
Understanding farmer and landowner decision-making and message preference concerning conservation practice adoption in the Clear Creek Watershed

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Executive Summary

Water quality continues to be a source of concern in agricultural states, with variable actions being taken. Agriculture in Iowa provides many benefits to the state, but also serves as the largest contributor to water quality problems throughout Iowa as well as in downstream rivers and streams (Tang et al., 2018). While many farmers across Iowa have adopted conservation practices, a large number have still not adopted conservation practices shown to decrease nutrient loading in waterways and to mitigate the impacts from agricultural activities on water quality in their watersheds.

The current study provides an in-depth understanding of decision-making around conservation practice adoption across four farmer types (owner-operators, tenant farmers, owner-tenants and non-operating landowners) through interviews with 15 individuals in Johnson and Iowa Counties. It also seeks to identify persuasive conservation messages for use with these groups when seeking to encourage adoption of conservation practices that will improve water quality. It is important to note that this study was qualitative in design and represents the perceptions and views of those interviewed. These may not be representative of those from other areas or even other farmers in Johnson and Iowa Counties.

Several key themes emerged from these interviews.

- Theme 1: Loss of farmland and deteriorating soil health are primary concerns
- Theme 2: Water quality is not a top of mind concern
- Theme 3: “Good farmers” are viewed as stewards of the land
 - Theme 3.1: Most farmers see in themselves aspects of a “good farmer”
 - Theme 3.2: Conservation is viewed as good farming in practice
- Theme 4: Participants’ connections to the land and personal relationships drive decision-making
- Theme 5: Involvement in decision-making and approach to farming drives information seeking and sources of information
- Theme 6: Individuals will reach out to farming support organizations primarily for technical assistance and cost-sharing opportunities
- Theme 7: Farmers assess the financial risk and impact on profit margins before implementing a conservation practice
- Theme 8: Participants are committed to conservation, but new practices to address it are sometimes viewed with skepticism about their value
- Theme 9: Current conservation programs are seen as underfunded
- Theme 10: Individuals perceive their own actions to have little impact in the grand scheme of conservation given the relative size of their land to other farms in Iowa

- Theme 11: Years of experience and habits are barriers to adopting new practices
- Theme 12: Awareness of conservation messaging is limited
- Theme 13: “Neighbors helping neighbors” is associated with farmer culture and identity, but not with conservation
- Theme 14: Persuasive messages need to be tailored to the audience

Based on the themes presented here, several recommendations for persuasive messaging are made. The overall recommendation is to use a multi-tiered style of messaging. Any successful persuasive messaging strategy will require targeting different aspects of conservation and utilizing different frames that will appeal to several different groups of individuals. A key aspect to messaging strategies is to understand that conservation is conceived of broadly by participants. It is understood as an ethic for care of the land: conservation and preservation of natural resources; keeping the land natural and original; and leaving the land better than you found it. It is also understood as specific practices, such as rotating crops, reducing soil erosion, and using the appropriate amount of chemicals and products. While practices in use by participants tended to address issues of soil health and stability, the concept of conservation as articulated by all 15 individuals included everything from keeping ditches mowed to crop rotation to soil testing, with many of these practices having been in place for several decades.

Specific approaches to messaging may include the following:

- Draw on the idea of stewardship of the land
- Emphasize the multiple benefits of conservation practices
- Frame conservation as a cost-efficient practice
- Frame conservation as a long-standing tradition
- Promote cost-sharing programs and technical resources as a partnership
- Use farmer spokespersons

[END EXECUTIVE SUMMARY]

Background

Water quality continues to be a source of concern in agricultural states, with variable actions being taken. Earlier this year, Minnesota passed the Groundwater Protection Rule to reduce the risk of nitrates from fertilizer impacting groundwater. The Groundwater Protection Rule will take effect January 1, 2020 and regulate the application of nitrogen fertilizer in areas exhibiting high nitrate levels and ban the application of nitrogen in the fall or on frozen ground (Minnesota Department of Agriculture, 2019). At this time, there are no rules of this nature in the state of Iowa. Agriculture in Iowa provides many benefits to the state, but also serves as the largest contributor to water quality problems throughout Iowa as well as in downstream rivers and streams (Tang et al., 2018). While many farmers across Iowa have adopted conservation practices, a large number have still not adopted conservation practices shown to decrease nutrient loading in waterways and to mitigate the impacts from agricultural activities on water quality in their watersheds.

Conservation messaging geared toward persuading farmers to adopt conservation practices has changed over the past few years. The early messaging was focused on improving water quality, both locally and downstream. Recently, messaging has placed more emphasis on the benefits of conservation practices to soil health on farm acres, while also benefiting water quality. This new emphasis on soil health may have resonated more with farmers and contributed to the adoption of conservation practices in recent years, as it ties the benefits of conservation practices to their land and productivity. However, based on previous work conducted in Iowa (Losch, Avery, Stephenson, Pollock, Heiden, & Wittrock, 2016), it is clear that this message does not resonate with all farmers. Specifically, those who rent acres for farming may not view soil health as a substantial reason to adopt conservation practices given that the typical lease term is for a duration less than that required to see the benefits of improved soil health from these practices. Because tenant farmers make up a large and growing segment of the farming population (Zhang, 2015), research efforts are needed to understand conservation messages that resonate with all farmers, including farmers who rent the land they work.

Previous research on farmer conservation decision-making and adoption of conservation practices has identified farming ethic (i.e. farmer identity and personal/social norms) and the appraisal of conservation practices – including risk, efficacy, flexibility and barriers to implementation – as key aspects of conservation practice adoption (Magdalena et al. 2017; Olson & Davenport, 2017). Ahnström et al. (2009) identify economics, farm demographics and subjective attitudes as additional contextual factors surrounding conservation decision-making. Research on conservation messaging has focused on farmers' trust in various information sources and their preferred media for receiving information on conservation practices

(Arbuckle, 2016; DeAngelo & Nielsen-Pincus, 2017). In addition, others have found that encouraging watershed stewardship is best accomplished by increasing capacity through additional on-the-ground experts to work jointly with landowners to facilitate conservation projects that meet their needs (DeAngelo & Nielsen-Pincus, 2017).

The current study seeks to build on this work in two ways. First, it provides an in-depth understanding of decision-making around conservation practice adoption across four farmer types (owner-operators, tenant farmers, owner-tenants and non-operating landowners) in Johnson and Iowa Counties. Second, the project identifies persuasive conservation messages for use with these groups when seeking to encourage adoption of conservation practices that will improve water quality. By providing a more nuanced view of how each of these groups view and prioritize conservation as part of their land management, project partners can better understand the on-farm decision-making process, use that to support the development of better messaging, and find ways to help farmers overcome barriers to implementation to increase the adoption of conservation practices in the Clear Creek watershed.

Methods

Study Design

Initially, a focus group design was planned to capture the depth and complexity of the information sought among three groups of interest (owner-operators, tenant farmers, and non-operating landowners), with the objective being two focus groups per farming group in each county yielding a total of 12 focus groups of 6-8 participants each. Once recruitment procedures were developed, a fourth group was added to include individuals who both owned and rented the land they farmed (owner-tenants). Due to extended periods of inclement winter weather conditions and low response rates for focus group recruitment, the study design shifted to in-depth interviews conducted with 15 participants over the phone. Focus groups offer the benefit of interaction between individual participants. However, the in-depth interviews conducted as an alternative offered a more nuanced exploration into the thoughts and perceptions of each individual participant than a focus group discussion would have allowed.

Recruitment

Participants were recruited from a contact list of landowners and farmers provided by the Clear Creek Watershed Coalition. Recruitment began with an invitation letter sent to 433 individuals on January 9, 2019 requesting participation in a focus group, along with a demographic questionnaire to be returned if willing to participate. A second wave of invitation letters was sent to 348 individuals on February 11, 2019. These letters offered a choice of participation in a focus group, or a telephone interview. A postcard follow-up was sent to the first wave of

mailings on February 26, 2019 to give individuals the additional option of a telephone interview. Those returning the demographic questionnaire were contacted by their preferred method of contact (phone or email) up to three times to schedule a telephone interview. A follow-up letter was sent on March 22, 2019 to those we were unable to contact for scheduling. A third wave of invitation letters was sent to the remainder of the contact list on March 29, 2019, for a total of 875 letters sent over the three mailings. A total of 37 demographic forms were returned. Of those 37, the preferred method of contact was not provided on five, 17 did not respond to multiple contact attempts to schedule, and one no-showed their interview without rescheduling, resulting in 14 completed interviews. In addition, flyers were placed in several locations in Johnson and Iowa Counties at establishments frequented by farmers (coffee shops and farm cooperatives), which prompted one individual to contact CSBR to schedule an interview. Snowball sampling was also utilized wherein farmers and landowners who were interviewed were asked to pass on contact information for CSBR to any other landowners or operators in their county. All individuals were offered a \$25 gift card to Casey's General Store as compensation for their time.

Materials

A semi-structured interview guide was developed for each group of interest to elicit information about decision-making processes regarding the implementation of conservation practices, and persuasive messaging surrounding conservation. The interview guides were constructed through a review of scholarly literature and with input from key staff with the Clear Creek Watershed Coalition regarding conservation messaging. A separate interview guide was created for each of the following farming types: landowners (own land but do not farm); tenants (rent all the land they farm); owner-tenants (own some of the land they farm and rent some of the land they farm); and owner-operators (own all of the land they farm). Each contained between 15-25 questions, depending on their ownership/tenant status and the degree to which they were involved in land management. Probes were included for each question to explore topics thoroughly and to facilitate meaningful conversation. Copies of each interview guide are provided in Appendix A.

Data Collection

A total of fifteen interviews were conducted by telephone between March 6, 2019 and April 27, 2019, and ranged from 30-45 minutes in length. Informed consent was obtained from participants prior to conducting the interview. Interviews were conducted by Megan Ruxton and Erin Heiden, with note taking provided when possible by Nahida Begum. The interviews were audio-recorded and transcribed verbatim for use in analysis. The Institutional Review Board at the University of Northern Iowa approved the study design, interview guides, and informed consent language.

Analysis

Data were analyzed using an inductive thematic approach, based on a combination of systematic coding frameworks as detailed by Saldaña (2009). This type of analysis consists of systematically breaking down data into codes in such a way as to identify relevant clusters and patterns. The codes are then grouped and synthesized into (more general) categories, which in turn are aggregated into more general themes and concepts arising from the interview responses. The analysis was carried out using a combination of deductive and inductive coding (also called "hybrid" coding, cf. Fereday & Muir-Cochrane 2006). The deductive codes and categories were generated from the specific focus areas of interest that were utilized in the interview guides – specifically, decision-making processes and characteristics of persuasive messaging. For the inductive coding process, transcripts were read by two team members with each identifying key words and phrases. One member of the research team then coded these key words and phrases and sorted them into subcategories, identifying categories across codes, and then themes across categories (Roller and Lavrakas 2015). This was done using a system of concept mapping similar to the process used by Schilling (2006)..

Limitations

It is important to note that findings are based on qualitative interviews with a small number of individuals. Efforts were made to recruit participants from each of the groups of interest, but the interviews conducted were not evenly distributed across farmer types. There may be implied measurement properties of qualitative data when descriptions such as “most”, “several”, or “a few” are used. However, this is not an appropriate interpretation of qualitative findings. The authors aimed to be mindful when using these descriptive qualifiers, so as not to imply a quantitative assumption about the findings. In all cases, descriptions such as “most” or “a few” simply mean the view or perspective was not unanimous (i.e. it was neither held by “none” nor “all”). Caution should be used to avoid inferring a quantitative inference from statements that use these descriptions.

Participant Profile

Interview participants were asked to provide demographic and background information about themselves. Most were male and most owned land but did not farm. Of those providing a response, most were over the age of 60 and all but two had at least some college education. For the question regarding which group of interest the participant fit in, one chose “Other” to indicate they manage the farmland owned by a family member. For the purpose of analysis, his responses are included in the “Owner” category (Table 1). Owner-tenant rental structures were comprised primarily of cash rent agreements, with two crop share arrangements (in the landowner group) and two variations of custom farming (one landowner, one owner-operator). The crops grown on all farmland was primarily corn and soybeans, with a small number of acres

(less than 25 in each case) set aside for hay, garden vegetables, protected forest land, or Conservation Reserve Program (CRP) land.

Table 1. Demographic characteristics of interview participants

	n
County	
Iowa	5
Johnson	10
Gender	
Male	11
Female	4
Age	
30 years or younger	0
31-40	2
41-50	0
51-60	2
61-70	3
71 and over	6
Did not respond	2
Education	
High school graduate or less	2
Some college, but did not finish	1
Two year college or associates degree (AA/AS)	2
Four year college or bachelor's degree (BA/BS)	7
Graduate college of professional degree	2
Did not respond	1
Rent or own farm land	
I own all the land that I farm (owner-operator)	1
I rent all of the land that I farm (tenant)	1
I own some of the land that I farm and rent some of the land that I farm (owner-tenant)	4
I own land, but I do not farm (landowner)	9

(Continued, next page)

Table 1. Demographic characteristics of interview participants

(Continued from previous page)

	<i>n</i>
Total acres farmed	
100-249	0
250 to 499 acres	5
500 to 999 acres	0
1,000 or more acres	1
I do not farm	9
Total acres owned	
Less than 50 acres	2
50 to 99 acres	4
100 to 249 acres	5
250 to 499 acres	2
500 to 999 acres	0
1,000 or more acres	1
I do not own land	1

Findings

A number of key themes and subthemes emerged from the interviews. These are presented below, structured in five main sections: land management and environmental concerns, conservation norms and farming ethic, decision-making structures and timelines, barriers to adopting new practices, and conservation messaging. Within each of these sections, key themes are identified, followed by sub-themes as needed. Important differences between groups are highlighted in each section as appropriate. Quotes listed to support the themes were made by individual interview participants.

Land management and environmental concerns

Participants were asked about what, if any, concerns they had about managing the land, and what, if any, environmental concerns they had.

Theme 1: Loss of farmland and deteriorating soil health are primary concerns

Several participants across groups mentioned encroaching development as a concern for land management.

Where I'm living, the towns are sprawling out and more and more of our ground is being put into houses and streets and urban development is kind of infringing on me. (Owner-tenant)

I'm going to still do what I can to keep the farmers in business here and keep the farm ground, at least in the county – keep them farming in the county. But I, like I say, I see it all the time that, I mean, even people go out and they'll buy 40 acres or they'll buy a farm and then they'll plop a big, expensive house on it, and it's hard to pass up the money for, you know, some guy – especially the people, the older people that are getting out of the rural areas and they just want to sell it to the highest bidder, and a lot of times, the highest bidder isn't going to be another farmer... (Landowner)

Other concerns for land management were similar to many of the environmental concerns mentioned across groups, with the primary concerns relating to soil erosion, soil health and runoff.

Best we can, keeping the soil in place and improving it. A lot of concern there. (Owner-operator)

Secondary concerns were related to balancing inputs and outputs in managing the land, particularly in terms of cost.

Theme 2: Water quality is not a top of mind concern

One issue that is mostly missing from the interviews, when participants were asked about their land management and environmental concerns, was the issue of water quality. When it was mentioned, it was rarely mentioned as a legitimate concern. Only one landowner mentioned it as an environmental concern. Others who did mention it did so in the context of it not being as much of a concern as some might think, and as an issue for which farmers receive undue blame.

I mean, we don't want to put more product on than we need just for the moneywise. And everybody thinks, oh, some people think we're putting more on and it's getting groundwater contamination and everything. Maybe years ago, that's the way it was, but now it's so expensive to put a crop in, you try to cut corners wherever you can and still have a good yield. So I don't think there's that over-application like there used to be. (Owner-tenant)

Well, I'm not certain. You know, I can understand why there is a concern about chemicals, and the farmers generally get blamed for all of this because of our chemicals that we use. But I think most farmers are well informed as to how to use them and the proper use of them. You know, farmers are not the only one that use chemicals. They're – in the cities they use Chem Lawn, and there's other ways that these chemicals get into waterways or water, you know. (Landowner)

Conservation norms and farming ethic

Previous research has suggested that elements of a farmer's identity and their perceptions and attitudes regarding conservation and conservation practices are underlying elements in the decision to adopt new conservation practices (Magdalena et al. 2017; Olson & Davenport, 2017). Participants were asked several questions meant to tap into these underlying elements of farmer identity as well as farmer culture. Questions about conservation as a concept and how it is practiced were included as well.

Theme 3: "Good farmers" are viewed as stewards of the land

Early in the interview, participants were asked to describe what "good farming" or a "good farmer" is. Across all groups, several key words or phrases were consistently mentioned. Farmers as "stewards of the land" was mentioned most frequently from participants, as well as the concept of leaving the land better than you found it, and leaving a legacy for future generations. A few participants also mentioned profitability as an element of good farming, specifically mentioning the balance between care of the land and producing a profitable crop.

Personally speaking I would say, good farming or what a good farmer is I think it's somebody who kind of takes on two or three hats. One is – I think the most important for me would be the good stewardship of the land itself. You know,

not just using what's there right now because you can but kind of keeping that it is something that is going to continue to exist for generations after you're done farming it. And so, leaving the soil, leaving the water, leaving whatever natural resources exist on that property as good or better than you currently have them. And then I would also on top of that because it is obviously very much a business endeavor somebody who is wisely managing the input that goes onto the property but will still yield a fairly profitable crop or whatever it is you're choosing to raise on that particular piece of property. (Landowner)

Across those who own and those who farm the land, another frequent theme was respect for the land and pride in their land management. One landowner and one of the owner-tenants spoke negatively of tenant farmers who farm in a way that maximizes yield over the health and upkeep of the land.

So many of these guys that rent a farm, they just farm right through everything. (Owner-tenant)

Another owner-tenant specifically talked about elements of farming that show others you take pride in your land and how you treat it.

A good farmer is somebody who takes care of their land, has pride in their land, wants it clean, wants it to look nice, picks up any kind of trash or debris from the highway or gravel roads. Keeps it mowed nice. Keeps the waterways flowing so there's no major erosion. Keeping the fences nice or removing the fences if you don't have livestock or cattle or anything. (Owner-tenant)

In a follow-up question regarding the responsibilities of a farmer, the primary theme was managing natural resources and seeking out best practices for the land, and respecting those around you when making decisions about how to farm.

I think for number one, first and foremost, [the responsibility of a farmer] is the management of the natural resources. I think and again, this is my personal opinion, but I think it's very hard to be viewed as a good farmer if you are mismanaging that. (Landowner)

Theme 3.1: Most farmers see in themselves aspects of a "good farmer"

Throughout the interviews, participants across groups reported decision-making and land management practices that are consistent with a conservation ethic. With regard to specific practices and approaches, all but one participant (landowner) reported applying nutrients in the spring rather than the fall, with runoff and erosion often mentioned as a driving force for their nutrient application plans. Most participants also reported using some combination of

cover crops, no/low-till and buffer strips. Other issues of cost and effectiveness were important factors, but even when the word “conservation” was not used in their descriptions of decision-making and land management, the underlying elements of conservation were clearly evident.

When asked how well their definition of good farming fits their perceptions of themselves, most participants were positive about their intentions, but also admitted that they could not always say there was a perfect match. Some not directly involved in farming said that while they gave input and suggestions on how best to apply their good farming ideals, ultimately it was up to the person or persons working the land, and so they did not always have control over the outcome.

I give input and I try knowing the personalities that I'm consulting with, try to meet in the middle knowing that some of the things I would prefer to see or would recommend probably wouldn't get done. You kind of chip away I guess if you will at certain practices to best meet that stewardship goal. (Landowner)

Others said that they are trying to make headway with balancing care of the land and profitability, but have not yet reached the point of perfect alignment with their perceptions of good farming.

I'm not making money. So yes, I'm sure that's not new. As far as erosion and soil health, I have yet work to be done on that front. (Tenant)

Overall, participants saw themselves and – often, though not always – those around them as trying to meet the ideal of good farming.

I'd like to say that's the way I see myself for the most part. We all try but we do the best we can. (Owner-operator)

Theme 3.2: Conservation is viewed as good farming in practice

When asked for top of mind associations for the word “conservation,” answers fell into one of two categories. First, words and phrases aligning with care of the land broadly speaking: conservation and preservation of natural resources; keeping the land natural and original; and leaving the land better than you found it. Second, practices they associated with conservation more narrowly focused: reducing erosion, maintaining soil health; rotating crops; proper waterways and drainage; tiling; terracing; no-till; and using appropriate amounts of chemicals and products.

Conservation practices, as specified here and throughout the interviews, were conceived of broadly by participants. As the preceding list shows, practices tended to address issues of soil

health and stability, but the concept included everything from keeping ditches mowed to crop rotation to soil testing, with many of these practices having been in place for several decades.

Well, these – the [conservation] plan that we have here includes the buffer strips, field borders, contouring, terraces, tiling... We've had those kind of plans – and of course, they've changed over time too as different practices have developed, but ever since we've farmed, we've had those kind of plans which started in – 1961, was our first crop. (Owner-operator)

Those engaged in the day-to-day aspects of farming (owner-tenants, tenant, owner-operator) were familiar with several conservation practices, including cover crops, no/low-till, buffer strips, soil testing and farm ponds. This was true for those who considered themselves as keeping up with new information, but also with those who did not, including an owner-tenant who described themselves as a “dinosaur” compared to other farmers. While the elements of conservation aligned well with conceptions of good farming, there was one key difference. While profit was mentioned as an element of good farming by several participants across groups, it was not mentioned at all as a characteristic of conservation.

Decision-making, information-seeking and timelines

Structures for making decisions regarding land management cover the breadth of options available to farmers both among and between farming groups. Discussions over land management decisions range from highly formal, written agreements, to very informal discussions that happen on an irregular basis.

Theme 4: Participants' connections to the land and personal relationships drive decision-making

Participant interviews revealed that there is no single approach to decision-making within or between groups, or based on the payment structure (cash rent vs. cost-share). The key theme that emerged from this line of questioning is the importance of the relationships each individual has with those that farm the land, and whether they have a strong connection to farming themselves. These are the elements that factor heavily into how involved individuals were in the decisions of land management.

Some landowners are actively involved in the day-to-day decision-making, others leave decisions solely up to their tenant. Those who actively participate in the decision-making spoke of a process that was collaborative, made of compromises, and a two-way communication with discussions initiated by both landowners and tenants.

My tenant makes the decision with me. He comes and visits with me each as to what he plans to do, and of course, you know, he appreciates my input as well. I

let him choose the crops that he puts on, but we do a rotation system, so that really, you know, is a given... Yeah, we communicate a great deal, and [if] I think I have issues, I will contact him or vice versa. (Landowner)

These actively involved individuals typically had a direct connection to the land they owned, with land that had been passed down through family, or a background in farming during their youth. Landowners who did not actively participate in decision-making indicated that the tenant had sole decision-making responsibilities for land management because the tenants were the ones making the financial investment in seeds, fertilizers, equipment, and other direct expenses. These landowners tended to lack a farming background, and so depended on the tenant to keep up with new information and make the best decisions.

Most owner-tenants tended to say that they make all of the decisions themselves about the land they rent, regardless of their relationship with the individuals they rent from (family or otherwise) with varying levels of input or suggestions, and interest, from the owners.

...[T]he one landlord, he'll want to know what I'm using, how much fertilizer I put on there, just interested to see. Curious I guess maybe more than anything. And we talk. We visit all the time about stuff like that, and they're happy with what I'm doing, I guess. (Owner-tenant)

Regardless of the level of involvement in decision-making, most participants mentioned the importance of alignment between landowner and tenant in their views of how best to manage the land, and long-term relationships with the tenant. Many had worked with the same tenant for decades. The single owner-operator that was interviewed has recently begun utilizing a custom farming agreement with farmers in the area. These individuals already own and farm land nearby, and were chosen by the owner-operator based on the way they farm.

I picked out four different farmers in the community... based on what I observed to be their good farming practices and talked to them, if they would be interested in custom farming my land. (Owner-operator)

The tenant of the group illustrates the differences between long-standing relationships – in this case family – and relationships that are strictly business-oriented. One parcel of land is rented from the tenant's mother, where decision-making is shared with the mother and a sibling, and the mother pushes the tenant to find new ways to improve farming practices.

[We talk] quite often and she's well aware. She would like to actually spend more on land improvement to offset income... [We talk] seasonally, spring and fall because she's well aware you can't do land and tiling or waterways during while

the crop is in the ground. So yeah, she's pushing me to identify things and make it happen. (Tenant)

A second parcel of land is rented from an out-of-state landowner, and discussions regarding land management are held with a farm manager. Decisions on which crops to plant, fertilizers, and other issues are reported to the farm manager in what can best be described as one-way communications. The tenant will make suggestions on improvements, but interprets silence from the farm manager as an unwillingness to invest in something new. There has been no pushback from the farm manager, but also no additional push from the tenant for more direction or clarity.

Theme 5: Involvement in decision-making and approach to farming drives information seeking and sources of information

Participants were asked to describe whether they keep up with new information regarding land management practices, and if so, for the sources of that information. There was a great deal of variability in responses on how much they kept up with new information, particularly among landowners. Some were broadly aware of new information but did not keep up with the day-to-day processes of farming. Others did not keep up at all with new information, leaving the responsibility to their tenants. One landowner did make a point of reading all the new information that came their way.

I read a lot of farm magazines, Wallaces' Farmer, Farm Journal, Successful Farming, primarily Progressive Farmer, I like that magazine. I read those things cover to cover about every month. (Landowner)

Among landowners, those who described themselves as keeping up with new information were also the individuals who identified themselves as actively involved in the decision-making process.

Owner-tenants were split on how much they kept up with new information. Some have been using consistent practices for many years and do not seek out new information. Others actively research to find ways to make their operation more efficient and more cost-effective. When asked about key drivers to making changes in their practices, one owner tenant talked about doing a great deal of research.

Research. My [spouse] researches a lot. And if [we] find something that's definitely cost-effective, going to grow our operation, going to make it easier, going to cut down the cost of things... We do look and navigate that a lot. (Owner-tenant)

The tenant and owner-operator in the group each identified themselves as keeping up with what is new in farming, but for different reasons. The tenant was previously not involved in farming, but left another profession after inheriting family land and has had to do a great deal of research to overcome the learning curve of a new profession. The owner-operator believes they lack the ability to keep up with the most recent technological advances, but is still actively seeking out information on farming and land management.

I'm probably always looking for time and places to keep up with what's going on in the industry. Where I get left out probably is on that high tech, computerized stuff. (Owner-operator)

Across all groups, the most prevalent means of getting new information was talking to other people, including seed and chemical suppliers, but primarily friends and neighbors with ties to farming. Those who reported keeping up with new information to some degree frequently cited several farm magazines. *Wallaces' Farmer*, *Successful Farming*, *Iowa Farmer Today*, *Farm Journal*, and *Progressive Farmer* were each mentioned at least once by name. In addition to farm magazines, participants also mentioned attending field days arranged by the ISU extension offices as well as farm shows and local farm banquets.

Theme 6: Individuals will reach out to farming support organizations primarily for technical assistance and cost-sharing opportunities

Participants were asked directly about any information or resources they received from their local soil conservation district, their local watershed organization, Farm Bureau and ISU Extension. Most participants across farming groups reported receiving information via postal mail and email from their local soil conservation district, their local watershed organization, Farm Bureau and ISU extension offices with new information on land management and/or assistance programs for new practices.

ISU Extension was seen as a source for information on technical knowledge and cost-sharing programs by several participants across farming groups. Specifically, the extension offices were mentioned as sources for classes and training. These resources were used primarily by those actively involved in the land management, mostly owner-tenants. It was the only organization mentioned as a source of information by participants prior to being asked about these organizations specifically by name. The local soil conservation district was identified as an additional source of technical knowledge and cost-sharing programs when asked about directly. When asked how much they rely on the local soil conservation district, the owner-operator stated they had only utilized them as a technical resource.

Just the technical part of the use and the installation of the physical practices that we use out here. In other words, those terraces, waterways, border strips and all that sort of thing. (Owner-operator)

Participants were also asked about any information or resources they had received from their local watershed organization. Several landowners and the tenant remembered receiving material from them in the mail, but few could give specifics on the information these contained. Only one landowner had utilized this organization in any way, for a waterway improvement project. Another landowner had received information about ways to include conservation practices on their land, but was not aware of any cost-sharing programs.

They sent a letter asking to do this and that. But they have all the ideas and no money, so you know how that works. Nobody wants to do for nothing. (Landowner)

Nearly all participants indicated that they are members of Farm Bureau, but most of these individuals did not utilize them as a resource beyond crop insurance or as a lobbying group on behalf of all farmers.

One of the most common themes for those who had utilized these organizations for information and resources was the one-on-one attention they had received in working with technical experts. Participants mentioned having been approached by individuals from ISU or ISU Extension, or from the conservation district or watershed coalition, who would come to them with ideas or asking them to participate in a study or program, and this was perceived as a positive element of their experiences.

Adopting New Practices: Barriers

Most descriptions of approaches to farming and land management suggested that practices were consistent from year to year, with few new elements added at any given time. When asked about adopting new practices, several key themes emerged as barriers to adopting new practices.

Theme 7: Farmers assess the financial risk and impact on profit margins before implementing a conservation practice

Adoption of new practices is seen as a financial risk without a guarantee of a commensurate payoff. New practices are perceived as requiring an investment of money and other resources in an industry with volatile markets that can have large impacts on profit margins. When asked about any negative elements of conservation or conservation practices, the tenant participant explicitly identified the loss of profits as a concern.

Yeah, our current low, low profitability world. You know, it takes time to learn in some cases you take out cropping area to put in these [conservation] structures. So it can reduce the profitability of a farm... With cover cropping it has cost us more – public money has not reimbursed us for the money we put into cover crops. (Tenant)

A direct investment in the yield of crops was the primary characteristic shared by those discussing financial risk. This was mentioned by the one of the two landowners who have a crop share agreement with their tenant, as opposed to a cash rent agreement, and was expressed by some owner-tenants and the owner-operator. This link was apparent when one of the owner-tenants was asked about their biggest concerns about farming and land management.

I would say prices. Being able to continue to stay afloat. Just with the ground prices themselves being so expensive, the cost of equipment being so expensive, and the turnout of corn and beans being so cheap... (Owner-tenant)

Several owner-tenants and the owner-operator discussed this in the language of cost-benefit analysis, in terms of both time and money. They also indicated that any decision to adopt new practices did not happen quickly, and that individuals would do a great deal of research through reading and talking to friends and neighbors while also keeping watch on crop prices.

Part of [my approach to farming] is economical. What can I do to turn the most, hopefully, profit? (Owner-tenant)

Participants across groups mentioned the need to balance the cost of new practices with the benefits it would bring. This was directly related to perceptions of the need to know your land and understand what the land needs; variability was a key aspect of the discussions of economic risks.

I read the magazines and stuff and if it will apply to me and can be cost-effective, I'll consider it. But a lot of this stuff for no more than I'm farming, especially row crops, I don't feel a lot of that stuff is practical for me. (Owner-tenant)

Theme 8: Participants are committed to conservation, but new practices to address it are sometimes viewed with skepticism about their value

Across groups, there was no clear trend in how newer conservation practices and technologies were viewed. Some saw the new practices as improved ways to continue their conservation efforts. One landowner, when asked about how their approach to managing the land had changed over the years, suggested that their approach was the same, but the ways to implement it had improved.

There's lots of things over the years that change, you know, as far as plans go and different government programs, and, you know, there's just lots of changes that take place over the years in farming practices and so forth. So I'm old enough to have seen a lot of those, and for the most part, they're getting better I think... The process is probably very similar, but the practices have changed.
(Landowner)

Others felt the way they had worked and managed the land was accomplishing the conservation goals they had, and saw no reason to change what they had been doing for years. This was demonstrated by some landowner and owner-tenant participants who indicated that their farming practices have remained consistent for many years and they are not inclined to shift to newer practices. They also do not see support for older practices that they believe are sufficient for the type of land they have.

Last fall I went down and talked to [a watershed organization representative] ... to see if I could qualify for rebuilding some of our terraces that have been in for... 30 years or so... and maybe longer... And some of them need to be reestablished. After a visit [from the representative] and looking for a while, I kind of decided with what he said that they would rather be doing new things rather than renovation of what was already there. They didn't exactly say that but that's the opinion I got. (Owner-tenant)

Some expressed a willingness to invest the money into new practices, even those with a substantial cost. The key aspect of this willingness came from a belief that a new practice had not only been proven effective, but that it would be effective and applicable to the unique aspects of their land. One owner-tenant stressed the primacy of personal experience over new information, citing a negative experience with no-till practices on erodible ground as making them resistant to trying other new practices.

Several other participants across groups mentioned that their decisions to try something new often came after observing their friends and neighbors first, to see if something new would work for them in similar conditions.

I think observing the neighbors, what they're doing, and then we'll try something different. (Owner-tenant)

Like if I'm considering [something new], I'll visit with one of the neighbors to get their opinion on what they're doing. (Owner-tenant)

Theme 9: Current conservation programs are seen as underfunded

Some participants spoke positively of programs to assist farmers with implementing conservation practices. One out-of-state landowner said they had participated in several cost-share programs for their land in Iowa, and was able to do so because of information provided by ISU Extension, the local soil conservation district and the local watershed organization.

Well, you know, since I'm quite a ways from them, I rely on [the soil conservation district] for information about, you know, cost-sharing and programs and those kind of things. I get more technical information, I would guess, from the Iowa State University Extension site, that has a lot of information... I rely on the [watershed organization] for programs. (Landowner)

Another landowner was able to put in \$100,000 worth of erosion mitigation practices including terraces and basins, and was able to do so as a result of a government cost-share program they became aware of through the local soil conservation district.

I [worked with the soil conservation district] when I did all that expensive work. That was quite a project. It was \$100,000, but it was shared with the government, so that helped. (Landowner)

The tenant spoke of the need for more money to go towards these groups and programs, and the need to get information to farmers by utilizing a personal, one-on-one connection so that more farmers could be reached even if they had not utilized any of these groups previously.

If [more groups] could be funded they could put feet on the ground to individually talk with farmers. So you know, I can say Practical Farmers [of Iowa] and I'm sure there are others, I suppose there's the Bean Association, Farm Bureau... or I suppose Soil Conservation Service, if they had more staff they could be in farmer's faces and preach the word a little stronger and harder. (Tenant)

Theme 10: Individuals perceive their own actions to have little impact in the grand scheme of conservation given the relative size of their land to other farms in Iowa

Of the entire group of participants, all but one owned and/or farmed less than 1,000 acres. The size of their land relative to other farms in Iowa appears to have an impact on individual perceptions of the importance of their own actions. For some, this appears to be because of the lack of control over what others are doing, especially larger farms. One owner-tenant expressed this as a consequence of their size and location.

Well, we're kind of in the center of everyone else. Kind of in this big huge section of land. So I guess [my concern is] more so what other people are doing, like

runoff from other people... Just kind of more or less runoff from what other people do. (Owner-tenant)

One landowner with less than 100 acres does not see their land as being large enough to be consequential, and believes it is not enough to count as “real farming” so there is no reason to expend the time and money that would be required to change their practices and approach.

We’re just kind of bystanders, you know? We kind of – that’s all. But the real farmers – we’re not real farmers. We’re just kind of city farmers. (Landowner)

The owner-operator also expressed what s/he saw as a conflict between farming conservation practices and the operation of large farms, which s/he perceived as making up a large proportion of agriculture today.

Well, some of the [conservation] practices run counter to some of the goings on I see happening in agriculture. We have larger, really larger operators where they’re – some of these guys are farming almost 5, 10, 15, 20,000 acres... some of those individuals still, they like it straight so they can get it all done in a hurry, a big hurry. They – at least they appear to me to not really give much thought to the land as such. (Owner-operator)

Theme 11: Years of experience and habits are barriers to adopting new practices

Some participants generalized older farmers as contentious, stuck in their ways, and as people who do not see newer conservation practices as what a “real farmer” does. There is a belief expressed by participants across groups that younger farmers would be more open to adopting new practices, and would treat the land better.

There were a couple [previous tenants] that were just kind of grisly old farmers, didn’t really care whole lot about relationship building, and they got weeded out to say the least. (Landowner)

And so, as we kind of look at maybe a new tenant partly yes, someone maybe a little bit younger. I say that maybe because we just need younger farmers but also because I feel like younger farmers potentially have more of an open mind to different practices... if you could find that healthy mix of age along with kind of the open mindedness to maybe some different practices that would be kind of my ideal tenant. (Landowner)

Farming is seen by several participants across groups as the profession of an older generation, with fewer young people either staying on farms or seeking out farming as a career or lifestyle.

Well, of the nine boys that were in the [redacted] family, you know, they got married. And then – and I was just – it really made me mad because some of the wives steer the

kids away from the farm, I mean, just saying, you know, you've got to go to school, and you need to, you know, go to college and get away from this – all this work and farm life, as though it's a, you know, less profitable way of life or a worse way of life. (Landowner)

Several older participants also cited their age and/or long-term experience as a reason for not adopting new practices that might change the way they manage the land, or lead them to seek out and apply new practices or technologies.

So you know, at our age, you don't worry about things as much as you do when you're 30. You know what I'm saying? Another ten years, it'll be somebody – ten or 15 years, it'll be somebody else's baby anyway. (Landowner)

Conservation Messaging

Participants were asked questions about any conservation messaging they had heard, read or seen, and were asked specifically for top-of-mind associations for the messaging theme currently in use by the Clear Creek Watershed Coalition, “Neighbors helping neighbors.” This was followed up with their suggestions for what to include or exclude from conservation messaging.

Theme 12: Awareness of conservation messaging is limited

Awareness of conservation messaging was minimal across all participants. Several were aware of having received postcards or brochures in the mail, some recalled hearing or seeing advertisements on TV and radio, but few were able to give specifics of what they had heard. The tenant mentioned hearing messaging about conservation from several sources, and understood it all to be targeted at issues concerning soil, which s/he had repeatedly included as primary issue of concern for their land.

I get brochures in the mail now and then explaining how important [conservation] is and giving examples. So probably, as you see these things whether it's from the watershed coordinator or from farm media it all repeats the same theme and we got to protect the soil. (Tenant)

Another participant had recently heard an advertisement on the radio, and could not recall the source of the message, but was able to recall certain details.

I heard a guy on the radio the other day saying how they'd reduced nitrates by 60 percent by, you know, protecting the creek beds and grassy areas around the creeks. (Landowner)

Theme 13: “Neighbors helping neighbors” is associated with farmer culture and identity, but not with conservation

Participants were asked to share what came to mind when hearing the phrase “neighbors helping neighbors,” the current messaging campaign of the Clear Creek Watershed Coalition. None of the participants associated it with any conservation messaging they were aware of. Across all groups, four main themes were elicited by the phrase: that it was evocative of a previous generation; it was communication between neighbors, specifically those very close by; it described a community where help is given to those who are in a vulnerable situation; and that it described the farming community more generally, one which is disappearing.

The tenant brought up communication as a key element of “neighbors helping neighbors.”

It brings to mind in my father’s generation how there was a lot more communication between land neighbors and how they would help with hay or thrashing and just general questions about farming. I don’t think that happens much these days. (Tenant)

One landowner spoke of it being the mentality of an older generation.

I think of very much an older generation neighborhood mentality where you knew who your neighbors were and no matter what the situation is if somebody needs help or whatever it was that you were there to help no questions asked. (Landowner)

An owner-tenant spoke of it as a disappearing way of life.

What comes to mind is in the rural community, if somebody gets hurt or something, we all just pitch in and go do it for them. And that kind of holds true with pretty much all things. If they need it, the community will see that it happens. It’s one of the things that’s starting to disappear in this country. (Owner-tenant)

Another owner-tenant believed it described farming culture.

I think around here that’s just the way life is. We want to succeed, but we want everybody to succeed. If somebody’s having problems, you help them out because it’s going to come back to you... It’s just good that way, even for people in town. I mean, we want to educate them what we’re doing is all right so then they’ll want to be positive towards us. (Owner-tenant)

Theme 14: Persuasive messages need to be tailored to the audience

All participants were asked, first, what words, phrases or sentiments should be included in messaging designed to persuade other farmers to adopt conservation practices; and second, what words, phrases or sentiments should be excluded. Participants across groups suggested the broad idea of improving or preserving the land for future generations as a sentiment that

would be persuasive for some farmers. Two landowners mentioned either “legacy” or “family legacy” as words that would resonate with some farmers. The tenant suggested a message that focused on integrating conservation practices into farming before being forced to do so through regulations. This fits with a similar sentiment from several landowners and owner-tenants who identified farmers as being independently minded.

I'm not sure what [conservation messages] would turn them off, but I know farmers, for the most part, you know, kind of like independence. (Landowner)

Several participants across groups indicated that focusing on practices with multiple benefits to the soil, water and overall environment would be persuasive for some farmers, but that variation in what the land needs should be considered, as this is a primary aspect of farmers' decisions to adopt new practices. In addition, several participants suggested that a way to battle the perception of conservation as being costly was to focus on the idea that inaction would prove to be more costly, and that conservation is a way towards increasing profit.

I think back of what my father told me, 'Always be a steward of the land and keep it the way it should be.' You know, if you let things go, you kind of ruin the ground, so I guess I go by that. (Landowner)

I think [for] conservation you also will find that from a dollars and cents perspective when you are managing and taking specific conservation practices and using them it does end up making you more profitable. (Landowner)

When asked what to exclude, the theme of independence was brought up again by two landowner participants, one suggesting the need to not “harass” farmers with any particular message.

I think when we kind of take a farmer for example and put him kind of backed into a corner and say we need to try this 'because'... I think that puts them in a mind frame of almost defiance and they don't want to do it at that point. (Landowner)

Related to this, one participant stressed the need to stay away from language that could be perceived negatively by independent-minded farmers, such as referring to “government” programs or assistance. One important recurring theme was that there is not a single word, phrase or sentiment that is going to appeal to everyone.

You can't keep everybody happy all the time. (Owner-tenant)

Summary

These interviews offered a deep, nuanced view of the fifteen individuals who took part. However, it is important to acknowledge that this group should not be taken as representative of all Iowa farmers, or even of all farmers in Johnson and Iowa Counties. The majority of the interviews were completed with farmers and landowners whose land is in Johnson County (10/15), were 60 years or older (9/15), had a bachelor's degree or higher (9/15), and/or were landowners who did not farm (9/15). Of those who farmed (owner or tenant), most (6/7) farmed fewer than 500 acres.

Of those interviewed, however, several themes became clear. Environmental and land management concerns are focused very strongly on soil issues, including soil health and erosion. Water quality is not a top of mind concern for our participants, and those who mentioned it primarily did so to express a concern that water quality is not a real issue, or that farmers are given undue blame as a cause of water quality concerns. There is also a concern about "development creep" as cities grow and farmland is lost. This appears to coincide with a concern that the farming lifestyle and farming communities are disappearing, as mentioned regarding the loss of young people in farming and the responses to the phrase "neighbors helping neighbors."

The concepts of conservation and good farming appear to have a significant overlap, with the themes of land stewardship, leaving the land better than they found it, and preserving it for future generations appearing consistently. While conservation was more narrowly defined in terms of specific practices, this would be expected based on the question coming late in the interview, after several practices had already been discussed. These practices were still tied to the larger ideas of land stewardship, caring for the land, and a balance between input and output, and care of the land and profit, which was seen as very important across groups. The major difference seen between conservation and good farming is the idea of profit – this was part of good farming, but not mentioned as part of conservation.

Participants recognized that reaching the ideal of good farming can be difficult, but most expressed a belief that they and their neighbors are doing the best they can given challenging conditions (i.e. volatile markets, small profit margins and changing weather conditions). There was also a recognition that while they as individuals are doing the best they can, they cannot control what others are doing, especially the larger farms around them and throughout the state.

Those with a direct connection to the land or farming is a common element for those who have input on decision-making, even those not directly involved in farming the land. However, the structure of that decision-making varies widely. Another common theme is that of alignment

between the landowner and the person farming the land regarding approaches to farming. This influences the structure, frequency and topics of conversations. Those with a personal relationship tend to have a more informal structure of decision-making, with the farmer working the land trusted to do what is best. In this situation, if the landowner is not engaged in the farming process, they are less likely to keep up with new information. Impersonal relationships often have more structure, more expectation for frequent conversations and more structured, formal agreements.

There appears to be generational differences regarding adoption to new conservation practices. In general, conservation is seen as an old idea, but is being presented in new, more efficient ways using new technology. This appears to cause some tension, depending on a farmer's age and approach to farming, with some embracing the new practices and others continuing to be skeptical. This ties into the variability of an individual's unique land needs, and the need for technical experts to meet landowners and farmers on a personal level to show them how best to utilize the resources available.

Farmers are perceived as having an independent streak, and do not want to be lectured to or told what to do on their own land. The sentiment is that landowners and farmers want to be able to have control over their land and be able to do what is best for their individual needs and circumstances. To achieve this, many participants suggested the need to be shown the benefits of any given practice, and be able to see what is working for other farmers and neighbors. Many participants gathered information by talking to friends and neighbors who farm, and several spoke of seeing what others are doing before making the decision to try something new. This is then the basis for the cost-benefit calculations on whether to adopt something new.

There is a lack of recognition of the Clear Creek Water Coalition's current messaging theme of "Neighbors helping Neighbors." While there does not appear to be an awareness of this theme, it is a message that resonated with participants though not as a conservation message, and tapped into their farming identities, ethics and norms. However, this is also seen as existing only in small communities among nearby neighbors, and as a way of life that is disappearing.

No consistent recommendation for persuasive messaging emerged across interviews, suggesting that a single message may not resonate with all farming types. Concepts that were mentioned include the broad idea of improving or preserving the land for future generations, conservation as a farmer's "legacy", making the choice now to implement conservation practices mindful of the unique aspects of their own land before it becomes regulated, and as mutually beneficial to soil, water, and the overall environment. Several participants explicitly indicated that not all individuals being targeted to adopt conservation practices would respond positively to any one message.

Conclusions and Recommendations

A number of important issues were raised in the interviews and the in-depth exploration of farmers' views.

General conclusions

Regardless of farming group or level of involvement in decision-making, soil is the primary concern of participants, and those who have water quality in mind see it as an overblown issue, with undue blame placed on farmers. Some see growing development as a threat, and see urban areas as placing undue blame on farmers, while also looking down on the farming lifestyle.

Conservation is generally understood as aligning with best practices for farming, but perceptions of new ways to achieve conservation are split. Some see new practices as a new way to accomplish a long-standing conservation ideal, while others think there is too much emphasis on new ways and new technology, and don't understand why they don't qualify for programs to keep up older ways of conserving natural resources.

In general, there is an overall perception that farmers are doing the best they can to care for the land while also trying to stay afloat – they don't want to be seen negatively, but as smaller players in Iowa agriculture there was a strong perception that a great deal is out of their control. In particular, there appears to be an underlying belief that large farms in Iowa have practices that seem to run counter to the conservation efforts many of the participants described themselves as doing: cover crops, tiling, no/low-tilling, soil testing and crop rotation.

Ultimately, regardless of how informed individuals perceive themselves to be, they seek out the information they want, and do not appear to absorb any information or messages that are not directly related to their own plans. The one element that appears to overcome this is the one-on-one, personal interactions they have with technical experts from a variety of organizations, who are able to provide a more hands-on way of seeing how new approaches to land management can work for the unique aspects of the land.

Messaging recommendations: Use a multi-tiered style of messaging

The variability in decision-making, information-seeking and likelihood of adopting new practices shows that there is no "one size fits all" type of messaging. Any successful persuasive messaging strategy will require targeting different aspects of conservation and utilizing different frames that will appeal to several different groups of individuals. Based on the themes and feedback received from participants, several avenues present themselves as possibilities going forward.

- Draw on the idea of stewardship of the land: A key aspect of farmer ethic and culture was the concept of being a steward of the land, with farmland perceived as a family legacy that farmers should leave better than they found it as a sustainable resource for future generations
- Emphasize the multiple benefits of conservation practices: while soil issues appear to be the main concern of individuals interviewed, messaging can stress that practices that improve water quality can also help with soil erosion and runoff
- Frame conservation as a cost-efficient practice: several interview participants stressed the idea that the cost of not incorporating conservation practices into your land management will cost you more in both the short- and long-term future, through loss of soil, degraded soil conditions, and therefore a lower yield
- Frame conservation as a long-standing tradition: Conservation was a strong aspect of the approaches described in interviews, with several suggesting that new practices offered better, more efficient ways to accomplish the conservation goals that have been part of their land management for decades
- Promote cost-sharing programs and technical resources as a partnership: Many individuals believe they are already doing the best they can when it comes to conservation, but also acknowledge that there is more to be done. Acknowledge that even small adjustments can make a difference, and showcase available programs as a way to help those who are doing the best they can to do even better

While creating messaging that appeals to farmers is important, several individuals stressed that for many who own and work the land, the adage of “seeing is believing” is paramount. Personal, first-hand experience with the benefits of conservation practices should be utilized to the largest degree possible, in addition to messaging campaigns. This will tap into the common theme of personalized attention seen in individuals’ willingness to listen to technical experts.

- Use farmer spokespersons: In addition to technical experts, draw on the tradition of “neighbors helping neighbors,” and of owners and operators looking to their friends and neighbors for ideas and assistance in managing their land by showcasing local farmers and their efforts to include new or improved practices on their own land

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Appendix A: Interview Guides

Landowner Guide

As we begin, I want to make sure I use terms that are relevant to you. Because there are a variety of different terms that might be used to describe the various roles in farming, would you tell me how you describe yourself when you tell someone else what you do – that is, how do you describe yourself in terms of the farm land or farming operation?

[If needed: Such as, Farmer? Operator? Producer? Tenant? Landowner? Farm manager?]

Thank you – I will try to remember to use _____ as we talk

Background

Have you ever done any farming?

How long have you owned your farm land?

[Probe – If unclear from demographics, or not obtained from mailback]

Do you share ownership of your land? If so, with who?

Would you tell me a bit about what is grown or raised on your land? Are there any unique aspects about it?

As a landowner, would you describe to me what you think “good farming or “a good farmer” is?

PROBE: What are the responsibilities of a farmer?

PROBE: How closely does your definition match how you see yourself?

How would you describe your involvement in the management of your farm land?

PROBE: How would you describe your general knowledge about various farming practices and ways to manage the land?

What is the most important factor in deciding who farms your land?

How many tenants have you had?

How long has the most recent tenant farmed your land?

What do you talk about most frequently with the tenant?

How often do you have those conversations?

PROBE: Is there anything else you talk about?

What, if any, concerns do you have about working with your tenant?

PROBE: Have there been any points of contention with your tenant(s)? What have those been about?

PROBE: Is there anything else you want to add about the relationship or communication with your tenant?

When deciding how to farm the land, who decides what methods to use?

[If they make or help make decisions]– How are those decisions made?

Some people are very involved in keeping up with information on farm management, others prefer to leave that to their tenants – where do you fall in that spectrum?

[If they do keep up]– Where do you get your information?

What is your biggest concern about farming and/or managing the land?

[IF PARTICIPANT IS INVOLVED IN DECISION-MAKING]

Land management considerations/perceptions

What are the key drivers for your decisions on whether or not to adopt new practices?

What kind of information drives that?

Where does that information typically come from? Who do you talk to?

How much do you rely on:

Your soil and conservation district

Farm Bureau

Your local watershed association

University extension offices

Would you tell me a bit about your approach to using nutrients on your land?

PROBE: What time of year do you apply nutrients?

PROBE: Do you do other practices that reduce the need to apply nutrients?

There are a few specific management practices I'd like to ask you about. Do you use:

Cover crops

No/reduced-till

Farm ponds

Buffer strips

Saturated buffers

Any other I haven't mentioned?

(Listen for: Bioreactors, Wetlands, Oxbows)

How knowledgeable/familiar are you with _____?
--

What is your biggest environmental concern, if anything, about farming?

What would you suggest be done to help address these issues? What strategies or tools do you think would be most effective?

What local, state or federal resources are available to assist farmers in meeting these challenges? What can you tell me about those and any experience you have with them?

Have you taken advantage of this information or assistance in the last couple years?

Conservation perceptions and practices

When I use the word “conservation,” tell me what comes to mind for you.

PROBE: What are the positive aspects of conservation? What are the negative aspects?

What conservation practices would you say you’re familiar with?

Is there anything that you or your tenant does that you would consider a conservation practice?

Messaging

If you were designing messages about conservation practices to use with farmers or neighbors, what words or phrases would you include? What type of sentiment should be conveyed? What would you avoid?

Tell me any messages you recall seeing or hearing about adopting conservation practices.

How did you hear or see something about these messages?

When you hear “neighbors helping neighbors,” what comes to mind?

If they mention the watershed messaging: What can you tell me about that?

Tenant and Landowner Guide

As we begin, I want to make sure I use terms that are relevant to you. Because there are a variety of different terms that might be used to describe the various roles in farming, would you tell me how you describe yourself when you tell someone else what you do – that is, how do you describe yourself in terms of the farm land or farming operation?

[If needed: Such as, Farmer? Operator? Producer? Tenant? Landowner? Farm manager?]

Thank you – I will try to remember to use _____ as we talk

Background

[FOR FARMERS WHO OWN SOME LAND, RENT SOME LAND]

How long have you owned your farm land?

[Probe – If unclear from demographics, or not obtained from mailback]

Do you share ownership of your land? If so, with who?

How long have you farmed the land that you rent?

Would you tell me a bit about what you grow or raise? Are there any unique aspects about the land you farm?

As someone who owns and farms land, would you describe to me what you think “good farming or “a good farmer” is?

PROBE: What are the responsibilities of a farmer?

PROBE: How closely does your definition match how you see yourself?

How are decisions made about farm management for the land that you rent? What about for the land you own?

Who is involved? Are you thinking ahead & planning in terms of weeks? Months? Years?
Can you give me an example?

What do you talk about most frequently with the landowner for the land you rent?

How often do you have those conversations?

PROBE: Is there anything else you talk about?

Have there been any points of contention? What have those been about?

Some people are very involved in keeping up with information on farm management, others less so and only seek information every now and then – where do you fall in that spectrum?

(If they do keep up) – Where do you get your information?

What are your biggest concerns about farming, production, or land management??

Land management considerations/perceptions

Does your approach to farming vary from year to year?

How? To what extent? Please tell me more about that

In what ways, if any, has your farming practices changed in the last 5 years?

[PROBE] When you make a change, how does that happen? How is that decision made?

If or when you are looking to make a changes in your farm management, what are the key drivers for your decision-making on whether or not to adopt new practices?

What kind of information drives that?

Where does that information typically come from? Who do you talk to?

How much do you rely on:

Your soil and conservation district

Farm bureau

Your local watershed association

University extension offices

Would you tell me a bit about your approach to using nutrients on your land?

PROBE: What time of year do you apply nutrients?

PROBE: Do you do other practices that reduce the need to apply nutrients?

There are a few specific management practices I'd like to ask you about. Do you use:

Cover crops

No/reduced-till

Farm ponds

Buffer strips

Saturated buffers

Any other I haven't mentioned?

How knowledgeable/familiar are you with _____?

(Listen for: Bioreactors, Wetlands, Oxbows)

What are your biggest environmental concerns, if anything, about farming?

What would you suggest be done to help address these issues? What strategies or tools do you think would be most effective?

What local, state or federal resources are available to assist farmers in meeting these challenges?

What can you tell me about those and any experience you have with them?

Have you taken advantage of this information or assistance in the last couple years?

Conservation perceptions and practices

When I use the word "conservation," tell me what comes to mind for you.

PROBE: What are the positive aspects of conservation? What are the negative aspects?

What conservation practices would you say you're familiar with?

Is there anything that you do that you would consider a conservation practice?

Messaging

If you were designing messages about conservation practices to use with farmers or neighbors, what words or phrases would you include? What type of sentiment should be conveyed? What would you avoid?

Tell me any messages you recall seeing or hearing about adopting conservation practices.

How did you hear or see something about these messages?

When you hear “neighbors helping neighbors,” what comes to mind?

If they mention the watershed messaging: What can you tell me about that?

Owner Operator Interview Guide

As we begin, I want to make sure I use terms that are relevant to you. Because there are a variety of different terms that might be used to describe the various roles in farming, would you tell me how you describe yourself when you tell someone else what you do – that is, how do you describe yourself in terms of the farm land or farming operation?

[If needed: Such as, Farmer? Operator? Producer? Tenant? Landowner? Farm manager?]

Thank you – I will try to remember to use _____ as we talk

Background

[FOR OWNER-OPERATORS – Some may also both own and rent]

How long have you been farming?

How long have you owned your farm land?

[Probe – If unclear from demographics, or not obtained from mailback]

Do you share ownership of your land? If so, with who?

Would you tell me a bit about what is grown or raised on your land? Are there any unique aspects about it?

As an [owner and operator], would you describe to me what you think “good farming” or “a good farmer” is?

PROBE: What are the responsibilities of a farmer?

PROBE: How closely does your definition match how you see yourself?

How do you make decisions about farm management?

Who is involved? Are you thinking ahead & planning in terms of weeks? Months? Years?
Can you give me an example?

Some people are very involved in keeping up with information on farm management, others less so and only seek information every now and then – where do you fall in that spectrum?

[If they do keep up] Where do you get information about new ways to manage your land?

What are your biggest concerns about farming, production, or land management?

Land management considerations/perceptions

Does your approach to farming vary from year to year?

How? To what extent? Please tell me more about tha

In what ways, if any, has your farming practices changed in the last 5 years?

[PROBE] When you make a change, how does that happen? How is that decision made?

If or when you are looking to make a changes in your farm management, what are the key drivers for your decision-making on whether or not to adopt new practices?

What kind of information drives that?

Where does that information typically come from? Who do you talk to?

How much do you rely on:

Your soil and conservation district?

Farm Bureau?

Your local watershed association?

University extension offices?

Would you tell me a bit about your approach to using nutrients on your land?

PROBE: What time of year do you apply nutrients?

PROBE: Do you do other practices that reduce the need to apply nutrients?

There are a few specific management practices I'd like to ask you about. Do you use:

Cover crops

No/reduced-till

Farm ponds

Buffer strips

Saturated buffers

Any other I haven't mentioned?

How knowledgeable/familiar are you with _____?

Listen for: Bioreactors, Wetlands, Oxbows

What is your biggest environmental concern, if anything, about farming?

What would you suggest be done to help address these issues? What strategies or tools do you think would be most effective?

What local, state or federal resources are available to assist farmers in meeting these challenges?

What can you tell me about those and any experience you have with them?

Have you taken advantage of this information or assistance in the last couple years?

Conservation perceptions and practices

When I use the word “conservation,” tell me what comes to mind for you.

PROBE: What are the positive aspects of conservation? What are the negative aspects?

What conservation practices would you say you’re familiar with?

Is there anything that you do that you would consider a conservation practice?

Messaging

If you were designing messages about conservation practices to use with farmers or neighbors, what words or phrases would you include? What type of sentiment should be conveyed? What would you avoid?

What, if any, messages you recall seeing or hearing about adopting conservation products?

How did you hear or see something about these messages?

When you hear “neighbors helping neighbors,” what comes to mind?

If they mention the watershed messaging: What can you tell me about that?