

BUILDING A CULTURE OF CONSERVATION

2004-2019

IOWA LEARNING FARMS

It started as a simple idea...

**Helping farmers talk to other farmers
about protecting Iowa's soil and water**

**A multidisciplinary approach to increase
adoption of conservation practices
that would lead to greater natural resource protection**



Our Approach:

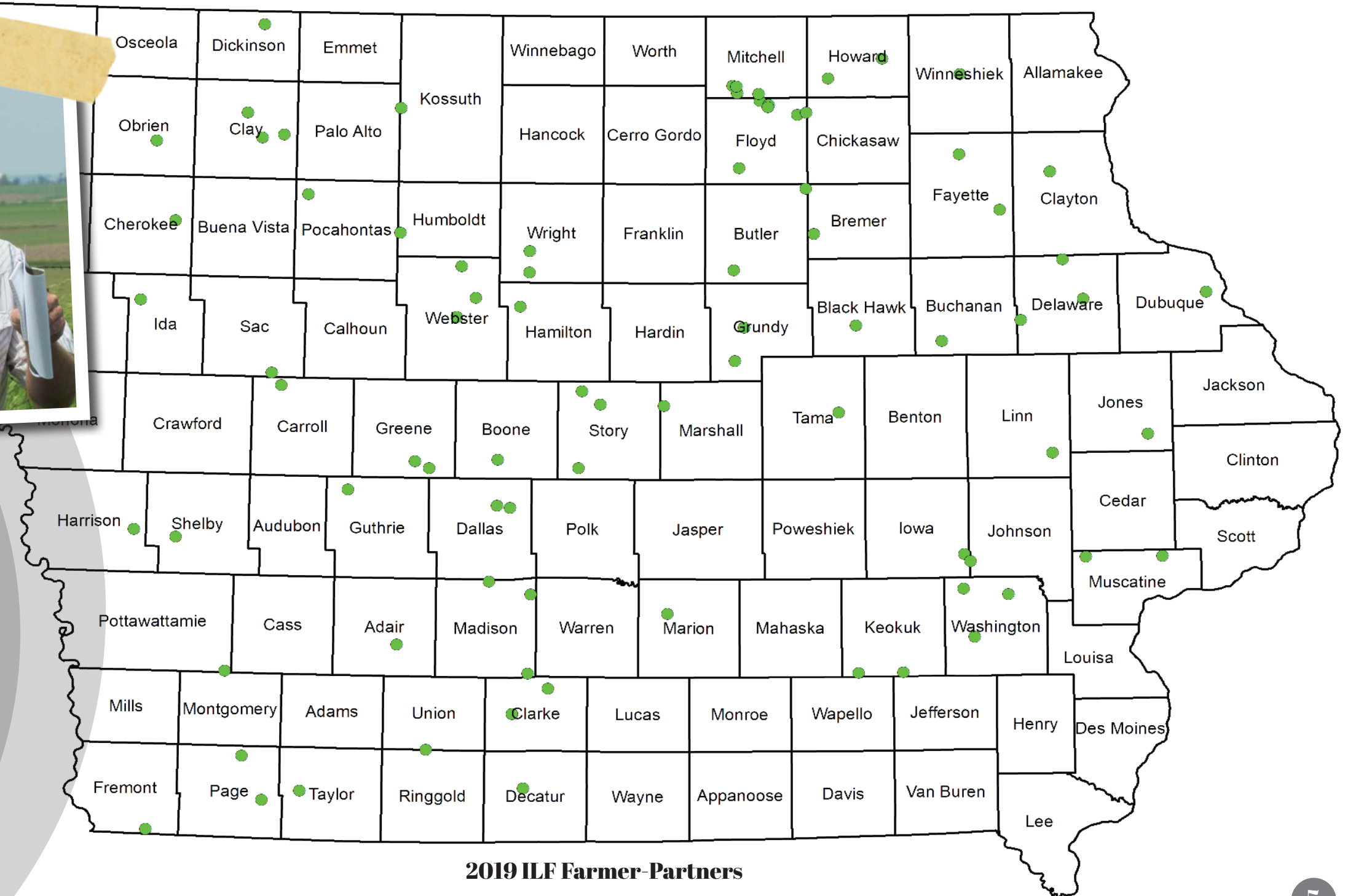
Our Mission:

**BUILDING A
CULTURE OF
CONSERVATION**

**IOWAN TO
IOWAN**

- ✓ Expanding our network of conservation-focused farmers across the state P.4
- ✓ Extending farmer and landowner outreach through field days and workshops P.6
- ✓ Boosting interest in field days and workshops through word of mouth P.8
- ✓ Broadening our networks through an online and social media presence P.10
- ✓ Amplifying the conversation to include all Iowans through community outreach and the Conservation Stations P.12

Expanding our network of conservation-focused farmers across the state



31
farmer-partners
at ILF's start

88
farmer-partners
statewide in 2019

2019 ILF Farmer-Partners

Extending farmer and landowner outreach through field days and workshops

It is well recognized that field days are one of the most effective means of communicating with farmers and landowners across the state.

Farmers and landowners prefer to learn about **new land management practices** and how to fine-tune existing practices through **one-on-one conversations** with scientists and other farmers.



We have made field days and workshops into a science!

265

field days/workshops since 2005

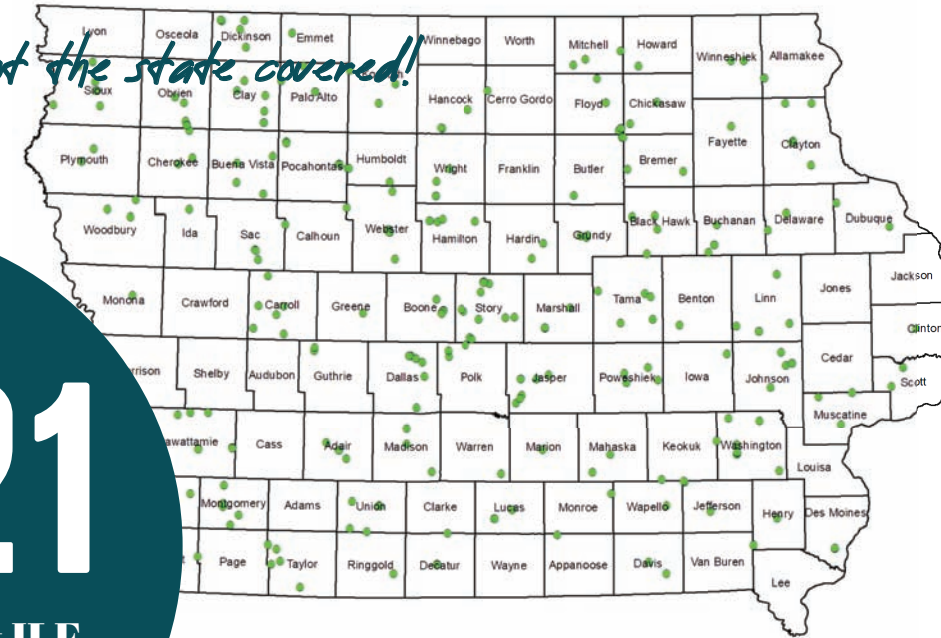
13,621

total attendees at ILF field days/workshops

51

average field day attendance

We've got the state covered!



ILF Field Day/Workshop Locations

ILF farmer outreach events have focused on conservation from the very beginning.

At first the emphasis was on no-till and reduced tillage. By 2010, cover crops were beginning to gain early traction. By 2013, with our partners, we were educating on a suite of conservation practices as the Iowa Nutrient Reduction Strategy was released.

Today, ILF field day topics have grown to also include strip till, nutrient management, grassed waterways, grazing/pasture improvement, nutrient removal wetlands, bioreactors, saturated buffers, wildlife habitat, biofuels and prairie strips.



COVER CROPS



STRIP TILL



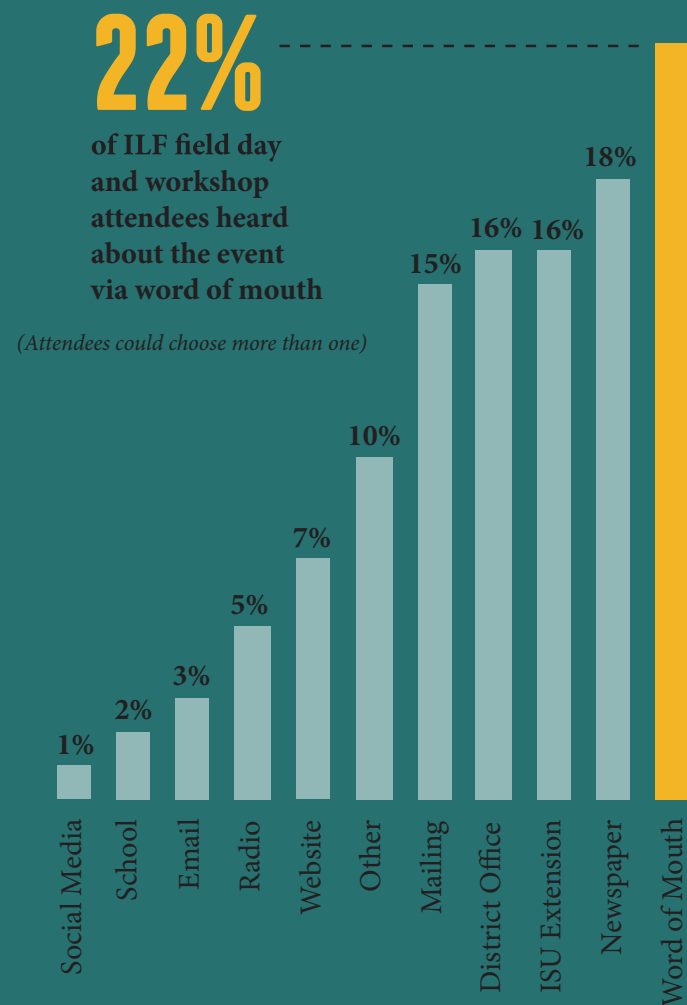
BIOREACTORS

Boosting interest in field days and workshops through word of mouth

Through the years, we have taken a **multi-faceted approach** to field day promotion: flyers, news releases, snail mail postcards, emails, website, blogs, and social media.



Good old fashioned **word of mouth** continues to be a major driver in getting folks in the door!

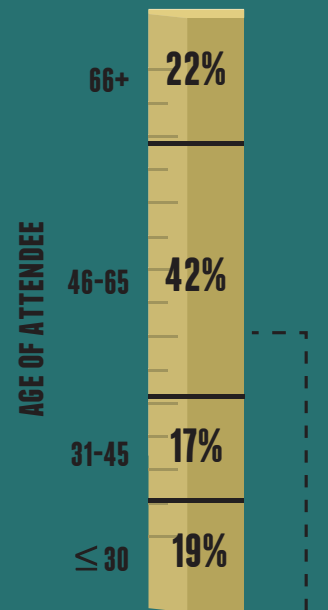
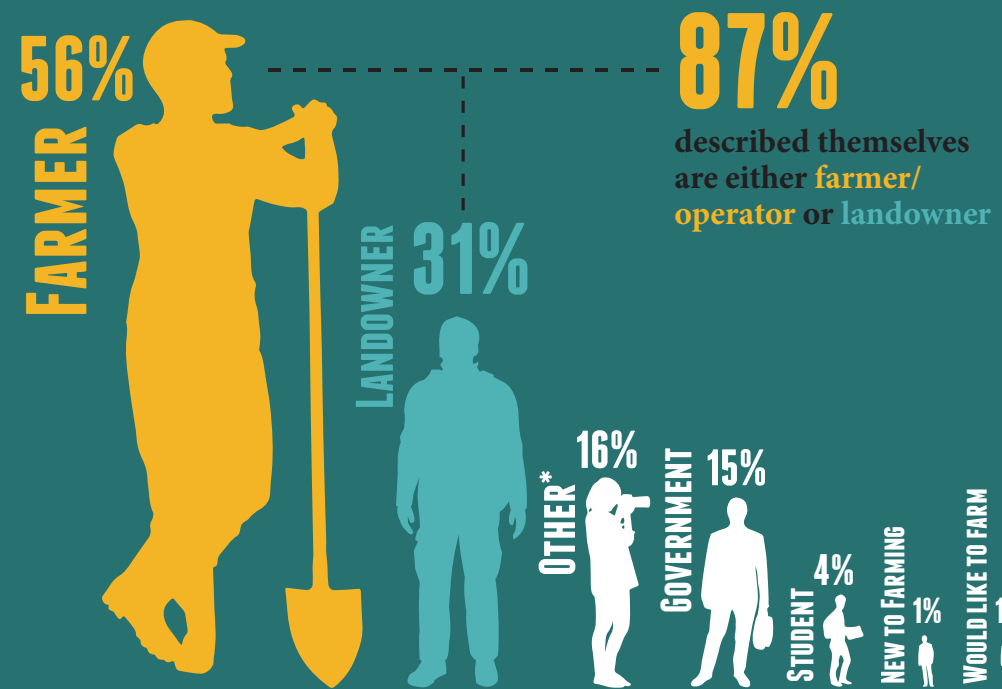


Reaching our Target Audience



Seventy-eight percent of ILF field day and workshop attendees are **farming 200+ acres:**

farmers and landowners that have the potential to implement conservation practices on a large number of acres.



51 average age of farmer attending ILF field day

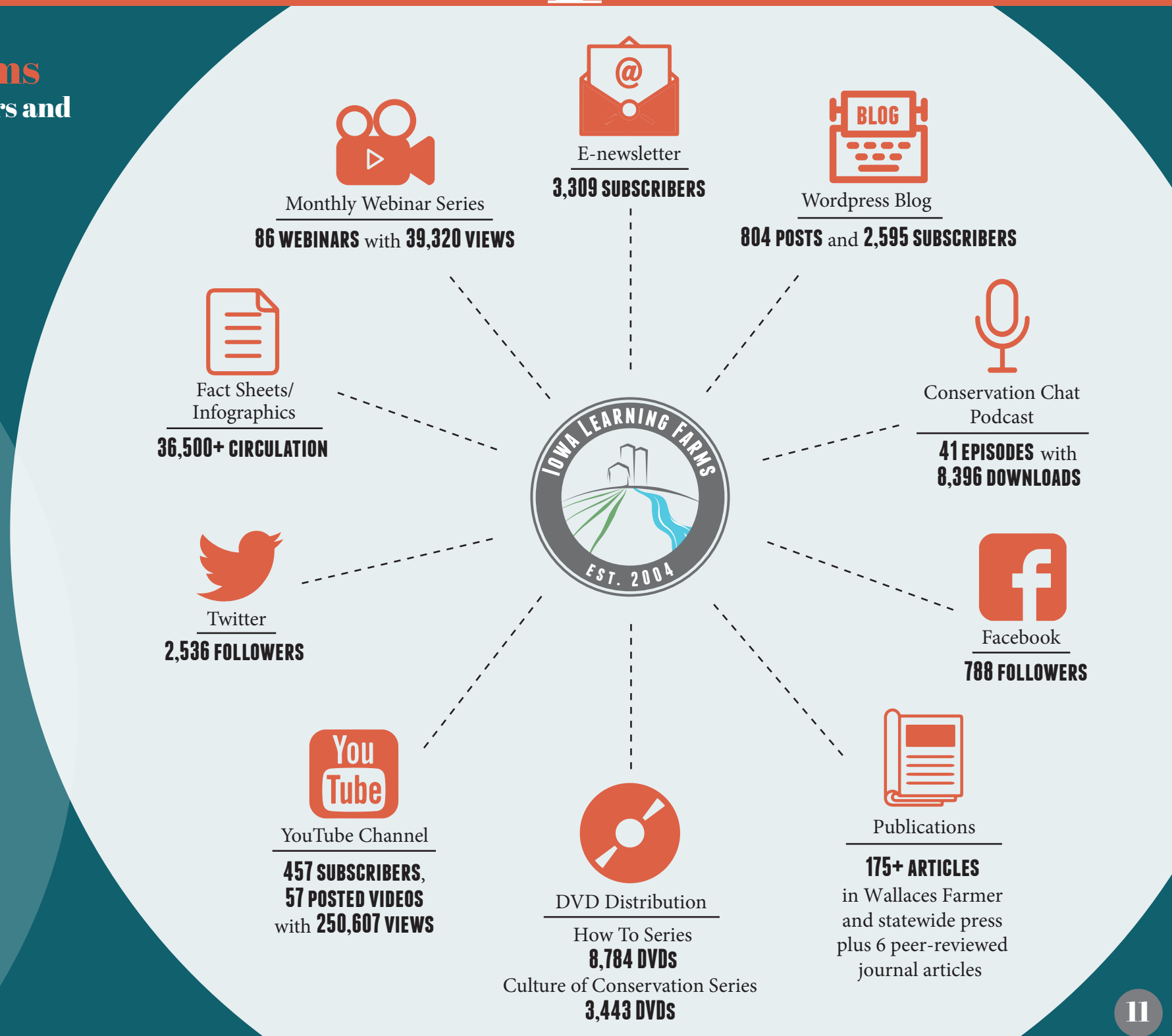
Started collecting this demographic data in 2010

Female farmers and landowners are now 25% of our field day attendees. Farmers/landowners under the age of 45 make up 36% of our attendees.

This information is based on demographic cards filled out by all attendees at ILF field days/workshops.

Broadening our networks through an online and social media presence

Iowa Learning Farms uses a **wide variety of media platforms** to reach out and communicate with farmers, landowners, agency partners and interested citizens.



Amplifying the conversation to include all Iowans through community outreach and the Conservation Stations

Farmer and landowner outreach is more effective when **multi-generational community outreach** is a part of the strategy. Family, friends and neighbors are part of the interwoven threads that make up farmers' social networks. This includes youth and non-farming members of the local community.



185,535
PEOPLE REACHED

Together Iowa Learning Farms and Water Rocks! have reached 185,535 Iowans of all ages, backgrounds, and walks of life over the years!

167,742
MILES TRAVELED
with Conservation Station trailers

Year	Number of Community Events	Attendees
2007	34	3,092
2008	32	2,779
2009	18	4,348
2010	47	7,291
2011	70	12,016
2012	106	15,769
2013 [^]	94	7,774
2014 [^]	82	10,563
2015 [^]	139	19,551
2016 [^]	178	31,461
2017 [^]	206	28,915
2018 [^]	280	41,976
Total	1,286	185,535

[^]Partially funded through Water Rocks!.

2007
Original Rainfall Simulator

2010
Big Conservation Station + CONSERVATION PACK

2013
li' Conservation Station

2018
Conservation Station ON THE EDGE

Now we are three!

Inspiring young and old, rural and urban

That simple idea...

Building a Culture of Conservation

Does it work?

We decided to find out.

In January 2019, we mailed a one-page survey to the 3,710 farmers and/or landowners who attended an ILF field day/workshop since 2005.

We asked these attendees about their efforts to **protect their natural resources** and their success in networking with others.



904 RESPONSES
24% RESPONSE RATE*

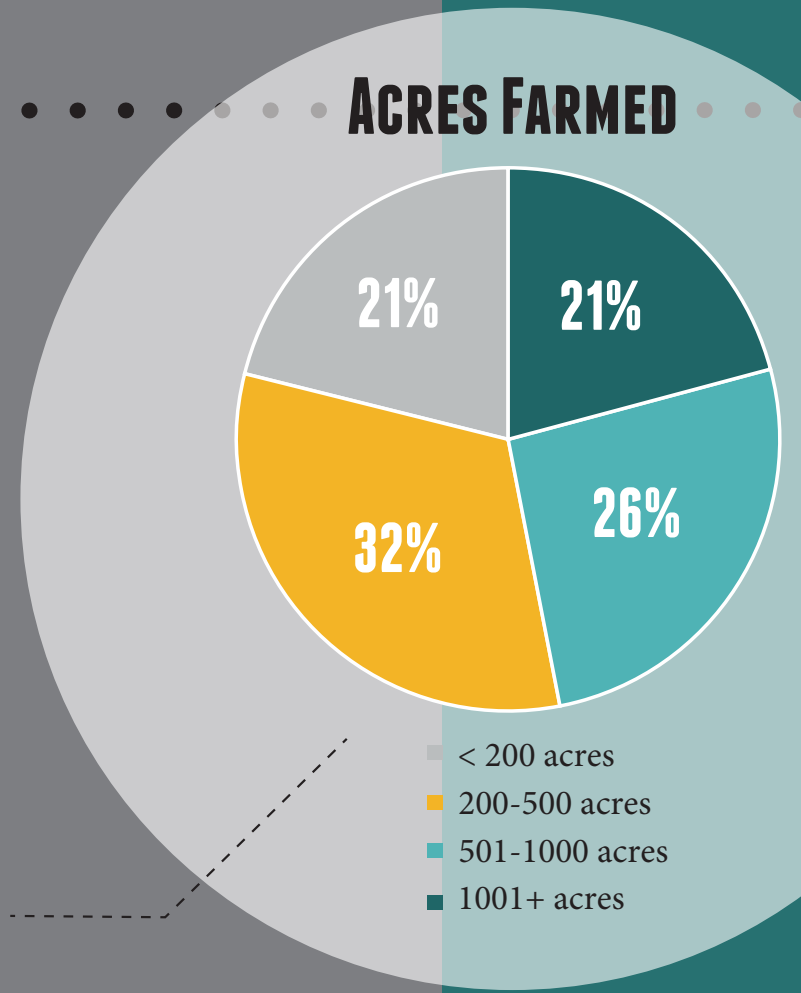


*This is a good response rate considering that we don't know how many of those on our list are still farming. It is the large sample size that is more significant than the response rate.

Is this a "Good" Sample?

80% ARE FARMERS AND/OR LANDOWNERS
20% ARE ONLY LANDOWNERS

79% FARM 200+ ACRES



The 2012 Census of Agriculture shows that 33% of farmers in Iowa operate 200+ acres of cropland. Our sample represents ~2.5% of these farmers across the state.

ILF survey respondents reported an average of 706 acres farmed (median 500 acres) with 96% of respondents reporting. The total number of acres farmed/owned by respondents was 601,298—~2.5% of the overall harvested cropland in Iowa (2012 Census of Agriculture).

Yes, this is a representative sample.

601,298
The total number of acres farmed/owned by respondents was 601,298—~2.5% of the overall harvested cropland in Iowa.

Are we building a Culture of Conservation?

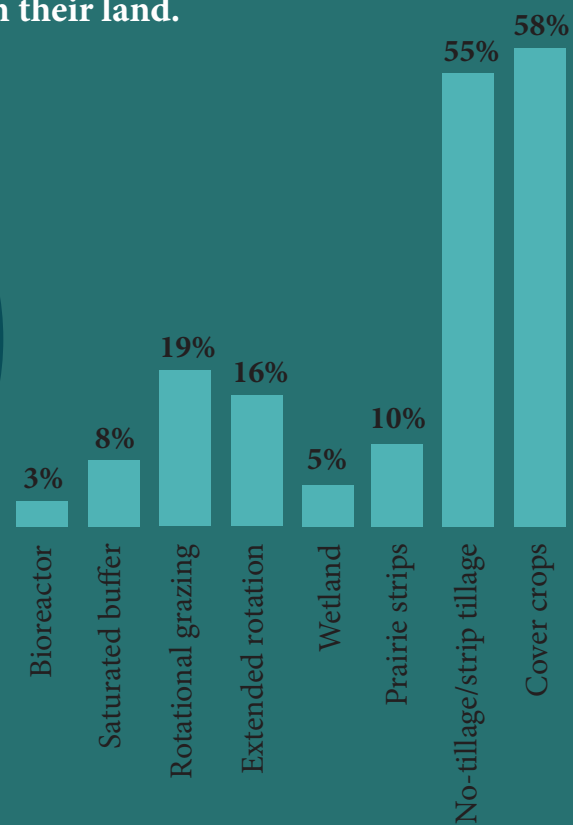
YES.

Field day/workshop attendees are adopting conservation on their land.

Respondents to our survey reported an average of 2 conservation practices on their land. Twenty percent of the respondents have three or more practices on their land.

2 CONSERVATION PRACTICES

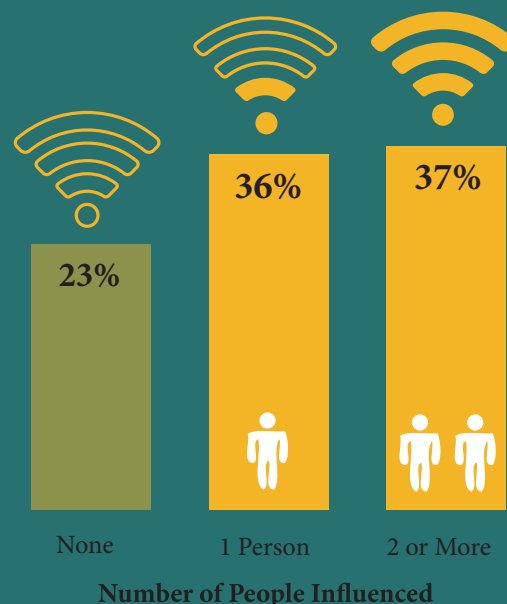
on average, as reported by survey respondents



Twenty-four percent of the farmers have both cover crops and no-tillage. These farmers are the innovators and early adopters of many of these conservation practices!

YES.

Almost 2/3 of the farmer respondents (n=715) reported networking conservation ideas with other farmers or farmer clients.



Of those respondents who networked, 73% reported that they successfully influenced at least one other person. Given this, these farmers are extending ILF's influence to 58% more farmers than attended ILF events over the years.

Sixty-two percent discussed cover crops, no-tillage and/or prairie strips with their landowners.

Some of this networking is happening at field days—39% attended two or more field days in the last year.



That's a **\$1.58 value** for every dollar invested in ILF.



Are we building a Culture of Conservation?

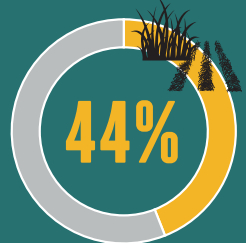
YES.

ILF field day attendees are the “**innovators**” and “**early adopters**” of cover crops in Iowa.



58% PLANTED A COVER CROP

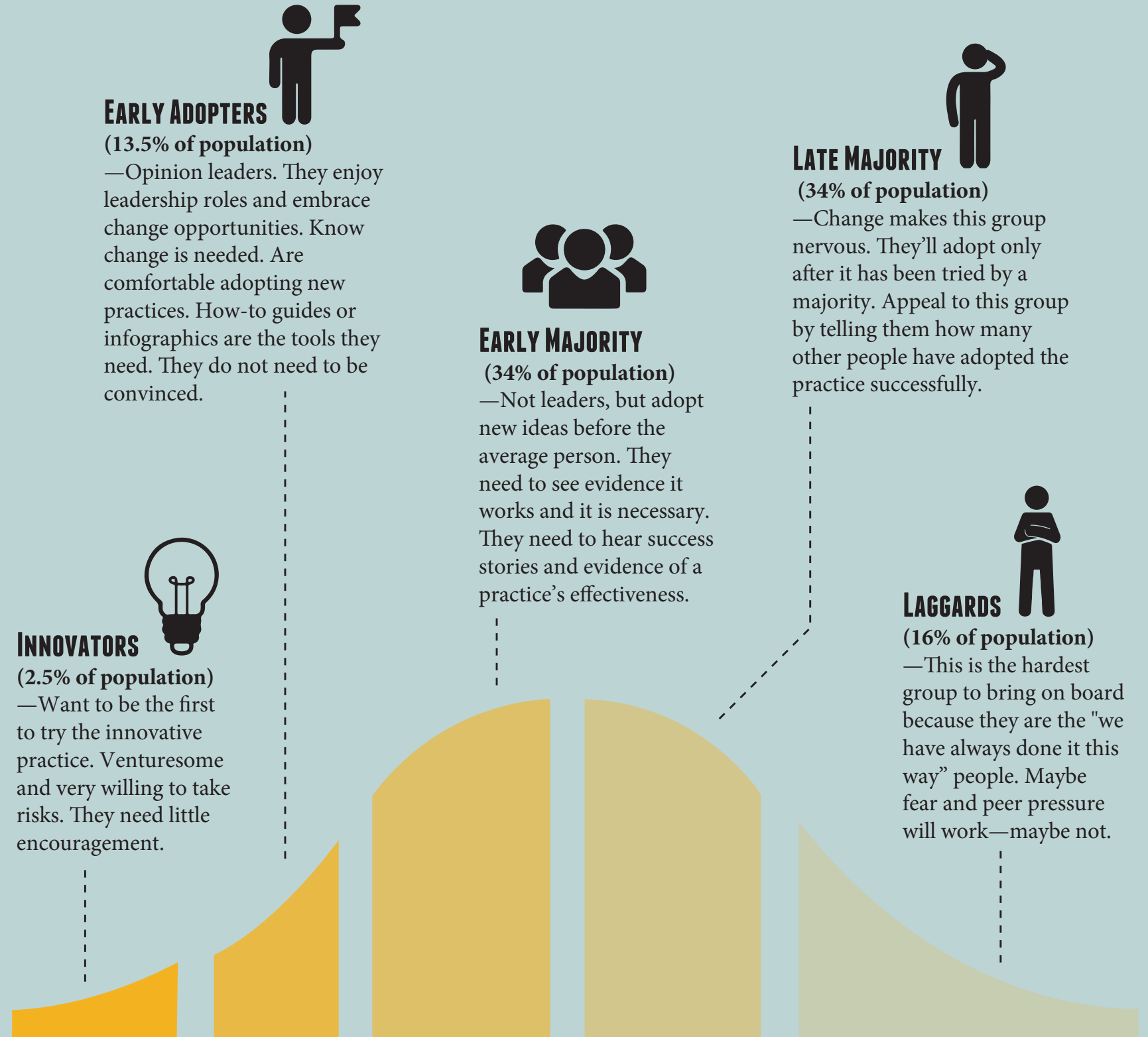
Fifty-eight percent of respondents planted cover crops, seeded on 38% of all reported row crop acres (132,695 total acres). Sixteen percent were new acres in 2018.



OF THOSE WHO SEEDED COVER CROPS ALSO USED NO-TILL/STRIP TILL

Diffusion of Innovation

The Diffusion of Innovation (DOI) Theory, developed by E.M. Rogers in 1962*, explains how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system resulting in widespread adoption of the new idea, behavior, or product. In order to adopt something, the person must perceive the idea, behavior, or product as new or innovative—that is how diffusion happens.



*Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York, NY: Free Press

Are we building a Culture of Conservation?

YES.

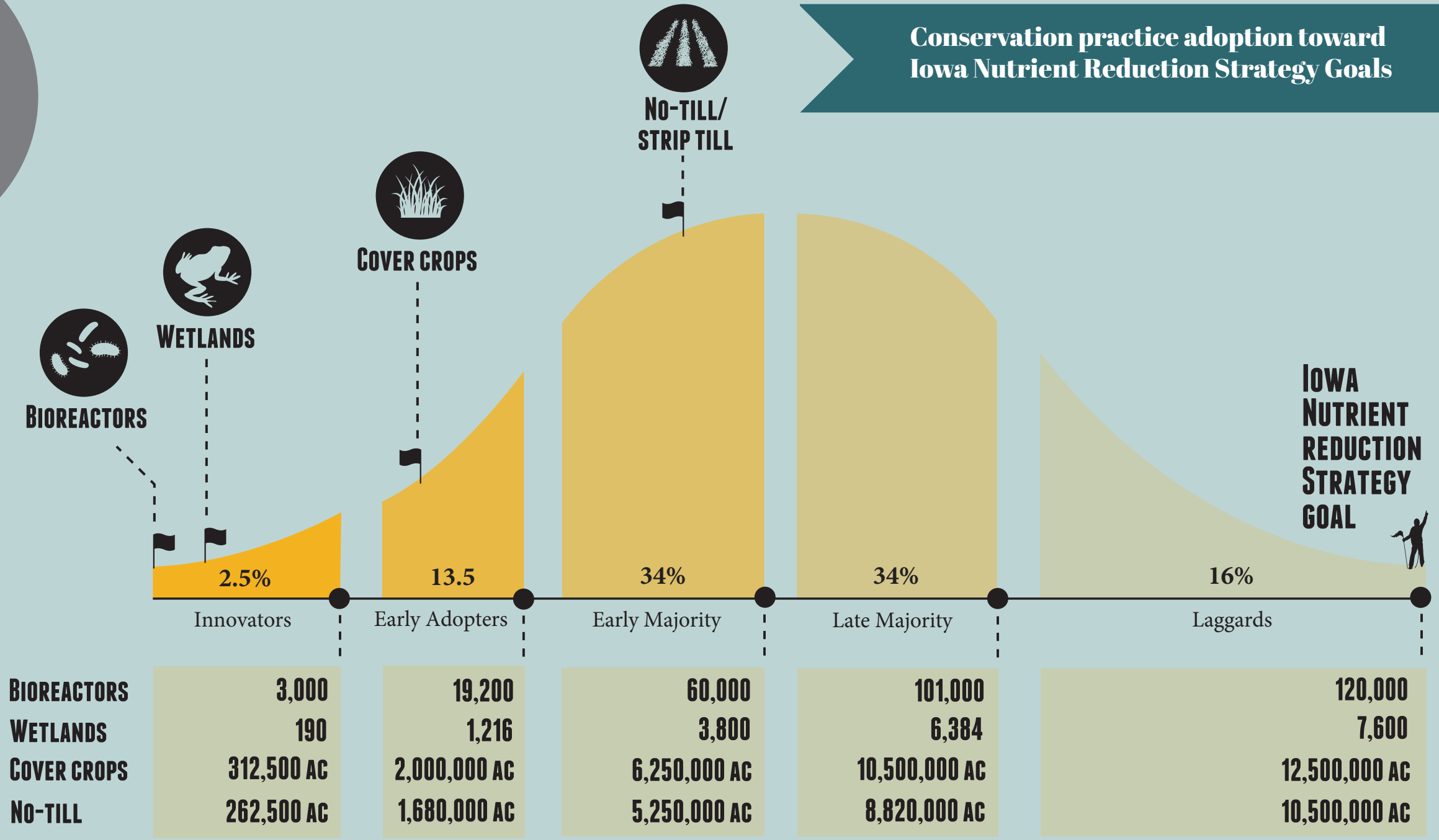


ILF field day attendees are also “early adopters” of reduced tillage practices with 55% of respondents using no-tillage or strip tillage, on 67% of their overall row crop acres for a total of 254,516 acres.

When it comes to adoption of no-tillage and strip tillage, we’ve **stalled out** in the early majority stage of adoption.

New growth in no-tillage and strip tillage was only at 10% in 2018 according to ILF survey respondents.

Conservation practice adoption toward Iowa Nutrient Reduction Strategy Goals





COVER CROPS

Greater Insight into the Cover Crop Innovators and Early Adopters

Cover crop adoption continues to increase across Iowa, but the rate of growth is slowing.

880,000

ACRES OF COVER CROPS PLANTED STATEWIDE



Sixteen percent of cover crops reported in the 15-year survey results for 2018 were new acres. This is a 6% decline in new cover crop acres over last year's estimate and a 19% decline since 2015, when 35% of all the cover crop acres were new.

If we project the 2018 ratio of new and existing cover crop acres to Iowa as a whole, we predict that there were

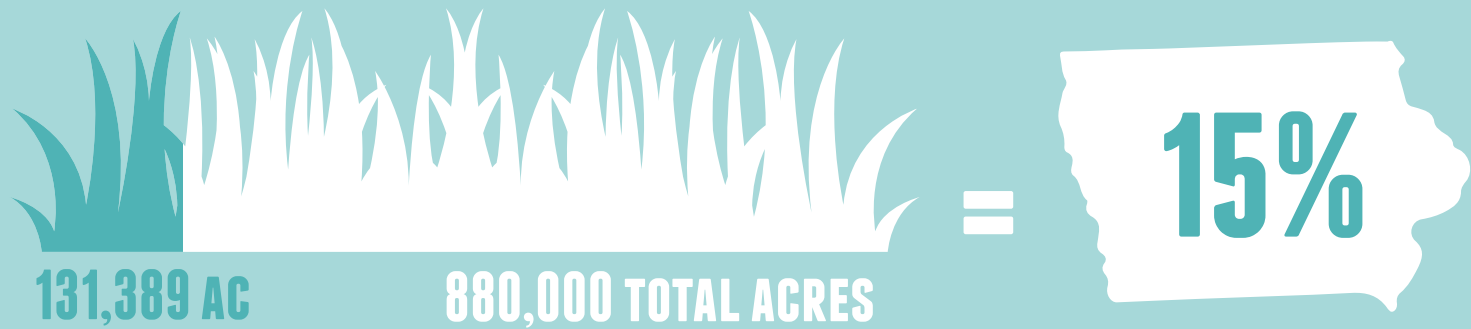
~880,000 total acres of cover crops planted statewide in 2018, compared to ~760,000 in 2017.

Based on this estimate, our sample of ILF field day and workshop attendees over the last 15 years represents 15% of the overall cover crop acres in Iowa.

The percentage of farmers trying cover crops for the first time in 2018 declined while the percentage of those farmers using cost share to plant cover crops increased. Fifteen percent of the growth in new acres of cover crops came from farmers planting them for the first time in 2018.

This suggests that cover crop adoption momentum seems to be stalling in the early adopters stage.

This is one of the big challenges facing Iowa Learning Farms and our partners in the upcoming years. If we can reach more early adopters and get them to field days, we should be able to successfully get them to adopt cover crops.





COVER CROPS
continued

The majority of respondents (85%) started seeding cover crops in 2016 or earlier. The average number of years that respondents reported using cover crops was six years. Overall, the respondents with cover crops reported an average of 44% of their total row crop acres in cover crops, consistent over the last two years.

Number of years with cover crops? (n=576)

1	6%
2	8%
3-5	39%
6+	47%

6 YEARS WITH COVER CROPS

All respondents who planted cover crops for the first time in 2018 used cost share and planted an average of 100 acres, higher than last year's average of 89 acres. Overall, 66% of the total reported cover crop acres were planted with cost share, while 78% of those new acres were planted with cost share.

Our estimate of 880,000 acres of cover crops statewide is 7% of the number of acres called for in the Iowa Nutrient Reduction Strategy.

The good news here is that we have moved from "innovator" stage into the "early adopter" stage. The less good news is that there are several indications that this progress is slowing.

What cover crops are being planted?



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



78% OF NEW COVER CROP ACRES WERE COVERED BY COST SHARE

Field days matter!

The more field days farmers attend, the more practices they implement on their farms.

The challenge? Drawing those would-be early and middle adopters to field days to receive the support and encouragement needed to try new practices.

While the "how" to implement the practice is important, it isn't the biggest barrier to implementation. Perhaps we still need to be stressing the "why" of implementation and creating a greater sense of urgency behind building soil health and improving water quality.

Farmers and landowners come to field days to build their knowledge base. Our research has shown that they also attend field days to get the moral support they need in a risk averse culture. If they can hear how their neighbors implement conservation and water quality practices and are still profitable, they will be more likely to do it.

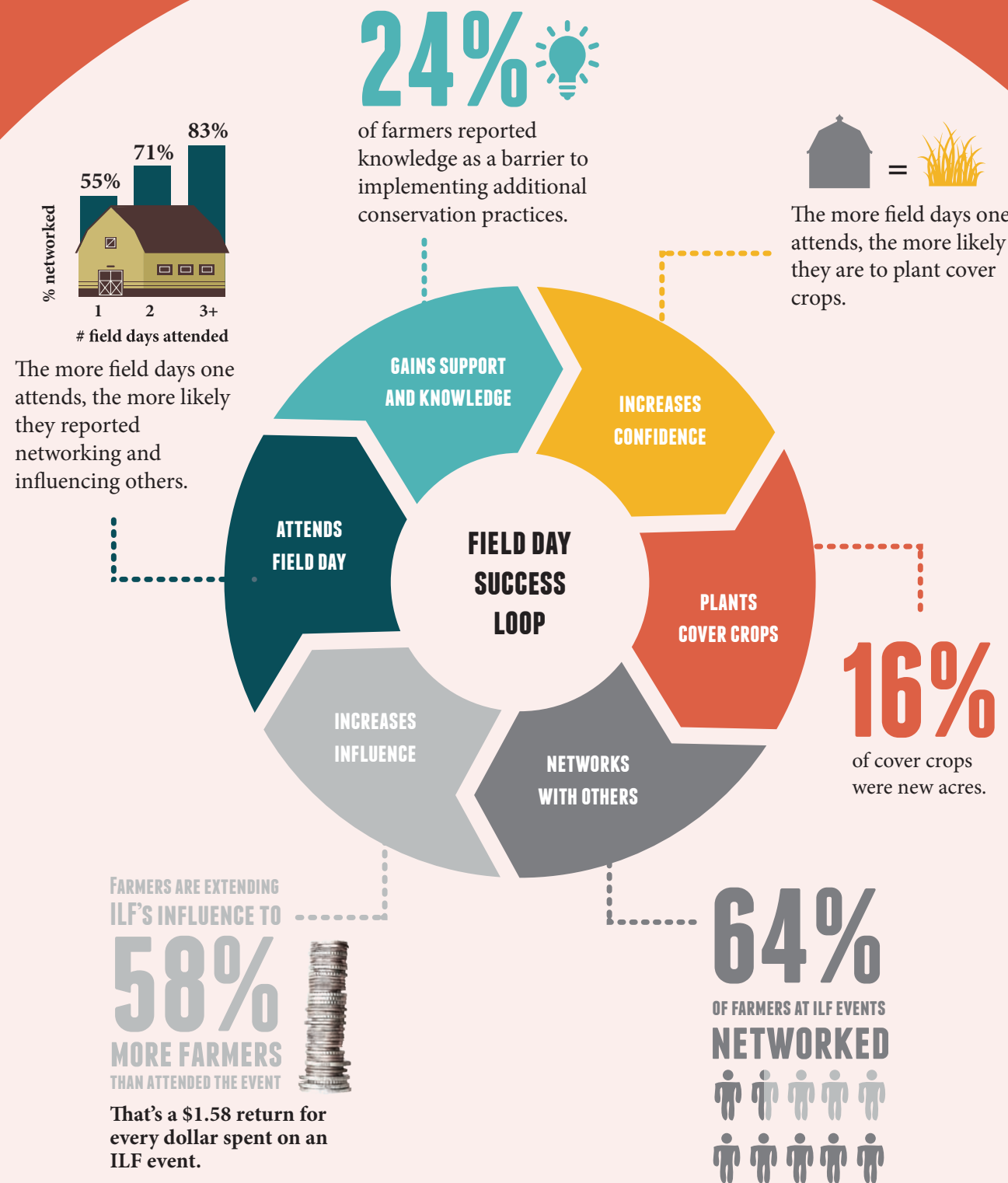


Perhaps our message should move away from whether the practices themselves are profitable to whether farmers who implement the practices are financially successful.



Field days matter!

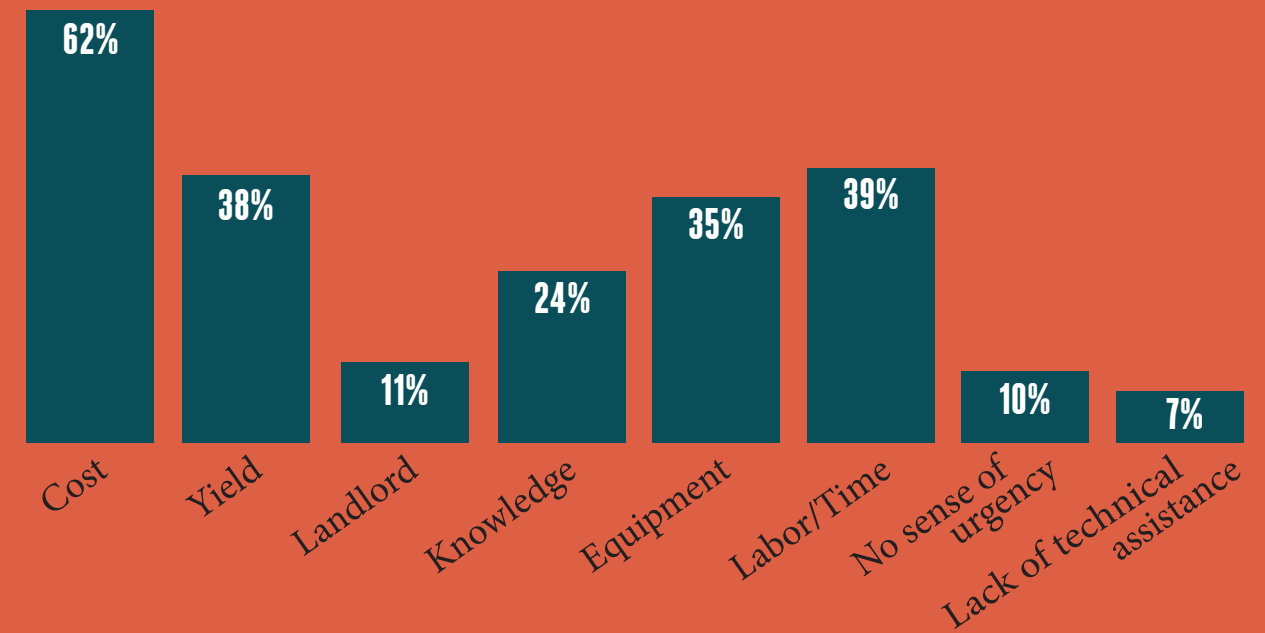
A gathering of innovators and early adopters



Attendees at ILF field days are a mix of innovators, early and middle adopters depending on which conservation or water quality practice we are considering. Many of our farmer-partners and field day speakers are the innovators and early adopters who are willing to speak to others about their success and also share practical tips on implementation.

Respondents report an average of 2 conservation practices on their land. Practices we looked at were cover crops, no-tillage/strip tillage, prairie strips, extended rotations, rotational grazing, saturated buffers and wetlands.

Barriers to Conservation Practice Adoption (Could list more than one)



It is no surprise that cost is the number one barrier to any additional conservation practices. A bigger surprise is that cost is less of a barrier to those who have no conservation on their land. Seventy percent of those (n=178) with 3 or more practices on their land list cost as a barrier, compared to 50% of the folks with no conservation on their land (n=176). Whether cost is actually a barrier is unclear. Perhaps cost is used as a "get out of conservation" free card. The rest of the barrier information isn't all that insightful with very little difference based on number of conservation practices.



FIELD DAYS
continued

Preaching Beyond the Choir

Every year, we have demonstrated that a fourth of our field day attendees have no conservation on their land. Thirty percent of the respondents reported no cover crop or no-till/strip tillage acres.

These numbers have been consistent over the years in our year-end survey and confirm information we gathered at the time of the field day. This demonstrates that the Iowa Learning Farms program is reaching audiences beyond those who have already tried conservation farming practices.



The ILF field day approach works.

We need to work harder to create that space where **innovators and early adopters** can engage with those who need more convincing and can be convinced!

We know word of mouth is **contagious!**

We know the farmer to farmer to scientist approach works!



Our Mission:
BUILDING A CULTURE OF CONSERVATION
IOWAN TO IOWAN

Field days are a gathering place for conservation to emerge!

That simple idea...

Building a Culture of Conservation

Did we succeed?

We have made a good start.

We have laid the foundation.

We have educated and encouraged the innovators and some of the early and middle adopters, but that is only a beginning.

For the next five to ten years to be considered successful, we need to—

- Increase the number of ILF field days and workshops, so that we can:
 - Expand our number of early adopters for cover crops
 - Increase the number of middle adopters for no-tillage and strip tillage
 - Increase the number of innovators for edge-of-field practices
- Nurture relationships with conservation-focused farmers across the state willing to host field days—field days matter more now than ever before!
- Rejuvenate farmer-partner program with new voices, particularly folks passionate about conservation with dynamic, engaging public speaking skills
- Focus on the “why” of conservation practice implementation, creating a greater sense of urgency behind building soil health and improving water quality
- Advance robust community outreach statewide with the Conservation Station trailers

Increasing our number of partnerships has helped us successfully work towards Building a Culture of Conservation.

In 2005, we started with...

And have expanded to include...

- Conservation Districts of Iowa
- Leopold Center for Sustainable Agriculture
- Iowa Monarch Conservation Consortium
- Practical Farmers of Iowa
- Iowa Cover Crop Working Group
- Midwest Cover Crops Council
- Iowa Agriculture Water Alliance
- Iowa Soybean Association
- Iowa Corn
- GROWMARK, Inc.
- Agri-Drain Corporation
- Iowa Water Center
- ISU Department of Agricultural and Biosystems Engineering
- STRIPS Team
- Soil Health Partnership
- Watershed Academy
- Water Rocks!

ILF Founding Partners:

- Iowa State University Extension and Outreach
- Iowa Department of Agriculture and Land Stewardship
- Iowa Department of Natural Resources (USEPA Section 319 of Clean Water Act)
- USDA-Natural Resources Conservation Service
- Iowa Farm Bureau Federation

Building a Culture of Conservation... Not such a simple idea.

We have a solid start. We also have our work cut out for us.

Will you join us?

Established in 2004, Iowa Learning Farms (ILF) 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 Iowa State University Extension and Outreach, Iowa Department of Natural Resources (USEPA Section 319), ISU's Leopold Center for Sustainable Agriculture, Iowa Department of Agriculture and Land Stewardship, Iowa Natural Resources Conservation Service, Conservation Districts of Iowa, Iowa Farm Bureau, Practical Farmers of Iowa and GROWMARK, Inc.

www.iowalearningfarms.org

