



Building a Culture of **CONSERVATION**

Iowa Learning Farms | 2021 Evaluation Report

Compiled and submitted by Jacqueline Comito, Liz Ripley and Nathan Stevenson

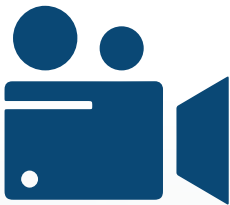
INTRODUCTION

Iowa Learning Farms continues to build a Culture of Conservation amidst the ongoing pandemic as we bring together and build community among farmers, landowners, agribusiness, researchers and agency partners. Through a multi-faceted approach to outreach including **virtual field days**, **in-person field days** and weekly **webinars**, we have grown and improved the variety of ways we are providing timely conservation information.

Over the last two years, there has been a societal shift in trust and access to online resources, and the Iowa Learning Farms was well-positioned to lead this shift to online conservation and water quality education in Iowa. Iowa Learning Farms' diverse virtual offerings have all proven to successfully connect with audiences – albeit somewhat differently – and have now gained permanence in the ILF menu of program offerings. The success of these programs does not replace the need for in-person engagement, but does offer a tremendous opportunity to expand the Culture of Conservation reach to a more diverse group of conservation influencers across Iowa and well beyond.

In 2021, Iowa Learning Farms hosted 11 virtual field days, 7 in-person field days and 49 webinars that were attended by 5,293 participants. The Iowa Learning Farms team and Conservation Station trailer fleet reached an additional 6,418 people through 80 additional outreach events, ranging from guest presentations to community events and county fairs.

VIRTUAL FIELD DAYS



11

virtual field days held

853

total attendees tuned in live

43%

of attendees were women

50%

of attendees were 50 or younger

2,237

archive views

JUMP TO [PAGE 4](#) FOR VIRTUAL FIELD DAYS

IN-PERSON FIELD DAYS



7
in-person
field days
held

167
total attendees

80%
of attendees
were farmers or
landowners

62%
are currently using
cover crops and 77%
reported using
strip-till or no-till

JUMP TO [PAGE 12](#) FOR IN-PERSON FIELD DAYS

WEBINARS



49
webinars
held

7,145
combined webinar
views (live and archive)

96%
of viewers rated
the overall quality
of the webinar
as “good” or
“excellent”

98%
of viewers reported
gaining new
information

JUMP TO [PAGE 25](#) FOR CONSERVATION WEBINAR SERIES

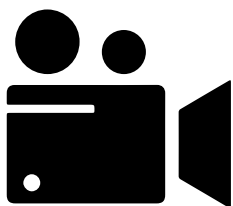


2021 IOWA LEARNING FARMS VIRTUAL FIELD DAYS

In 2021, Iowa Learning Farms (ILF) hosted **11 virtual field days with 853 total event attendees tuning in live (an average of 78 attendees) and 2,237 archive views (as of 1/4/2022)**. The virtual format of the events allowed us to reach a larger audience both during the live events and through the archive views.

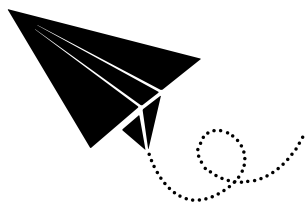
Virtual field days continue to be a valuable outreach tool, even as in-person events return. Virtual field days provide an opportunity for attendees to participate in multiple events without the travel requirement and our previous evaluation reports have shown that attending multiple field days increases the likelihood of adoption of conservation practices.

Based on a separate survey of previous in-person and virtual field day attendees¹, we were able to explore some additional differences and preferences between the groups. The data showed that younger farmers and female farmers, two groups we have worked to include in outreach efforts, were more likely to attend virtual events. We also saw that those who attended both in-person and virtual events were likely to serve as opinion leaders and are actively engaged in seeking and sharing information with others. We will continue to offer a combination of both virtual and in-person field days to provide timely conservation information to farmers and landowners.



VIRTUAL FIELD DAY FORMAT

Virtual field days are one-hour events hosted in Zoom that feature a video from a field site and a live question-and-answer session with the presenters. An Iowa Learning Farms staff member acts as the host of the event, providing background information on Iowa Learning Farms and the topic of the virtual field day, and relaying questions from the chat to the presenters. The virtual field days are recorded and uploaded to YouTube following the event, which allows us to also track archive views.



VIRTUAL FIELD DAY PROMOTION

We promote each virtual field day the same way, utilizing a multi-faceted approach. A press release is sent out two weeks before the event to our statewide media contact list and Iowa State University (ISU) Extension and Outreach communications team. It is also promoted on our website and posted on our blog one week before the event. A reminder about the field day is sent out to the ILF email list as a special notice within 10 days of the field day.



VIRTUAL FIELD DAY CERTIFIED CROP ADVISER (CCA) CONTINUING EDUCATION UNITS (CEUs)

Board-approved CEUs for CCAs are available for attending ILF virtual field days. Attendees who are seeking credits send an email with their name and CCA number by 5pm the day of the event. Their attendance is checked against the Zoom-generated usage list and added to the sign-in sheet that is submitted to the CCA board. Thirty-two Certified Crop Advisor continuing education units were awarded to 25 attendees in 2021.

¹ Witzling, L., Williams, E., Wald, D.E., Comito, J. and Ripley, E., 2021, Virtually the same? Understanding virtual and F2F farmer audiences for conservation outreach. Submitted to Journal of Extension.

VIRTUAL FIELD DAY EVALUATION METHODOLOGY

The virtual field day evaluations are created using Qualtrics and designed to be similar to both the cards that in-person field day attendees would fill out at the event and the mailed follow-up evaluation. A link to the survey is emailed to the Zoom-generated usage list 2-3 hours after the event and a reminder is sent out again 2-3 days later. If the response rate is low, additional reminders may be sent out. The evaluation email also contains a link to the field day archive.

In 2021, we sent a year-end evaluation to attendees who identified as a farmer or landowner during the virtual field day registration within Zoom. This evaluation was identical to the mailed evaluation that in-person event attendees received. Follow-up emails were sent six times to encourage attendees to respond. The email also contained a link to the entire field day archive.

Virtual Field Day	Total Attendees	Archive Views ¹	Follow Up Evaluations Sent ²	Returned Evaluations
January 14: Miscanthus: What is the value for Iowa farmers?	82	619	74	33
January 21: Returning Oxbows to Iowa's Landscape	124	630	111	49
February 4: Improving Water Quality and Quantity in the Karst Topography of the Upper Iowa Watershed	100	104	86	34
February 18: C-CHANGE - Utilizing Perennial Biomass and Prairie for Renewable Natural Gas	73	185	66	18
March 4: Water Quality and Quantity Improvements in the Clear Creek Watershed	73	152	66	25
March 18: Improving Water Quality Through Stream Stabilization in the East and West Nishnabotna Watersheds	80	118	70	23
April 15: Conservation Learning Labs - Exploring the Impact of Cover Crops on Water Quality	64	50	58	17
June 17: Improving Bioreactor Design and Performance	69	80	48	16
September 23: What's the Buzz? Exploring the Impact of Prairie Strips and Pollinators	63	76	57	19
October 21: Increasing Water Quality Enhancement Wetlands and Oxbows	56	174	45	16
December 16: Cover Crop Dos and Don'ts - Lessons Learned About Cover Crops, Corn Growth, Diseases and Pests	69	49	69	22
Total	853	2,237	750	272³

1 - Views of the archived virtual field days and related videos on YouTube, as of 1/4/2022

2 - Qualtrics surveys were emailed to attendees following the live events, with reminder emails sent a few days later. Virtual field day presenters, ILF staff, and attendees who viewed less than 10 minutes of the virtual field days did not receive surveys.

3 - This is a 36% response rate and is excellent for an online survey format.

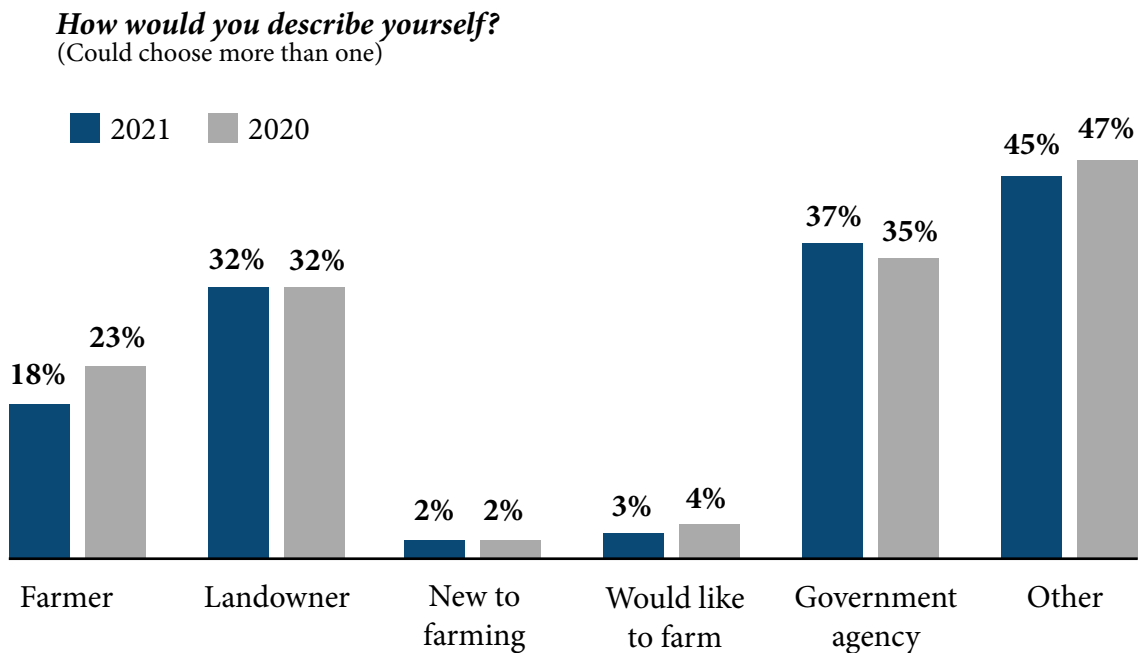
VIRTUAL FIELD DAY EVALUATION RESULTS

The results of the 2021 Iowa Learning Farms virtual field day evaluations are summarized below, and comparisons to 2020 virtual field days are provided where appropriate. We had an overall 36% response rate to our post-event emailed surveys, which is very good for an online survey.

Out of 853 attendees who provided an email address during registration, 566 were unique participants (68%). Because these summary data are compiled from the individual virtual field day surveys, it is possible that we are counting some of the same people more than once if they attended and evaluated more than one virtual field day. It's important to keep that in mind while comparing the results of this evaluation to the results from 2021 in-person and 2019, when fewer people attended multiple ILF field days.

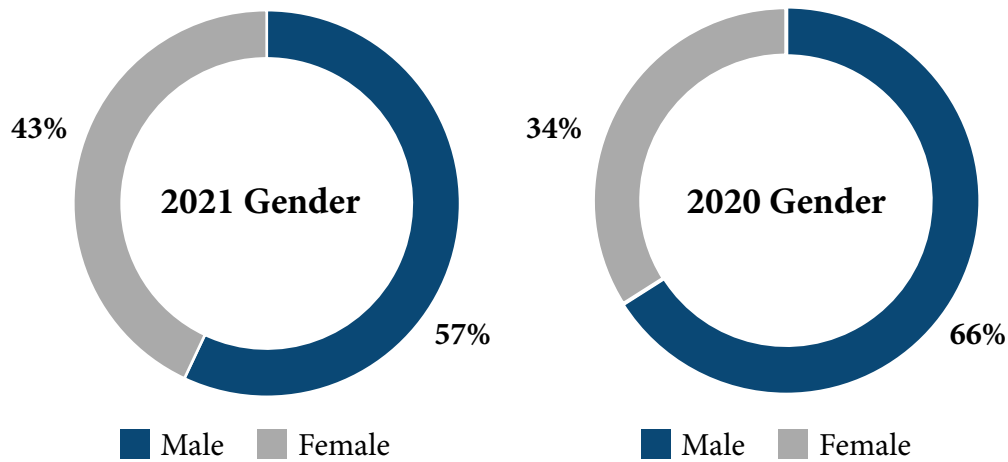
WHO ATTENDED ILF VIRTUAL FIELD DAYS?

ILF's 2021 virtual field days continued to draw a diverse audience, attracting more females and a younger audience than our traditional in-person events. The virtual field day platform offers a training opportunity for conservation professionals, government agency staff and others working with farmers to provide them with the latest science and research surrounding these conservation practices. Fewer attendees identified as a farmer for the virtual field days compared to in-person events, but approximately the same percentage of the audience for both virtual and in-person field days were landowners.



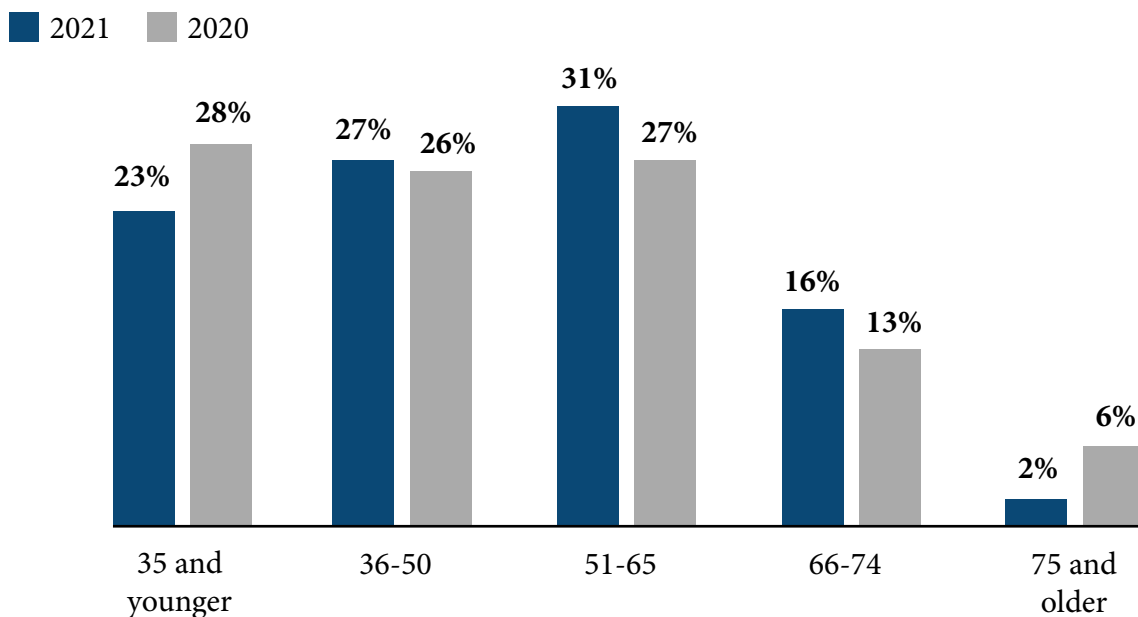
Other includes student or educator, media, agricultural business or industry, or unspecified

Seventy-nine percent of virtual field day attendees reported that they live or farm in Iowa. Others live in 16 states, including Alabama, California, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Pennsylvania, South Carolina, South Dakota, Texas, Virginia and Wisconsin, plus Alberta, Canada.



Attracting more female attendees to field days has been a long-term goal of Iowa Learning Farms. **Females represented 43% of attendees at ILF virtual field days in 2021.** This represents an ever-increasing trend over recent years, with females making up 34% of attendees in 2020 (exclusively virtual field days) and 23% of attendees in 2019 (exclusively in-person events).

Age of Attendees

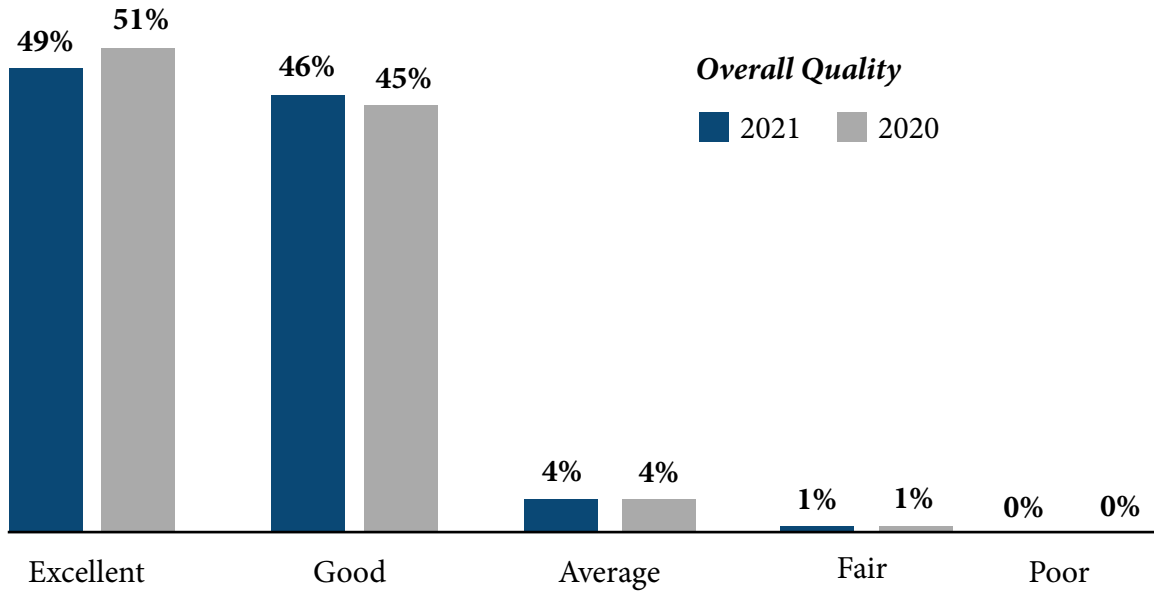


Attracting a younger audience to field days has also been a goal of Iowa Learning Farms. **The virtual field day format continues to attract younger attendees, 50% being age 50 or younger,** compared to 2021 in-person events (34% were age 50 or younger). The average age of 2021 virtual field day attendees was 50 years old, compared to 48 years old for 2020 virtual field days and 54 years old for the 2019 and 2021 in-person field days. Further comparison of in-person and virtual field day attendees was conducted in a soon-to-be-published study in the *Journal of Extension*¹. The results of that study suggest younger farmers and female farmers are more likely to attend virtual events. For conservation educators interested in making content more accessible to these audiences, virtual options appear to be an appealing outreach tool.

¹ Witzling, L., Williams, E., Wald, D.E., Comito, J. and Ripley, E., 2021, Virtually the same? Understanding virtual and F2F farmer audiences for conservation outreach. Submitted to *Journal of Extension*.

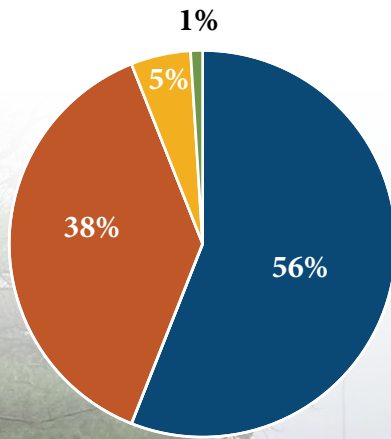
HOW WAS THE OVERALL QUALITY OF THE VIRTUAL FIELD DAYS?

The overall quality of the virtual field days remained high during 2021, indicating that they meet the high standard of quality set by Iowa Learning Farms' in-person field days. Ninety-five percent of virtual field day attendees rated the event's overall quality as "excellent" or "good." Presenters received "excellent" or "good" ratings from 94% of attendees, consistent with 2020 when 95% of attendees gave similar ratings to presenters. We also asked attendees to rate the technology used and 87% rated it as "excellent" or "good."

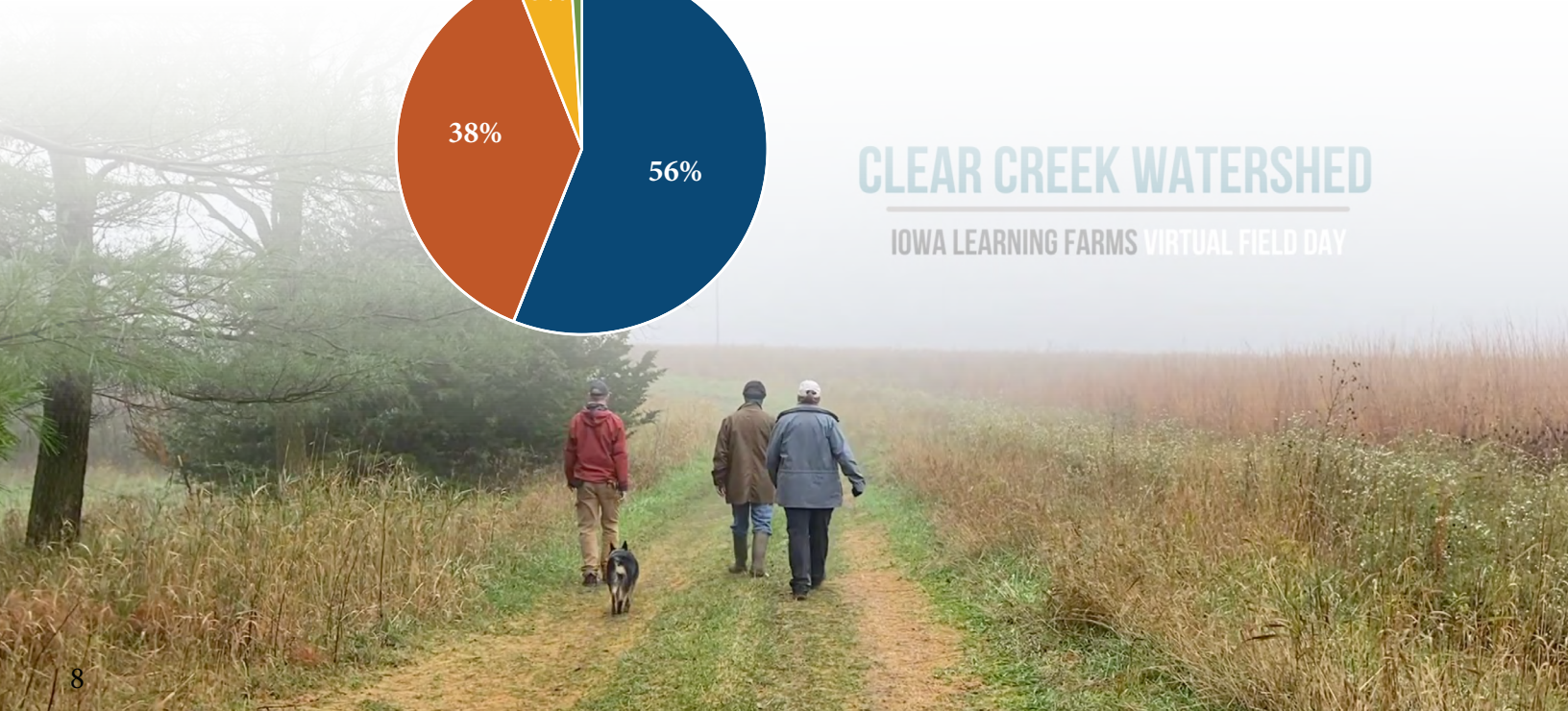


Quality of Presenters in 2021

■ Excellent
 ■ Good
 ■ Average
 ■ Fair
 ■ Poor



CLEAR CREEK WATERSHED
IOWA LEARNING FARMS VIRTUAL FIELD DAY



SUMMARY OF ATTENDEES' FARMING PRACTICES

In early January 2022, a Qualtrics version of our year-end survey was sent to the unique virtual field day attendees that indicated they were a farmer or landowner. There were 290 attendees who indicated they were a farmer or landowner during the registration process, with 182 valid and unique email addresses (63%). Following multiple reminder emails, we reached a 27% response rate, which is well above the 10% average response for emailed surveys. When applicable, comparison to 2020 follow-up evaluations is included, as a 2020 year-end evaluation was not conducted.

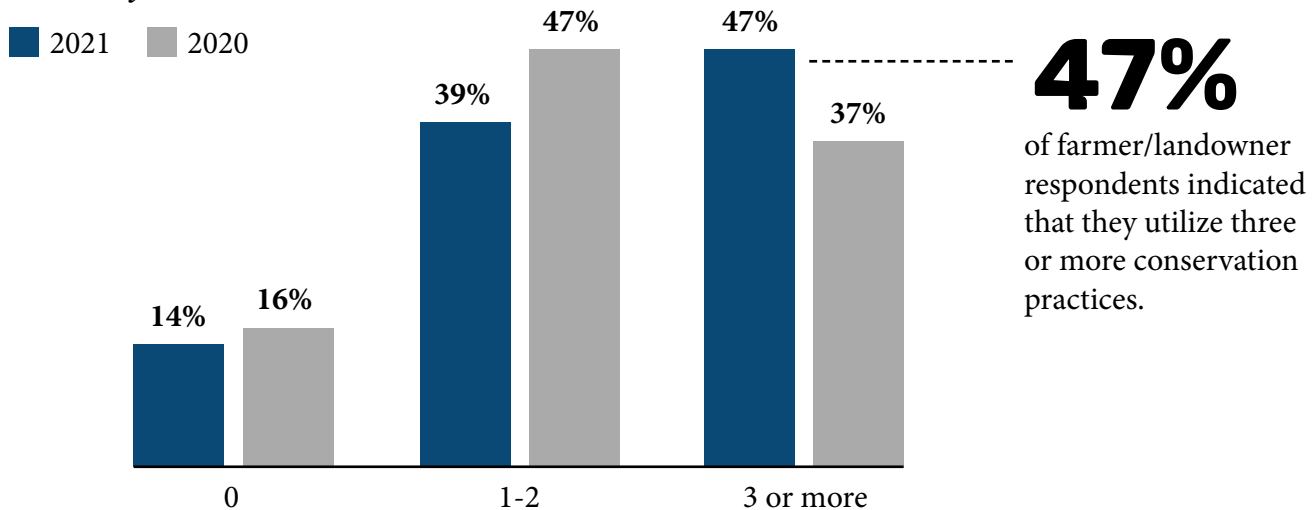
Virtual field days are able to draw a geographically diverse audience. Of the respondents to the year-end evaluation, 75% live or farm in Iowa. Additional locations represented in the data include: Illinois, Indiana, Missouri, Ohio, South Dakota, Virginia, Wisconsin and Alberta, Canada.

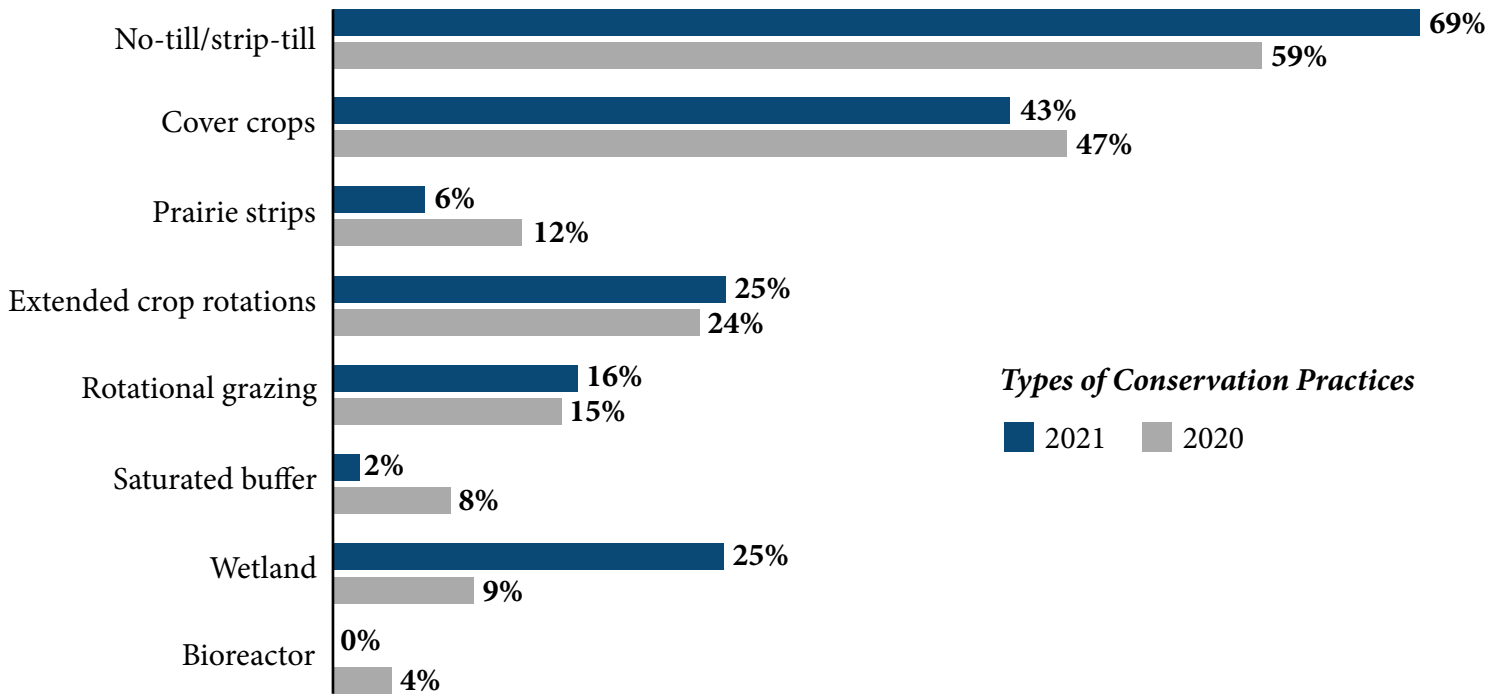
	Acres Operated (average)	Acres Leased (average)	Field Days Attended (average)
<i>Iowa respondents</i> (n = 37)	319	85	4
<i>All respondents</i> (n = 49)	1,030	102	4

We asked field day attendees about the conservation practices that are used on the land they farm or own, and they were given a list of the following practices: no-till/strip-till, cover crops, extended crop rotation, prairie strips, rotational grazing, saturated buffer, nutrient reduction wetland and bioreactor.

Forty-seven percent of farmer/landowner respondents indicated that they utilize three or more conservation practices. The most common practices used were no-till/strip-till (69%) and cover crops (43%). There was a significant increase in the number of respondents indicating they have a nutrient reduction wetland on their farm, compared to the 2020 respondents.

Number of Conservation Practices





We also asked additional questions about the use of cover crops, no-till/strip-till and prairie strips. Twenty-one respondents seeded cover crops this past fall on a combined 4,117 acres, including 1,281 new acres in 2021. Thirty-four respondents use no-till/strip-till on a combined 17,046 acres, with 525 new acres in 2021. Three respondents have prairie strips established on a combined 25 acres, and ten respondents are considering this practice for their farm.

Experience with cover crops ranged from 1 to 34 years of experience, for an average of 10 years of cover crop experience. Nearly 91% of the cover crops used were grasses. Cereal rye was the most popular (used by 76% of respondents), followed by oats (29%), radishes/turnips (14%), wheat (10%) and other species (14%). Sixty-two percent of respondents who planted cover crops used cost share in 2021. Seventy-one percent of respondents reported that they would not reduce their cover crop acres in the absence of cost share.

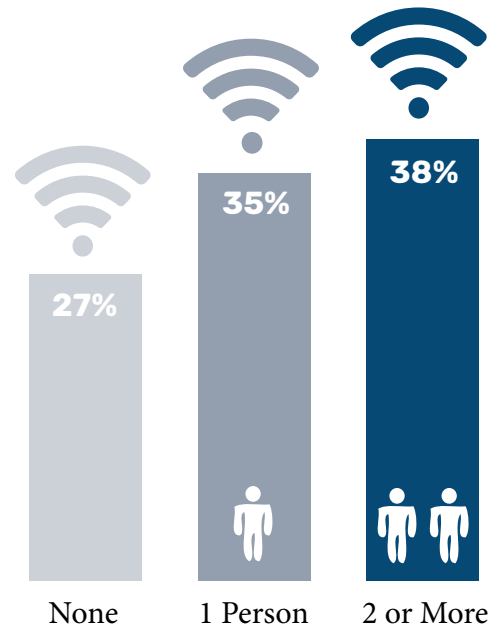


NETWORKING

Networking by field day attendees remains an important outreach method for Iowa Learning Farms. It is even more important for virtual events when attendees are not able to communicate with each other directly. In 2021, 73% of respondents reported that they networked with others about conservation ideas. This is supported by the 2,237 archival views of ILF virtual field days, over 260% more than had attended. The link to the recorded field day is shared out to attendees in the evaluation email, making it easy to share with others that were not able to attend.

Of those attendees who networked, 73% reported that they were successful in influencing at least one other person. Given this, these farmers are extending ILF's influence to 80% more farmers than attended virtual field days in 2021. That's a \$1.80 value for every dollar invested in ILF.

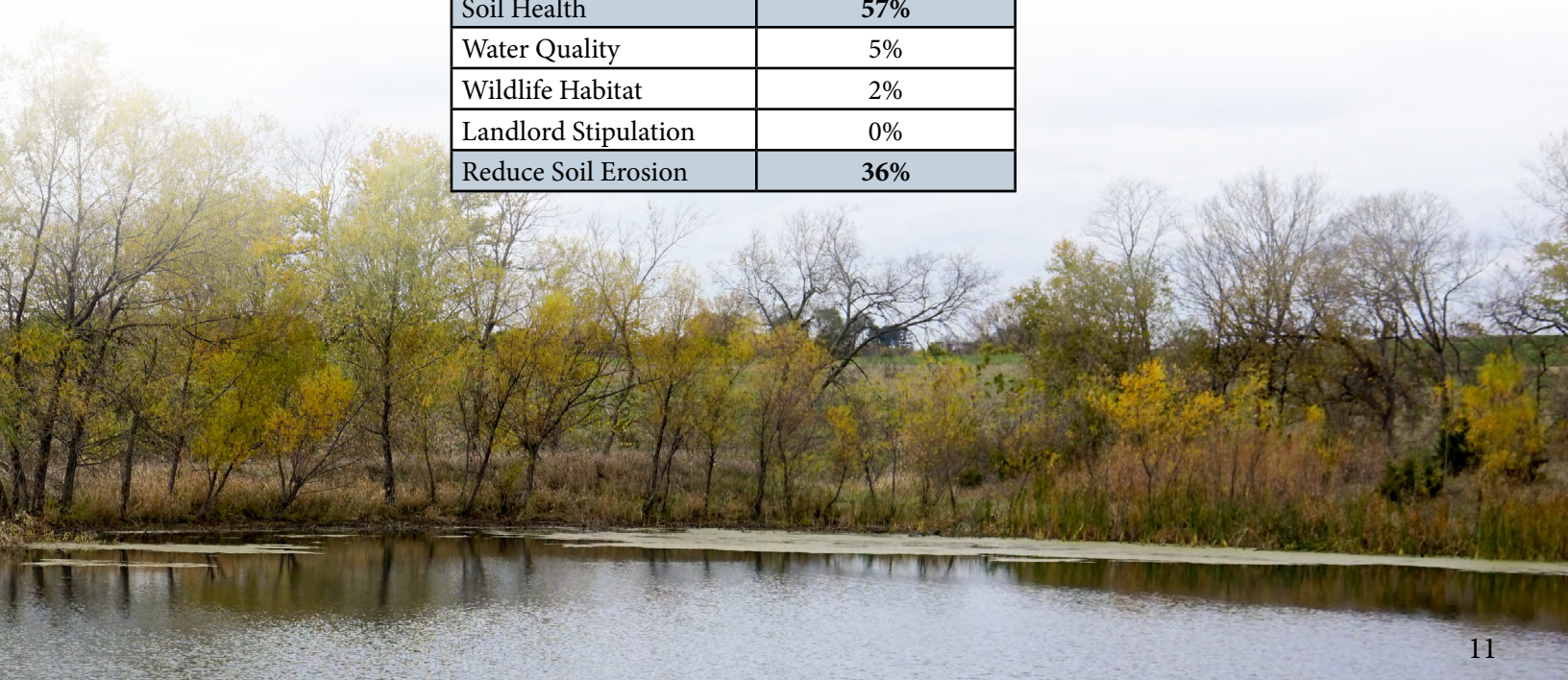
How Successful Were You in Networking? n= 35



REASON FOR IMPLEMENTING CONSERVATION PRACTICES

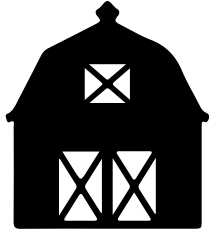
We asked attendees to identify their top reason for implementing conservation practices. Respondents were asked to choose one from this list of reasons: variable weather, soil health, water quality, wildlife habitat, landlord stipulation and reduce soil erosion. Ninety-three percent of respondents chose soil health or reduce soil erosion as their top reason for implementing conservation practices, which is similar to our in-person field day responses. Understanding the reason that farmers are choosing to implement conservation practices will allow for education and outreach efforts to be better tailored to these reasons.

Reason	2021 (n= 44)
Variable Weather	0%
Soil Health	57%
Water Quality	5%
Wildlife Habitat	2%
Landlord Stipulation	0%
Reduce Soil Erosion	36%



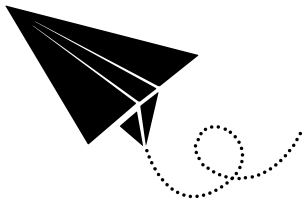
2021 IOWA LEARNING FARMS IN-PERSON FIELD DAYS

In September, ILF returned to offering in-person field days and hosted seven events across the state on a variety of topics including cover crops, wetlands, oxbows, nutrient management and saturated buffers.



IN-PERSON FIELD DAY FORMAT

ILF's in-person field days are two-hour events including a meal and a diversity of speakers, integrating local farmers utilizing the featured conservation practices. With some modifications, like boxed meals and plenty of spacing between seating, these in-person field days provided localized opportunities for education, networking and idea sharing among neighbors. Audio accessibility—ensuring attendees can clearly hear presenters—has been a priority for years and we were well prepared with amplification equipment already part of the ILF field day toolkit.



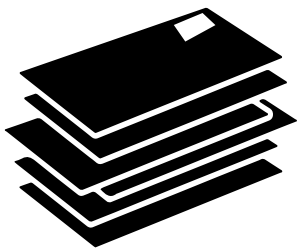
IN-PERSON FIELD DAY PROMOTION

We promote each field day the same way, utilizing a multi-faceted approach. A press release and flyer are sent out three weeks before the event to a compiled list of local newspapers, county Farm Bureau offices, radio stations, ISU Extension and Outreach offices, Natural Resources Conservation Service offices, our statewide media contact list and ISU Extension and Outreach communications team. A save-the-date postcard invitation is also mailed to farmers and landowners in the area using either a partner-provided mailing list or plat map. It is also promoted on our website, blog, social media and e-newsletter.

IN-PERSON FIELD DAY EVALUATION METHODOLOGY

Our multi-step approach to evaluation is described below.

- Comment and demographic cards are filled out by participants at ILF-sponsored field days/workshops in order to gain a better understanding of who they are and why they are there. Demographic cards provide a snapshot of attendees in terms of their age, gender, role in agriculture and information about their farming operation.
- Follow-up evaluations are mailed to participants of field days that happen before November and 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. A summary of the collective data gathered from follow-up evaluations is included in the pages that follow. Data from individual field day evaluations are available in a separate report.
- January evaluations are mailed in late December to only farmer and landowner attendees to see what conservation practices field day attendees are implementing.



2021 ILF IN-PERSON FIELD DAYS

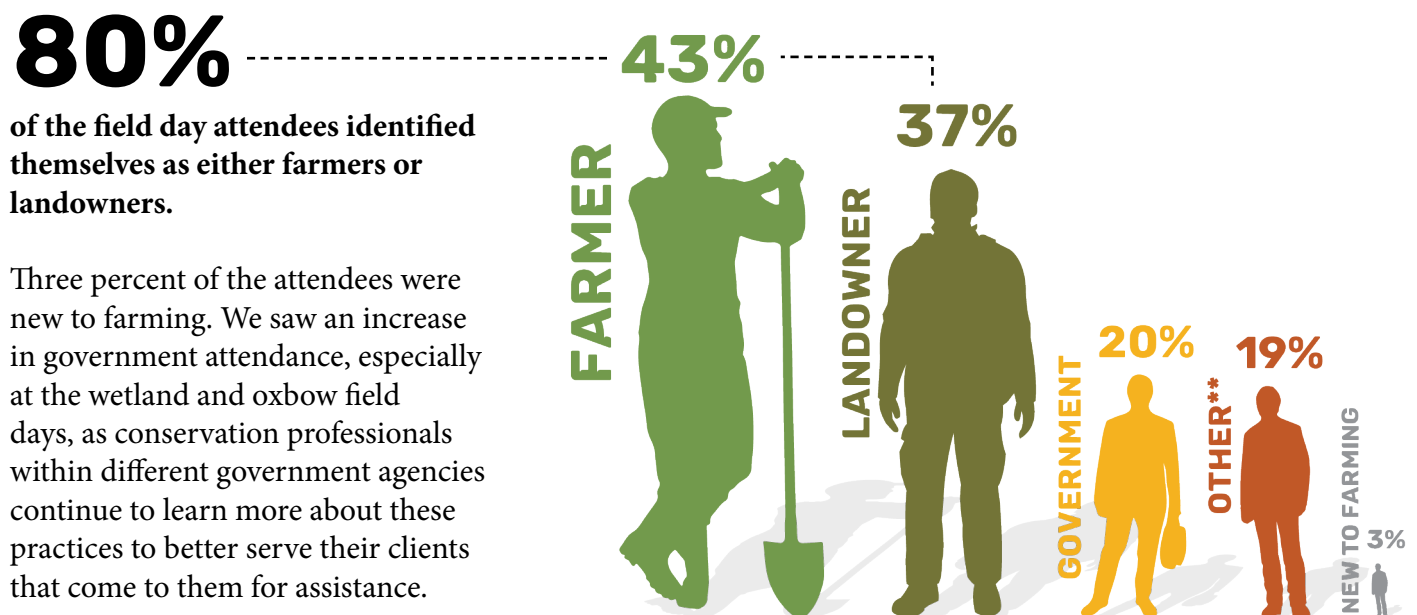
In-Person Field Day	Total Attendees
September 8: Cover Crop, Nutrient Management and Wetland Field Day, Gilmore City	32
September 14: Cover Crop Field Day, Grinnell	53
September 29: Wetland Field Day, Coggon	27
November 10: Oxbow Field Day, Lu Verne	26
November 11: Cover Crop Field Day, Nashua	30
November 16: Cover Crop Field Day, Kanawha	22
November 17: Cover Crop and Saturated Buffer Field Day, Walcott	42
Total	232

IN-PERSON FIELD DAY EVALUATION RESULTS

Field Day Attendees

A demographic card is completed by each attendee, excluding speakers and partners, 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. The total number of demographic cards collected in 2021 was 167.

Description of Field Day Attendees (n=167)



*Respondents could choose more than one category

**Other includes: student or educator, media, agricultural business or industry, or unspecified

On average, farmers attending ILF field days in 2021 have 560 acres (range of 6-2,000 acres) in row crops. About half (52%) of respondents indicate they own over 75% of their land. However, when looking at respondents aged 50 and under, that changes dramatically to 71% of respondents reporting that they own 30% or less of their acres. Faced with many acres changing hands in the next decade, it is important to continue to develop outreach materials and plan events accessible to landowners, farmers and emerging farmers (those with ties to farming who want to farm).

The average age of farmers attending ILF field days was 56 years, which is only slightly younger than the average age of farmers in Iowa at 57.4 years according to the 2017 Census of Agriculture. 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 landowner attendees was higher at 65 years.

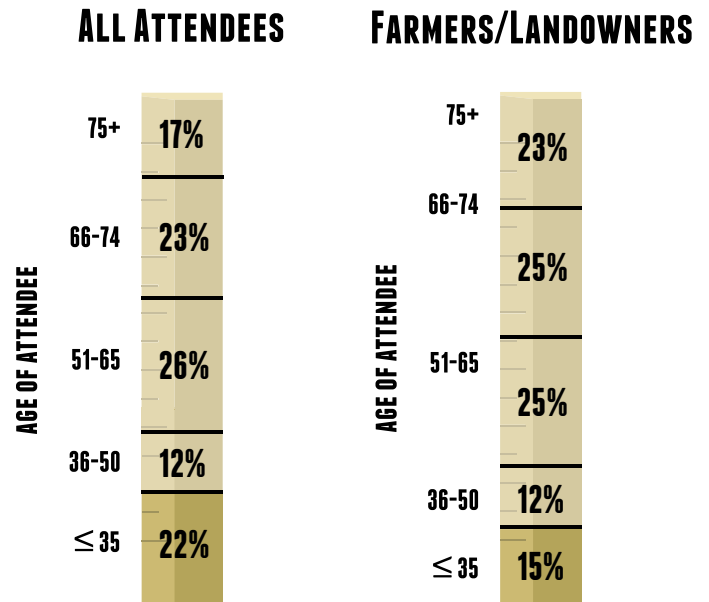
FARMERS 35 AND YOUNGER

Twenty-two percent of ILF field day attendees were 35 years or younger, with 50% of that age range indicating they are farmers and/or landowners. Seventy-two percent of these attendees were men, while 28% were women, up from 19% in 2019. On average, this age group farms 249 acres of row crop land (range of 60–1,000 acres) and owns 37% of their farmland. **Forty-four percent of respondents in this category reported that they did not own any of the acres that they currently farm.**

GENDER

Twenty-five percent of ILF field day attendees were women and 21% of all attendees who identified as farmers or landowners were women, up from 23% and 19%, respectively, in 2019. 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.

Twenty-two percent of women attendees describe themselves as farmers, a decrease from 32% in 2019. Forty-nine percent describe themselves as landowners, an increase from 40% in 2019. This is indicating that **women who own the land are seeking information to advise farm decision-making, as well as those active in the daily decision-making on the farm.** Sixty-seven percent reported owning 80% or more of their land. This 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.



25%
OF ATTENDEES
WERE FEMALE

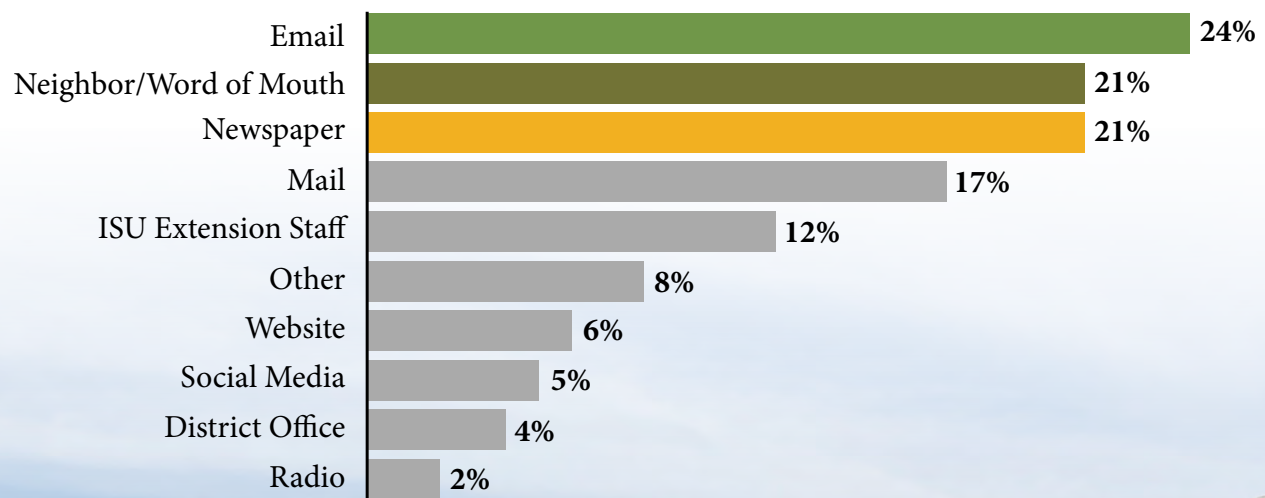
ILF will continue to seek ways to increase female attendance, especially female farmers and landowners, at field days and workshops. In 2021, women indicated that they prefer weekday morning or afternoon events. Examining previous year's responses, weekday afternoons are the preferred timing, followed by weekday morning and evenings after 5pm. In 2022, 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 and landowners.

HOW DID ATTENDEES HEAR ABOUT THE FIELD DAY?

Email (24%), word of mouth (21%), newspapers (21%) and mailings (17%) were the primary ways that field day attendees found out about ILF field days/workshops in 2021. The largest percentage of people heard about ILF field days through email, which is a change from previous years now that more people connected digitally as a result of the COVID-19 pandemic. We have also seen significant growth in our e-news mailing list (from 3,600 in 2019 to nearly 6,000 in 2021) and blog subscribers (over 1,000 new followers since 2019), which are both used to send notifications of events as well as other conservation-related topics. We will continue to use a diversified communications approach in order to maximize the number of attendees at our events.

How did you hear about the field day?

(Could choose more than one)



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. 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 81 evaluations were mailed; 43 evaluations were returned for a 53%% response rate (n=43).

	# Attendees	# Comment Cards	# Returned Evaluations+	# Demographic Cards
September 8: Cover Crop, Nutrient Management and Wetland Field Day, Gilmore City	32	22	12	23
September 14: Cover Crop Field Day, Grinnell	53	42	25	43
September 29: Wetland Field Day, Coggon	27	17	6	18
November 10: Oxbow Field Day, Lu Verne	26	19	Not sent	20
November 11: Cover Crop Field Day, Nashua	30	20	Not sent	20
November 16: Cover Crop Field Day, Kanawha	22	11	Not sent	11
November 17: Cover Crop and Saturated Buffer Field Day, Walcott	42	34	Not sent	32
Total	232	165	43	167

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

Overall, the quality and effectiveness of presentations were rated very highly, **with 93% of respondents rating the quality of the field day as “excellent” or “good.”** A few respondents noted that the use of a face mask by the speaker at the event decreased their overall rating, with these respondents acknowledging that the mask made it harder for them to hear and clearly understand the speaker. The individual field day evaluations are available as a separate report.

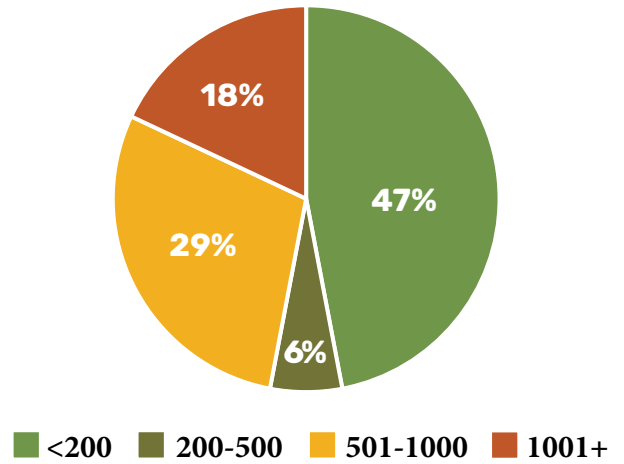
	Excellent (5)	Good (4)	Average (3)	Fair (2)	Poor (1)	Average
Overall quality of field day or workshop (n=43)	35%	58%	7%	--	--	4.3
Effectiveness of farmer presentations (n=25)	40%	60%	--	--	--	4.4
Effectiveness of ISU presentations (n=43)	37%	53%	7%	2%	--	4.2
Effectiveness of conservation professional presentations* (n=6)	50%	50%	--	--	--	4.4
Effectiveness of field portion (n=17)	35%	47%	18%	--	--	4.2

*Includes presenters from government agencies and non-governmental organizations

We also asked attendees to rate the length of the field day as we use this information for planning the length of future events. **All respondents indicated that the length was “just right.” After tracking the responses to these questions since 2018, we feel confident that our field days are an appropriate length for our audience.**

NUMBER OF ACRES FARMED

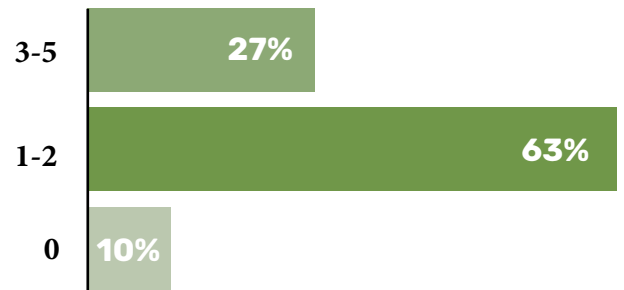
Fifty-three percent of respondents farmed 200 or more acres, with an additional 24% farming between 150-200 acres. Respondents reported an average of 590 acres per farmer (median 400 acres) with 40% of respondents reporting. These acreage numbers are similar to our demographic card data set (average of 560 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-seven percent of our respondents indicated that they farm over 500 acres.



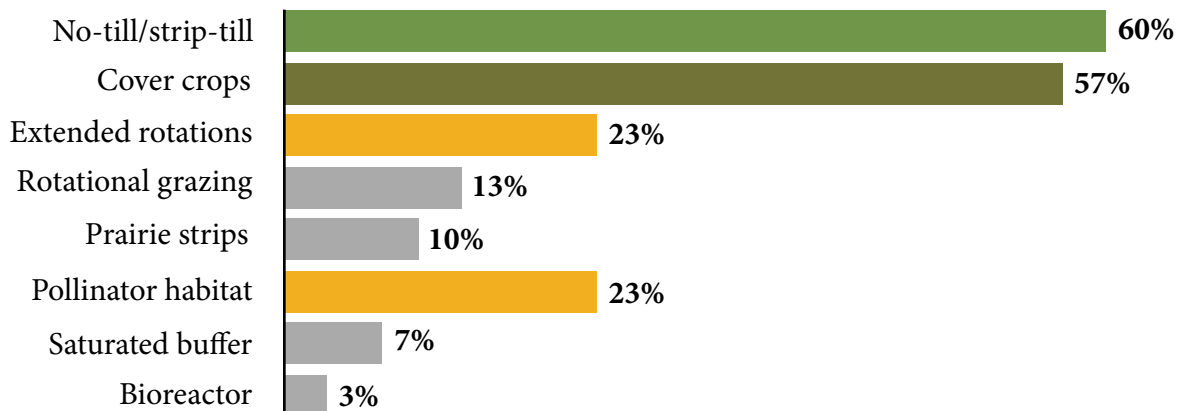
CONSERVATION PRACTICES

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.

Of respondents that indicated they are actively farming or are leasing ground, 27% are utilizing three or more conservation practices. The most common conservation practice reported was no-till/strip-till, with 60% of respondents indicating they use that practice in their operations. Fifty-seven percent of respondents also reported using cover crops.



Types of Conservation Practices (n=30)



LEASED LAND

Starting in 2019, we asked field day attendees about the farm land they lease to a tenant or rent from a landlord. A large portion of Iowa's farmland is under a lease agreement, as evidenced by our demographic card information and supported by the survey responses with 54% of respondents indicating they leased their land or rented from a landlord. Twenty-six percent of respondents noted that they currently lease land to a tenant, with an average of 135 acres (range of 10-320 acres). Twenty-eight percent of respondents indicated they rent an average of 448 acres (range of 20-1500 acres) from a landlord.

When land is leased to a tenant for agricultural production, land management decisions, like the amount of tillage and use of conservation practices, are determined by the lease agreement. Twenty-two percent of respondents reported that they have conservation practices built into the lease agreement they have for their land. Current leasing surveys do not ask about the use of conservation practice requirements in leasing to compare our results.

Of those who indicated that they had conservation practices built into their lease (n=14), 71% reported using cover crops, compared to 28% of respondents who said they did not have conservation practices built into their lease agreements (n=29). Forty-one percent of those without conservation practices built into their leases indicated no conservation practices being used. This could indicate the importance of including conservation practices in lease agreements to increase adoption. We will continue to ask these questions on future evaluations to help further our understanding of this relationship when we have more years of data collected.

	Respondents with conservation built into leases (n=14)	Respondents without conservation built into leases (n=29)
Report using cover crops	71%	28%
Report using 1 to 2 conservation practices	86%	34%
Report using 3 to 5 conservation practices	14%	24%



SUMMARY OF JANUARY EVALUATIONS FOR FIELD DAYS

January evaluations were mailed to farmers and landowners for seven ILF field days in late December 2021. The goal of the January evaluation is to investigate whether respondents made changes to their farming practices. For three events with initially low response rates, a second mailing was sent. This second mailing increased our response rate to 52%. When comparing to previous years, it is important to note that fewer in-person events were held due to the COVID-19 pandemic, resulting in a smaller overall number of responses.

# Evaluations Sent	# Evaluations Returned	Response Rate
105	55	52%

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	Field Day Season 2021 n=55
Used surface residue management (no-till or strip-till) on some of my acres	28%*	49%*	86%*	77%
Total acres of no-till/strip-till implemented by ILF field day attendees	67,711 (5,410 new acres)	44,292 (6,231 new acres)	83,310 (5,158 new acres)	17,635 (258 new acres)
Average # of acres per respondent who said they were putting more acres into no-till or strip-till	135	149	207	65
I fall seeded cover crops on some of my acres in fall	70% (10,973 new acres)	67% (4,028 new acres)	58% (6,020 new acres)	62% (978 new acres)
Total acres of cover crops planted by ILF field day attendees	48,749	20,138	36,918	12,336
Average # of acres per respondent who said they were putting more acres into cover crops	127	73	114	65
I discussed +/- of using no-till/strip-till/cover crops with my landowners/tenants	62%	70%	71%	69%
I networked conservation ideas with other farmers or my farmer clients	68%	73%	65%	62%
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%	One other: 30% Two or more: 57% No others: 13%
I did not make any changes	7%	10%	10%	42%

*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 64% of our January evaluation respondents. Respondents reported farming an average of 550 acres and collectively operated 29,163 total crop acres in Iowa. Respondents reported leasing an average of 224 acres with a total of 7,602 leased acres being reported.



64%
of attendees farm
200 acres or more

This year we saw a higher no-till/strip-till usage from our year-end respondents (77% compared to 60% from the two-week evaluation). This may be due to one of the November field day locations experiencing a significantly delayed harvest season due to wind damage earlier in the year reducing the window for fall tillage. With a smaller number of in-person field days compared to previous years (2019 and earlier), this one localized situation appears to have skewed the overall no-till/strip-till data. As we return to our previous number of events statewide, the impacts of local geographical differences will be less significant.

COVER CROPS*

Eight percent of cover crops reported were new acres. This is a decrease from 2019, when 16% of the cover crops reported were new acres. This represents a sizable decline from the 35% new acres reported in 2015.

The percentage of farmers who were trying cover crops for the first time in 2021 (18%) increased from 2019 (10%). Farmers planting cover crops for the first time in 2021 accounted for 46% of the new acres.

The majority of respondents (76%) started seeding cover crops at least three years ago. The average number of years of cover crop usage was seven. Those using cover crops reported an average of 55% of their row crop acres in cover crops—an increase from 2019, when respondents reported an average of 33%. Respondents who planted cover crops for the first time in 2021 (n=6) planted an average of 75 acres (range from 30-100 acres).

Number of years with cover crops? (n=34)

	2016	2017	2018	2019	2021
1	21%	16%	10%	10%	18%
2	10%	16%	7%	4%	6%
3-5	36%	26%	44%	28%	18%
6+	33%	42%	34%	58%	58%

76% HAVE BEEN USING
COVER CROPS FOR
THREE YEARS OR MORE

*Comparisons to previous year data in this section is done to be consistent with previous year-to-year comparisons. The 2021 ILF Year-End Report includes only respondents who attended a field day in 2021. Due to the ongoing pandemic, we held fewer in-person field days than previous years and therefore had a much smaller sample size (~200 fewer respondents than in 2015-2017 and 2019).

We asked respondents what percentage of their reported cover crop acres they would maintain if cost share was not available. **Sixty-six percent stated they would maintain 100% of their cover crop acres and 24% would maintain at least half of their acres.** Only one respondent indicated they would no longer use cover crops.

The most common cover crops used were grasses including cereal rye, wheat, oats and triticale. Reported brassica usage was up slightly, while legume usage was significantly lower compared to 2019 data. Similar to previous years, cereal rye was the most commonly used cover crop. Sixty-seven percent of first time cover crop users reported planting cereal rye and 33% planted radishes. All respondents who have used cover crops for six or more years seeded a grass.

Was cost share used? (n=34)

	2016	2017	2018	2019	2021
Yes	61%	65%	68%	68%	74%
No	39%	35%	32%	32%	26%

2021 Cover Crop Planting by Species Type (n=34)

(Could choose more than one)

Species Type	Percent Planted
Grasses	94%
Brassicas	27%
Legumes	3%

Type of cover crops used? (n=34)

(Could list more than one)



* Other includes rapeseed, winter camelina, triticale, kale, bluegrass, clover

PRAIRIE STRIPS

Seventeen percent of farmers and landowners who attended ILF field days in 2021 reported using prairie strips on their land. Respondents accounted for a total of 407 prairie strip acres in Iowa (90 acres of which were reported to be new in 2021).

Sixty percent of respondents indicated they were considering prairie strips, down from 65% of respondents in 2018 and 2019. The percent of respondents who reported being unfamiliar with prairie strips increased to 27% this year, from 18% in 2019.

Thoughts on prairie strips

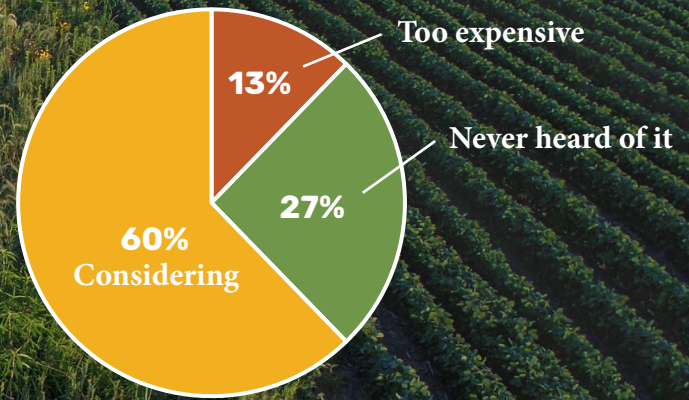


Photo courtesy of Iowa State University Department of Natural Resource Ecology and Management

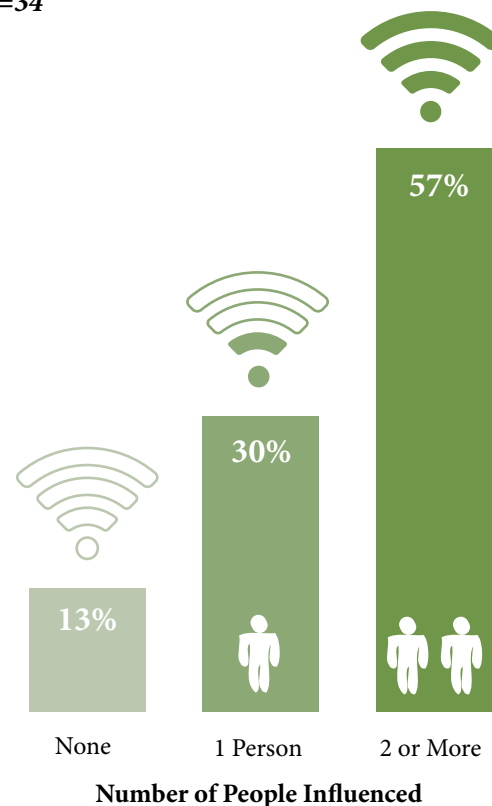
NETWORKING

Networking by attendees remains an important outreach method for Iowa Learning Farms as we host outreach events and provide valuable information to farmers, landowners, agricultural professionals and others. In 2021, networking by field day attendees continued, with 62% of respondents reporting that they networked with others about conservation ideas.

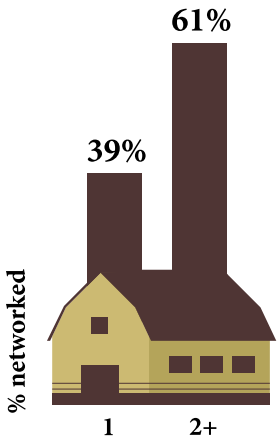
Of those attendees who networked, 87% reported that they were successful in influencing at least one other person. Ultimately, these farmers extended ILF's influence to 90% more farmers than those who attended ILF events in 2021. **That's a \$1.90 value for every dollar invested in ILF.**

How Successful Were You in Networking?

n=34



FIELD DAY SUCCESS LOOP



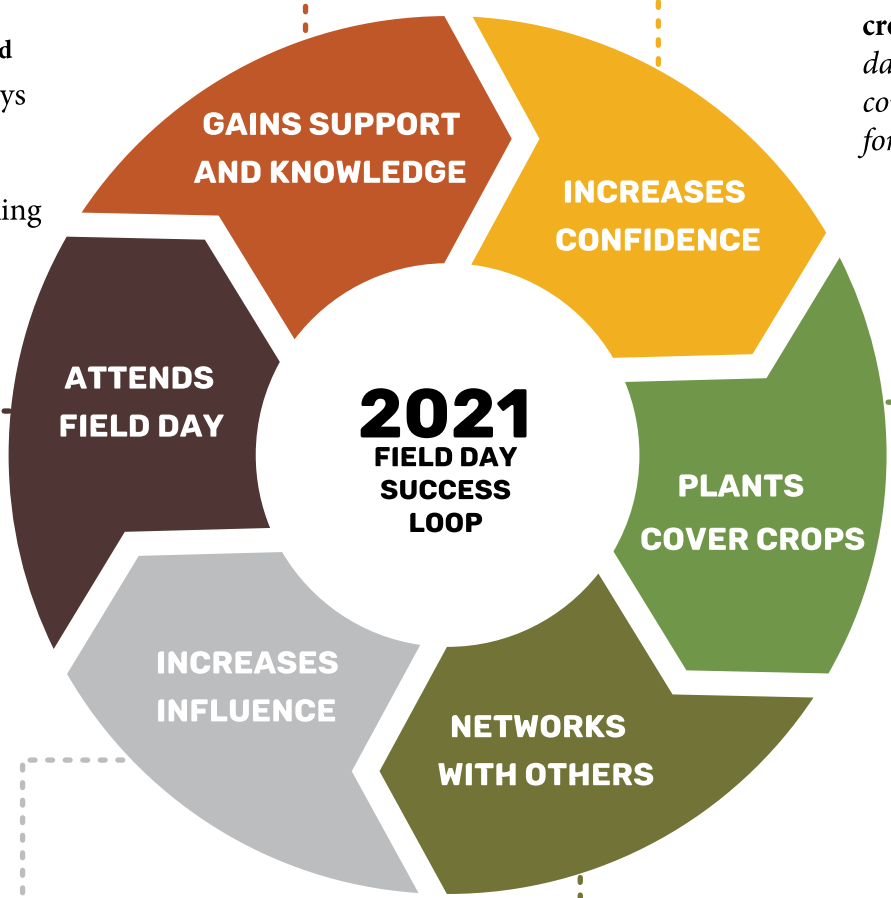
The more field days one attends, the more likely they reported networking and influencing others.

100% 

of field day attendees found the farmer presentations to be good to excellent.





The more field days one attends, the more likely they are to plant cover crops (average = 3 field days for those that planted cover crops vs. 1 field day for those that didn't).



8% of cover crops were new acres.

FARMERS ARE EXTENDING ILF'S INFLUENCE TO **90%** MORE FARMERS THAN ATTENDED THE EVENT



 That's a \$1.90 return for every dollar spent on an ILF event. ILF makes sense!

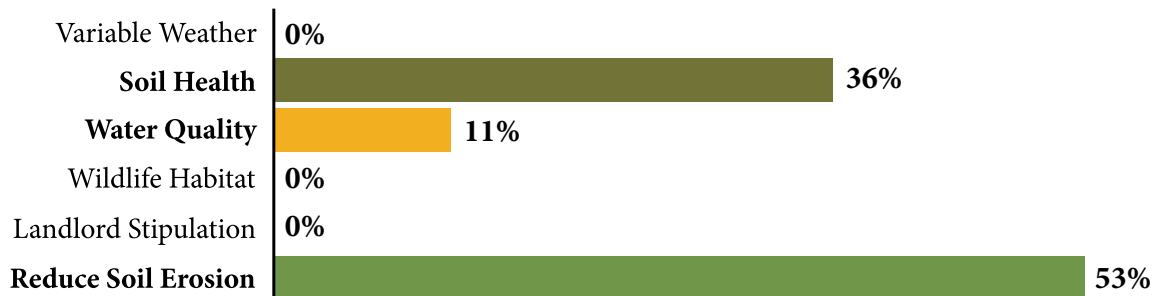
62% OF FARMERS AT ILF EVENTS NETWORKED



REASON FOR IMPLEMENTING CONSERVATION PRACTICES

We asked respondents to identify their top reason for implementing conservation practices from this list: variable weather, soil health, water quality, wildlife habitat, landlord stipulation and reduce soil erosion. **Eighty-nine percent of respondents chose soil health or reduce soil erosion as their top reason for implementing conservation practices.** It is not a surprise that variable weather was not a factor, as we have been in drought or near-drought conditions since early 2020. 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.

2021 Top Reasons for Implementing Conservation Practices (n=28)



Some respondents (n=27) selected more than one answer to the question and are not included in the responses above because we have no way of determining what their top reason would have been. Among the 25% of respondents who selected water quality as one of multiple reasons, 79% also chose soil health and 57% also chose reduce soil erosion. This shows that respondents are aware of the interconnected nature of soil health, erosion and water quality. While 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.



2021 ILF CONSERVATION WEBINAR SERIES

The Iowa Learning Farms **Conservation Webinar Series** started in 2011 on a monthly basis and in March 2020 we began to host weekly webinars. Due to its popularity, we continued the weekly series into 2021, hosting 49 webinars featuring 48 different presenters, covering topics such as wetlands, bioreactors, soil health, cover crops, urban conservation, precision agriculture, wildlife, trees and more.

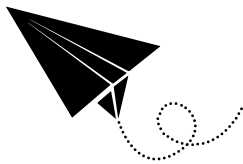
The 49 weekly webinars drew an average audience of 86 attendees, a slight decline from 2020 where the average was 93 attendees. With more events returning to in-person, however, this is outstanding participation.

WEBINAR FORMAT



Webinars are hosted each Wednesday at 12pm CT using Zoom. A set of first and last slides is provided to the speaker the Monday before their scheduled presentation to provide a uniform look for the series, as well as including information for submitting CCA credit requests and promotion of the upcoming webinar. Following a brief introduction by an ILF staff moderator, the speakers share a 25-30 minute presentation on the requested topic. Attendees are encouraged to submit questions via the chat box to the moderator. After the speaker has concluded their presentation, the moderator reviews the questions to ask them verbally. This method provides the archive viewers an opportunity to hear the questions as they do not have access to the chat feature to view submitted questions. The recorded webinar is sent to the Brenton Center for Agricultural Instruction and Technology Transfer at Iowa State University for the addition of captions and posting to Vimeo. The webinar recording is then posted to the ILF website by Friday afternoon and a recap blog posted.

WEBINAR PROMOTION



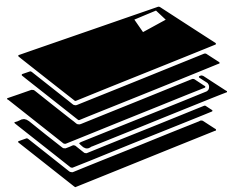
We have the same promotion routine in place for every webinar, utilizing a multi-faceted approach. A week before the webinar, a press release is sent out to our statewide media contact list and ISU Extension and Outreach communications and posted to our website. The Tuesday before a webinar, a promotional post is published on our blog. The morning of the webinar, information is sent out to the ILF email list as a special notice. The Friday after the webinar, a recap is posted on the blog along with a link to the recording.

WEBINAR CERTIFIED CROP ADVISER (CCA) CONTINUING EDUCATION UNITS (CEUs)



When the topic is relevant, we apply for a CCA CEU. Once approved, these webinars are added to the CCA CEU calendar. Webinar attendees who are seeking credit for watching the live webinar email their name and CCA number after the webinar. These attendees are checked against the Zoom-generated usage list and added to the sign-in sheet, which is then submitted to the CCA board. One hundred and seventy-three CCA continuing education units were awarded to webinar attendees in 2021.

WEBINAR EVALUATION METHODOLOGY



To gain an understanding of our webinar audience and the effectiveness of our weekly webinar series, we sent out a Qualtrics survey via email to all 2021 webinar attendees in early January 2022. The survey was successfully sent to 1,194 people, and 408 responded (34%). While we typically have a response rate of over 40% for our mailed evaluations, this is a very good response rate for an emailed survey where the typical response rate is closer to 10%.

2021 ILF CONSERVATION WEBINAR SERIES

Webinar	Live Views	Archive Views*	Total
January 6: Josh Divan Improving Farm Profitability with Precision Conservation	106	101	207
January 13: Jeff Jensen Pollinator Plus: Creating a Buzz	152	179	331
January 20: Laura Christianson Around the World in 80 Bioreactors	115	70	185
January 27: Gabriel Lade The Iowa State Rural Drinking Water Survey: Some Preliminary Results and Insights	109	66	175
February 3: Levi Lyle Electricity as Weed Management for the Future	117	103	220
February 10: Adam Janke Exploring Iowa's Aquatic Wildlife Diversity	105	70	175
February 17: Bryan Page Nutrient Retention Capacity of Newly Restored Wetlands in Southwestern Ontario	96	45	141
February 24: Ashley Conway Silvo-what? Exploring Opportunities for Livestock with Silvopasture Management	84	55	139
March 3: Matt Helmers Conservation Learning Lab: Implementation of Cover Crops at Small Watershed Scale	117	55	172
March 10: Matt Liebman Cropping System Diversification is a Path to Greater Sustainability	102	106	208
March 17: Charles Brown Incorporating Conservation Practices Into Your Farm Lease	102	45	147
March 24: Alejandro Plastina Economic Considerations on Cover Crop Adoption	123	49	172
March 31: Rick Cruse When, Where and Why Soil Erosion Occurs and When, Where and How Do We Control It	144	67	211
April 7: Mike Naig Conservation and Water Quality in Iowa	106	101	207
April 14: Liz Ripley Cyclone Soil Health Sweepstakes Showcase	43	27	70
April 21: Kathleen Delate Benefits of Organic Farming in Terms of Soil and Water Quality	76	46	122
April 28: Taylor Shirley Cover Crops and Pheasant Nesting in Iowa's Ag-Dominated Landscape	99	98	197

*Archive views as of 1/4/2022

Webinar	Live Views	Archive Views*	Total
May 5: Mark Licht Can Small Grain-Soybean Relay Intercropping Be Successful in Iowa?	64	64	128
May 12: Randall Cass Survey of Beekeeper, Farmer, and Landowner Attitudes on Bee Health and Pollinator Conservation	79	41	120
May 19: Linda Prokopy Understanding Adoption of Agricultural Conservation Practices	138	58	196
May 26: Marshall McDaniel Soil Health Under and Around Prairie Strips	88	85	173
June 2: Edward Johnstonbaugh and Matthew McVey Emerging Concepts in Biogas Digestion	36	59	95
June 9: Antonio Mallarino Impacts of Cover Crops and Tillage Systems on Phosphorus Loss with Surface Runoff from Corn and Soybean Fields	78	74	152
June 16: Wendong Zhang Water Quality and Iowans' Lake-Based Recreation: New Results from the 2019 Iowa Lakes Survey	54	57	111
June 23: Mark Rasmussen Looking Back to Look Ahead	55	32	87
June 30: Bob Hartzler Weed Management in Iowa: 40 Years of Progress?	86	55	141
July 7: Ted Corrigan The Increasing Challenge of Producing Safe Drinking Water	120	99	219
July 14: Billy Beck Are Stream Channel Sediment and Nutrient Sources Masking Upland Conservation Progress?	119	100	219
July 21: Manbir Kaur Rakkar Improving Soil Health with a Novel Perennial Grain Crop	64	64	128
August 4: Melissa Wilson Applying Liquid Manure to Living Roots: Research Update	69	45	114
August 11: Kelly Nelson Subirrigation of Crops Using Drainage Water Recycling	46	48	94
August 18: Ehsan Ghane Designing Drainage Systems for Maximizing Profit and Protecting Water Quality	56	38	94
August 25: Mark Licht In the Field: A Conservation Case Study	74	60	134
September 1: Catherine DeLong Happily Ever After? Improving Edge-of-Field Practice Implementation After the Landowner Says 'Yes'	70	45	115
September 8: Bill Hunt The Evolution of Stormwater Management in North Carolina from the 1900s to the 2020s	38	28	66

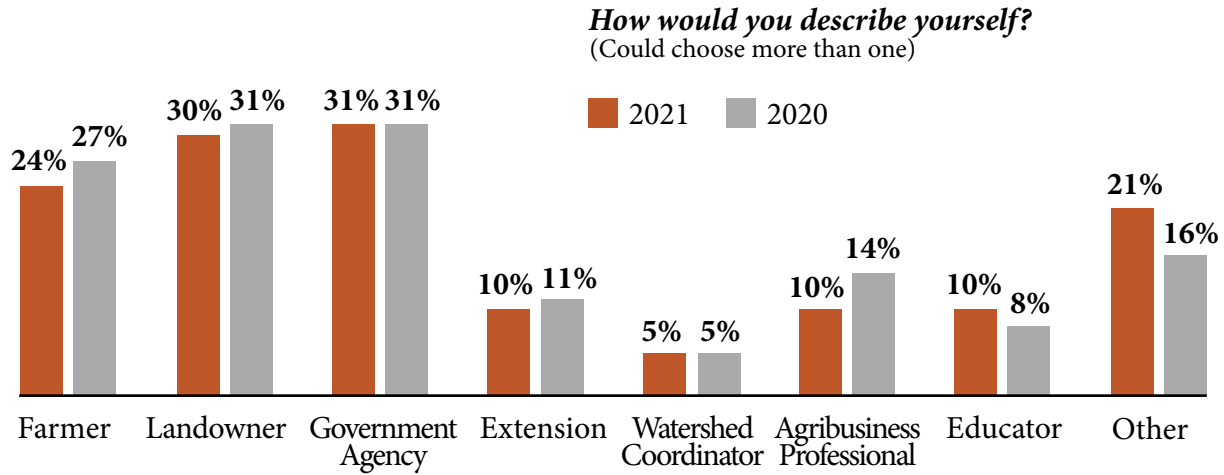
*Archive views as of 1/4/2022

Webinar	Live Views	Archive Views*	Total
September 15: Ryan Bergman Benefits to Farming and Conservation through Precision Agriculture Technologies	58	43	101
September 22: Peter O'Brien Relay-Cropping Winter Camelina with Soybean in Central Iowa – Potential Benefits and Lessons Learned	63	49	112
September 29: Dean Eisenhauer Beaver Dams in Incised Channels in Eastern Nebraska: The Good, the Bad, the Ugly	86	61	147
October 6: Reid Christianson Ticking the Box on Conservation Adoption	80	38	118
October 13: Jake Hansen Iowa Department of Agriculture and Land Stewardship Wetland Initiative	123	64	187
October 20: Sara McMillan Ecosystem Function of Wetlands in Midwestern Agricultural Landscapes	77	41	118
October 27: Beth Baker Expanding Engagement in Watershed Conservation and Planning	75	32	107
November 3: Steven Hall Environmental Impacts of Poorly Drained Agricultural Soil	100	70	170
November 10: Bill Hunt The North Carolina Stormwater Control Measure Inspection and Maintenance Certification	32	16	48
November 17: Sotirios Archontoulis Past, Present, and Future Optimum N Rates for Corn	95	53	148
November 24: Jacqueline Comito Can Revision and Hope Improve the Environment?	55	31	86
December 1: Laura Witzling Extending Outreach Impacts through Virtual Events and Facebook Ads	68	38	106
December 8: Kay Stefanik and Adam Janke Wetlands and Wildlife: A Conservation Case Study	101	39	140
December 15: Tom Richard Bioeconomy Solutions for the 21st Century	65	27	92
Total	4,208	2,937	7,145

*Archive views as of 1/4/2022

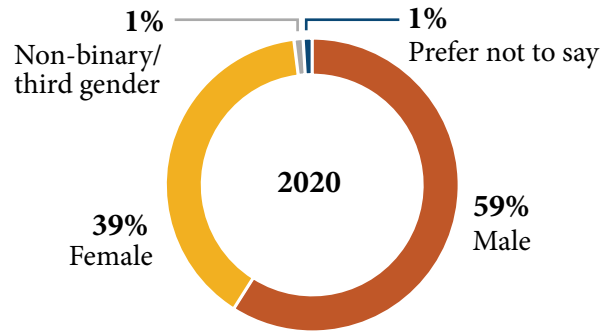
WEBINAR EVALUATION RESULTS

WHO ATTENDED THE WEBINAR SERIES?

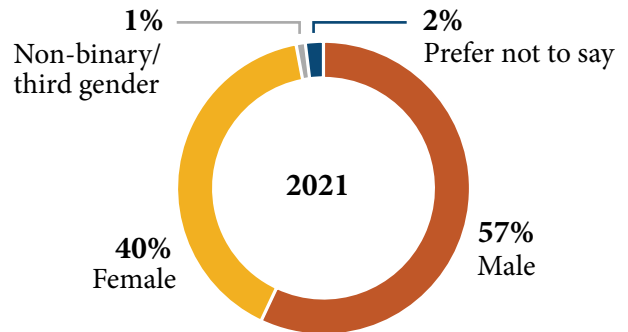


Government agency includes city, county, state and federal agency partners and SWCD staff.
Other includes students, media, engineers, NGO and non-profit staff, interested residents and researchers.

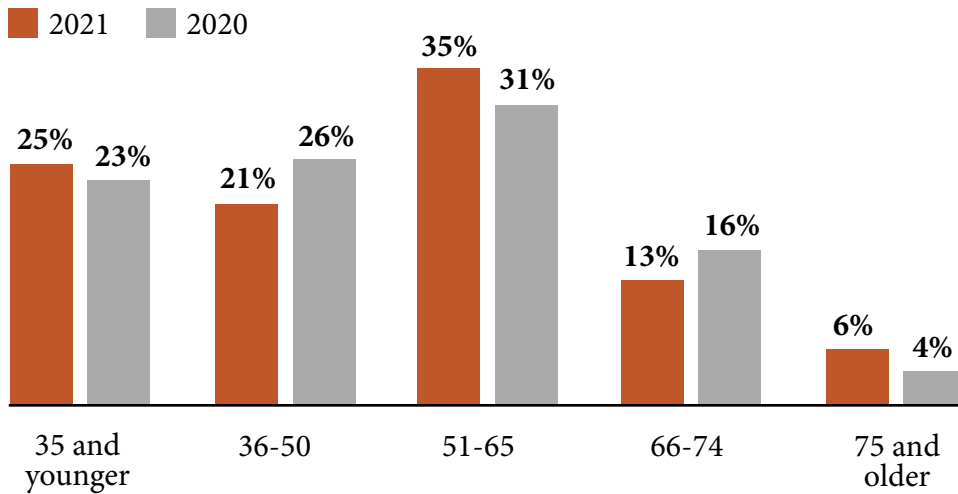
The webinar series is not necessarily targeted to farmers and landowners, but the demographic information we collected showed that **a large percentage of our webinar audience identifies as either a farmer or landowner**. This indicates that our webinar series is another effective way to reach farmers and landowners, in addition to our farmer-focused field day events.



In 2021, 72% of the survey respondents live in Iowa, compared to 77% in 2020, showing that we are expanding our audience to other states. **Attendees from 18 states and Canada tuned in.** Attendees indicated they lived in the following states: California, Illinois, Indiana, Kansas, Maryland, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas and Wisconsin.



Age of Attendees



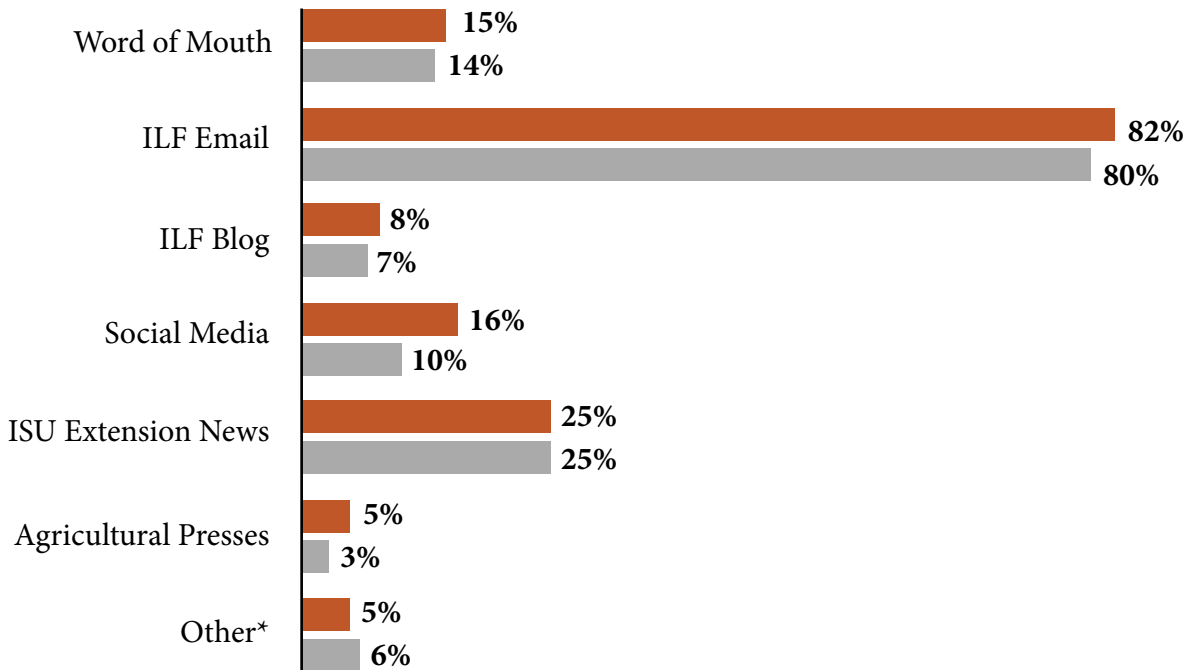
Similar to virtual field days, we see a high participation of females in our webinars, further indicating the need to offer a variety of outreach options. The average age of 2021 webinar attendees was 50 years old, compared to 51 for 2020 attendees.

HOW DID PARTICIPANTS HEAR ABOUT THE WEBINARS?

How did you hear about the webinar?

(Could choose more than one)

2021 2020

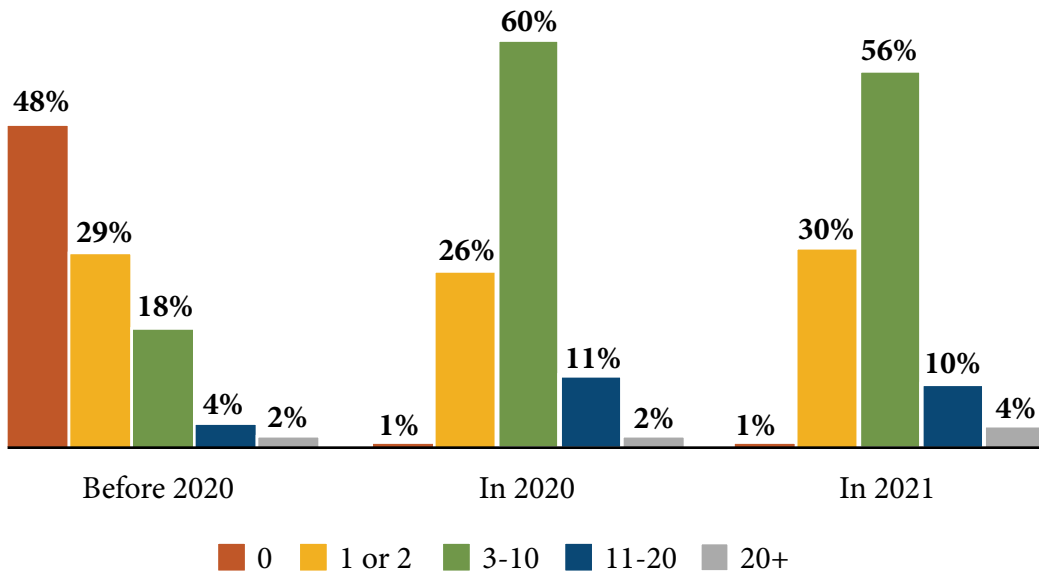


*Other includes from non-agricultural presses and other organizations like the Soil and Water Conservation Society, Practical Farmers of Iowa, Wisconsin Land and Water Association and Farm Bureau.

Following each webinar, attendee email addresses are added to our ILF email service. This allows previous attendees to receive the weekly notifications to tune in and continues to serve as an effective communication tool for promoting our online events.

HOW MANY WEBINARS DID PEOPLE ATTEND BEFORE AND DURING 2021?

How many webinars did you attend?

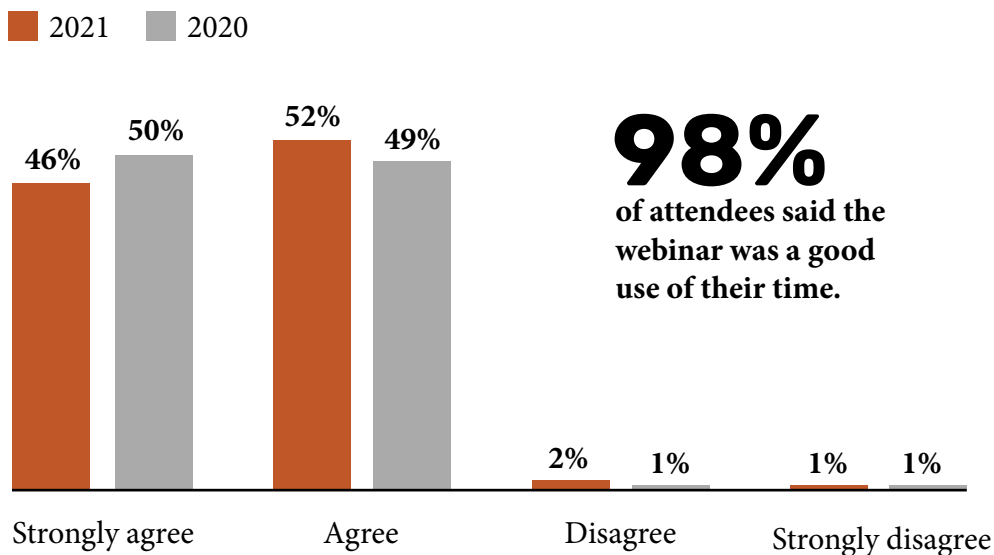


Prior to starting the weekly series in 2020, nearly 50% of the people surveyed had never attended an Iowa Learning Farms webinar. In 2021, 56% of the people surveyed attended between 3 and 10 webinars, down slightly from 2020. However, the number of attendees participating in 20 or more webinars doubled from 2% to 4%. **We continue to draw new attendees and the majority are tuning into multiple webinars throughout the year.**

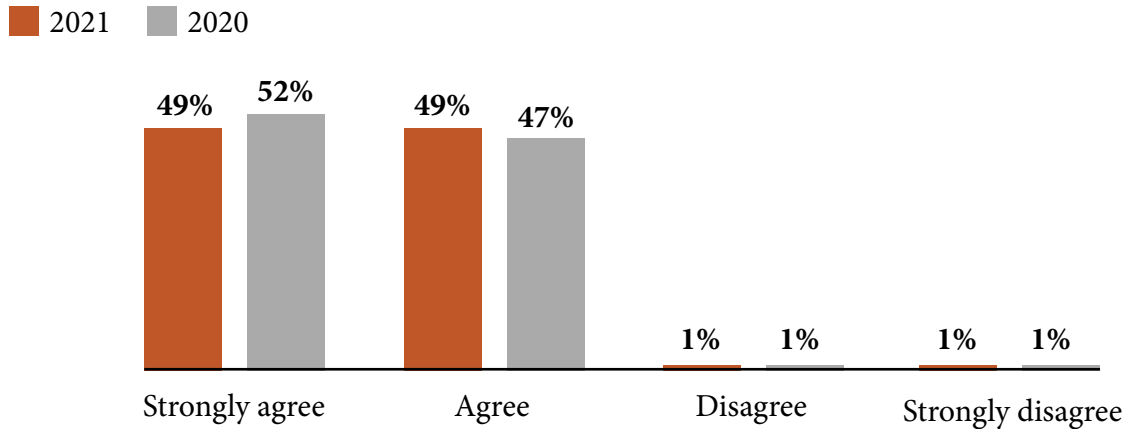
HOW EFFECTIVE WAS THE WEBINAR SERIES?

Over 96% of webinar attendees rated the overall quality of the webinar(s) they attended as “excellent” or “good.” Attendees also overwhelmingly stated that the webinars were a good use of their time, that they learned new information and that they learned about new initiatives, resources and/or tools.

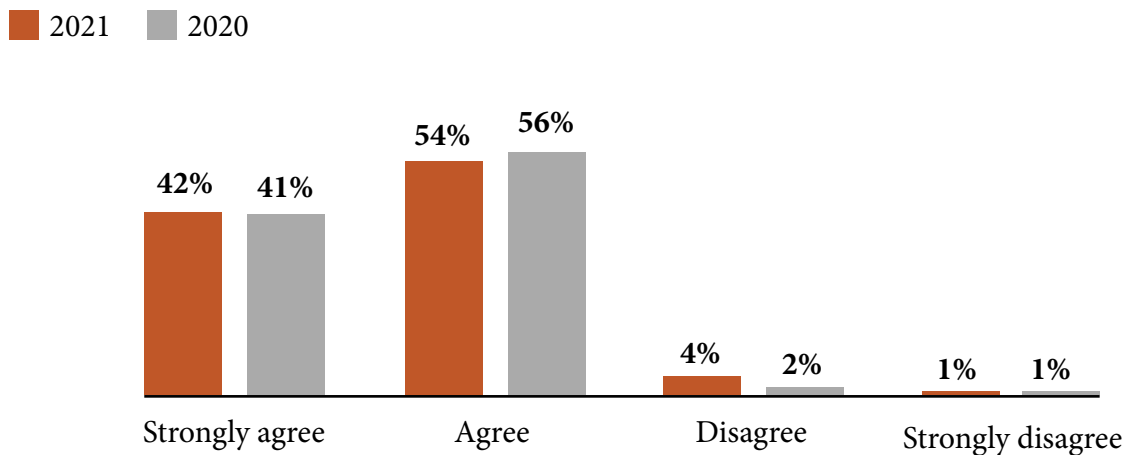
The webinar(s) I attended were a good use of time.



As a result of the webinar(s) I attended, I gained new information.



As a result of the webinar(s) I attended, I learned about new initiatives, resources and/or tools.



WHAT WERE SOME OF THE AUDIENCE’S FAVORITE WEBINARS?

We asked attendees which of the webinars were their favorite and provided them with a link to the 2021 webinar list on the Iowa Learning Farms website. The webinars that were listed as favorites show the breadth of topics that are of interest to our audience.

1. December 8: Kay Stefanik and Adam Janke | Wetlands and Wildlife: A Conservation Case Study
2. November 17: Sotirios Archontoulis | Past, Present, and Future Optimum N Rates for Corn
3. May 12: Randall Cass | Survey of Beekeeper, Farmer, and Landowner Attitudes on Bee Health and Pollinator Conservation
4. January 20: Laura Christianson | Around the World in 80 Bioreactors
5. July 14: Billy Beck | Are Stream Channel Sediment and Nutrient Sources Masking Upland Conservation Progress?
6. October 13: Jake Hansen | Iowa Department of Agriculture and Land Stewardship Wetland Initiative
7. December 1: Laura Witzling | Extending Outreach Impacts through Virtual Events and Facebook Ads

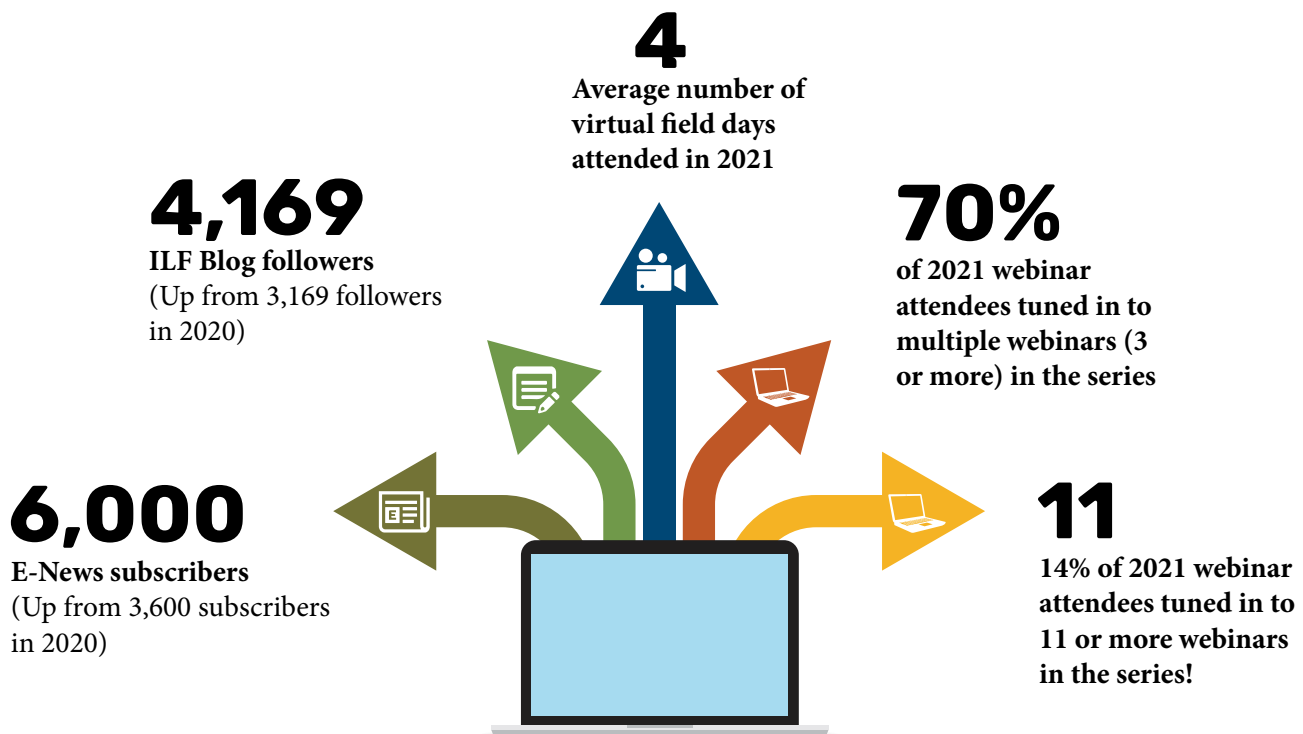
CONCLUSIONS

Influencing human behavior in relationship to environmental issues such as conservation and clean water is one of the most difficult challenges faced by our state. Research and ideas can change hearts, minds and behavior, but only when coupled with strategic influence. Bringing together a cohort of conservation and water quality influencers into a robust influence strategy focused on broader recognition of issues and effective corrective actions, we can productively move toward better water quality in Iowa.

Over the last two years, there has been a societal shift in trust and access to online education, outreach and resources. Through its unique blend of in-person and online activities, Iowa Learning Farms has vigorously pursued its mission of building a Culture of Conservation in Iowa and making science- and research-based best practices in agriculture, land management and environmental science available to all. As indicated in this report, program elements such as virtual field days, livestreamed seminars and an increased cadence of weekly webinars, have all proven to successfully connect with audiences – albeit somewhat differently – and have now gained permanence in the ILF menu of program offerings. The success of these programs does not replace the need for in-person engagement, but does offer a tremendous opportunity to expand the Culture of Conservation reach to a more diverse group of conservation influencers (e.g. farmers, landowners, policy makers and conservation professionals) across Iowa and well beyond.

We have anecdotal evidence that the online community is also expanding to our in-person events. In early March 2022, we held an ILF workshop on perennial prairie plantings. A female landowner spoke to us after the event and told us that she drove two hours to be there. She had previously participated in several of our online activities and told us she felt like she knew us. Her comfort with the community we had built virtually allowed her to feel comfortable to come to a workshop, ask questions and network with others. We expect to see our virtual community of conservation and water quality influencers continue to grow over the years ahead!

BUILDING A CULTURE OF CONSERVATION THROUGH AN ONLINE COMMUNITY OF CONSERVATION AND WATER QUALITY INFLUENCERS



Established in 2004, Iowa Learning Farms is building a Culture of Conservation by encouraging adoption of conservation practices. Farmers, researchers and ILF team members are working together to identify and implement the best management practices that improve water quality and soil health while remaining profitable. Partners of Iowa Learning Farms include the Iowa Department of Agriculture and Land Stewardship, Iowa State University Extension and Outreach, Leopold Center for Sustainable Agriculture, USDA Natural Resources Conservation Service, Iowa Department of Natural Resources (EPA Section 319 Grant Program) and GROWMARK, Inc.