Building a Culture of **CONSERVATION** Iowa Learning Farms 2019 Evaluation Report

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Introduction

Iowa Learning Farms continues to build a *Culture of Conservation* as we bring together farmers, landowners, agribusiness, researchers and state and federal agency partners. In 2019, Iowa Learning Farms delivered or participated in 116 outreach events that reached a total of 7,859 people. Our staff, trailer fleet and partners across the state helped us reach new communities and participants as we continue to build a *Culture of Conservation*.

BGG% of field day/workshop attendees described themselves as either farmers/operators or landowners.

Highlights

Respondents who attended an ILF field day in 2019 planted

36,918 total acres of cover crops,

16% of which were new acres of cover crops.

An estimated **42%**

are not currently using cover crops and only 14% reported no current acres in strip-till or no-till.

ILF Approach to Evaluation

Evaluation of Iowa Learning Farms outreach events occurs in five stages:

• **Event Evaluations** for every event in which ILF team members participated. These forms, completed by ILF team members, help us to understand the audience's level of engagement, document the questions that were asked by participants, and help us to improve future outreach activities.

The remaining evaluation process is specific for farmer outreach activities that we hold:

- **Comment Cards** filled out by all participants at ILF-sponsored field days and workshops in order to gain a better understanding of who they are and why they are there.
- **Demographic Cards** filled out by all participants at ILF-sponsored field days/workshops. Demographic cards provide a snapshot of attendees in terms of their age, gender, role in agriculture and information about their farming operation. The cards also capture preferences on timing and topics of interest for future outreach events.
- Follow-up Evaluations mailed to participants at ILF-sponsored field days/workshops that happened before November 7. These questionnaires were sent within three weeks following the event. The questions focused on the clarity and accessibility of the information received and inquired whether participants planned to make any changes in their land management as a result of the event. The individual field day evaluations are available in a separate report.
- January Evaluations mailed to only farmers/operators and landowners at all ILF-sponsored field days/ workshops. These questionnaires were sent in late December 2019 to see what conservation practices field day attendees were implementing.

Event Evaluations

Event evaluation forms were completed by Iowa Learning Farms team members following all outreach events, including field days/workshops. For detailed information of a specific event, see the respective quarterly reports.

	Number of Events	Number of Attendees
Field Days/Workshops	24	1,080
Presentations	23	1,002
Community Events/Conservation Station Appearances	66	5,570
Conferences	3	207

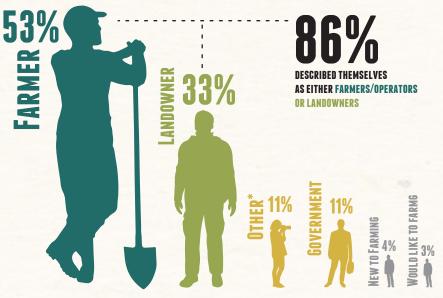
ILF 2019 Events

Field Day Attendees

In 2017, the Iowa Learning Farms field day demographic card was introduced. A separate demographic card allows to track if we are reaching less traditional field day attendees such as younger farmers and women and how we can continue to improve our appeal to this audience. Each attendee, excluding speakers and partners, was asked to fill out the card at the beginning of the field day. Since each individual attendee fills out a demographic card (rather than each household that fills out a comment card), we are able to get a more accurate representation of who is attending our field days. We use this data throughout the year to help us plan better field days. We will continue to experiment with time of day and week for field days to see if we can't get a better diversity of audience. The total number of demographic cards collected in 2019 was 656.

Description of Field Day Attendees (n=656)

Eighty-six percent of the field day attendees identified themselves as either farmers/operators or landowners (n=562). Four percent of the attendees were new to farming and three percent would like to start farming. In 2020, we want to continue reaching out to these populations. We also plan to take our message in to high schools with our Emerging Farmer program where we are more likely to find individuals who would like to start farming.



*Respondents could choose more than one category **Other includes: student or educator, media, agricultural business or industry, or unspecified About half (51%) of respondents indicate they own over 75% of their land. However, when looking at respondents aged 50 and under, that changes dramatically to 62% of respondents reporting that they own 25% or less of their acres. Faced with many acres changing hands in the next five to ten years, it is important to continue to develop outreach materials and plan events accessible to both landowners, farmer/operators and emerging farmers (folks with ties to farming who want to farm). To reach our goals of increasing conservation implementation, it will be a coordinated effort by landowners, those who actively farm and giving opportunity to those who want to farm.

The average age of farmers/operators attending ILF field days was 54 years, which is only slightly younger than the average age of a farmer in Iowa (57 years). The average age of ILF field day attendees being so close to the statewide average age of farmers in Iowa indicates that, in terms of age, our attendees are a representative sample of Iowa farmers. The average age of landowners attending ILF field days was higher at 63 years.

Farmers 35 and Younger

Twenty-three percent of our field day attendees were 35 years or younger with 45% of that age range indicating they are farmers and/or landowners. Eighty-one percent of these attendees were men, while 19% were women. On average, farmers in this age group farm 867 acres of row crop land (range of 1–6,100 acres) and own 37% of their farmland. **Forty-nine percent of respondents in this category reported that they did not own any of the acres that they currently farm.**

Livestock is an early entry point for the next generation to begin or return to the farm. Sixty percent of the farmers and/landowners age 35 and younger reported having livestock, compared to 40% of farmers and/or landowners who were over age 35. These younger attendees indicated a preference for events held on weekday evenings after 5pm.





Gender at Field Days/Workshops

Twenty-three percent of attendees at ILF field days/workshops in 2019 were women. Nineteen percent of all attendees who identified as farmers/operators or landowners were women; 28% of those who identified as "other" were women (government employees, agribusiness, students or educators). Since Iowa Learning Farms first started hosting field days, the number of women attending field days has increased. There are more women serving as Extension Specialists, agronomists, and government employees and this is reflected in our data.

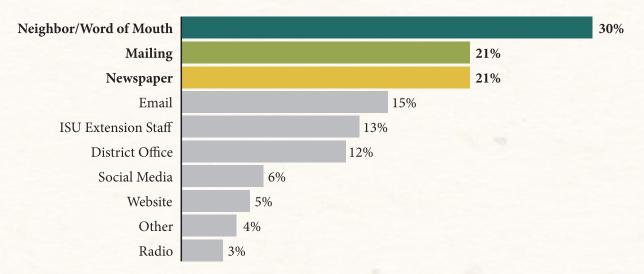


Thirty-two percent of women attendees describe themselves as active farmers/operators and 40% describe themselves as landowners. This is an increase from 2018, where 20% reported actively farming and 35% reported being landowners, **indicating that more women who are active in farm decision-making attended a field day in 2019.** Fifty-nine percent reported owning more than three-quarters of their land. This finding is consistent with the trend of increasing numbers of acres owned by female landowners. It is encouraging to see these women taking an active role in the management of their land as both farmer operator and/or landowner.

In 2020, ILF will continue to seek new ways to increase female attendance, especially female farmers/operators and landowners, at field days and workshops. Women indicated to us that they prefer weekday events, and have a preference for afternoons and evenings after 5 pm. In 2020, we plan to offer events at these times to see if we can increase the number of women attending our events and continue to partner with organizations that focus on women farmers/operators and landowners.

How Did Attendees Hear about the Field Day

Word of mouth (30%), mailings (21%) and newspapers (21%) were the primary ways that field day attendees found out about ILF field days/workshops in 2019. The largest percentage of people heard about ILF field days and workshops through word of mouth, which is consistent with previous years' data. This year mailings rose by 6% to become the joint second most common way that people heard about field days/workshops. ILF will continue to use a diversified communications approach in order to maximize the number of attendees at our events. Respondents specifically mentioned *Farm Bureau Spokesman* as one of the newspapers where they heard about ILF field days/workshops.



How did you hear about the field day?

Summary of Follow-up Evaluations for Field Days

Follow-up evaluation questionnaires were mailed to participants at ILF-sponsored field days and workshops that occurred before November 7. The one-page questionnaires were mailed within three weeks of the event and focused on event feedback and whether participants intended to change any land management practices. A total of 300 evaluations were mailed; 121 questionnaires were returned for a 40% response rate (n=121).

	# Attendees	# Comment Cards	# Returned Surveys	# Demographic Cards
3.26.19 Jefferson Cover Crop Field Day, Jefferson	31	23	7	24
3.27.19 McNay Grazing Cover Crop Field Day, Chariton	49	32	14	25
3.28.19 Williams Cover Crop Field Day, Williams	42	28	8	32
4.9.19 Rob Stout Field Day, Washington	67	46	25	48
4.10.19 Kossuth Co Field Day, Whittemore	51	38	19	39
6.11.19 Leimer Bioreactor Field Day, Albert City	62	25	8	25
7.9.19 Ray Gaesser Field Day, Corning	47	30	9	34
7.31.19 Bob Floss Field Day, Baxter	60	24	10	34
8.8.19 Uthe Field Day, Madrid	65	32	15	48
8.14.19 Linn Co Cover Crop Field Day, Marion	64	43	25	49
8.22.19 Fawcett Field Day, West Branch	48	31	17	34
8.29.19 Rob Stout Bioreactor Field Day, Washington	48	29	13	30
9.10.19 Nathan Anderson Monarch Field Day, Cherokee	24	13	7	16
9.11.19 Gilmore City Field Day, Gilmore City	35	27	8	22
9.19.19 Paustian Field Day, Walcott	37	14	5	16
11.7.19 CLL Field Day, Nashua	32	24	Not sent	24
11.21.19 Jerry Dove Cover Crop Field Day, Janesville	55	39	Not sent	44
12.3.19 Grundy Co Cover Crop Workshop, Grundy Center	36	25	Not sent	29
12.5.19 Clayton County Cover Crop Workshop, Luana	39	33	Not sent	34
12.11.19 Dordt University Cover Crop Workshop, Sioux Center	65	48	Not sent	49
Total	957	604 (430 mailed)+	190*	656

*44% response rate

+Field days held in November or later are sent only the January survey.



In 2018 we increased the number of categories that were used to evaluate the effectiveness of field days from 3 evaluation categories to 6 evaluation categories.

In 2019 we also included the effectiveness of agribusiness professional presentations, the effectiveness of presentations from those associated with NGOs, the effectiveness of the Conservation Station "On the Edge" trailer and the effectiveness of our Conservation Station rainfall simulator. Overall, the quality and effectiveness of presentations were rated very highly, with the largest portion of respondents rating the quality of the field day and the effectiveness of presentations and the field portion as excellent. The individual field day evaluations are available as a separate report.

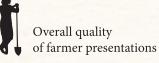
	Excellent (5)	Good (4)	Average (3)	Fair (2)	Poor (1)	Average
Overall quality of field day or workshop (n=118)	48%	50%	2%			4.46
Effectiveness of farmer presentations (n=163)	55%	35%	7%	2%	1%	4.40
Effectiveness of ISU presentations (n=157)	58%	35%	6%	1%		4.49
Effectiveness of Conservation Professional presentations* (n=130)	54%	36%	8%	2%		4.35
Effectiveness of Conservation Station demonstrations (n=85)	52%	36%	12%			4.40
Effectiveness of field portion (n=75)	56%	33%	11%			4.45

*Includes presenters from government agencies, non-governmental organizations and agbusiness professionals



Overall quality of field day









4.49/5

Overall "expert" effectiveness, which has been reported previously, was 4.40 this year. This "expert" effectiveness rating includes ISU, ILF, and all conservation professional categories in the average.

We also asked field day attendees to rate the length of the field day and the helpfulness of the take-home materials provided. We will use this information for planning the length of 2020 field days and to try to provide more helpful take-home materials at future field days.

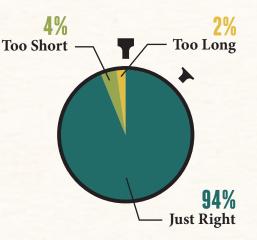
After tracking the responses to these questions over two years, we feel confident that our field days are an appropriate length for our audience.

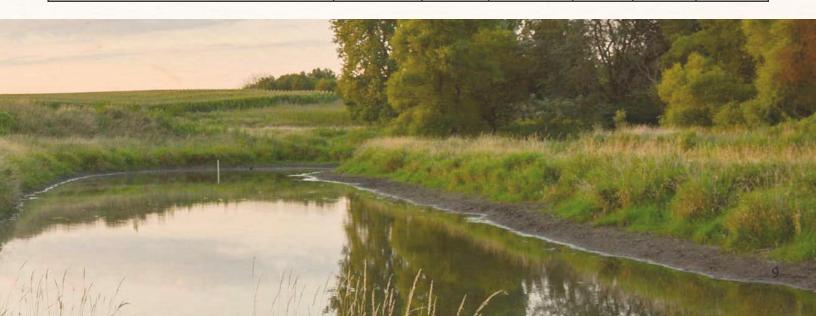
The helpfulness of take-home materials showed that the most people took the one page and four page documents provided (based on the number of respondents who rated those materials) and that these materials were "very helpful" to our field day attendees. We will plan to focus our efforts on creating short (one to four page) infographicstyle materials that will effectively communicate information to our field day attendees.

Helpfulness of Take-Home Materials Provided

Slightly Not Very Extremely Somewhat Helpful Helpful Helpful Average Helpful (5) Helpful (3) (4) (2)(1) One Page Document (n=143) 50% 1% 25% 23% 1% 3.98 Four Page Document (n=138) 22% 1% 2% 18% 57% 3.88 Full Research Report (n=114) 18% 43% 31% 5% 3% 3.66 DVD (n=82) 18% 31% 30% 10% 11% 3.35 Presentation Slides (n=100) 20% 43% 26% 6% 5% 3.67

How would you rate the length of the field day?





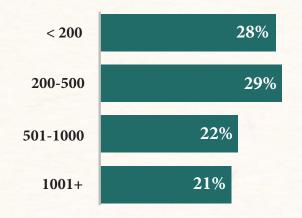
Number of Acres Farmed (n=104)

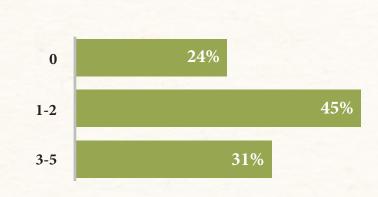
According to the follow-up evaluation data, 72% of respondents in our data set farmed 200 or more acres, which is Iowa Learning Farms' target audience. Respondents reported an average of 647 acres farmed per farmer (median 400) with 55% of respondents reporting. These acreage numbers match our demographic card data set (average of 647 acres farmed), further validating both data sets. This shows that we are reaching farmers who have large enough operations that when they make changes, those changes will have an impact. Forty-three percent of our respondents indicated that they farm over 500 acres.

Conservation Practices (n=190)

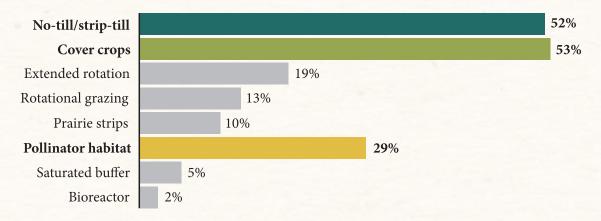
Respondents were asked what types of conservation practices they currently utilize, and they were given a list of the following practices: no-till/strip-till, cover crops, extended crop rotation, rotational grazing, prairie strips, pollinator habitat, saturated buffer and bioreactor.

Thirty-one percent of respondents answered that they utilize three or more conservation practices. The most common conservation practice reported was cover crops, with 53% of respondents indicating they used cover crops in their operations. Fifty-two percent of respondents also reported using no-till or strip-till.





The percentage of respondents who indicated using no-till/strip-till in the 2-week surveys (52%) was much lower than the percent who reported using no-till/strip-till in the year-end surveys (86%). This is likely due to the wet spring and fall that occurred in 2019. Some of the respondents to the 2-week surveys would have filled out the evaluation before planting in the spring and may have had plans to till that they were then not able to complete due to the weather. This may account for the large number of respondents who then in the year-end survey indicated that they had used no-till/strip-till on some of their acres in 2019. Because we do not ask specifically about continuous no-till/strip-till acres or "never till" acres, we will need to continue to monitor this data to see if there is a trend toward increased adoption of no-till/strip-till over the coming years or if this increase was temporary due to weather conditions.



What types of conservation practices are you using? (n=190)

Leased Land

In 2019 we asked field day attendees about the farm land they lease to a tenant. Thirty-four percent (n=180) leased an average 257 acres (range: 25-960 acres) to tenants.

This year we adjusted the survey to also ask respondents about renting land from a landlord for those who attended a field day in June or later. Thirty-two percent (n=108) rented an average of 610 acres (range: 10-2500 acres) from a landlord.

Twenty-seven percent of respondents (n=148) reported that they have conservation practices built into the lease agreement they have for their land. This is the first year that we asked this question and we will continue to analyze this in the future to see if a trend emerges that shows a correlation between higher numbers of conservation practices reported or a higher rate of cover crop use and conservation being part of the lease agreement for land.

There is some indication that conservation leases increase conservation practice implementation. Of those who indicated that they had conservation practices built into their lease (n=40), 65% reported using cover crops compared to 56% of respondents who said they did not have conservation practices built into their lease agreements (n=108). Forty percent of those with conservation practices built into their leases indicated using 3 to 5 conservation practices, compared to 31% of those without conservation practices built into their leases. This could indicate the importance of including conservation practices in lease agreements to increase adoption of conservation practices. We will have a better understanding of this relationship when we have more years of data collected.

	Respondents with conservation built into leases (n=40)	Respondents without conservation built into leases (n=108)
Report using cover crops	65%	56%
Report using 1 to 2 conservation practices	45%	48%
Report using 3 to 5 conservation practices	40%	31%

Summary of January Evaluations for Field Days

January evaluations were mailed to only farmers/operators and landowners for 20 ILF-sponsored field days/ workshops of 2019. We mailed these questionnaires in late December 2019. The goal of the January evaluation is to investigate whether respondents made changes to their farming practices. Due to the success of sending out a second mailing last year, we again sent a second mailing out in late January. This second mailing increased our response rate to 62%.

# Evaluations Sent	# Evaluations Returned	Response Rate
387	241	62%

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

	Field Day Season 2017 n=251	Field Day Season 2018 n=126	Field Day Season 2019 n=241
Increased use of surface residue man- agement (no-till or strip-till) on some of my acres	28%*	49%*	86%*
Total acres of no-till/strip-till imple- mented by ILF field day attendees	67,711 (5,410 new acres)	44,292 (6,231 new acres)	83,310 (5,158 new acres)
Average # of acres per respondent who said they were putting more acres into no-till or strip-till	135	149	207
I fall seeded cover crops on some of my acres	70% (10,973 new acres)	67% (4,028 new acres)	58% (6,020 new acres)
Total acres of cover crops planted by ILF field day attendees	48,749	20,138	36,918
Average # of acres per respondent who said they were putting more acres into cover crops	127	73	114
I discussed +/- of using no-till/strip- till/cover crops with my landowners/ tenants	62%	70%	71%
I networked conservation ideas with other farmers or my farmer clients	68%	73%	65%
If yes, how successful were you? (Number of people you influenced)	One other: 40% Two or more: 37% No others: 23%	One other: 44% Two or more: 27% No others: 29%	One other: 39% Two or more: 35% No others: 26%
I did not make any changes	7%	10%	10%*

*This is the percent who indicated they **increased** use of surface residue management (no-till or strip-till) on some of their acres. The question was changed in 2019 to ask if they used surface residue management on some of their acres.

ILF is reaching a variety of producers. Our target audience of those who farm 200 or more acres made up 82% of our January evaluation respondents. Respondents reported farming an average of 678 acres and collectively operated on 130,782 total crop acres in Iowa. This year we also asked respondents about the acres that they lease to a tenant. Respondents reported leasing an average of 328 acres to tenants with a total of 24,260 leased acres being reported. In the 2-week evaluations from June onward we asked about acres rented. Respondents reported renting an average of 610 acres with a total of 17,076 rental acres reported.



This year we saw a much higher percentage of January survey respondents who indicated that they used no-till or strip-till on some of their acres (86%), even compared to our 2-week evaluation respondents (52%). This is likely due to the wet spring and fall that occurred in 2019. Some of the respondents to the 2-week surveys would have filled out the evaluation before planting in the spring and may have had plans to till that they were then not able to complete due to the weather. This could explain why a larger number of respondents then reported that they had used no-till/strip-till on some of their acres in the year-end survey. Because we do not ask specifically about continuous no-till/strip-till acres or "never till" acres, we will need to continue to monitor this data to see if there is a trend toward increased adoption of no-till/strip-till over the coming years or if this increase was temporary due to weather conditions.

Cover Crops

Sixteen percent of cover crops reported in the January evaluation were new acres. This is a 4% decrease from the 2018 ILF Year-End survey, when 20% of the cover crops reported in the January evaluation were new acres.* Since 2015 when 35% of cover crops reported were new acres, this represents a 19% decline. If we project the 2019 ratio of new and existing cover crop acres to Iowa as a whole, we can predict that there were ~1.02 million total acres of cover crops planted statewide in 2019, compared to ~880,000 in 2018 and ~760,000 in 2017. If this holds true, our sample of ILF field day/workshop attendees represents 3% of the overall cover crop acres in Iowa. The percentage of farmers who were trying cover crops for the first time in 2018 declined while the percentage of those farmers using cost share to plant cover crops remained the same. Ten percent of the growth in new acres of cover crops came from farmers planting them for the first time in 2019.

*Comparisons to 2018 data in this section are comparisons to the 2018 ILF Year-End Report in order to be consistent with previous year-to-year comparisons. The 2018 ILF Year-End Report only includes respondents who attended a field day in 2018. Due to reduced funding, we held fewer field days in 2018 and therefore had a much smaller sample size (~100 fewer respondents than in 2015-2017 and 2019) to draw conclusions from for the 2018 Year End Report. We had a much larger sample size for the ILF 15 Year Report, which was sent to everyone who had attended an ILF field day between 2005-2018. The ILF 15 Year Report includes a much more robust and accurate analysis of cover crops due to the larger sample size available.



16% NEW \sim 1.02 MILLION TOTAL ACRES

The majority of respondents (86%) started seeding cover crops at least three years ago. The average number of years that each respondent reported using cover crops was eight years. Those respondents with cover crops reported an average of 33% of their total row crop acres in cover crops—an increase from last year, when respondents reported an average o f 27% of their total row crop acres in cover crops.* **Respondents who planted cover crops for the first time in 2019 planted an average of 113 acres, which is an increase over the average of new acres per respondent in 2018 (100 acres).**

The overall percentage of farmers who are using cost share to seed cover crops has increased by seven percent since 2016, but has remained consistent at 68% over the past two years. Seventy-five percent of respondents who planted cover crops for the first time in 2019 used cost share, compared to 78% in 2018.

For those respondents who listed the types of cover crops they use, the most common cover crops used were grasses, primarily cereal rye and oats. Reported brassica usage is down overall compared to 2018 data. Similar to findings in previous years, cereal rye was the most commonly used cover crop.

Ninety-two percent of respondents who planted a cover crop for the first time in 2019 reported planting cereal rye (the next highest type used was oats with 31% reporting using, with radishes/turnips and other both being reported as 8% of the type of cover crops used by first time planters).

Number of years with cover crops? (n=141)

	2016	2017	2018	2019
1	21%	16%	10%	10%
2	10%	16%	7%	4%
3-5	36%	26%	44%	28%
6+	33%	42%	34%	58%

LF SAMPLI

86%

HAVE BEEN USING Cover crops for ---Three years or more

Was cost share used? (n=170)

	2016	2017	2018	2019
Yes	61%	65%	68%	68%
No	39%	35%	32%	32%

2019 Cover Crop Planting by Species Type (Could choose more than one) (n=133)

Species Type	Percent Planted
Grasses	91%
Brassicas	21%
Legumes	8%

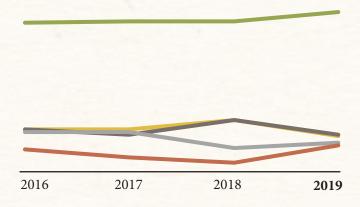
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Among respondents who have used cover crops for six or more years, cereal rye was still the most commonly used at 91%, but the variety of types used increased, with oats accounting for 19%, wheat 17%, radishes/turnips 14% and other 21% of cover crops planted by these more experienced users.

Cover Crop Planting by Species

	2016	2017	2018	2019
Cereal rye	84%	85%	85%	90%
Radishes/ Turnips	24%	24%	29%	20%
Oats	24%	21%	29%	21%
Other*	22%	22%	13%	16%
Wheat	12%	8%	5%	15%

* Other includes hairy vetch, clover, winter pea, cowpea, rapeseed, triticale, mustard and annual rye





* Other includes hairy vetch, clover, winter pea, cowpea, rapeseed, triticale, mustard and annual rye

Prairie Strips

Nine percent of farmers/operators and landowners who attended ILF field days in 2019 reported using prairie strips on their land. This number has fluctuated in recent years – we saw 9% in 2015, 14% in 2016, 8% in 2017 and 18% in 2018. Respondents who reported acres in prairie strips accounted for a total of 356 prairie strip acres in lowa (76 of those acres were reported to be new in 2019).

The percent of respondents who indicated they were considering prairie strips was consistent with last year (65% last year). The percent of respondents who reported being unfamiliar with prairie strips went down again this year (84% in 2017 to 23% in 2018) to 18%.

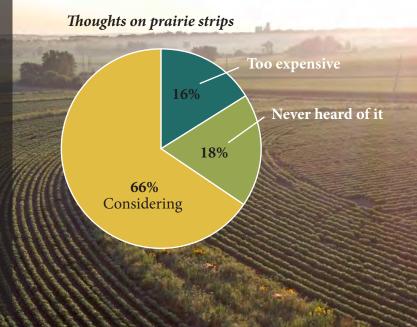
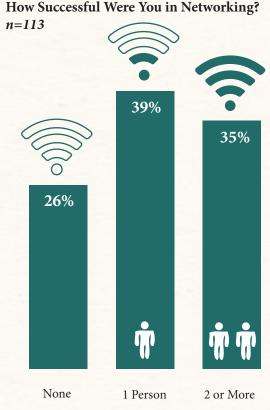


Photo courtesy of Iowa Stae University Department of Natural Resource Ecology and Management

Networking

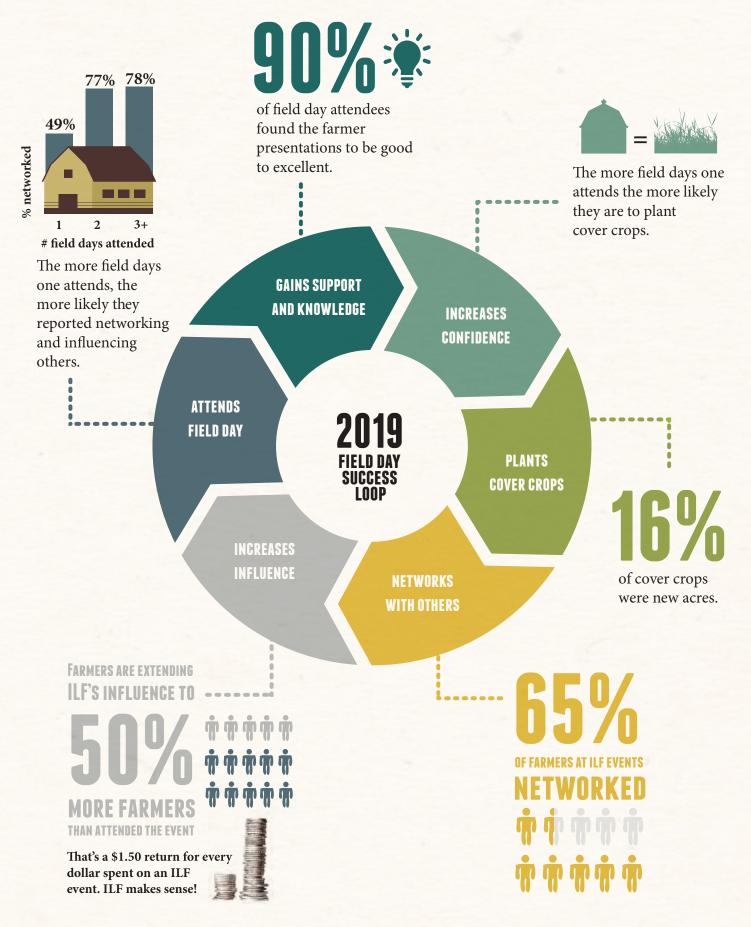
Networking by field day attendees remains an important outreach method for Iowa Learning Farms as we host farmer outreach events and provide valuable information to farmers, landowners, agricultural professionals and others. In 2019, networking by field day attendees continued, with 65% of respondents reporting that they networked with others about conservation ideas.

Of those attendees who networked, 74% reported that they were successful, influencing at least one other person. Given this, these farmers are extending ILF's influence to 50% more farmers than attended ILF events in 2019. **That's a \$1.50 value for every dollar invested in ILF.**



Number of People Influenced

Field Day Success Loop



Reason for Implementing Conservation Practices

This year, instead of asking what the biggest barriers to implementing additional conservation practices were for respondents, we asked them to identify their #1 reason for implementing conservation practices. Respondents were asked to choose one from this list of reasons: variable weather, soil health, water quality, wildlife habitat, landlord stipulation and reduce soil erosion. Eighty-seven percent of respondents chose soil health or reducing soil erosion as their top reason for implementing conservation practices. Understanding the reason that farmers are choosing to implement conservation practices will allow for education and outreach efforts to include information tailored to these reasons.



2019 Top Reason for Implementing Conservation Practices (n=161)

Some respondents (n=80) selected more than one answer to the question and are not included in the responses above because we had no way of determining what their top reason would have been. In addition to the 6% of respondents who chose water quality as their top reason, 27% chose water quality as a reason along with one or more other reasons.

Among the 27% of respondents who selected water quality as one of several reasons, 82% also chose soil health and 86% also chose reduce soil erosion. This shows that respondents are aware of the inter-connected nature of soil health, erosion and water quality. Although not many chose water quality as their top reason for implementing conservation practices, it was associated with soil health and reducing soil erosion for many respondents.