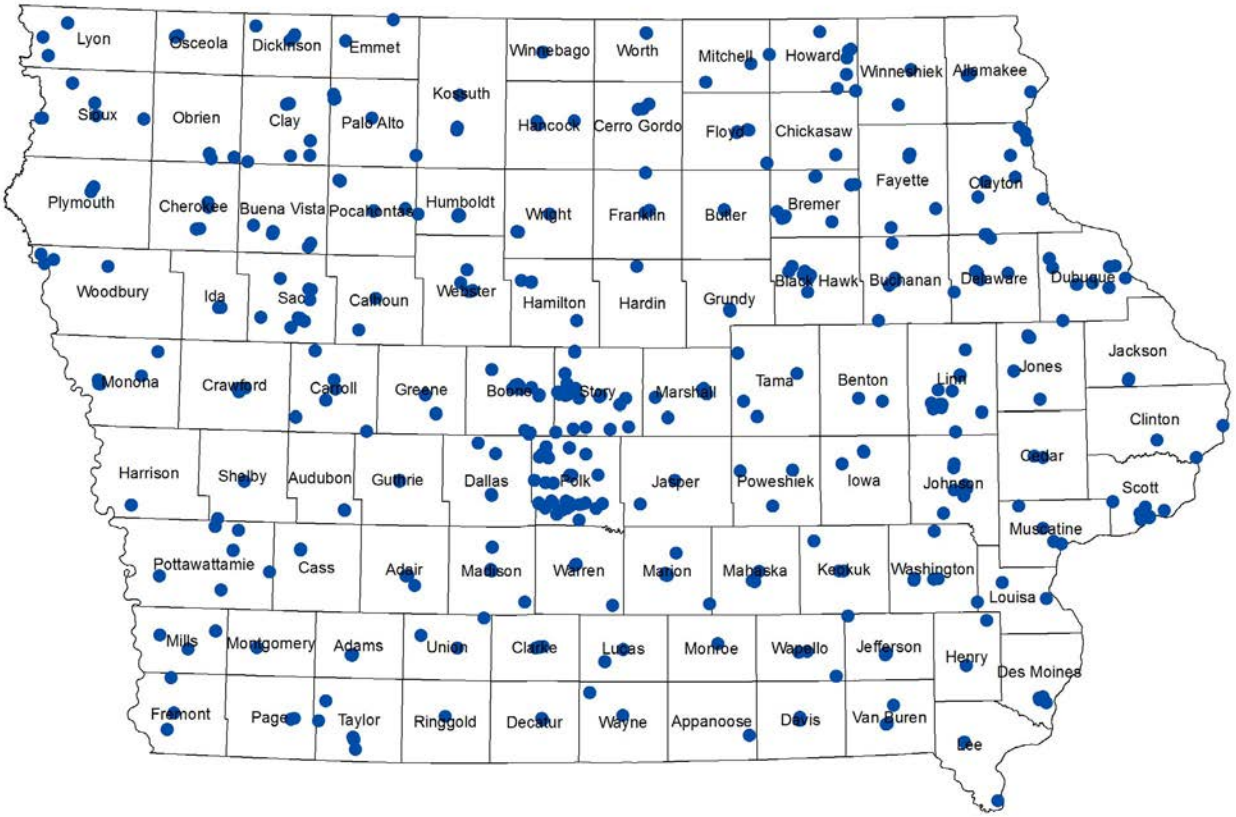
Farmers are known for their "coffee shop" discussions outside of formal field days and workshops. Both the ILF Group and the Control Group report influencing other farmers on conservation ideas. However, ILF field day attendees are a lot more willing to network with their peers and are more successful influencing farmers who did not attend the field day when compared to the Control Group.

The ILF Group reported extending ILF's influence to 65% additional farmers beyond those who attended the event, while the Control Group reported influencing only 24% additional farmers.

	ILF Group n=635	**Control Group n=267**
I discussed +/- of using no-till/strip-till/cover crops with my landowners/tenants	76%	53%
I networked conservation ideas with other farmers or my farmer clients	69%	38%
If yes, how successful were you?	One other: 38% Two or more: 41% No others: 21%	One other: 42% Two or more: 26% No others: 32%
I did not make any changes	8%	29%

PART 4: Community and Youth Outreach

Outreach Events 2007-2014



Community and youth outreach summary 2010-2014:

- 452 total events
- 59,969 total attendees
- 133 = average attendance

	2014	2013	2012	2011	2010
Schools	39	18	16	17	7
Attendees	4,503	1,910	1,557	2,527	1,155
Youth Outdoor	25	21	27	20	10
Attendees	1,884	3,294	6,236	6,419	3,925
Libraries	12	26	1	5	7
Attendees	435	1,476	63	327	320
Community	46	33	52	39	31
Attendees	8,348	2,701	5,628	4,910	2,351
Total events	**122**	**98**	**96**	**81**	**55**
Total attendees	**15,170**	**9,381**	**13,484**	**14,183**	**7,751**

Details on these events are in a separate evaluation report for Community and Youth Outreach.

Appendix: ILF 10-Year Questionnaire

10 Year Evaluation

Which describes you? (check all that apply)

☐ Farmer/operator ☐ Landowner

Please describe the ways you have integrated what you learned from this field day or workshop into your farming operations:

I fall-seeded cover crops on some (or more) of my acres in fall 2014. ☐ Yes ☐ No

- List number of acres_____
- Type(s) of cover crop planted_____
- List the year you first planted cover crops_____
- Was cost share used? ☐ Yes ☐ No

I increased use of surface residue (no-till or strip-till) management on some of my acres in 2014.

☐ Yes ☐ No • List number of acres_____

I have discussed benefits and challenges of cover crops/no-till/strip-till with my landowners/tenants.

☐ Yes ☐ No

I networked conservation ideas with other farmers or my farmer clients. ☐ Yes ☐ No

If yes, how successful where you:

☐ I influenced one other farmer ☐ I influenced two or more farmers ☐ I influenced no others

I did not make any changes. ☐

As part of Iowa Learning Farms, we are focused on ways to improve our programming to better meet your needs.

What other practice(s) are you currently using? (check all that apply)

☐ CREP wetland ☐ Buffers/prairie strips ☐ Bioreactor ☐ Miscanthus/biofuels
☐ Rotational grazing ☐ Nutrient management ☐ Terraces ☐ Grassed waterway

What other practice(s) are you interested in? (check all that apply)

☐ CREP wetland ☐ Buffers/prairie strips ☐ Bioreactor ☐ Miscanthus/biofuels
☐ Rotational grazing ☐ Nutrient management ☐ Terraces ☐ Grassed waterway

What are the biggest barriers to implementing additional conservation practices? (check all that apply)

☐ Cost of implementation ☐ Concern of yield impact ☐ Landlord
☐ Knowledge ☐ Equipment ☐ Labor/time

List the number of field days/workshops you have attended since 2009 _____

Which topics were presented at the field days/workshops? (check all that apply)

☐ Cover crops ☐ Strip-till/No-till ☐ Prairie strips ☐ CREP wetland
☐ Grazing/Pasture walk ☐ Nutrient management ☐ Bioreactor ☐ Biofuels

The Iowa Nutrient Reduction Strategy calls for reductions in nonpoint source loads: 41% for nitrogen and 29% for phosphorus. Based on your knowledge of the local area, is this achievable?

☐ Yes ☐ No