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 Mission: BUILDING A CULTURE OF CONSERVATION

Our Approach:

- Expanding our network of conservation-focused farmers across the state

- Extending farmer and landowner outreach through field days and workshops

- Boosting interest in field days and workshops through word of mouth

- Broadening our networks through an online and social media presence

- Amplifying the conversation to include all Iowans through community outreach and the Conservation Stations
Expanding our network of conservation-focused farmers across the state

31 farmer-partners at ILF’s start

88 farmer-partners statewide in 2019
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.

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.

We have made field days and workshops into a science!
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!

Boosting interest in field days and workshops through word of mouth

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.

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

- **Monthly Webinar Series**
  - 86 webinars with 39,320 views

- **Conservation Chat Podcast**
  - 41 episodes with 8,396 downloads

- **E-newsletter**
  - 3,309 subscribers

- **Wordpress Blog**
  - 804 posts and 2,595 subscribers

- **Twitter**
  - 2,536 followers

- **YouTube Channel**
  - 457 subscribers, 57 posted videos with 250,607 views

- **Fact Sheets/Infographics**
  - 36,500+ circulation

- **DVD Distribution**
  - How To Series 8,764 DVDs
  - Culture of Conservation Series 3,443 DVDs

- **Iowa Learning Farms**
  - EST. 2004

- **Publications**
  - 175+ articles in Wallaces Farmer and statewide press plus 6 peer-reviewed journal articles

- **Iowa Learning Farms**
  - 8,784 DVDs
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

Did you know?

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

^Partially funded through Water Rocks!
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*

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.

*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.
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

<table>
<thead>
<tr>
<th>Practice</th>
<th>0%</th>
<th>1 Person</th>
<th>2 or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioreactor</td>
<td>23%</td>
<td>36%</td>
<td>37%</td>
</tr>
<tr>
<td>Saturated buffer</td>
<td>19%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotational grazing</td>
<td>16%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prairie strips</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No-tillage strip tillage</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cover crops</td>
<td>55%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.**

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!
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**
- **44% Of those who seeded cover crops also used no-till/strip till**

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.

**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.

- **Early Adopters** (13.5% of population)
  - Opinion leaders. They enjoy leadership roles and embrace change opportunities. Know change is needed. Are comfortable adopting new practices. How-to guides or infographics are the tools they need. They do not need to be convinced.

- **Early Majority** (34% of population)
  - Not leaders, but adopt new ideas before the average person. They need to see evidence it works and it is necessary. They need to hear success stories and evidence of a practice’s effectiveness.

- **Innovators** (2.5% of population)
  - Want to be the first to try the innovative practice. Venturous and very willing to take risks. They need little encouragement.

- **Late Majority** (34% of population)
  - Change makes this group nervous. They’ll adopt only after it has been tried by a majority. Appeal to this group by telling them how many other people have adopted the practice successfully.

- **Laggards** (16% of population)
  - This is the hardest group to bring on board because they are the “we have always done it this way” people. Maybe fear and peer pressure will work—maybe not.

**18**

**58%**

**44%**

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-till 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

<table>
<thead>
<tr>
<th>Practice</th>
<th>Innovators</th>
<th>Early Adopters</th>
<th>Early Majority</th>
<th>Late Majority</th>
<th>Laggards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioreactors</td>
<td>3,000 AC</td>
<td>19,200 AC</td>
<td>60,000 AC</td>
<td>101,000 AC</td>
<td>120,000 AC</td>
</tr>
<tr>
<td>Wetlands</td>
<td>190 AC</td>
<td>1,216 AC</td>
<td>3,800 AC</td>
<td>6,384 AC</td>
<td>7,600 AC</td>
</tr>
<tr>
<td>Cover crops</td>
<td>312,500 AC</td>
<td>2,000,000 AC</td>
<td>6,250,000 AC</td>
<td>10,500,000 AC</td>
<td>12,500,000 AC</td>
</tr>
<tr>
<td>No-till</td>
<td>262,500 AC</td>
<td>1,600,000 AC</td>
<td>5,250,000 AC</td>
<td>8,820,000 AC</td>
<td>10,500,000 AC</td>
</tr>
</tbody>
</table>
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.
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)

<table>
<thead>
<tr>
<th>Years</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>3-5</td>
<td>39%</td>
</tr>
<tr>
<td>6+</td>
<td>47%</td>
</tr>
</tbody>
</table>

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?

- Radish: 22%
- Oats: 21%
- Cereal Rye: 16%
- Other*: 8%
- Wheat: 8%

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

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.

C$78% of new cover crop acres were covered by cost share
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)

- Cost: 62%
- Yield: 38%
- Landlord: 11%
- Knowledge: 24%
- Equipment: 35%
- Labor/Time: 39%
- No sense of urgency: 10%
- Lack of technical assistance: 7%

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.
Building a Culture of Conservation...that simple idea.

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-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

This whole page – big and bold statements. Text much larger than regular body text – make it artsy, kind of like a lyric video/infographic, while still maintaining high readability.

Increasing our number of partnerships have helped us successfully work towards Building a Culture of Conservation!

We started with
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)
Natural Resources Conservation Service
Iowa Farm Bureau Federation
...and have expanded to include
Conservation Districts of Iowa
Leopold Center for Sustainable Agriculture
Practical Farmers of Iowa
Iowa Cover Crop Working Group
Midwest Cover Crops Council
Iowa Water Center
STRIPS team
Iowa Agriculture Water Alliance
Iowa Corn GROWMARK, Inc.
Iowa Soybean Association
Monarch Consortium
Agri-Drain Corporation
Soil Health Partnership
Watershed Academy
Water Rocks!

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.

Preaching Beyond the Choir

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!

The ILF field day approach works.

Field days are a gathering place for conservation to emerge!
Did we succeed?

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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.

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  - 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!

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