

# **Prairie Strip Case Studies Evaluation Report**

Towards widespread adoption of prairie conservation strips: case studies

## Advisory Committee Evaluation Interviews

One of the key components of this project was the formation of an advisory committee made up of farm managers, landowners, farmers, and technical assistance providers. This diverse group of stakeholders helped TPC personnel to better understand the sort of information that the people who are making farm management decisions.

The following is a summary of evaluation interviews conducted with the advisory committee in January of 2024. Participant responses have been edited from a transcript for clarity and readability while still capturing the person's original intent. The responses have been divided into three categories: farm managers (PFM); technical assistance providers (TAP); and landowners with no distinction between non-farming landowners and owner operators (L). It's important to note that all of the interviewees have a background in farming.

The questions aimed to provide qualitative answers to how effective the participants felt the case studies turned out. Questions also sought to learn more about their experience with prairie strips and share their thoughts on how prairie strips could be more widely adopted on our agricultural landscape moving forward.

### Key Takeways:

- All landowners are unique and have different goals. Likewise, all farms are different and require different conservation practices. Prairie strips can be a piece of the land management puzzle.
- Prairie strips must prioritize targeting the least productive areas of a farm.
- The easier it is to establish, manage, and, most importantly, farm around prairie, the more likely people will adopt the practice.
- The case studies are effective tools to introduce landowners to prairie strips due to their personal narratives, specificity on what it takes to work with prairie, and the sharing of financial data. They are less useful to farm operators and are no replacement for person to person consultations or getting people in-person to see the practice i.e. field days.
- The FSA and USDA offices are the key players in adoption. There is a feeling that these offices may be understaffed and overworked.
- Prairie strips have the added benefit as habitat alongside their utilitarian aspects, namely, helping combat soil erosion. Maximizing their potential as habitat and as aesthetically pleasing is an avenue to wider adoption and good will amongst the public.

## Participant Responses

### Why do you think prairie is an effective conservation practice?

- “I think it’s effective in strategic places. It’s more diverse than just a typical brome grass seeding like how a lot of CRP that we use started out as.” PFM
- “I think we as farm managers are really using prairie or CRP specifically in areas of low production or vulnerability.” PFM
- “Prairie is a great fit in areas where you’re trying to make the farm more efficient, whether it’s taking vulnerable areas out of production, managing low production areas, so that you’re not wasting inputs and wasting money for people. Or if you have a landowner that’s very interested in wildlife and habitat, you know, those are the areas where it needs to be.” PFM
- “How can we maximize productivity on the most productive acres. Then we look at the marginal acres and figure out how to spend less money there. You don’t invest in inputs or chemical fertilizer and time on acres that just can’t produce a cash crop.” PFM
- “You might be reducing your tillable acres, but we’re likely increasing our average yield over those tillable acres. That, then, over time yields you higher rent and income.” PFM
- “A lot of times people are interested in areas that are not super productive.” TAP
- “Prairie strips can be an easier practice than, say, something like cover crops.” PFM
- “The flexibility with the layout makes it much easier on a farm operator, same with rules about headlands and driving on them if needed when planting and harvesting.” PFM
- “I think it’s one piece in putting together this puzzle of effective conservation. Agriculture is a long, ongoing experiment that we’ve been doing in Iowa for 150 or 200 years. The economic side of it is there, which has provided a lot of benefits and a lot of good livelihoods. But there have been unintended negative environmental consequences that we didn’t anticipate. The loss of soil, dirty water, the lack of habitat for wildlife... I love that prairie is a foil to that. The simplicity of taking the plants that were here that provided clean water, that provided the topsoil. The wildlife will respond best to the native prairie plants that they need for their life cycles.” TAP
- “The intrinsic habitat benefits. It’s not just for erosion control or not just for water quality. It ticks a lot of boxes and I think people really enjoy the beauty. There’s a real emotional connection.” TAP
- “You’ve got to improve productivity. You are not losing money by taking out these acres.” L
- “The flexibility with placement and the idea that you can turn and drive the tractor. Being able to pick up the planter and drive across and we can do that and not kill many prairie plants.” L
- “The amount you take out of production you’ll break even because you’re trapping moisture and nutrients, and you have the side benefits of the pollinators and wildlife and less erosion.” L

- “The flexibility that came with making prairie strips a specific CRP practice.” L

### **What challenges have you had with working with prairie strips?**

- “Management is a challenge... volunteer trees are a burden to manage and keep out.” PFM
- “We’re managing within real crop production. If fire is the best way to manage prairie, it’s not that easy to just burn a strip through the middle of the field with corn stalks in it. There is also a lack of prescribed fire insurance infrastructure.” PFM
- “A barrier is a lack of staffing and resources in the NRCS and FSA offices... farmers and farm managers are just not motivated to do conservation practices right now, because offices are challenging to work in.” PFM
- “But they can’t do it all. The USDA has trouble retaining staff. You go into those offices and its just mountains of file cabinets and paperwork they have to keep track of, so they’re understaffed and overworked.” TAP
- “If they come out with a design that isn’t going to be farmable, then you’re not going to have prairie on the landscape.” TAP
- “On contour may be best for conservation, but not fore actually farming it. If the choice becomes all or nothing, people choose nothing.” PFM
- “You will need to manage weeds, but that’s just a part of adding new plants to the farm.” L
- “The weed problems, the Canada thistle problems.” L
- “The NRCS wanted to use the contour lines they laid out as opposed to the contours that the operators had been using for a couple of decades.” L

### **What is the role of financial incentives in establishing prairie as a conservation practice?**

- “There is a large chunk of prairie that’s currently in place that was purely based on high rental rates, locking in those rates, with the pollinator program that has since been revamped or adjusted... So I imagine a majority of those are probably gonna get pulled out anyway, and go back to real crop production” PFM
- “I don’t think rental rates being competitive to the bottom end of the range of cash rent is a bad thing. The issue became when there wasn’t any restriction where the practice could be implemented.” PFM
- “When CRP rates were so high, a ton of CRP went in. What we didn’t think about was the expense and the labor of maintenance.” PFM
- “Having those financial incentives gets landowners over the hump.” PFM
- “A lot of people are using it as an investment. So having a competitive level of return on those areas that are going to be used for conservation certainly makes the decision a lot easier.” PFM

- “But when it comes down to dollars and cents, there’s a limit to how much people are willing to pay to do what’s right. So competitive rental payments and cost share is important.” PFM
- “I could see more landowners giving up that annual payment if somebody just helps them maintain it and install it.” PFM
- “Cost share for implementation and mid-contract management have been important.” PFM
- “People like the money through CRP. It gives them an annual payment that is guaranteed money.” TAP
- “I think, if someone was left to their own devices, they would go out and plant brome or alfalfa. If they didn’t get money for it, I don’t think people would choose to do a prairie that’s more permanent and takes more effort.” TAP
- “Old farmers and young farmers are watching their bottom line for every decision they make... the people that I know that have CRP, they know it shouldn’t be in row crops. The thing that keeps them from making the decision is the money that they might get out of it.” L
- “Feeling like you have a partnership with the government is good. Let’s do this together, let’s create habitat for wildlife.” L

**What is your experience like with landowners/farmers? Do you feel they were knowledgeable of prairie conservation practices coming in?**

- “Generally, if a landowner is working with us, we’re the ones leading it, managing it, and coordinating it.” PFM
- “The edge-of-field practices are areas that a farm manager and landowner can control.” PFM
- “Iowa farmland owners can be from all over the country. Sometimes, there’s a different idea of what conservation is for people living out of state... A lot of my initial work is figuring out a landowner’s goals and aligning them with the tenant... We try to expand the perspective to include various practices. Taking marginal ground out and building habitat, edge-of-field practices, and give them the boots on the ground perspective of the doable bite sized steps that can be taken on the farm.” PFM
- “For our clients, return on investment is their first priority. Number 2 is conservation.” PFM
- “Everybody is different. Everybody is coming from a different perspective.” TAP
- “You need to have as many people involved early in planning, especially if the owner is not the operator and may live out of state. It can be a challenge to dictate down to the farmer when you want to do a practice a little out of the box.” TAP
- “The advisors role is especially helpful for absentee owners or older people. Maybe someone who has just inherited their land are new to the programs available. Getting help from a real person is often all people want.” TAP

- “People have an area in mind and then its up to us to figure out what would be best for that area.” TAP
- “They’re skeptics sometimes. They’ll say you’re losing some crop ground there. But I say the ideal situation would be that we are trapping enough runoff and nutrients from the soil.” L

**What do you think other landowners, farmers, farm managers, technical assistance providers would want to know about prairie strips? What advice would you offer them?**

- “It’s important as a farm manager to ask questions and challenge landowners to say, ‘could we do this?’ Just because you’ve always farmed this way for 60 years doesn’t mean it has to be farmed that way.” PFM
- “How best to lay them out in a field.” PFM
- “People need to be on the same page. Be upfront about the mowing, there’s going to be maintenance. You might have to figure out how to burn or bail it. Prairie is not something you just plant and then let nature take its course.” TAP
- “Meet the farmers where they are.” TAP
- “They often have questions about prairie in tile lines, questions about overspray, or habitat sink concerns.” TAP
- “The layout requirements, like does it work with their GPS; seeding establishment; what kind of management; available contractors.” TAP
- “People are going to be taking land out of production. Are there going to be yield impacts on the adjoining areas?” L
- “You need to work together with somebody. Farmers are good and growing corn and soybeans, prairie not so much.” L

**What do you think would lead to a more widespread adoption of prairie strips in the upper-midwest? What would be the advantages of this? Disadvantages?**

- “It’s certainly not something you can put on every farm, not every farm needs strips or should have strips. Each operation is unique. It’s about picking the right practice as well.” PFM
- “Huge environmental impact on a small percentage of land.” PFM
- “We need more outreach and education... having local people on the ground.” TAP
- “I think if we put too much out too fast, I don’t think there would be that big of a problem. But prairie doesn’t grow itself. It needs maintenance and it needs establishment help. If we just put out a bunch of really poor seed mixes, and we call it prairie, and then that turns into weeds, we create a bunch of enemies doing that.” TAP
- “The biggest thing is that if we just put it out there and we don’t give people enough help.” TAP

- “The biggest factor are the rental payments. Right now, things are capped at \$300. When you can get \$400 an acre for cash rent, CRP is not attractive enough to bite on it.” TAP
- “The convenience and how much it impacts the way people are farming. It has to be convenient.” TAP
- “If we are going to do what’s necessary for improving something like climate change, we will be taking acres out of production. We’re going to be reducing our productivity. So that is a drawback, potentially not producing as much grain in the US as we need to. That’s probably not going to be a problem because we have so little habitat now.” TAP
- “People are resistant to change by nature, and of course the money is part of it too. If there was better payback.” L
- “More information will reach the farmers who are already tuned into things like caring about the environment, helping pollinators.” L
- “You need to take money away from production supports and move it over to conservation supports.” L
- “Farmers are slow to change. Peer pressure is one way. A farmer sees a neighbor doing something and see it work for a while they might consider it on their farm. Field days are important.” L
- “More awareness about water quality issues and nutrient issues, as well as issues surrounding habitat and pollinators would help farmers think about their role in that more.” L

**What aspects of the case studies do you think are most successful?**

- “The firsthand explanation of what it took to do it is effective. You know the resources they used and the people they worked with. The financial numbers are going to be helpful for people considering how they’re going to deal with it or manage it.” PFM
- “Something new is scary. The more you can know ahead of time, the better off you will be.” PFM
- “Seeing multiple strips with different planting mixes has helped.” PFM
- “Seeing a realistic picture.” TAP
- “Looking at the numbers. People are always clamoring for more on the economic side.” TAP
- “The practical timeline. Showing people that these things take time.” TAP
- “Local stories help landowners envision themselves doing something similar.” TAP
- “Examples of people targeting specific problems.” L
- “The stories show other farmers goals, which is what farmers want to see, and that helps them think about their goals.” L

**What aspects of the case studies do you think are lacking? Or, are there aspects you would have emphasized more?**

- “Longer term information on management.” PFM

- “I think getting them in from of more farm management companies would be good.” PFM
- “Quick, one-pagers.” PFM
- “What much land are we actually seeing impacted by the strips. What are the actual yield impacts?” PFM
- “Do more of them, in a wider variety of places.” TAP
- “Questions about yield impacts.” TAP
- “Comparisons between land with and without prairie strips, in particular to adverse weather events such as rain is effecting those places differently.” L
- “Being upfront with real costs and financial data.” L
- “More ephasize on prairie being a learning opportunity as well. There’s a joy to experiencing something that is new.” L

**Has your experience with this project and/or the case studies themselves increased your knowledge of prairie strips and prairie establishment in general?**

- “Yes, definitely. Having a sounding board between different groups has been good.” PFM
- “The project didn’t increase my knowledge about strips very much. What I did enjoy was hearing from other landowners in the area and learning about other examples.” TAP
- “Yes, the group discussion helped me better understand how to talk to others about prairie strips.” L

**How likely are you to recomend prairie strips? How likely are you to specifically use the case studies when recommending prairie strips?**

- “I’m very likely to use them. If someone asking questions about it. But it’s a situational thing. Do you have a landowner that’s interested or willing to entertain that and the right farm that it will fit on?” PFM
- “I have definitely used print the material... It’s a conversation starter with landowners.” PFM
- “I’m very likely to use the case study, especially with older landowners or people who have just inherited something or an absentee landowner. I would definitely use them targeted towards landowners, not operator as much... their mind would immediately go to what do I have to do? They’re going to be the ones asked to mow it, or take care of it. They’re going to be farming around them. They just want to know how does this impact me.” TAP
- “100%. If I had somebody here talking about prairie. You can participate in prairie strips program and benefit the whole field without taking a lot of land out of production.” L
- “I would naturally share this sort of thing.” L

## **Prairie Strips Professional Development Evaluation for FSA and NRCS Staff**

One avenue of research concerning prairie strips that has developed over the process of this project has been the question of do prairie plants plug tile lines. To further pursue this question, we purchased a sewer camera to conduct tile line investigations. Results indicate that while tile roots do get into tile lines, they are not causing clogged or plugged tile lines that disrupt farm operations. Several case studies mention investigations conducted on their property.

Along with conducting tile line investigations, the camera has become a way to interact with farmers, landowners, and other agricultural professionals about prairie and how they work on farms. An opportunity arose when the Iowa State University STRIPS team hosted FSA and NRCS staff at four events across the state to train them on prairie strips. We led a demonstration station about prairie roots in tile lines. Additionally, this was a great opportunity to discuss and distribute the case studies to USDA staff. ISU conducted a survey of the trainings and demonstration stations, which can be found here:

<https://dr.lib.iastate.edu/handle/20.500.12876/7vdXg1Ky>.

The tile lines were one of the surprises they found in the survey responses.

1. “That we have evidence that prairie grass doesn’t plug tile.”
2. “I was surprised about the roots not blocking the tile drainage.”
3. “The area that talked about the roots and the tiling. The roots for grasses are extremely long but don’t cause the damage to tiles that you would think. Also the run off water and how it was measured and tested.”
4. “How little roots there are in the tile lines. I thought there would have been a few more.”
5. “I enjoyed the demonstration with the camera placed inside the tile to show and explain that native grasses, though deep rooted, did not create tile disruptions in tile that was currently functioning well.”

Additionally, 55% of respondents rated the overall workshop as having high value, and 37% rated it as of medium value.

## Botany Beginners 2022 - Managing Prairie Strips Post-Course Survey Results

7/27/2022

Results based on 14 responses.

Did this course increase your botany skills? 100% answered yes.

Did this course increase your knowledge and awareness of prairie strips? 100% answered yes.

	What are your current botany skills? (1-5 scale with 1 being slim/none, and 5 being very confident.)	How good is your knowledge of weeds found in corn and soybean fields? (1-5 scale with 1 being slim/none, and 5 being very confident).	How good is your knowledge of weeds found in pastures and ditches? (1-5 scale with 1 being slim/none, and 5 being very confident).
Pre-course	2.5	2.3	2.4
Post-course	2.8	2.8	2.7
Change	+0.3	+0.5	+0.3

### What aspects of the course worked well for you?

Detail was great

Flexibility - ability to watch later if you missed a recording

It was a well delivered zoom course. Dr. Jackson's visit was much appreciated.

identifying the plant of the day, understanding the usual sequence of plants growing in a prairie strip. review of the plant identification steps

Instruction in using Newcomb's Guide to Wildflowers worked well. There is no substitute for a step-by-step demonstration of how to go about identifying a plant, done by someone who knows how to do it. Use of photographs to illustrate what plants and plant parts being discussed really look like is invaluable for a beginner and those who have been looking at these parts for years, but not knowing all their names. Photos of habitat areas where subject plants are typically found provided context. Discussion of hardcopy and digital botanical resource material provided essential basic references. Critical examination of plant ID apps was extremely helpful.

I appreciated differentiating between prairie plants and those that had similar characteristics.

weekly timing of webinars, clear expectations, knowledgeable speakers

Plants of the day are a great way to learn! The slides had helpful, detailed photos. I like how they showed the whole prairie strip and then zoomed in on the leaves and flowers. I also appreciate that the class had replays available.

lots of images! I like that it was paired down to a couple of plants a day. I think it would have been overwhelming to have more.

Plants of the Day - identifications

explanation on use of key

It was online and I could go back to it later

seeding and planning prairie strips

**Do you have suggestion that would improve your learning next time?**

Some audio quality wasn't the best

Examples are always good - ID seems so easy when one reads the book

Course needs an interactive component, enabling students to get to know each other, and instructors better.

Make us do homework!!!

No

More in person days. I know this is inconvenient but it would help a lot to have some hands on experience.

it might be nice to have like handouts or study material so people can practice and remember important things for identifying plants

**Additional comments of questions.**

Thank you so much for continuing this series and making the information available to so many people.

Clearly the prairie strip concept is especially relevant to Midwestern farming areas. However, it is similar to Douglas Tallamy's idea of native species corridors, which can be constructed in yards almost anywhere, and which are more important than ever in rebuilding the health of our ecosystem. Thus the significance of the course goes way beyond prairie strips in just one part of the country.

Thank you so much - I really enjoyed this class. I appreciated the Zoom format, and I especially enjoyed being able to see the videoed meetings at a later date as I had a conflict with work. I had to leave each meeting early but I was able to go back and see/hear what was taught.

Thanks for your time!

I enjoyed the course, even though my focus is more restoration; not CRP/crop/strip creation.

Very interesting and well done!