

# ASSESSING CONSERVATION PRACTICES AND INFORMATION PREFERENCES IN THE FEVER RIVER HEADWATERS AREA

A REPORT FOR UNIVERSITY OF  
WISCONSIN - PLATTEVILLE  
PIONEER FARM

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The project team is grateful for the time and contributions of the farmers who participated in this study.

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## INTRODUCTION

The University of Wisconsin-Platteville Pioneer Farm, located near the headwaters of the Fever River and in Southwest Wisconsin, is a teaching facility and experimental farm. Programs model state-of-the-art farming methods and the staff conducts various research studies. Through producer-guided research, UW-Platteville Pioneer Farm seeks to assist the growth of Wisconsin farmers with productive, economical, and environmentally sound farm management practices.

This report summarizes a study assessing conservation attitudes and practices of agricultural producers in the headwaters and surrounding townships of southwestern Wisconsin's Fever River Watershed, in close proximity to the UW-Platteville Pioneer Farm. UW-Platteville Pioneer Farm, reflecting its outreach mission, commissioned the University of Wisconsin Environmental Resources Center (ERC), Madison, to conduct the study. The study was intended to help UW-Platteville Pioneer Farm understand the sociological factors and decision-making processes of farmers within the headwaters region of the Fever River and to assess their options for outreach to that community. Key questions in the study focused on, (a) type and extent of land management practices associated with conservation, (b) attitudes toward conservation, (c) factors influencing adoption of practices, (d) information sources used in making decisions, (e) interactions with external agricultural agencies, associations, and organizations, and (e) farmer knowledge of UW-Platteville Pioneer Farm.

The two-phase study included a series of initial farmer interviews with a small set of producers, followed by a survey of all producers in the headwaters area. Farmer interviews and field research during the first phase influenced development of the questionnaire, deployed during the second phase. Ninety-five farmers received the questionnaire; of the 60 that were returned, 58 were usable (63% response rate). The survey collected demographic and descriptive information about the farmer and their farm: the 'Land Management Practices' and 'Manure Management' sections addressed the past and current practices used on the farms; the Information Sources and Involvement section asked about farmers' levels of involvement within the community and from where/whom they sought assistance or information when making management decisions.

The Fever River Watershed (once called the Galena River Watershed) encompasses roughly 242 square miles (approximately 91,840 acres) in Grant and Lafayette Counties in southwest Wisconsin, in an area known as the Southwest Savanna. Unglaciaded for the last 2.4 million years, the landscape includes broad open hilltops and river valleys, and steep wooded slopes. Predominant land uses within the watershed are as follows: 85% cultivated, 5% pastured, 6% road/farmsteads, 4% other. Dairy, cash crops and beef farming dominate the agricultural land use. Most of the livestock operations are found in the upper portions of the watershed.

The topography contributes to the difficulty of managing non-point source pollution, and according to the Wisconsin DNR non-point sources of pollution are major contributors to impaired water quality in the watershed (WDNR, 2001). During the past few years several fish kills in the region resulted from manure spills and runoff from winter-spread manure.

This study area covers roughly 50 square miles (approximately 19,000 acres) in Lafayette County and includes the towns of Belmont, Elk Grove, Benton, and New Diggings. Farm size ranges from 150 acres to more than 2,600 acres in the study area. Production is primarily cash crop, livestock,

dairy or combinations thereof. The study did not engage the Amish communities farming in or near the area.

The following two sections summarize the research behind this study and explain the methodology used. A description of common themes that emerged from interviews and a presentation of survey findings make up the fourth and fifth sections. The report concludes with a discussion of the potential future direction of Pioneer Farm's outreach efforts.

This study is grounded in previous research addressing innovation, behavior, and the adoption of agricultural land management practices. Much existing research builds upon theories regarding the diffusion of new ideas and technologies (e.g. Rogers, 1995; Fliegel, 2001) and theories of behavior change in individuals (e.g. Ajzen and Fishbein 1980; Ajzen 1991). In general, these studies suggest that a substantial percentage of individuals can be persuaded to adopt new technologies but they reinforce that numerous factors, such as knowledge, awareness, capacity, social norms, and individual experiences influence adoption decisions.

Numerous efforts have sought to better understand various aspects of factors affecting adoption of agricultural management practices (e.g., Nowak 1983, Nowak 1992, Napier and Bridges 2002, Ervin and Ervin 1982, Traore et al. 1998, Shepard 2005, and Lambert et al. 2006). Consistent with broader explorations of individual and social behavioral choices, this body of research reinforces that generally how and why farmers adopt practices is complex and greatly influenced by individual characteristics and farm specific-factors. In other words, understanding the decision-making processes of farmers involves understanding the interplay of multiple human and geographical factors in specific settings. Studies reinforce the importance of making information available and argue that the delivery of information alone is not sufficient to induce change (Kim et al. 2005; Napier and Bridges 2002; Traore et al. 1998).

Researchers have identified several factors influencing adoption of agricultural management practices. Some studies suggest that education level affects adoption, with farmers with some college being much more likely to adopt than farmers who have not gone to college (Gould et al. 1989; Kim et al. 2005; Wu and Babcock 1998). Farmer age generally has an inverse relationship with adoption of new technology (Featherstone and Goodwin; 1993; Soule et al. 2000); although Kim et al. (2005) found older farmers were more likely to adopt recommended practices.

Farm size is another often-studied farm characteristic, but results are mixed. Some conclude that farm operators of larger farms are more likely to adopt recommended practices (Featherstone and Goodwin; 1993; Feder 1980) while others found no relationship (Traoré et al. 1998; Napier et al. 2000). Lambert et al. (2006) reinforced that operators of small farms and operators not primarily focused on farming are less likely to adopt management-intensive conservation-compatible practices and to participate in working-land conservation programs than operators of large enterprises whose primary occupation is farming. Pampel and Van Es (1977) found that size influenced farmer's adoption of commercial practices with anticipated economic benefits, whereas number of years a farmer had farmed better predicted adoption of practices with anticipated environmental benefits, such as reduced tillage, terracing, and tree planting.

Three other farm characteristics have been shown to shape adoption of practices. Owner-operators are the more likely to adopt than cash renters or share renters (Soule et al. 2000). The type of farm operation has an influence, with greater diversity in farm operation associated with adoption of recommended practices (Fernandez-Cornejo et al. 1994; Kim et al. 2005). Farm income also seems to play a role, with higher income levels correlated with higher adoption rates (Napier et al. 2000; Valentin et al. 2004). In Australia, Cary and Wilkinson (1997) found that both environmental attitudes and economic profitability correlated with the adoption of conservation practices.

Several other factors have been shown to impact adoption of practices: risk-adverse individuals are less likely to adopt practices (Feder 1980; Kim et al. 2005; Napier et al. 1984); farmers dependent on off-farm employment were found to have a negative relationship with adoption (Gould et al. 1989, Lambert et al. 2006); and having a relative “who will continue farming” is found to have a positive relationship with adoption of recommended practices (Napier et al. 2000).

Researchers and educators are challenged to understand the interplay among these factors and identify needs and approaches for specific audiences on specific issues. In developing this project, researchers drew upon factors identified in literature as well as research methods suggested by several other fields. Persuasion communication suggests the critical role of local opinion leaders in decision making and the importance of building effective communication networks with farmers (Dotterer 2004). Social marketing emphasizes the necessity of identifying, understanding, and keeping in mind barriers and obstacles individuals face when adopting specific conservation behaviors (McKenzie-Mohr and Smith 1999). Environmental education reinforces the importance of customizing approaches for specific audiences (e.g., see meta-analysis of Best Educational Practices by Stevens and Andrews 2006). Within the conservation field, Nowak and Cabot (2004) argue for focusing research, outreach and technical assistance on very specific agricultural audiences managing particularly sensitive lands. This study incorporated these various concepts in its design, assessment, analysis and recommendations.

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# METHODOLOGY

*Phase One of this study included literature and document review, stakeholder identification and a series of focused interviews with local producers. Phase Two included a survey of 95 producers near UW-Platteville Pioneer Farm including Phase One field study participants. The field study (Phase One) spanned September 2004 through August 2005. The survey was developed and conducted during early 2006.*

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## PHASE ONE: EXPLORATORY FIELD STUDY

Phase one consisted of a field study with semi-structured interviews as an important data collection method. Prior to conducting personal interviews a focus area was determined, a review of conservation history conducted, and a contact network initiated. Data collection was followed by a content analysis.

### Focus Area

Initial scoping reduced the focus area from the entire 242 square mile Fever River watershed to the headwaters sub-watershed area near UW-Platteville Pioneer Farm and four surrounding towns: Belmont, Elk Grove, Benton, and New Diggings. Phase One concentrated only on a smaller area within the headwaters area and the 25 farmers with riparian property residing therein. This smaller focus area was selected because of its immediate proximity to the Pioneer Farm and to facilitate more detailed discussions with a smaller set of producers.

### Conservation History

Research began by collecting information from agencies involved in conservation efforts in the area. Information from the 1979 Priority Watershed project was taken from the original program and contract files from the Lafayette County Land Conservation Office, as well as from project plans produced by Wisconsin DNR. This information included landscape and water quality descriptions, final participation numbers, the types of conservation practices being implemented, and a list of farmers within the research area.

### Contact Networks

A contact network was considered a vital data collection strategy. Given the relatively small initial study area, and the plan to collect detailed information, Phase One relied on the initiation of contact networks. This involved locating and securing help from individuals who know the area and are acquainted with the farmers to be interviewed. By working with different offices throughout the area, people were found to help make additional contacts with farmers in the focus areas. There were numerous meetings to discuss the research and gain support. During the fall and winter months considerable time was spent developing contact networks. In the end, this strategy demonstrated limited value and time would have been better spent initiating direct contacts with producers.

### Semi-structured Interviews

Eventually, six farmers fully participated in semi-structured interviews. Interviews were intended to be discussions or dialogues. Before each, the farmer was told they give as long a response as they felt the question warranted. This allowed the farmer to be in control of the dialogue and the interview length. Farmers were asked about their land management practices, their attitudes about conservation, where and from whom they seek information, and their knowledge about Pioneer Farm. Most contacts were made during the noon hour or in early afternoon, when farmers were most likely to be coming back in from the field for lunch or to do errands.

## Data Analysis

Initial Phase One analysis involved content analysis by the primary field researcher. Content analysis involves noticing, tracking, and taking into account particular words, phrases or concepts within the data and then developing inferences or statements of meanings (Manning 1994). Analytical matrices were developed from field notes based on interaction with each farmer. Completed matrices were summaries of responses and inferences made by the researcher organized according to research question and farmer. Analysis of each interaction was guided by questions included one asking what, if anything, was learned about any of the initial research questions from the interaction. During analysis inferences resulted both at the level of individual interactions and at the level of all interactions as a group. In addition, inferences were derived about methodology. Phase One provided a helpful foundation for developing Phase Two, but did not produce the detailed field-level data originally intended. If repeated, the approach should be more tightly structured and focused on specific conservation decisions.

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## PHASE TWO: SURVEY METHODOLOGY

The survey consisted of 53 questions that were grouped into eight sections (see Appendix B). Each section addressed a distinct category of interest to the study. The 'About Your Farm' and 'Information About You' sections collected basic demographic and descriptive information regarding the farmer and the farm operation. The 'Land Management Practices' and 'Manure Management' sections addressed the past and current practices utilized on the farms. The 'Information Sources and Involvement' section contained questions about farmers' activity levels within the community and from where/whom they seek assistance or information during the decision making process. More details about selection of survey recipients, survey administration, response rate, comparison with non-respondents and data analysis follows.

### Selecting Survey Recipients

For purposes of this survey farms are defined as any property with the primary purpose of producing agricultural products, of any type, for sale and/or trade, for profit, regardless of size of property or net profit. Given the desire to focus on farm operators within close proximity to Pioneer Farm, selection began with a census of all farm operators within a pre-determined geographical area. A population of known farmers from a geographical area was selected and mailed a survey. The geographical area from which the population is drawn encompasses all or parts of four different towns: Belmont, Benton, Elk Grove and New Diggings. The northern most point of the area begins at the SE Quadrant of S8 T3 R1 and the SE and SW Quadrants of S9 T3 R1 in Lafayette County, with the southern most point ending at the SW and SE Quadrants of both S33 T2 R1 and S34 T2 R1 in Lafayette County. The overall area is roughly 48 square miles, with the furthest point from Pioneer Farm at approximately 10 miles in a SSE direction.

The Lafayette County Treasurer's Office provided a comprehensive list of names and addresses within this area. Legal property descriptions from this list were cross-referenced with the Lafayette County Plat Maps to determine farmers' locations. Once the complete list of names and addresses was established, meetings with clerks for each of the four towns were conducted to verify the actual farm operators. Ninety-five farmers received a mailed survey as follows: from Belmont, 5; Benton, 20; New Diggings, 10; and Elk Grove, 55.

## Survey Administration

Using Dillman's recommended procedures, a series of letters and two rounds of the survey were sent in order to garner the highest response rate possible (Dillman, 2000). An advance letter that explained the purpose of the study and gave details about the upcoming survey was sent on January 9, 2006, to all 95 farmers. The first survey along with an additional explanatory letter followed on January 19. On January 26, a reminder letter about the study was sent to all farmers, encouraging them to complete the survey. Each farmer was assigned a unique identification number and surveys were labeled correspondingly. Returned surveys were marked in a tracking database to ensure that farmers who had already completed the survey didn't receive the reminders or the second round of the survey. In much the same as the first round, the second survey mailing was sent on February 11, with the second and final reminder letter being sent on February 17.

## Response Rate

Ninety-five farm operators received the survey. One was returned with an incorrect address label and was eliminated after it was learned that the individual had retired. Thus, the final surveyed population consisted of 94. A total of 60 surveys were returned, a 63% response rate. One individual refused to complete the survey and another survey was too incomplete to be included. Thus, 58 usable surveys were available for analysis.

## Comparison with Non-respondents

Thirty-four farmer operators did not return a completed survey. To check the extent those who responded represent the total intended surveyed population and to identify any potential major discrepancies between those who responded and those who did not, a brief review of acreage and township of residence was conducted.

For survey respondents, managed acres run from a low of 32 acres to a high of 5,000 acres, with an average of 561 acres. Data from the County Tax Auditors office show that non-respondents owned from 6 to 967 acres, with an average of 261 acres. Response rates from specific towns were adequate.

## Analysis

Two types of analysis were performed using SPSS, a common statistical software program. In the first, central tendencies were identified and inferences were made using descriptive statistics. Mean scores, ranges and standard deviations for each question allowed for the identification of possible sub-groups. Sub-groups were defined by response patterns and/or farmer characteristics. The analysis indicated that there were no distinct sub-groups with easily discernible characteristics or response patterns. This prevented any study of correlations between sub-groups using inferential statistics.

Given the lack of sub-groups in the data, the main focus of the second analysis was on individual cases. The second analysis was an "outlier analysis" used to identify differences between survey respondents occupying the extremes of a normal bell shaped distribution. High and/or low outliers on individual survey questions were identified and their responses across a select number of remaining questions were further scrutinized. Specifically, this analysis involved comparisons on farm size, gross net product, herd size, operation type and total managed acreage.

A “high outlier” refers to farmers whose responses place them at the extreme positive end of a response range or scale of items. A “low outlier” refers to farmers whose responses place them at the extreme negative end. Outliers were grouped according to “high” or “low.” For questions with distinct high and low outliers, analyses focused on comparisons of the mean scores between “high” and “low” groups. For questions where only one type of outlier was present, either high or low, the mean score of the outlying group was compared to that of the entire population. Outlier analyses did not identify meaningful distinctions between groups.

## THEMES FROM THE FIELD STUDY

Several themes emerged during the semi-structured interviews in Phase One. Themes are common beliefs or statements among participants that cannot, with great confidence, be generalized to the entire population of farmers. However, they do provide insights that can influence further thought and study. The themes revealed farmers' knowledge of Pioneer Farm, while providing insights about their information seeking behaviors, insights about farmers' views and attitudes about conservation, and farmers' insights about land management practices.

### **Landowners Definition of Conservation**

Farmers as a group did not articulate a clear and consistent concept of conservation. That is, the analysis did not show any clear views or a holistic construct of how farmers perceive and define conservation. However, on some level, all farmers conveyed a general understanding that conservation practices affect the environment and benefited their land. Field crop residue management was mentioned most frequently; stream bank protection was also mentioned. Farmer responses suggest that individual constructs of conservation are linked to specific practices. For example, a farmer after mentioning that his farm was 100% no-till noted that he was "conservation minded."

### **Attitudes about Conservation**

Interactions with the farmers suggest that conservation is not a primary factor in their management decisions. However, farmers mentioned specific types of practices that they follow. Soil erosion and chemical pollutants were the two major topics of discussion. Farmers spoke about conservation across their farm as well as on a site-specific basis. For example, a farmer who raises livestock discussed a conservation method minimizing total acreage used to grow feed grain and not how specific sites on the farm were affected through raising livestock. A few of the repeated contacts specifically addressed "organic farming" as a method of conservation. Another noted that the waterways were "left alone" or not planted to reduce erosion.

No clear messages emerged regarding farmer attitudes about costs of conservation. Farmers appeared aware that not implementing conservation methods resulted in environmental costs and potential for fines associated with regulations. However, no specific costs or regulations were mentioned.

### **Where Farmers Seek Information**

All responses indicated farmers seek out information. They gather information both from their own experiences and from a variety of sources (print media, opinion leaders, external agencies, crop consultants, farm co-ops, etc.). Farmers listed colleagues, friends and business associates as sources of information. They also indicated that they received a number of publications, trade magazines and newspapers.

Responses also indicated that if questions arose regarding conservation practices, most farmers would seek advice from the "Darlington office," without mentioning any specific agency housed there. The "Darlington office" consists of various agencies, including the Farm Services Agency, Lafayette County Land Conservation Department, and the Natural Resource Conservation Service, that are located in one central building in Darlington, Wisconsin.

## **Landowner Attitudes About Pioneer Farm**

Farmer responses suggested a general lack of knowledge about Pioneer Farm and, specifically, the types of research being conducted there. Discussions suggested an overall feeling of ambiguity about Pioneer Farm, farm-related research and its value for them.

In most interactions there weren't any clear statements, voice inflections, or gestures that indicated either approval or displeasure with Pioneer Farm. Once again there seems to be an overall feeling of ambiguity in the attitudes of the farmers toward Pioneer Farm. The primary researcher assumed that a close proximity to Pioneer Farm would be a factor in shaping attitudes. Interactions suggested this was not the case.

There were strong indications that few of the farmers would contact Pioneer farm seeking information. Limited levels of knowledge about Pioneer farm coupled with ambiguity about its mission and purpose seems to be affecting how farmers are assessing the benefits-potential of collaborating with Pioneer Farm.

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## SURVEY FINDINGS

Analysis of survey data resulted in 21 findings, which fall into the eight categories presented below. Findings are defined as credible inferences derived from intensive analysis of survey data. The additional outlier analysis, (study of sub-groups of extreme responses on certain questions) resulted in no additional findings. Instead, this further analysis suggested that on issues related to farm size, gross net product, herd size, operation type and total managed acreage, farmers with “outlier” responses were similar to other respondents

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### GENERAL OVERVIEW

Most farmers in the study area were fifty or older and had farmed for a number of years; nearly half expected that ownership would remain in the family. Most are operating a medium-size farm using barn, lot and pasture arrangements as they produce dairy (herd size averages 127) and beef. Some only produce cash crops and a few manage large hog operations. Most describe their operations as both family farms and businesses.

The land management practices used most often are (a) crop rotation, (b) grass waterways, (c) crop residue management, and (d) contour farming and strip cropping. About a dozen use managed grazing and have installed riparian buffers. Most of those with dairy or beef operations do not store manure and haul daily and throughout the year.

Most producers appear to be somewhat positive toward conservation in general but prefer organized efforts that encourage farmers to voluntarily adopt best management practices to additional legislated rules and regulations. Cost related to adopting a conservation practice was the most frequently reported obstacle to adopting conservation practices. Most farmers think that their practices have minimal negative environmental effects within their townships. A handful participate in cost-sharing reimbursement programs.

Most farmers used multiple sources of information during the last three years to assist them when making decisions about how to manage their land. The relatively infrequent use of typically cited sources (farm organizations, agencies, friends, family, etc) raises questions about what influences decisions about land management practices.

A small core of farmers was civically engaged and attended various public, organization, or associations meetings or contacted a public elected official during the last year. The overall trend among respondents is infrequent attendance at public and organizational meetings and infrequently contacting an elected official.

Attitudes toward different types of agricultural research and entities that conduct research are neither extremely positive nor negative. Instead, most surveyed farm operators view such research and those producing it as being at least “somewhat helpful”. A handful of those completing the survey consider their farm operations to be “research-based”.

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### FARMERS COMPLETING THE SURVEY

Knowledge about Pioneer Farm, its programs and research is relatively low. Reading a printed newsletter is the most likely activity most farmers would do to learn more about Pioneer Farm. A more detailed account of survey responses follows.

*Farmers are male, most are 50 years or older and nearly half the households have a family member with an off-farm job. Nearly half report that a family member will continue operating the farm after they retire or quit farming.*

Mean age is 51 and with 64% between the ages of 43 and 61 (see Table 1). All but three have a high school degree, with sixteen (28%) completing some post-secondary education and nine (16%) having earned a college degree. Slightly more than half of the represented households have an adult member with either a full-time or part-time off-farm job contributing to the total annual income or used to provide health benefits.

*Operators have been farming for a long time on family-owned farms. Most are the sole owners and operators; a few are in partnership with a family member. Many view their operation as a “family farm” and as a “business”.*

Average tenure is 24 years and ranges from a low of five years to a high of 65 years. Twenty-six operators (45%, N=58) range have been farming between 26 and 40 years. Approximately 62% report that the farm has been previously owned by a family member for an average of 65 years, ranging from low of six years to a high of 158 years. Seventy percent are the sole owners and operators with 20% in a partnership with a family member. None respond as having a partnership with a non-family member and only a few are legally incorporated. (see Table 1)

Nearly 81% chose “family farm” from a list of twelve phrases describing types of farm operations. The second most frequently selected phrase was “business” (56%). Seventeen farmers provided information about significant changes they made since farming at their current locations and most reported changes affected production.

**Table 1.**

Category	Average	Minimum-Maximum	N
Age	51	25-92	56
Years farming at current location	24	5-65	58
Years of family ownership	65	6-158	33
Acreage	561	30-5,000	55
Dairy herd size	126	35-415	56
Beef herd size	219	1-900	56
Category	Yes (%)	No (%)	N
Farm legally incorporated	18	79	57*
Raised and sold cash crops in 2005	68	32	57
Belongs to ag. organization or association	52	48	56

**FARM OPERATIONS** *Most farms in this study are medium-sized, based on total acres and gross farm income. This is larger than the average farm in Lafayette County and statewide.*

Farm size averages 561 acres (median = 315, Mode = 200) and acreage ranges from 30 to 5,000 acres. A medium-size farm is sometimes defined in the literature as being between 180 and 999 acres, and grossing \$50,001 to \$249,999 (SAFI, 2006). According to the 2002 Agricultural Census, the average farm in Lafayette County is 284 acres and according to 2004 state data, the average Wisconsin farm is 203 acres (USDA, 2006). Nearly 40% of

operators reported the products they sold in 2004 yielded from \$100,000 to \$249,999 gross, 21% checked options ranging from \$250,000 to \$499,999, 20% reported value of products sold as being less than \$99,000 and 19% reported value of products sold as being \$500,000 or more.

*Most farms are dairy, beef, or a combination. The number of dairy cows is higher than the state average. Raising and selling cash crops is prevalent. A few raise hogs and one is a large operation.*

Twenty-four farm operators (43%, N=56) have milking cows (including dry cows and cattle) with the average herd size being 126. Herd size ranges from 35 to 415 cows. This compares with 2001 research showing that 85 percent of the state's dairy operations numbered fewer than 100 milking cows (PATS, 2006). This same research also showed that farms milking between 100 and 199 cows accounted for almost 10 percent of farms.

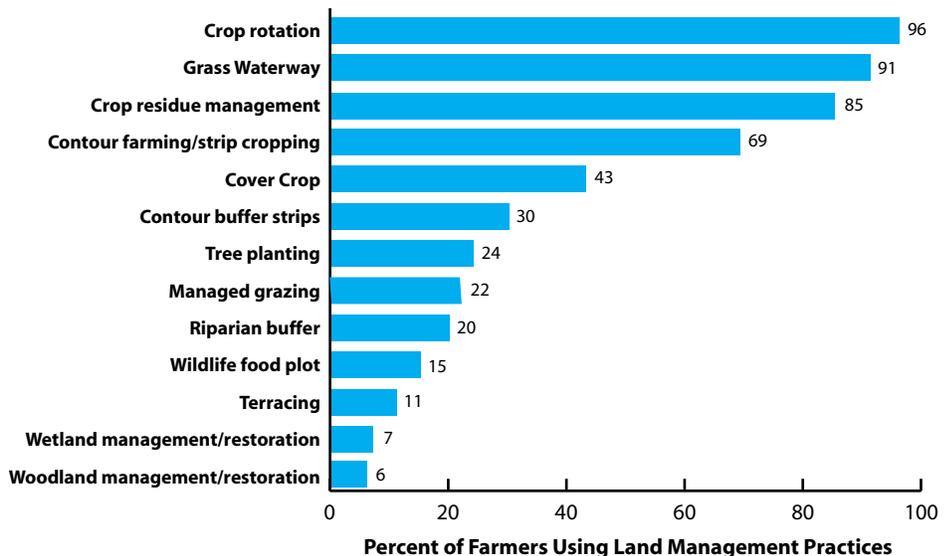
Thirty-two farmers (57%, N=56) raise beef cattle (average number 218; range, 1-900). Thirty-nine reported that they raised and sold cash crops in 2005 involving an average of 477 acres. Four of the 56 responding farmers raised hogs with the low being 600 and the reported high of 10,000. Three-fourths of the 24 farmers with dairy herds and nearly 90% of farmers raising beef cattle use a combination of barn, barnyard and pasturing.

## LAND AND MANURE MANAGEMENT PRACTICES

*Frequently used land management practices are: (a) crop rotation, (b) grass waterways, (c) crop residue management, and (d) contour farming and strip cropping.*

Ninety-six percent (N=55) reported using crop rotation while 91% (N=55) reported using grass waterways, 85% (N=52) crop residue management and 69% (N=54) were using contour farming and strip cropping. Used less were cover crop (43%) and contour buffer strips (30%). Thirteen reported planting trees, 12 reported using managed grazing and 11 riparian buffers. Eight or fewer farmers reported using a wildlife food plot, managed or restored a wetland, or managed and restored a woodlot. (see Figure 1)

**Figure 1.**



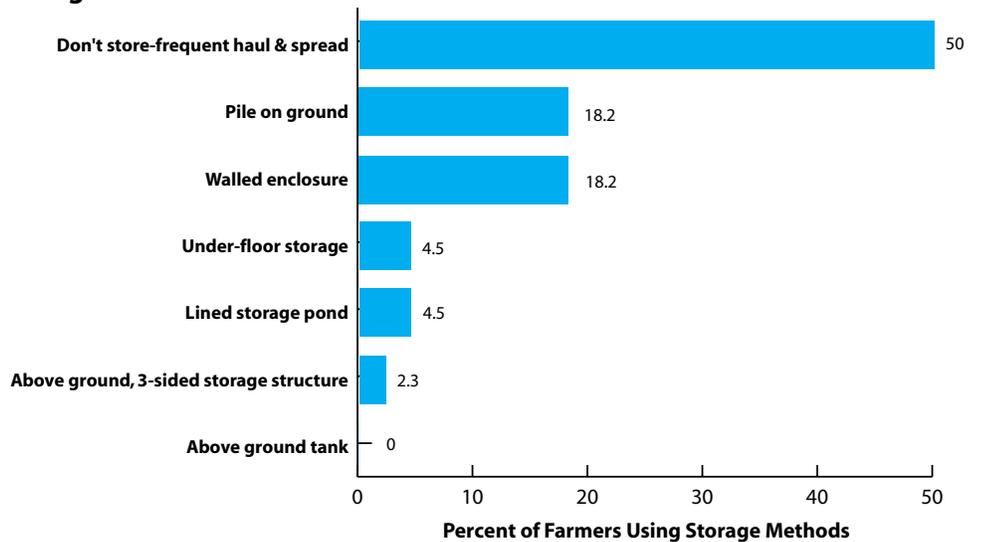
*Multiple factors were considered important when farmers made a decision to use a land management practice.*

Farmers generally considered six factors as being equally important when making a decision: (a) cost, (b) their own views about effectiveness, (c) easy fit with farming methods, (d) conservation benefits, (e) affects on productivity, and (f) anticipated profits. Factors considered as being less important were (a) ease/difficulty of learning what's required by the practice, and (b) availability of cost-sharing.

*Farmers indicated little storage of manure with daily hauling and spreading.*

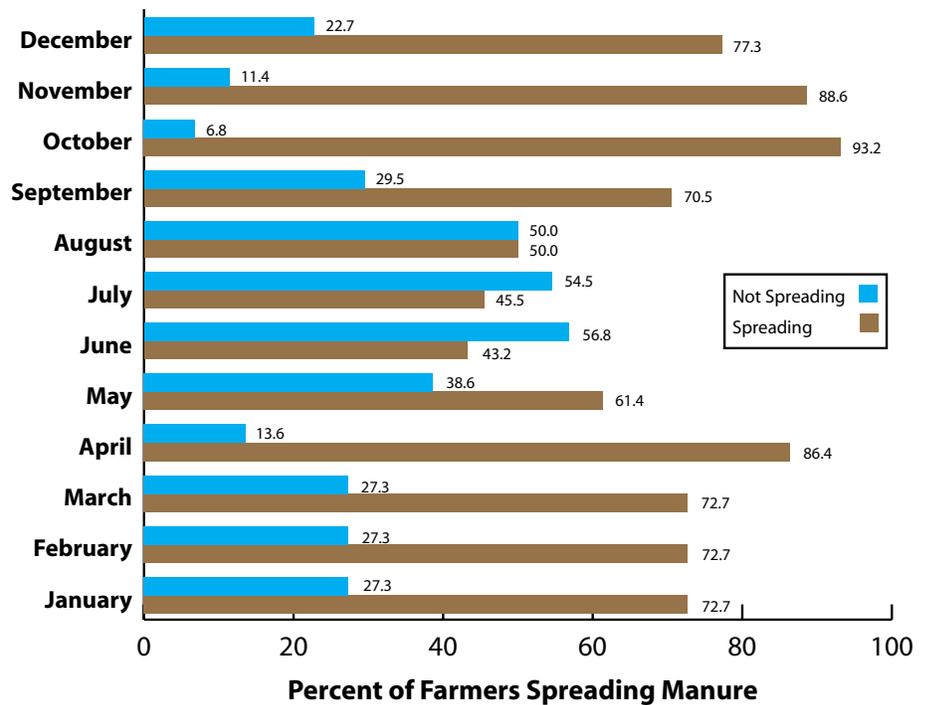
A total of 44 farm operators manage farms that produce manure and half of these say that they “don't store it and haul and spread often”. Of the remaining 22 farm operators, 16 (36.4%) indicated that they either “pile it on the ground” or “use a walled enclosure.” None of the farmers indicated that they store manure “in an above ground tank.” (see Figure 2)

**Figure 2.**



Farmers hauling and spreading manure often do so year-round, including during the months of January, February, and March. Nearly 73% of responding farmers report spreading during these three months. (see Figure 3)

**Figure 3.**



## OTHER FARM PRACTICES AND PARTICIPATION IN COST-SHARING PROGRAMS

*Many farmers have written conservation plans and some have written nutrient management plans. Few farmers have written manure spill management plans.*

While a majority of farmers (67%) say they have a written conservation plan 7 of 50 (approximately 14%) report having a written nutrient management plan for applying manure and commercial fertilizer on their farms (see Figure 4). Nearly 94% (N=48) do not have a written manure spill emergency plan.

*Few farmers with grazing cattle and a stream or water body on their land keep cattle out of streams and off shorelines.*

Two of the 39 farmers who graze cattle and have a stream or water body on their land keep cattle out of the stream banks and shorelines through fencing or some other way.

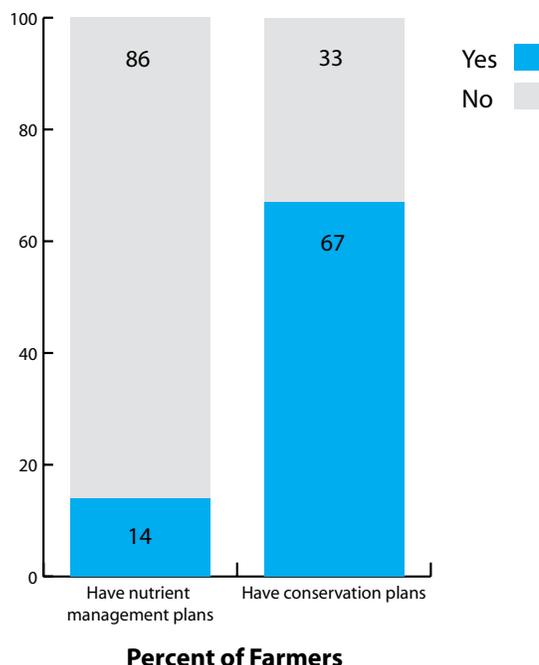
*Responses indicate low rates of participation in cost-sharing reimbursement programs.*

Six or 15% of the farmers (N=54) indicated that they participated in a cost share program. Indicated practices involved barn yard run-off, tree planting, riparian buffers, and stream banks. All six farmers were involved in the Conservation Reserve Enhancement Program (CREP).

*Most farmers favorably view organized efforts that encourage voluntary adjustment of land management practices to protect and improve environmental conditions. Farmers are split regarding their support of additional laws and regulations.*

Collapsing the original response scales (1=Strongly oppose, 2 = Oppose, 3= Favor and 4=Strongly favor) into the broader categories of oppose and favor showed support for organized voluntary efforts to protect and improve stream quality, water quality, soil quality, trees/woodlots, wetlands

**Figure 4.**



and wildlife habitat. All farmers either strongly favored or favored protecting and improving soil quality through voluntary efforts. “Water quality” and “stream quality” had high levels of support (98% and 96% being in favor). Most farmers were also favorably disposed to voluntarily protect and improve wildlife habitat (82%), wetlands (83%), and trees/woodlots (89%).

In contrast, most farmers oppose additional rules and regulations affecting how they manage their land to “improve/protect wildlife habitat,” (72%) “improve/protect wetlands” (66%) and to “improve/protect trees/woodlots.” (69%) Farmers are relatively split between opposing and favoring additional rules and regulation to “improve/protect stream quality,” (53% oppose/47% favor) to “improve/protect water quality” (49% oppose/51% favor) and to “improve/protect soil quality” (53% oppose/47% oppose).

## OPINIONS REGARDING CONSERVATION

*Generally more farmers think that their practices minimally contribute to negative environmental situations within their townships; fewer think the effect is substantial.*

Approximately 6 out of 10 farmers (N=55) think that their practices contribute “slightly or moderately” to seven possible negative environmental situations. These are: (a) reduced water quality in rivers/streams, (b) reduced water quality in groundwater, (c) eroding river/stream banks, (d) reducing health/quality of soil, (e) reduction of habitat for birds/animals, and (f) loss of wooded areas. Eight out of 10 farmers think their practices contribute “not at all” or “slightly” to loss of wetlands.

*Generally, more farmers regard conservation favorably.*

Distribution of farmers (N=55) regarding their agreement/disagreement with three statements about conservation were as follows:

- Forty-one (75%) disagree that “farmland productivity can be maintained with little or no conservation practices.” The remainders are either unsure or agreed.
- Thirty-one (56%) disagree that “a farmer committed to conservation is put at an economic disadvantage.” Eighteen (33%) agreed, the remainder were unsure.
- Forty-six (84%) agree that “the costs of protecting and preserving natural resources on a farm are worthwhile.” The remainders are either unsure or agreed.

*Farmers reported four kinds of “greatest obstacles” faced in adopting conservation practices with cost being most frequently mentioned.*

Cost was the most frequently cited obstacle to adopting conservation practices (N=39). Second was perceptions about current governmental programs supporting conservation practices. Programs were perceived as having characteristics that make adoption difficult or not very attractive. For example, one farmer viewed current programs as favoring row crop farming while a few said current programs involve “too much red tape.” Tied for third were “how conservation practices require farmers to change their traditional ways” and “time.” Comments suggest that farmers feel adopting conservation practices takes time away from production. One farmer’s view:

*“Time, I think most farmers are running so many acres they don’t have time to mess with conservation practices. They want to go from point A to point B and do it quick. I see farms that once were a family operation that are now just another big field.”*

The fourth most frequently mentioned obstacle linked conservation practices with a potential profit loss or low return on investment. Other, less frequently mentioned obstacles: (a) adaptability or “how it works with my farming practices”, (b) high cost of machinery, (c) how using larger machinery is difficult if land is contoured, (d) conservation requires education and (e) low commodity prices.

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**VIEWS ABOUT  
AGRICULTURAL RESEARCH**

*A high percentage of farmers consider plant genetics research and soils research as “helpful” or “very helpful” for resolving issues and problems they face, but consider research into animal diets, animal genetics, pasture management, other land management practices, business practices, and nutrient management as “somewhat helpful” or “helpful.”*

Studying the percentage distribution and combining the response categories of “Helpful” and “Very Helpful” showed that approximately equal percentages (83%) of farmers had high regards for the usefulness of research on plant genetics and soils (4 point scale with 1=not helpful and 4=very helpful; N varies from 50 to 52). Furthermore, for the other six types of research, a majority of farmers fell into the combined category of “Somewhat Helpful” and “Helpful.” Percentages were: animal genetics 54%, animal diets 64%, business practices 74%, nutrient management 72%, pasture management 58%, and other land management practices 76%.

*Most farmers consider research conducted by four agricultural-related entities as either somewhat helpful of helpful to resolving farm related issues and problems.*

Similar percentages considered research conducted by university experiment stations (68%), university sponsored farms (68%), private agricultural associations (70%), and research conducted by corporations/agribusiness (67%) as being Somewhat Helpful or Helpful. (N=54).

**KNOWLEDGE OF PIONEER FARMS, WAYS TO LEARN MORE**

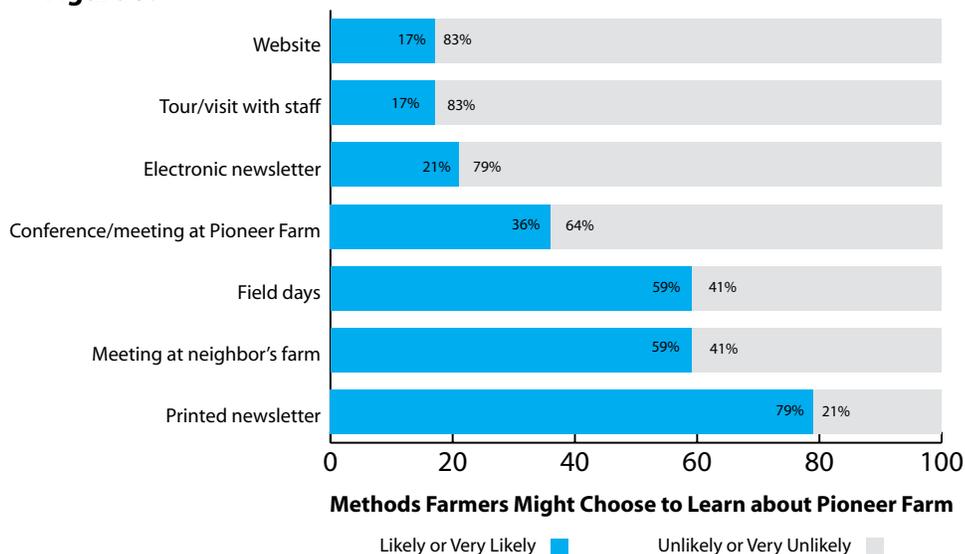
*An overwhelming number of farmers have little knowledge of Pioneer Farm, its programs and research.*

Farmers rated their knowledge about seven Pioneer Farm programs and eight research areas on a scale of 1 to 5 with 1=No knowledge and 5=Very high knowledge. Generally, knowledge levels are low. Those programs with the highest means are ‘educating students’ (2.09 mean) and ‘beef bull test site’ (2.02 mean). These means place farmer knowledge between low and moderate. For the rest of both the programs and research efforts the mean scores fall between 1.61 and 1.93 indicating farmers have no to low knowledge of those activities.

*Farmers are most likely to read a printed newsletter.*

Forty-two farmers (79%, N=52) are likely or very likely to read a printed newsletter to learn more about Pioneer Farm. Thirty-two (59%, N=54) would be likely or very likely to attend field days while a similar percentage would attend a meeting at a neighbor’s farm hosted by Pioneer staff. Nineteen (36%, N=53) selected attending conferences/meetings at Pioneer Farm. Schedule a tour/visit with a staff member, visit/read information on a website, and read an electronic newsletter, as means to learn more had relatively low numbers (from 17% to 21%). (see Figure 5)

**Figure 5.**



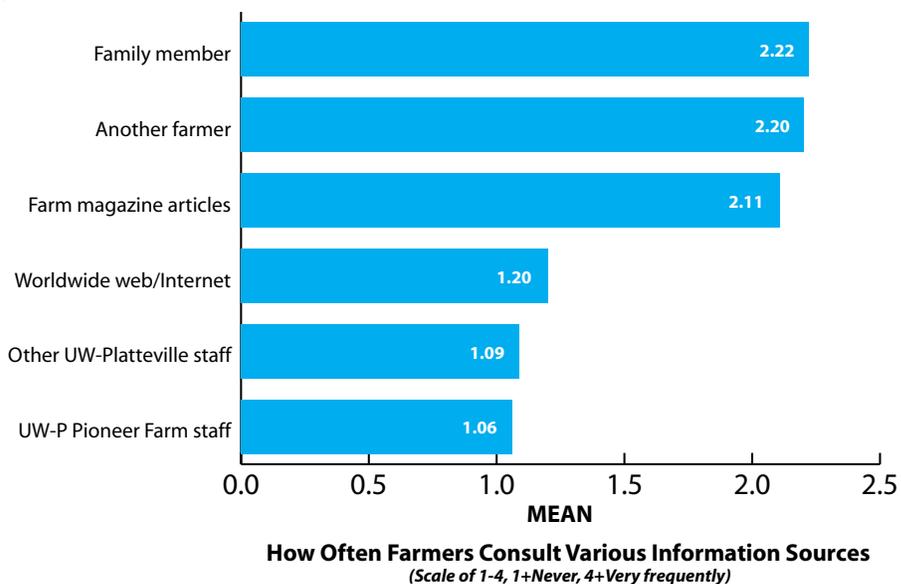
*Most farmers used outside sources of information infrequently during the last three years to assist them when making decisions about how to manage their land.*

On average, farmers used information from possible listed sources never or occasionally when making decisions about how to manage their land (see Question 1, Information and Involvement Section, Appendix B). Mean scores were relatively low on items related to use of information measured on a scale of 1 to 4 where 1=Never and 4=Very frequently. Three sources with the highest means are ‘family member’ (2.22 mean), ‘another farmer’ (2.20) and ‘farm magazine articles’ (2.11 mean). For the rest of the sources (farm organizations, UW-Extension staff, Pioneer Farm staff, other UW-Platteville staff, Farm Service Agency, Land Conservation Department, Natural Resource Conservation Service, paid consultant, friend, World wide Web/Internet, commercials/ads, lender) mean scores falling between 1.06 and 2.02 indicated that farmers use information from these sources never to occasionally. The lowest two mean scores were “staff Pioneer Farm, UW-Platteville’ (1.06 mean) and “other UW-Platteville staff” (1.09 mean). These mean scores fall somewhere between the response items of “never” and “occasionally.” (see Figure 6)

*Study results point to infrequent attendance at various meetings and infrequently contacting elected officials. A small core of farmers attended survey-listed meetings or contacted a public elected official more frequently during the last year.*

The survey listed “attend meetings of civic/community organizations,” “attend county or township government meetings,” and “attend a citizen organized local meeting.” Nearly 42 % never attended a county or town meeting, 54% never contacted a public elected official about some concern and 58% never attended a citizen organized local meeting. A smaller core attended meetings or contacted a public elected official more frequently. Approximately 11% attended 5 or more meetings per year of both agricultural organizations and civic/community organizations and 34% contacted a public elected official during the last year. Approximately 29 of 56 respondents (52%) also attended meetings of an agricultural organization at least 1-2 times during the last year.

**Figure 6.**



# OUTREACH OPTIONS

UW-Platteville Pioneer Farm initiated this study hoping to learn how to extend their research to producers within their home watershed. The findings presented so far help characterize this audience. This section builds upon those findings to explore approaches Pioneer Farm might pursue to engage farmers on issues of mutual interest.

The study shows farmers are not aware of Pioneer Farm activities or the implications of those activities for their operations. Generally, knowledge of programs and research is low, and Pioneer Farm is underutilized as a source of information when farmers make management decisions. A few targeted initiatives could assist in addressing this lack of awareness and knowledge. However, developing an appropriate strategy will depend on a clear understanding of Pioneer Farm's local outreach objectives. The options below assume the main objective is to raise awareness among farming neighbors of the relevance of Pioneer Farm research. If the objectives include bringing about the adoption of conservation practices within the headwaters area, the approach would require more intensive interactions with specific landowners for specific issues.

Based on information gathered in the survey and depending on specific outreach goals, the following options may prove useful in Pioneer Farm outreach efforts:

## Newsletters

The survey data indicate that to learn more about Pioneer Farm, nearly 80% of the respondents would read a printed newsletter. Beyond being a cost-effective method for reaching a large population, reading a newsletter requires relatively low levels of energy. This is an important consideration for farmers, who have busy schedules year-round. Additionally, a targeted mailing such as a newsletter would allow Pioneer Farm to tailor the information to the surrounding farmers.

Newsletters have the ability to serve as an introduction to programs and research topics at Pioneer Farm, as well as a forum for announcements and invitations. By including such sections as an events calendar, with dates of activities, conference schedules or meeting times listed, audiences will view Pioneer Farm as more accessible and open. This advance notice of events will give farmers more chances to work visits or field days into their schedules.

## Field Days

Close to 60% of respondents indicated that they would attend field days at Pioneer Farm. While they do take significant resources to plan and conduct, field days provide direct contact with farmers. They allow farmers to see agricultural research first-hand.

Most farmers are familiar with field days and the types of activities they normally offer. This sense of familiarity would allow them to feel more at ease with the process and the number of attendees would likely be greater here than at any new type of interaction. Field days would also provide Pioneer Farm and farmers an open communication opportunity. This allows for greater questioning and feedback on research efforts and information being presented.

It will be important to keep in mind that many farmers will attend field days not to learn new methods or find out about cutting edge research, but to confirm that what they are already doing is correct. This suggests producing an itinerary that would address both fundamental information and newer practices. This would also help to alleviate any misconceptions as

to the expectations for the field days. Field days on their own would not be expected to bring about changes in land management practices.

### **Neighborhood Meetings**

More than 50% of respondents indicated they would participate in a meeting at a neighbor's farm hosted by Pioneer Farm staff. This option shares several similarities with field days. Unique to neighborhood meetings, however, is the farmer-directed approach that the event and information would take.

Neighborhood meetings would require the consent and close participation of one of the area residents. Topics of discussion would likely be proposed by the host and/or hostess, and would be targeted to specific types of operations. Pioneer Farm would need to carefully consider specific outreach objectives a potential farmer benefits before approaching a farm to host a neighborhood meeting.

### **Media Outlets & Information Brokers**

High numbers of survey respondents indicated that they occasionally to frequently utilized farm magazine articles as sources of information for land management decisions. During Phase One interviews, farmers indicated that they frequently read local newspapers from Platteville, Benton and Darlington. Unlike many research publications, farm magazines and local newspapers often add more 'human' elements to stories while maintaining scientific information – both educational and entertaining. Magazines, newspapers and other local publications are always looking for good feature articles. Pioneer Farm has a unique combination of research, outreach and education that would make for appealing local and regional news.

High numbers of respondents indicated that they would consult the Lafayette County Land Conservation Department (LCD) and agricultural associations when making land management decisions. These types of agencies serve as information brokers to farmers in the area. By building on existing working relationships with agencies Pioneer Farm can help increase awareness of its mission and goals. Giving regular reports at agency meetings, writing guest author articles for agency newsletters or co-sponsoring an agency's event are potential opportunities for Pioneer Farm to provide the agencies with information about the farm's current educational programs and research efforts.

### **Direct Engagement**

A final approach could involve establishing close working relationships with one or two neighboring farmers to integrate research with outreach to the local community. Although neighboring farmers are currently somewhat ambiguous about Pioneer Farm research, the survey response rate (63%) suggests some level of willingness to engage with Pioneer Farm. The overall low participation in the initial phase of the project suggests that interactions are more effective when tied to a specific research effort or outreach initiative. Establishing working research and outreach relationships with area farmers could also complement related efforts associated with the Wisconsin Agricultural Stewardship Initiative (WASI).

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## CONCLUDING COMMENTS

This report has presented an overview of characteristics and general conservation activities of agricultural producers in the extended Fever River headwater area. The report is intended to provide information to UW-Platteville Pioneer Farm regarding options for outreach to this agricultural audience. Findings suggest the audience is amenable to learning more about Pioneer Farm, but does not suggest that farmers are receptive to making changes based on new information alone. The utility of these results depends on how Pioneer Farm ultimately defines its outreach strategy and specific outreach objectives for nearby farms.

Communicating education and research to producers is part of Pioneer Farm's stated mission. Given the breadth of Pioneer Farm's research projects, and the diversity of the region's agricultural audiences, Pioneer Farm may choose to advance this aspect of their mission by setting specific outreach objectives related to each research project. Within that context, outreach strategies would link to specific audiences which advance the purpose of the research or for whom the research has practical relevance. Understanding the characteristics of area farmers can help determine which research efforts would be appropriate for this headwaters audience versus regional, statewide, or national farm and academic audiences.

In general, if objectives include persuading farmers to adopt specific practices, this study reinforces previous findings that suggest bringing about behavioral changes would require an intensive outreach and assistance effort. Such an effort may involve creating partnerships with local conservation delivery networks and developing working relationships with area farmers to enable long-term assistance. There is a potential that some farmers in the study area could be receptive to that kind of relationship.

In focusing on the headwaters of the Fever River Watershed, near Pioneer Farm, the study targeted a group of farmers who had previously been exposed to limited outreach efforts regarding conservation practices. Most farmers in this area report that they are aware of where to find county and federal assistance for conservation, but almost none were aware of conservation (or other) research activities taking place at Pioneer Farm. The options suggested in the previous discussion assume the main objective is to raise awareness of the relevance of Pioneer Farm research among their agricultural watershed neighbors. If outreach resources need to be focused on priority audiences which are outside of the headwaters area and it is not feasible to provide more intensive forms of assistance to area farmers, then increasing awareness is a reasonable starting point for outreach efforts. This study provides a baseline for assessing progress toward that and related outreach goals.

# APPENDIX A: References

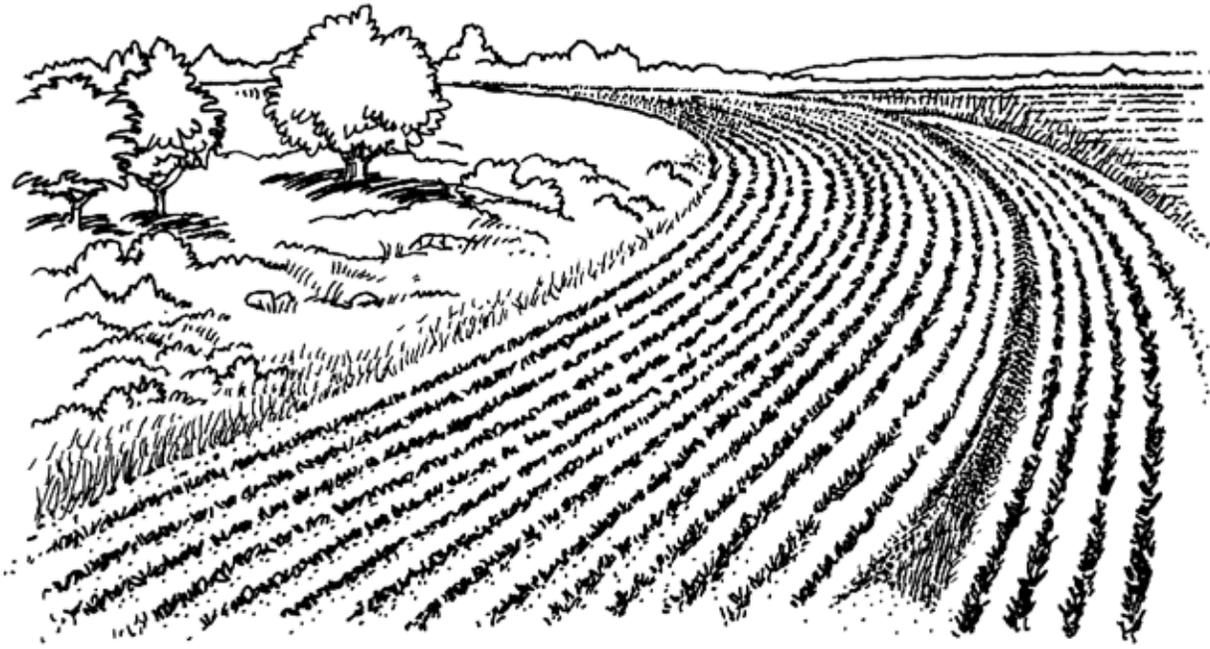
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## APPENDIX B: Survey Instrument

### A Survey of Farm Practices & Management Decisions: Sharing Your Views



Pioneer Farm, UW-Platteville (29200 College Farm Road) and the University of Wisconsin Extension are conducting this survey. Results will help shape outreach programs and agricultural research at Pioneer Farm and elsewhere in Wisconsin. If you have questions or want further information about the survey please contact:

Jake Blasczyk  
Evaluation Specialist  
608.890.0718  
jblaszyk@education.wisc.edu

203 Hiram Smith Hall  
1545 Observatory Drive  
Madison, WI 53706-1289

## ABOUT YOUR FARM

1. How many years have you been farming at your current location? **N=58 Min: 5 Max: 65 Mean: 24.38**
2. Did any family member own and operate the farm before you did? **N=58**  
 No = **37.9%**                       Yes = **62.1%**  
 number of total years in the family, including your ownership **N=33 Min: 6 Max: 158 Mean: 65.24** \_\_\_\_\_
3. How many total acres do you manage in your farm operation? **N=55 Min: 30 Max: 5,000 Mean: 561.16**
4. Do you rent any of the total acres you manage? **N=55 Yes = 58.2% No = 41.8%**  
 If yes, how many acres? **N=32 Min: 6 Max: 1,450 Mean: 238.63** \_\_\_\_\_
5. Do you rent to another farmer any of the total acres you manage? **N=55 Yes=14.5% No=84.5%**  
 If yes, how many acres? **N=8 Min: 30 Max: 475 Mean: 193.75** \_\_\_\_\_
6. How many acres are actually tillable (rented and owned)? **N=53 Min: 2 Max: 4,800 Mean: 489.04** \_\_\_\_\_
7. About how many different fields are you now farming? **N=42 Min: 3 Max: 72 Mean: 22.67**
8. Does your farm include any pastures? **N=54 Yes = 81.5% No = 18.5%**  
 If yes, about how many acres? **N=44 Min: 1 Max: 400 Mean: 82.20** \_\_\_\_\_
9. About how many of these animals are involved in your farm operations? If none, fill in that circle, otherwise write a number. **N=56**
- | Animals  | None       | Approximate Average Number for 2005            |
|--|------------|--|
| Milking cows (include dry cows and heifers)      | <b>60%</b> | <b>N=24 Min: 35 Max: 415 Mean: 126.04</b>      |
| Cattle raised for beef (include cows and calves) | <b>40%</b> | <b>N=32 Min: 1 Max: 900 Mean: 218.59</b>       |
| Hogs   | <b>93%</b> | <b>N=4 Min: 600 Max: 10,000 Mean: 3,675.00</b> |
| Sheep  | <b>97%</b> | <b>N=2 Min: 10 Max: 12 Mean: 11.00</b>         |
10. Did you raise and sell any cash crops (corn, beans, etc.) during 2005? **N=57**  
 No = **31.6%**                       Yes = **68.4%**  
 about how many acres were involved? **N=33 Min:13 Max: 4,600 Mean: 476.58** \_\_\_\_\_
11. Is any part of your farmland next to the Fever River? **N=54**  
 No =**61.1%**                       Yes =**31.5%**                       Don't know =**7.4%**
12. Which of the following best describes your position as a farm operator? **N=57**  
 Own and rent land to others who are the operators = **10.5%**  
 Sole owner and operator = **64.9%**  
 Partnership with a family member = **22.8%**  
 Partnership with a non-family member = **0%**  
 Farm manager – Don't own land and paid to operate = **0%**  
 Tenant – Rent land or work on shares for others = **1.8%**  
 Other (Please identify) = **0%** \_\_\_\_\_
13. Is your farm operation legally incorporated? **N=57**  
 No = **78.9%**                       Yes = **17.5%**                       Don't know = **3.5%**

14. Which **one** of the following best describes how you manage and house any dairy and/or beef cattle?  
 If you don't have dairy or beef cattle skip this question. **Dairy N=24 N/A=32, Beef N=27 N/A=24**

<b>Management/Housing</b>	<b>Dairy</b>	<b>Beef</b>
Barn & lot with cattle rotated among barn, lot, and pasture	75%	40.7%
Confined indoors with freestall housing or similar systems	12.5%	3.7%
Confined to outside lot with some shelter	0%	48.1%
Managed grazing (during growing season rotate cattle between pastures or fenced paddocks and housed during the winter)	8.3%	7.4%
Other (Please describe) <b>custom feed dairy heifers</b> , _____	4.2%	0%

15. Which of these terms would you use to describe your farm operation? Select all that you would use. **N=57**

- Business = **56.1%**
- Organic = **7%**
- Hobby farm = **3.5%**
- Life style farm = **15.8%**
- Family farm = **80.7%**
- Modern and Up-to-Date = **33.3%**
- Traditional = **26.3%**
- Sustainable agriculture = **12.3%**
- Conservation-based = **42.1%**
- Stewardship = **12.3%**
- Research informed = **10.5%**
- Other (Please write the term):  
**no-till = 1.8% farmer-feeder = 1.8%** \_\_\_\_\_  
 \_\_\_\_\_

16. How would you describe the size of your farm? **N=56**

**41.1%** Small                      **51.8%** Medium                      **7.1%** Large                      **0%** Very Large

17. Since farming at your current location what 1 to 2 significant changes have you made in your farm operations and why did you change?

**Text responses not included.**

18. Approximately, what was the gross value of all products sold from your farm during 2004? **N= 52**

- Less than \$10,000 = **3.8%**
- \$10,000- \$99,999 = **17.3%**
- \$100,000 -\$249,999 = **38.5%**
- \$250,000-\$499,999 = **21.2%**
- \$500,000 or more = **19.2%**

## LAND MANAGEMENT PRACTICES

1. Are you using any of the following land management practices in your farm operation?

Practices	Using	Not Using
a. Terracing <b>N=53</b>	11.3%	88.7%
b. Contour buffer strips <b>N=54</b>	29.6%	70.4%
c. Contour farming & strip cropping <b>N=54</b>	68.5%	31.5%
d. Managed grazing <b>N=55</b>	21.8%	78.2%
e. Crop rotation <b>N=55</b>	96.4%	3.6%
f. Riparian buffer <b>N=54</b>	20.4%	79.6%
g. Crop residue management <b>N=52</b>	84.6%	15.4%
h. Cover crop <b>N=53</b>	43.4%	56.6%
i. Management/restoration of woodlots <b>N=53</b>	5.7%	94.3%
j. Wetland management or restoration <b>N=55</b>	7.3%	92.7%
k. Tree planting <b>N=54</b>	24.1%	75.9%
l. Grass waterway <b>N=55</b>	90.9%	9.1%
m. Wildlife food plot <b>N=54</b>	14.8%	85.2%

2. Have you ever used any of the land management practices checked as “not using” in the previous question? If yes, please list the letters of the practices and briefly explain why you stopped using.

Letter      Why stopped using practice

*Text responses not included.*

3. How important is each of the following when you make a decision to use a land management practice?

	Not Important	Somewhat Important	Important	Very Important
Cost of adopting practice <b>N=54</b>	0%	16.7%	57.4%	25.9%
My own views about effective farming methods <b>N=54</b>	0%	13%	51.9%	35.1%
How it easily fits with my farming methods <b>N=54</b>	0%	9.3%	55.6%	35.1%
Conservation benefits <b>N=55</b>	0%	7.2%	65.5%	27.3%
Affects on productivity <b>N=54</b>	0%	3.7%	57.4%	38.9%
Ease/difficulty of learning what's required <b>N=54</b>	9.3%	24.1%	57.4%	9.3%
Anticipated profits <b>N=53</b>	1.9%	9.4%	55.7%	34%
If government funds available to cover some costs <b>N=54</b>	9.3%	33.3%	33.3%	24.1%

4. If you graze cattle and have a stream or water body on your land, do you keep cattle out of stream banks and shorelines through fencing or some other way? **N=54**

No = 68.5%       Yes = 3.7%       Don't graze or have stream/water body = 27.8%

5. Do you have a written overall conservation plan for your farm? **N=55**

No = 32.7%       Yes = 67.3%

6. Do you currently participate in any cost-sharing reimbursement programs (receiving payment for installing or using any land management practice)? **N=54**

- No = **83.3%**                       Yes = **16.7%** (Please list practices and agencies involved)

## MANURE MANAGEMENT

1. Do you have a written nutrient management plan for applying manure and commercial fertilizers on your farm? **N=50**

- No (If selected, skip next question) = **86%**                       Yes = **14%**

2. To what extent does your nutrient management plan influence how you manage manure? **N=7 N/A=43**

- Not at all = **0%**  
 Very little = **0%**  
 Somewhat = **28.6%**  
 A lot = **71.4%**

3. Do you have a written manure spill emergency plan? **N=48**

- No = **93.8%**                       Yes = **6.3%**

4. How do you usually store manure? **N=44**

- Don't store it; haul and spread often = **50%**  
 Pile it on the ground = **18.2%**  
 Walled enclosure = **18.2%**  
 Unlined storage pond = **2.3%**  
 Lined storage pond = **4.5%**  
 Above ground tank = **0%**  
 Under floor storage = **4.5%**  
 Other (Please identify) **above ground 3-sided storage structure = 2.3%**\_\_\_\_\_

5. During which months do you or someone you hire spread manure? Check all months. **N=44 N/A=3**

Manure is not spread on my farm = **6.4%** (If selected, skip questions 6 & 7 below)

- |  |   |
|--|---|
| <input type="checkbox"/> <b>72.7%</b> January  | <input type="checkbox"/> <b>45.5%</b> July      |
| <input type="checkbox"/> <b>72.7%</b> February | <input type="checkbox"/> <b>50%</b> August      |
| <input type="checkbox"/> <b>72.7%</b> March    | <input type="checkbox"/> <b>70.5%</b> September |
| <input type="checkbox"/> <b>86.4%</b> April    | <input type="checkbox"/> <b>93.2%</b> October   |
| <input type="checkbox"/> <b>61.4%</b> May      | <input type="checkbox"/> <b>88.6%</b> November  |
| <input type="checkbox"/> <b>43.2%</b> June     | <input type="checkbox"/> <b>77.3%</b> December  |

6. How likely are you to consider the following before you (or someone you hire) spread manure? **N/A=3**

	Very Unlikely	Unlikely	Likely	Very Likely
Concerns about odor <b>N=43</b>	37.2%	25.6%	20.9%	16.3%
Frozen ground <b>N=43</b>	20.9%	18.6%	34.9%	25.6%
Wet ground <b>N=44</b>	2.3%	2.3%	22.7%	72.7%
Potential for runoff <b>N=44</b>	6.8%	2.3%	34.1%	56.8%
Concerns about storage <b>N=42</b>	31%	11.9%	33.3%	23.8%

7. How **often** do you consider each of the following when deciding **how much** manure to spread? **N/A=3**

	Never	Occasionally	Frequently	Very Frequently
Crop nutrient requirements <b>N=43</b>	0%	11.6%	51.2%	37.2%
Soil test results <b>N=43</b>	2.3%	14%	46.5%	37.2%
Amount remaining in storage <b>N=43</b>	51.2%	20.9%	20.9%	7%
Actual time available to haul/spread <b>N=43</b>	27.9%	18.6%	34.9%	18.6%
Distance from storage <b>N=42</b>	38.1%	31%	21.4%	9.5%

## OPINIONS

1. How do you view organized efforts that encourage farmers to **voluntarily adjust** farmland management practices to protect and improve each of the following:

	Strongly Oppose	Oppose	Favor	Strongly Favor
Wildlife habitat <b>N=54</b>	0%	18.5%	72.2%	9.3%
Water quality <b>N=54</b>	0%	1.9%	61.1%	37%
Stream quality <b>N=54</b>	0%	3.7%	66.7%	29.6%
Soil quality <b>N=54</b>	0%	0%	61.1%	38.9%
Wetlands <b>N=54</b>	1.9%	14.8%	64.8%	18.5%
Trees/woodlots <b>N=54</b>	1.9%	9.3%	72.2%	16.7%

2. How much would you oppose or favor any additional **laws and regulations** affecting how farmers manage their land to achieve the following?

	Strongly Oppose	Oppose	Favor	Strongly Favor
Improve/protect/wildlife habitat <b>N=54</b>	24.1%	48.1%	27.8%	0%
Improve/protect water quality <b>N=53</b>	15.1%	34%	47.2%	3.8%
Improve/protect stream quality <b>N=53</b>	17%	35.8%	47.2%	0%
Improve/protect soil quality <b>N=53</b>	17%	35.8%	45.3%	1.9%
Improve/protect wetlands <b>N=54</b>	20.8%	45.3%	34%	0%
Improve/protect trees/woodlots <b>N=54</b>	16.7%	51.9%	31.5%	0%

3. What do you think are the 2 greatest obstacles farmers face in adopting conservation practices?

**Text responses not included.**

4. To what extent do you agree or disagree with the following statements about conservation?

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
Farmland productivity can be maintained with little or no conservation practices. <b>N=55</b>	29.1%	45.5%	5.5%	20%	0%
Usually a farmer committed to conservation is put at an economic disadvantage. <b>N=55</b>	3.6%	52.7%	10.9%	27.3%	5.5%
The costs of protecting and preserving natural resources on a farm are worthwhile. <b>N=55</b>	1.8%	1.8%	12.7%	67.3%	16.4%

5. How much do you think farming practices within your township contribute to each of the following possible situations?

	Not at All	Slightly	Moderately	Substantially
Reduced water quality in rivers/streams <b>N=52</b>	19.2%	38.5%	28.8%	13.5%
Reduced water quality in groundwater <b>N=52</b>	28.8%	40.4%	21.2%	9.6%
Eroding river/stream banks <b>N=52</b>	17.3%	34.6%	36.5%	11.5%
Reducing health/quality of soil <b>N=52</b>	30.8%	30.8%	23.1%	15.4%
Reduction of habit for birds/animals <b>N=52</b>	32.7%	32.7%	21.2%	13.5%
Loss of wooded areas <b>N=52</b>	30.8%	30.8%	26.9%	11.5%
Loss of wetlands <b>N=52</b>	50%	28.8%	11.5%	9.6%

## INFORMATION SOURCES AND INVOLVEMENT

1. How often during the past 3 years have you used information from any of the following to assist you when making decisions about how to manage your land?

	Never	Occasionally	Frequently	Very Frequently
Farm organizations <b>N=55</b>	40%	45.5%	12.7%	1.8%
UW-Extension staff <b>N=55</b>	67.3%	27.3%	5.5%	0%
Staff Pioneer Farm, UW-Platteville <b>N=54</b>	94.4%	5.6%	0%	0%
Other UW-Platteville staff <b>N=55</b>	92.7%	5.5%	1.8%	0%
Farm Services Agency <b>N=55</b>	27.3%	49.1%	18.2%	5.5%
Land Conservation Department <b>N=55</b>	29.1%	41.8%	27.3%	1.8%
Natural Resource Conservation Service <b>N=54</b>	48.1%	37%	14.8%	0%
Paid consultant <b>N=54</b>	74.1%	13%	5.6%	7.4%
Another farmer <b>N=55</b>	16.4%	60%	10.9%	12.7%
Friend <b>N=55</b>	27.3%	56.4%	7.3%	9.1%
Family member <b>N=55</b>	18.2%	50.9%	21.8%	9.1%
World wide Web/Internet <b>N=55</b>	83.6%	14.5%	0%	1.8%
Farm magazines articles <b>N=55</b>	21.8%	50.9%	21.8%	5.5%
Commercials/ads <b>N=55</b>	63.6%	29.1%	5.5%	1.8%
Lender <b>N=55</b>	69.1%	23.6%	5.5%	1.8%

2. Are there any other sources of information not mentioned in the above lists that you frequently used during the last 3 years when making decisions about managing your land? If yes, please list below.

**Text responses not included.**

3. During the last year how many times have you done each of the following?

	0	1-2	3-5	5+
Attend meetings of civic/community organizations (excluding religious or agriculturally related) <b>N=55</b>	45.5%	30.9%	12.7%	10.9%
Attend meetings of an agriculture organization <b>N=56</b>	26.8%	51.8%	10.7%	10.7%
Attend county or township government meeting <b>N=55</b>	41.8%	45.5%	5.5%	7.3%
Attend a citizen organized local meeting <b>N=55</b>	58.2%	34.5%	1.8%	5.5%
Contacted a public elected official about some concern <b>N=53</b>	54.5%	32.7%	5.5%	7.3%

4. Do you currently belong to any agricultural organizations or associations? **N=56**

No = **48.2%**       Yes = **51.8%**      If yes, please list the 1 or 2 that are most useful to you:

5. Do you currently belong to any organization that promotes conservation? **N=54**

No = **87%**       Yes = **13%**      If yes, please list the 1 or 2 that are most useful to you:

## AGRICULTURAL RESEARCH

1. How helpful are research findings from each of the following types for resolving issues and problems you face as a farmer?

Research About:	Not Helpful	Somewhat Helpful	Helpful	Very Helpful	Don't Know/ Not Aware of findings
Animal diets <b>N=50</b>	12%	32%	32%	18%	6%
Animal genetics <b>N=50</b>	14%	20%	34%	24%	8%
Plant genetics <b>N=52</b>	3.8%	11.5%	51.9%	30.8%	1.9%
Soils <b>N=53</b>	3.8%	11.3%	62.3%	20.8%	1.9%
Pasture management <b>N=50</b>	30%	38%	20%	4%	8%
Other land management practices <b>N=51</b>	17.6%	41.2%	35.3%	2%	3.9%
Business practices <b>N=51</b>	11.8%	33.3%	41.2%	7.8%	5.9%
Nutrient management <b>N=51</b>	5.9%	31.4%	41.2%	17.6%	3.9%

2. To what extent do you feel research conducted by the following is generally helpful for resolving farm related issues and problems?

Research conducted by:	Not Helpful	Somewhat Helpful	Helpful	Very Helpful	Don't Know/ Not Aware of findings
University experiment stations <b>N=54</b>	13%	33.3%	35.2%	9.3%	9.3%
University sponsored farms <b>N=54</b>	20.4%	29.6%	38.9%	1.9%	9.3%
Private agricultural associations <b>N=54</b>	7.4%	33.3%	37%	7.4%	14.8%
Corporations/agribusiness <b>N=54</b>	16.7%	38.9%	27.8%	7.4%	9.3%

## UW-PLATTEVILLE PIONEER FARM ( 29200 COLLEGE FARM RD)

1. How would you rate your knowledge of the following Pioneer Farm's programs and research areas?

<b>Programs:</b>	No knowledge	Low	Moderate	High	Very High
Educational conferences <b>N=54</b>	46.3%	40.7%	11.1%	1.9%	0%
Educating students <b>N=54</b>	33.3%	37%	16.7%	13%	0%
Agronomy <b>N=54</b>	35.2%	40.7%	22.2%	1.9%	0%
Beef Enterprise <b>N=54</b>	46.3%	31.5%	18.5%	3.7%	0%
Dairy Enterprise <b>N=54</b>	44.4%	35.2%	16.7%	3.7%	0%
Beef Bull Test Site <b>N=54</b>	37%	35.2%	18.5%	7.4%	1.9%
Swine Enterprise <b>N=54</b>	53.7%	27.8%	16.7%	1.9%	0%
<b>Research On:</b>	No Knowledge	Low	Moderate	High	Very High
Conservation practices <b>N=54</b>	40.7%	37%	20.4%	1.9%	0%
Nutrient management <b>N=54</b>	42.6%	40.7%	13%	1.9%	1.9%
Phosphorous management <b>N=54</b>	48.1%	38.9%	9.3%	3.7%	0%
Farm economics <b>N=54</b>	44.4%	42.6%	11.1%	1.9%	0%
Farm odors/smells <b>N=54</b>	46.3%	37%	14.8%	1.9%	0%
Runoff <b>N=54</b>	35.2%	40.7%	20.4%	3.7%	0%
Groundwater <b>N=54</b>	44.4%	40.7%	11.1%	3.7%	0%
Grazing practices <b>N=54</b>	53.7%	33.3%	11.1%	1.9%	0%

2. How likely are you do any of the following to learn more about Pioneer Farm?

	Very Unlikely	Unlikely	Likely	Very Likely
Schedule a tour/visit with a staff member <b>N=52</b>	30.8%	51.9%	13.5%	3.8%
Read a electronic newsletter <b>N=53</b>	30.2%	49.1%	20.8%	0%
Read a printed newsletter <b>N=53</b>	9.4%	11.3%	67.9%	11.3%
Attend conferences/ meetings at Pioneer Farm <b>N=53</b>	17%	47.2%	30.2%	5.7%
Visit/read information on a web site <b>N=53</b>	37.7%	45.3%	15.1%	1.9%
Attend a meeting at a neighbor's farm hosted by Pioneer staff <b>N=53</b>	9.4%	32.1%	54.7%	3.8%
Attend field days <b>N=54</b>	5.6%	35.2%	50%	9.3%

## INFORMATION ABOUT YOU

1. How was this survey completed? **N=57**

- By myself = **86%**       I completed it along with another person = **14%**       Other = **0%**

2. How involved are you in making decisions affecting your farm? **N=57**

- 0%** Uninvolved       **7%** Somewhat involved       **10.5%** Involved       **82.5%** Very involved

3. What was your age at your last birthday? **N=56 Min:25 Max:92 Mean:50.79**\_\_

4. What is the highest grade in school you have completed? **N=57**

- Less than high school graduate = **5.3%**  
 High school graduate = **49.1%**  
 Some college/post high school = **28.1%**  
 4 year college graduate = **15.8%**  
 Post-graduate = **1.8%**

5. Your gender **N=57**

- Male = **100%**       Female = **0**

6. Do you or any adult member of your household have another full or part time job that contributes to total annual income or is used to provide health benefits? **N=57**

- No = **45.6%**       Full time = **35.1%**       Part time = **19.3%**

7. How likely is it that any family member may continue farm operations when you retire or quit farming? **N=56**

- Will not happen = **41.1%**  
 Likely = **46.4%**  
 Will definitely happen = **12.5%**

**Please return the completed survey in the stamped envelope provided. Use the next page to share additional comments about the survey and/or about any of the topics covered.**

**ADDITIONAL COMMENTS**

**Thank you for your time and for providing this information.**

# APPENDIX C: Map of Project Area

## FEVER (GALENA) RIVER WATERSHED

