FINAL REPORT

Conversations with Women Landowners

Understanding Barriers to Sound Farming Practices on Leased Farmland

Dr. Peggy Petrzelka
Professor, Utah State University
Dr. Ann Sorensen
Research Director, American Farmland Trust

UtahStateUniversity
American Farmland Trust
SAVING THE LAND THAT SUSTAINS US

Contents

Acknowledgments

AFT is grateful for the generous support provided by Rachel's Network. Named in honor of Rachel Carson, Rachel's Network is a community of women funders committed to a safer, healthier, and more just world for all. www.rachelsnetwork.org

Summary

In partnership with Rachel's Network and the U.S. Department of Agriculture's Economic Research Service (ERS)—and with funding from Rachel's Network, ERS, and The Mosaic Company Foundation—American Farmland Trust (AFT) and Utah State University (USU) set out to learn as much as possible about women who own farmland and lease it out (women non-operating landowners or WNOLs). Women tend to be deeply committed to healthy farmland, farm families, and farm communities. However, limited research indicates that WNOLs face more gendered barriers than male NOLs do in managing their land for long-term sustainability.

The long-term goal of our efforts is to enhance resource management on agricultural land by providing information to policymakers and natural resource agencies that help them design more effective resource management and land protection programs for WNOLs.


www.agplan.org
nership Structures
rt Borrowing
ents – Finality
herit tenant?
ke you did it.?!
• Community
• My Land
• My/Our Plan
• Conservatio
• Legacy

Introduction

People who lease farmland out for production agriculture own about 40 percent of U.S. farmland. Nearly 40 percent of U.S. farmland is rented or leased from agricultural landowners (USDA Census of Agriculture, 2014). Eighty-seven percent of these landowners are non-operator landowners (NOLs)—landowners who own but do not operate the land themselves. These landowners may be resident (i.e. live on their land), or absentee (i.e. live apart from the land and possibly not even in the same state) (Petrzelka et al. 2009).

Yet, information on this group of landowners is extremely limited. AFT and USU are interested in learning more about women non-operating landowners (WNOLs)—women who own farmland by themselves or co-own it with a husband, siblings, or other relatives. While there is a glaring gap in information on both male and female NOLs, the limited research that exists indicates that WNOLs face more gendered barriers than male NOLs in managing their land for long-term sustainability (Petrzelka and Marquart-Pyatt 2011). These barriers can include dealing with operators who dismiss their conservation goals (Carolan 2005) and infrequent interaction with resource management agencies (Eells 2008). At the same time, women tend to be deeply committed to healthy farmland, farm families, and farm communities, potentially making them ideal partners in conservation if gendered barriers can be overcome (Bregendahl and Hoffman 2010).

Many non-operating landowners are women. WNOLs are a critical group of agricultural landowners whose decisions will be important in determining the future of America's farmland, and USDA needs better information to develop appropriate land management recommendations and materials for this audience. Based on the 2014 USDA Tenure, Ownership and Transition of Agricultural Land (TOTAL) survey (Bigelow et al. 2016) and data from the 2012 Census of Agriculture, AFT calculates that 371 million acres could change hands nationwide in the next 20 years, with women, absentee, and non-farming landlords increasing in numbers. These landownership changes will have a profound impact on farm viability and land stewardship.

Empowering women in agriculture benefits us all. Information from multi-year evaluative work in Iowa indicates that engaged and empowered WNOLs can have a significant impact on the economic, social, and environmental sustainability of agriculture and on their communities. An interagency collaboration between Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS), Iowa State University Extension and others reached out in 2010 to over 300 WNOLs in Iowa with surveys and listening sessions and found that: 1) social support was fundamental to social risk management strategies that women use to act in the best interests of themselves, their families, communities, and land; 2) empowering women financially, socially, and politically is important for conserving Iowa's land and water; and 3) growing the leadership capacity of women in agriculture benefits the communities in which they live (Bregendahl and Hoffman 2010). WNOLs engaged through structured learning sessions were more likely to establish or update estate plans, draft or revise leases, create trusts, prepare wills and farm plans, and take on new leadership roles by serving on community-based committees,

boards, civic organizations, producer associations, and other assorted groups.

Older women are increasingly owning land. WNOLs have been shown to have a strong interest in learning more about (1) their rights as landowners; (2) best management practices; (3) communicating effectively with their operators; and (4) state and federal conservation programs available to help them. The opportunity to reach this group of women is anticipated to reach a high point over the next decade, as the demographics of farmland ownership change with male farmers passing away and women in their 60s, 70s, and 80s inheriting farmland.

Helping WNOLS implement conservation on their leased land increases the sustainability of agriculture. This research seeks to understand and overcome barriers that WNOLs face in implementing conservation on their leased land. We pay particular attention to the landlord-operator relationship and conservation information needs. Getting more conservation on the ground is particularly critical because five to 33 percent of cropped acres lack conservation practices to prevent significant loss of soils and nutrients, and 46 to 62 percent of cropped acres need additional conservation practices to prevent continuing losses of soils and nutrients in regions that USDA has studied so far.[1] Ownership arrangements impact the decision-making behavior of farm operators, affecting production decisions, adoption of technologies, and conservation practices that can enhance the productivity of the land (Nickerson et al. 2012). Thus, addressing both the glaring data gap of WNOLs and barriers to conservation implementation on their land is of significant public interest.

We have identified three key questions to answer. They include:

1. How do gender and non-operator landownership factor into conservation decision making and behavior on agricultural land?
2. To what extent do gender and non-operator landownership factors vary regionally, particularly with conservation implementation on leased land?
3. How effective are different methods of conservation outreach to WNOLs; does effectiveness differ regionally; and if so, how?

In this white paper, we review the relevant research on NOLs in general and WNOLs more specifically, then detail the research we have conducted thus far.

1. USDA NRCS Conservation Effects Assessment Project national assessments are available at https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/

What We Know About Leased Farmland and Its Owners

Understanding Non-Operating Landowners (NOLs)

Leased land is particularly prevalent in the Corn Belt. Figure 1 shows the proportion of U.S. farmland rented or leased by county. Several concentrated areas have a majority of farmland that was operated by someone other than the owner in 2012. The 2014 USDA TOTAL survey results show that 39 percent of the 911 million acres of farmland in the contiguous 48 states is rented. Non-operating landowners own 80 percent of rented farmland (283 million acres, 30 percent of all farmland). With 69 percent of land owned by people over 65, non-operator landlords tend to be older than both owner-operators and operator landlords. The survey also found that most operators rent land from multiple landlords, and 57 percent of rented acres (accounting for 70 percent of lease agreements) are renewed annually (Bigelow et al. 2016).

Most of our information on NOLs comes from Iowa. Detailed and recent analyses of

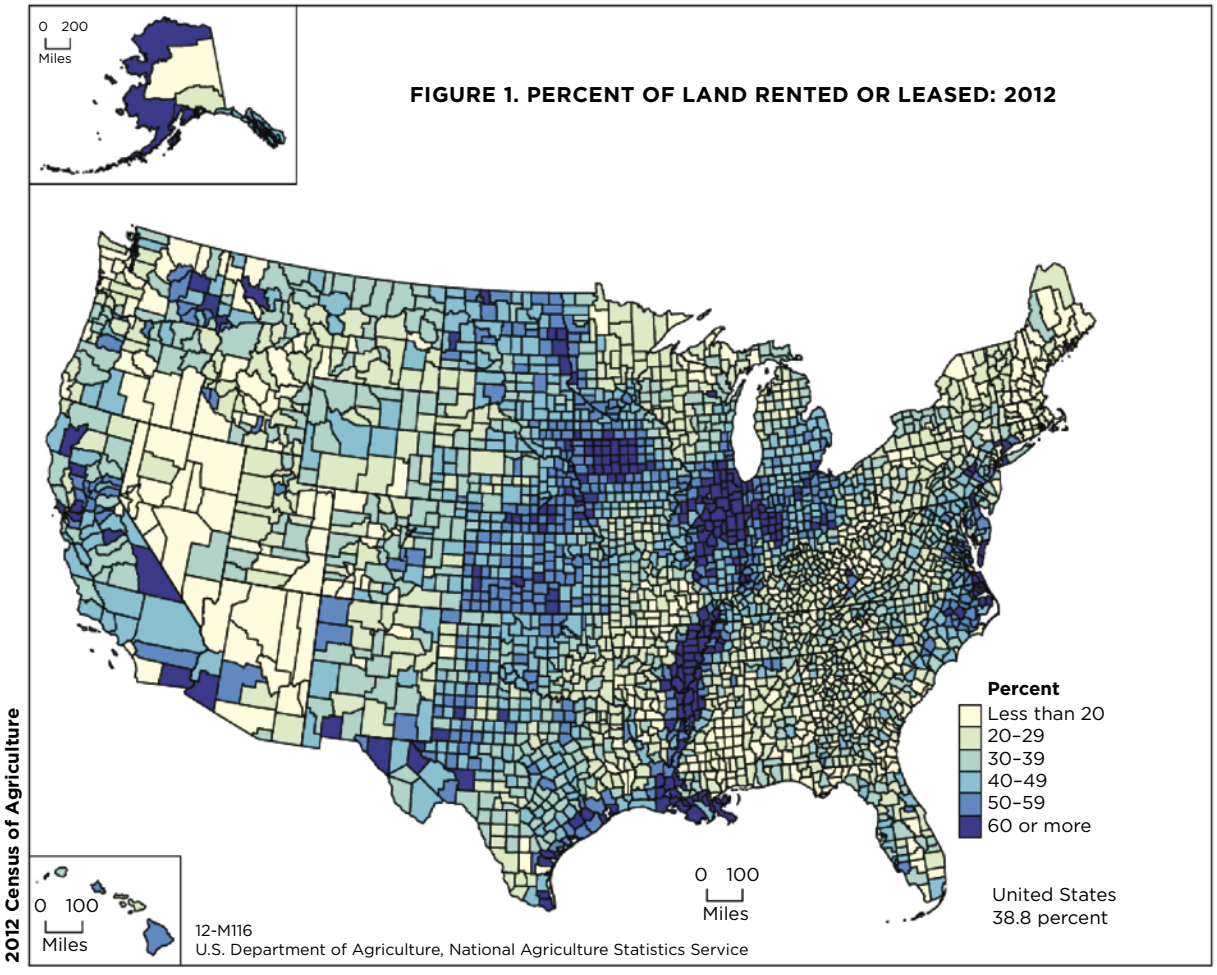


FIGURE 1. PERCENT OF LAND RENTED OR LEASED: 2012

land tenure patterns are only available for a few smaller geographies. The Iowa Land Ownership Survey has collected panel data from a representative statewide sample of land parcels and landowners in Iowa since 1949 (Duffy and Johanns 2012). While national trends suggest that the total proportion of farmland that is owner-operated land has hovered near 60 percent since World War II, the Iowa study shows a pronounced decline in the proportion of land under owner-operator status (dropping from 55 percent in 1982 to 40 percent in 2012). This is partly because of the aging of the farmland owner population in Iowa, where individuals more than 75 years of age owned 30 percent of Iowa farmland in 2012, and individuals over 65 years of age owned 56 percent of the farmland. This change in owner-operator status is also due to the increased importance of female landowners in the state. In 2012, 49 percent of the agricultural landowners in Iowa were WNOLs (Duffy and Johanns 2012). They owned 47 percent of Iowa's farmland and leased 52 percent of all acres. Comparable information on WNOLs in other states does not exist, a critical gap in the data on agricultural landowners.

Landlords and Conservation Decision Making

Understanding how landlords and operators interact is important. With the large amount of farmland that is rented, the non-operating landlord-operator relationship clearly plays a significant role in U.S. agriculture. Understanding land tenure—the different ways people have rights to the land (Gilbert and Harris 1984)—has social, economic, and environmental implications, such as uneven power relations among the landlord, co-owners, and operators; rental rates that may not reflect the value of the land asset; and reduced land stewardship.

How decisions are made about practices on leased land varies. Harris (1974) and Mooney (1983) argued that on leased agricultural land, landlords exert substantial control over operators and have the decision-making power. Harvey (1982) and Neocosmos (1986) disagreed and argued that there is frequently total separation of the landlord from control over the land, with the landlord removed from a position of power. Gilbert and Beckley (1993) studied decision-making authority (their proxy for power) by interviewing farmland owners and their operators in two Wisconsin townships. They found landlords and operators overwhelmingly agreed that operators were primary decision makers for conservation decisions on the farm, such as the application of soil conservation practices. Constance, Rikoon, and Ma (1996) studied the involvement of landlords in Missouri in decision making on rented agricultural land and found that landlords were most likely to be involved in conservation program participation decisions and least likely to be involved in pesticide decisions (75 percent of both NOLs living on and off their farmland gave this decision-making control to the operator). Overall they found landlords to be less involved in all of the agricultural decision-making practices. They also found landlords who had a share lease with their operator versus a cash lease were significantly more involved in decision making. These findings were similar to work by Rogers and Vandeman (1993) who—using 1988 Agricultural Economic Land Ownership Survey (AELOS) data—found those landlords who were more involved in decision making had past farming experience, lived closer to the land, and rented on a crop-share basis rather than a cash-rent basis. The above research findings that show the operator as the primary decision maker on the leased land are consistent with the nationwide 1999 AELOS findings (AELOS 1999).

How Gender Affects On-Farm Decisions About Conservation

Gender and Conservation Decision Making

NOLs may relate differently to their operators depending on gender. Effland et al. (1993), using the 1988 AELOS data, looked specifically at gender and conservation decision making. They examined differences in involvement in farm management decisions and found that female landlords were less likely to make farm management decisions than male landlords. Rogers and Vandeman (1993) found younger landlords, both male and female, were more involved in on-farm management decisions and female landlords less likely than male landlords to participate in choices of fertilizer and chemical practices on leased land. Gilbert and Beckley (1993) argued that what may be occurring is a situation of a dominant operator-subordinate landlord relationship. More explicitly, they suggested those being dominated include "retired farmers, small landowners and widows" (Gilbert and Beckley 1993, p. 578) and argued for more attention to be given to this perspective, both conceptually and empirically.

WNOLs in the Midwest often feel excluded from farm decision making. More recent research has directly examined gender in on-farm conservation decision making. For

example, in his Iowa study of WNOLs, Carolan (2005) found that female landlords would self–censor and were reluctant to discuss implementation of sustainable agricultural practices with their operators, fearing they would "scare away good operators" (p. 396). Carolan (2005, p. 402) stated, "All of the female landlords described inequitable power relations between themselves and their male operators. Specifically, they expressed feelings of exclusion [and] alienation [from the farm decision making]." In her study of Iowa women farmland owners, Eells (2008) found some operators deceived their female landlords, particularly in terms of potential soil conservation measures, which would be presented to the female landlord by the male operator most often in "an authoritative way as not being very practical or effective" (p. 67). Eells also found that conservation and stewardship values of the women can be silenced when the operators are relatives, and environmental concerns are subdued in order to maintain "peace within the family," suggesting, "…it may be possible that women with non-kin operators could exert more influence [over their operator] when asking for conservation practices" (p. 68).

Additional obstacles to conservation decision making. A quantitative study of the role of gender in conservation decision making in four Great Lakes counties found WNOLs less likely to be involved in conservation decision making on their land if they were older, retired, inherited the land, co-owned the land with a sibling, or rented to a farmer not related to them. By contrast, for male landlords, involvement in conservation decision making on the land was reduced only when a non-relative farmed the land (Petrzelka and Marquart-Pyatt 2011), indicating a much more complicated situation for WNOL involvement in conservation decision making.

Thus, female landowners provide challenges to those promoting land conservation goals.

Female landowners of agricultural land in general tend to draw upon conservation organizations for information less often than male landowners, in part because the materials produced by these organizations do not resonate with the women landowners, and they may not be familiar with the language used when discussing conservation programs (Wells and Eells 2011). This, then, contributes to WNOLs often feeling invisible to USDA agency staff.

Regional Differences in Landlord-Operator Decision Making

Indications exist of regional differences in how NOLs interact with operators. The limited research on NOLs also suggests regional differences may exist in their degree of involvement in decision making. For example, Rogers and Vandeman (1993) found landlords in the Midwest and West to be more actively involved on their rented land than those in the South and Northeast. This is partially explained in the literature by noting differences in labor and land tenure in the historical development of farming regions. In California and the South, land tenure relationships have been portrayed as coercive (Wells 1987), while Midwestern landlord-operator relations have typically been complementary and harmonious (Salamon 1992).

However, these studies do not systematically examine the landlord-operator relationship by gender. It may be in the Midwest, as Carolan (2005) and Eells (2008) argue, that women feel uncomfortable talking to family members or operators about making changes in farm management practices. Women often "inherit" an operator along with farmland. This operator may be a neighbor, friend, or family member who goes to church with the landowner and is part of her community. Thus, there may be tremendous social pressure to forego questions or problems that arise related to farm management and express or imply criticism of the operator (Eells and Adcock 2012). These social obstacles, which have economic and environmental implications, may or may not be present in other regions of the country. For example, Pfeffer (1983) details the social origins of differing systems of farm production in various U.S. regions, noting that while the Northern Plains and Midwest region were historically very much "family farming," in California the system is that of corporate farming, while in the South, the dominant system was that of share cropping. These differences in farm production systems may result in differing landlord-operator relations, with region-specific constraints faced by both the WNOL and the operator varying with the system of farm production (Pfeffer 1983). For example, there may be less social pressure on WNOLs in California to maintain harmonious relations with their operator. Due to the lack of attention to this possible variability, the existence of regionally gendered differences in the landlord-operator relationship as they relate to conservation remains unknown.

WNOLs and Conservation Outreach

WNOLs are less likely to interact with conservation professionals. Research by the project team and others has found NOLs are less likely to have personal contact with local extension and natural resource agency staff, leading to lower levels of resource management knowledge about local environmental conditions (e.g. Redmon et al. 2004; Petrzelka et al. 2009). This lack of contact is even more pronounced among WNOLs (Petrzelka 2012, 2014). This is problematic given the percentages of elderly women owning land, which are expected to rise over the next decade as more women inherit farmland from spouses and parents (Eells and Adcock 2012).

Midwestern WNOLs lack the information and confidence to implement conservation practices. Although WNOLs in the Midwest have consistently indicated strong conservation values in surveys, they report a lack of information and confidence in implementing conservation practices, often reporting they feel intimidated or ignored when they ask operators or agency staff questions about land management or conservation (Eells and Adcock 2012). In 2007, women over the age of 65 owned over one-fourth of Iowa's farmland, and women 75 years or older owned 10 percent of Iowa's farmland (Duffy and Smith 2008). Eells (2008) found that conservation materials used by Iowa conservation outreach agencies and organizations do not appeal effectively to this demographic; for example, none of the photos in the brochures are of older women and the language tends to be technical and full of unfamiliar terms and acronyms. Thus, there are gendered barriers to participation in conservation outreach—and female landowners provide unique challenges to those promoting land conservation goals. Little is known about whether these patterns are also found in other regions.

The Women, Food and Agriculture Network (WFAN) has developed and used participatory, women-only learning circles in the Midwest to deliver information that informs WNOLs about conservation concepts and options and empowers WNOLs to take conservation action (WCL 2014). Since 2012, AFT has collaborated with WFAN to extend learning circles into Illinois and Indiana. AFT was also part of a USDA NRCS Conservation Innovation Grant that enabled WFAN to provide training and resources to conservation professionals to expand this work into Nebraska, Minnesota, Wisconsin, and Missouri as well as Iowa, Illinois, and Indiana. Research in adult education shows that adult learners are most likely to act when information is offered in this setting, and when they feel comfortable asking questions and sharing information with one another, as opposed to traditional classroom presentation style methods of information delivery (e.g. Eells 2008). Of 45 WNOLs who participated in the WFAN pilot project in Iowa in 2009, 50 percent took at least one conservation action within the following year. In the following years, WFAN completed 15 learning circles with 118 WNOLs in Iowa, Nebraska, and Wisconsin who each owned, on average, 330 acres of farmland. Fifty-two percent of the women made at least one change in farm management to improve soil and water conservation within six to 12 months of the learning circle (Adcock 2012). More recent research conducted by USU and AFT following the learning circles held in Illinois and Indiana shows a similar impact. Of 130 learning circle attendees interviewed by phone, 72% stated they made changes to their farmland. Of the women who took an action, 70% had talked with a family member or their renter about conservation, while 32% actually implemented new conservation practices on their land (Fairchild et al. 2018). While the learning circles have been shown to be an effective outreach tool and a means of learning more about the concerns and needs of WNOLs, the program initially had limited use outside the Midwest region, and to what extent Midwest WNOLs are similar to or different from WNOLs elsewhere is unknown. AFT recently started testing the approach in New York, Ohio, Virginia, and Maryland. WFAN has expanded use of this approach to Kentucky and Maine. Other farming regions may have different obstacles to conservation implementation that require different approaches to help WNOLs achieve conservation goals on their leased farmland.

Our Project

Methods

We are starting to secure the information to begin empowering WNOLs. Our team conducted research on WNOLs and barriers to conservation implementation on their land, with funding obtained from Rachel's Network, USDA Economic Research Service, and The Mosaic Company Foundation. We have completed testing a WNOL survey. Detailed survey questions focus on conservation activities and decision-making authority and the nature of the landlord-operator relationship, with a specific focus on types of lease arrangements, quantity and quality of communication with operator, and degree of landlord-operator involvement in operational and conservation decision making on the land. In addition, we include questions on types and level of interest in educational activities, sources of conservation information, and preferences on methods of conservation outreach. The survey benefited from significant input from our Advisory Committee[2] and several Rachel's Network members who critically reviewed and commented on our drafts. We convened focus group meetings with WNOLs in seven of the 10 USDA production regions to test the survey and learn more about these women (see page 20).

We pilot tested the survey with focus groups of WNOLs in North Dakota[3] (n=5), Virginia[4] (n=8), Indiana[5] (n=7), Minnesota[6] (n=10), Texas[7] (n=10), Massachusetts[8] (n=6), and Louisiana[9] (n=4). After administering the survey, we engaged in a two-hour discussion with the WNOLs regarding the survey (including length, confusing questions, regionally appropriate terminology, and specific obstacles to conservation implementation) as well as land management issues and concerns that the women have.

2. The Project Advisory Committee helped to develop the survey instrument and includes Bruce Ahrens, Farmers National Company; Dr. J. Arbuckle, Iowa State University, Dr. Nelson Bills, Cornell University (emeritus); Dr. Allison Borchers, formerly with USDA-ERS; Ed Cox, Orsborn, Milani, Mitchell and Goedken, LLP (formerly Drake University); Jennifer Dempsey, Director of AFT's Farmland Information Center; Dr. Mike Duffy, Iowa State University (retired); Ginger Harris, USDA National Agricultural Statistics Service; Dr. Larry Redmon, Texas A&M University Extension; Jamie Ridgely, formerly with Agren, now with R&R Farms; and Kathy Ruhf, Land For Good. John Philip Wyek, Strategies Consulting, provided facilitation services.
3. Representing the Northern Plains USDA Production Region.
4. Representing the Appalachia USDA Production Region.
5. Representing the Corn Belt USDA Production Region.
6. Representing the Lake States USDA Production Region.
7. Representing the Southern Plains USDA Production Region.
8. Representing the Northeast USDA Production Region.
9. Representing the Delta USDA Production Region.

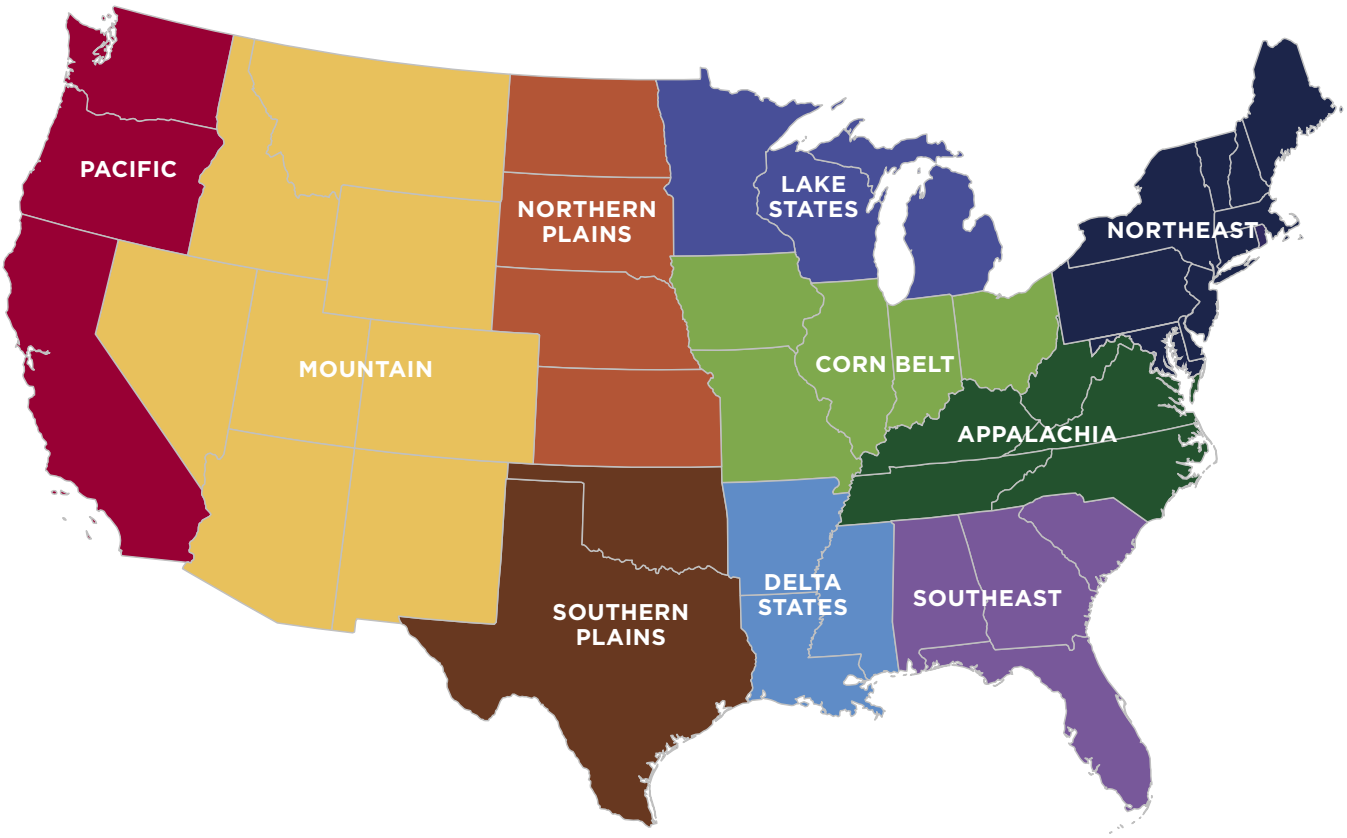
Focus Group Results

Focus group results. The data helps identify trends across the seven regions, allowing for the eventual creation of more targeted conservation outreach strategies. The following sections examine WNOLs' "Demographic and Land Characteristics," "Decision Making on Land," "Conservation Decision Making," "Enrollment in Conservation Programs," "Lease and Operator Characteristics," "Relationship with Renters" and "Interest in Land Management Information Activities."

Demographics and Land Characteristics

Regional differences show up in various demographics and land use characteristics. Table 1 includes selected demographics and land characteristics of the respondents. Across all regions, survey data revealed that WNOLs are primarily in the $25,000 to $175,000 household income range. Although there is not a significant difference in average age, those in the Southern Plains tend to be slightly younger (average age 57 years) while those in the Appalachia and Corn Belt regions are older (average age 71 years). Average acreage differed dramatically, ranging from an average of 92 acres in the Lake States region to 1,613 acres in the Delta region. Interestingly, WNOLs in the Appalachia, Corn Belt and Lake States tend to purchase their land, while those in the Northern and Southern Pains and Northeast Regions tend to inherit their land more than purchase. There is more sole ownership of agricultural land in Appalachia than in any of the other regions, and there is

FIGURE 2. USDA'S FARM PRODUCTION REGIONS



strong identification as a farmer or rancher by WNOLs in the Appalachia, Delta, Northeast, and Lake States regions.

As expected, the use of the land differs by the crop production region being discussed. For example, crop production is the dominant activity on the land for those WNOLs in the Corn Belt, Northern Plains, and Lake States.

Appalachia also has grazing/rangeland as a dominant activity, as do those in the Southern Plains (although recreation is a more dominant activity in this region). And those in the Lake States also rank recreational activity on the land as dominant as crop production activity. Lastly, nearly all WNOLs gave at least *some importance* to renting their land as a source of income for the household.

TABLE 1. DEMOGRAPHICS AND LAND CHARACTERISTICS*

	APPALACHIA (N=8)	CORN BELT (N=7)	NORTHERN PLAINS (N=5)	SOUTHERN PLAINS (N=10)	DELTA (N=4)	NORTHEAST (N=6)	LAKE STATES (N=10)
HOUSEHOLD INCOME							
≤ $25,000	1	0	1	2	0	0	0
$25,001–$175,000	4	4	2	5	2	4	10
≥ $175,001	1	1	1	3	0	1	0
AVERAGE AGE	71	71	69	57	67	65	58
AVERAGE ACREAGE	179	396	912	1054	1613	160	92
METHOD OF ACQUISITION OF LAND							
Purchased	4	4	2	2	2	1	7
Inherited	3	3	3	8	2	4	2
Marriage or divorce	1	0	0	0	0	1	0
OWN LAND WITH OTHERS	0	3	2	3	3	6	5
IDENTIFY AS FARMER/ RANCHER	8	3	3	6	3	5	7
PRODUCTION ACTIVITY ON LAND	7	7	5	3	4	5	8
GRAZING/RANGELAND	7	2	2	7	0	5	6
RECREATIONAL ACTIVITY ON LAND	2	2	2	9	1	2	8
IMPORTANCE OF RENTED FARMLAND AS SOURCE OF INCOME FOR HOUSEHOLD							
Not at all important	1	1	0	2	0	3	3
Slightly to somewhat important	3	2	0	5	0	1	5
Important to very important	4	4	5	3	4	1	2

* For complete survey results, please contact the authors at peggy.petrzelka@usu.edu

TABLE 2. DECISION MAKING ON LAND*

	APPALACHIA (N=8)	CORN BELT (N=7)	NORTHERN PLAINS (N=5)	SOUTHERN PLAINS (N=10)	DELTA (N=4)	NORTHEAST (N=6)	LAKE STATES (N=10)
PRIMARY DECISION MAKER FOR LAND							
Myself	8	5	4	7	1	2	7
Children	0	1	0	0	1	0	0
Siblings	0	0	0	1	0	1	1
Spouse/Partner	0	0	1	1	0	0	0
Parents	0	0	0	1	0	0	0
Other relatives	0	0	0	0	0	0	1
LANDOWNER PRIMARILY RESPONSIBLE FOR FOLLOWING DECISIONS							
Crop inputs (e.g. chemicals, seed)	0	1	0	0	0	1	3
Tillage & harvesting practices	1	1	0	0	0	0	2
Crop varieties/rotations	1	1	0	0	0	0	2
Conservation practices	3	1	0	2	0	2	3
Maintain & repair fences	3	2	0	1	0	0	1
Livestock decisions (e.g. stocking rate, rotational grazing)	1	3	0	1	0	0	0
OPERATOR PRIMARILY RESPONSIBLE FOR FOLLOWING DECISIONS							
Crop inputs (e.g. chemicals, seed)	2	5	4	7	4	4	5
Tillage & harvesting practices	5	5	4	7	4	4	6
Crop varieties/rotations	4	5	4	5	4	4	6
Conservation practices	1	3	2	3	1	0	2
Maintain & repair fences	0	1	1	2	0	2	2
Livestock decisions (e.g. stocking rate, rotational grazing)	4	0	1	4	0	2	1
WNOL AND OPERATOR SHARE FOLLOWING DECISIONS							
Crop inputs (e.g. chemicals, seed)	5	1	1	3	0	0	2
Tillage & harvesting practices	1	1	1	2	0	1	2
Crop varieties/rotations	1	1	1	1	0	0	1
Conservation practices	4	3	2	3	3	3	5
Maintain & repair fences	4	0	2	6	0	1	1
Livestock decisions (e.g. stocking rate, rotational grazing)	1	0	1	3	0	2	1

* Number represents respondents indicating “yes”

Decision Making on Land

Whether operators or WNOLs make decisions about specific practices varies. Examining how WNOLs make decisions regarding their land reveals interesting trends (Table 2). For the most part, across all regions, each landowner considered herself to be the primary decision maker for the land. However, when asked about specific decisions such as crop inputs, varieties, rotations as well as tillage and conservation practices, the WNOLs very rarely see themselves as the sole primary decision makers. Rather, it is the farm operator to whom they rent who is primarily responsible for making decisions on these specific activities. The one area where the WNOLs have more of a voice in decision making is on conservation practices on their land—either having the primary responsibility or sharing it with their farm operator.

Conservation Decision Making

Many considerations factor into decisions about conservation. Table 3 contains results on the level of importance that various factors should be given when making conservation decisions about the land. The top three considerations in terms of agreement by the WNOLS in each region are in bold. As shown, WNOLs in all regions strongly agree that it is important to consider "soil quality" (Table 3). Water quality is also a consideration that WNOLs in all regions except for the Northern Plains believe should be a high consideration when making decisions about conservation on the land. And WNOLs in all regions except the Delta and Lake States strongly agree another consideration should be "future availability of land for agriculture." For the most part, all regions agree that all the considerations are important but "neighboring landowners" and "surrounding communities" tend to be lower priorities. "Needs of the operator" also differ among regions, as WNOLs in Appalachia, Southern Plains, and Lake States do not feel it is as important to consider the needs of their operator (compared to those in the Corn Belt, Northern Plains, Delta, and the Northeast) when it comes to conservation decisions.

TABLE 3. IMPORTANT CONSIDERATIONS FOR CONSERVATION DECISION MAKING ON LAND*

	APPALACHIA (N=8)	CORN BELT (N=7)	NORTHERN PLAINS (N=5)	SOUTHERN PLAINS (N=10)	DELTA (N=4)	NORTHEAST (N=6)	LAKE STATES (N=10)
SOIL QUALITY	**1.57**	**1.29**	**1.40**	**1.10**	**1.00**	**1.17**	**1.20**
WATER QUALITY	**1.43**	**1.33**	**1.50**	**1.30**	**1.00**	**1.17**	**1.30**
FUTURE AVAILABILITY OF LAND FOR AGRICULTURE	**1.75**	**1.29**	**1.40**	**1.30**	1.25	**1.00**	1.70
NEED FOR INCOME FROM THE LAND	1.88	1.71	**1.40**	1.89	**1.00**	1.83	2.80
NEEDS OF THE OPERATOR	3.00	1.86	1.80	2.10	1.25	1.67	2.40
WILDLIFE HABITATS	2.00	1.43	2.20	**1.30**	1.50	**1.17**	**1.20**
BIODIVERSITY	1.86	2.00	2.75	1.50	2.25	**1.17**	1.56
ENDANGERED SPECIES	2.14	1.86	2.40	1.67	1.75	1.33	1.40
NEIGHBORING LANDOWNERS	2.38	2.43	2.00	2.10	1.75	1.50	2.50
SURROUNDING COMMUNITIES	2.57	2.29	2.00	1.78	1.75	2.00	2.33

*On a scale where 1= Strongly Agree, 2=Agree, 3=Uncertain, 4=Disagree, 5=Strongly Disagree

Enrollment in Conservation Programs

Receiving financial or technical support. The data in Table 4 indicates there are varying levels of enrollment in conservation programs/activities. For example, WNOLs in Appalachia are enrolled in conservation programs or have received financial or technical support in the past five years at a slightly higher rate than those in any other region. Across all regions, "Conservation Reserve Program" has the highest participation amongst WNOLs while "cost share" has the lowest. The data seems to support the thrust of the overall study, as enrollment, financial, or technical support dealing with conservation programs never goes above half of the respondents for any region (except for conservation easements in the Northeast).

TABLE 4. PARTICIPATION IN VARIOUS CONSERVATION PROGRAMS/ACTIVITIES*

	APPALACHIA (N=8)	CORN BELT (N=7)	NORTHERN PLAINS (N=5)	SOUTHERN PLAINS (N=10)	DELTA (N=4)	NORTHEAST (N=6)	LAKE STATES (N=10)
Conservation Reserve Program	4	2	2	3	2	0	2
Cost share	2	2	0	3	1	1	3
Planning assistance	3	3	0	5	1	2	1
Conservation easements	3	2	1	2	0	4	1
Received assistance but do not recall name	2	2	0	3	1	1	0

*Number represents respondents indicating "yes"

Lease and Operator Characteristics

Most leases are cash rent and the WNOL's relationship to her operator varies. Regarding lease agreements, it is most common for there to be a cash rent with a fixed payment for all regions (Table 5). The predominant type of lease is written, although in each region, at least two of the WNOLs have a verbal lease. While there is some variability across all regions, the most typical length of lease is annual. The relationship that the WNOL has to her operator reveals a bit more variability among regions. For example, in Appalachia, relationship to the operator is split evenly among "family members," "friends of the family," "neither a relative or friend" and "other." But in the Corn Belt, the most common relationship WNOLs have with their operator is being a "friend of the family," while this relationship does not exist for WNOLs in the Northern Plains. Unsurprisingly, nearly all operators are male.

TABLE 5. LEASE AND OPERATOR CHARACTERISTICS*

	APPALACHIA (N=8)	CORN BELT (N=7)	NORTHERN PLAINS (N=5)	SOUTHERN PLAINS (N=10)	DELTA (N=4)	NORTHEAST (N=6)	LAKE STATES (N=10)
LEASE AGREEMENT							
Cash rent with fixed payment	7	4	4	9	1	3	6
Cash rent with flexible payment	0	1	0	0	1	1	1
Crop share	0	1	0	1	2	0	1
Cash rent and crop share	1	0	0	0	0	0	1
Other	0	1	1	0	0	0	1
TYPE OF LEASE							
Written	5	5	3	7	2	2	6
Verbal	2	2	2	3	2	2	3
DURATION							
Year to year	6	6	3	5	1	1	8
Every two years	0	1	1	0	0	0	0
Every three years	2	0	1	1	0	1	0
RELATIONSHIP TO OPERATOR							
Family member	2	1	2	0	1	0	0
Friend of family	2	4	0	1	1	1	2
Neither relative or friends	2	2	2	8	2	2	3
Other	2	0	1	1	0	2	5
OPERATOR GENDER							
Male	8	7	4	9	4	3	10
Female	0	0	1	1	0	1	0

* Number represents respondents indicating "yes"

Relationship with Renters

WNOLs look for similar qualities in their operators. WNOLs tend to assess qualities of current or potential renters in similar ways, regardless of the region (Table 6). Those qualities seen as the three most important in each region are in bold. All regions agree that "trustworthiness" is a very important quality, indeed the most important for all WNOLs surveyed. WNOLs in six regions agree that "they [operator] care about my land" is also very important. WNOLs in five regions believe that the reputation the operator has as a "good farmer" is a very important quality. The amount of rent the operator will pay, their ability to maintain wildlife habitat, and the length of time the operator (or their family) has rented from the WNOL are less important qualities in all regions.

TABLE 6. IMPORTANCE OF QUALITIES OF CURRENT OR POTENTIAL RENTERS*

	APPALACHIA (N=8)	CORN BELT (N=7)	NORTHERN PLAINS (N=5)	SOUTHERN PLAINS (N=10)	DELTA (N=4)	NORTHEAST (N=6)	LAKE STATES (N=10)
TRUSTWORTHINESS	**4.00**	**4.00**	**4.00**	**4.00**	**4.00**	**4.00**	**4.00**
THAT THEY CARE ABOUT MY LAND	**3.88**	3.71	**4.00**	**4.00**	**4.00**	**4.00**	**4.00**
REPUTATION AS A GOOD FARMER	**4.00**	3.43	**4.00**	**3.90**	**4.00**	**4.00**	3.60
ABILITY TO MAINTAIN SOIL PRODUCTIVITY	3.63	3.86	**4.00**	3.80	**4.00**	**4.00**	**3.90**
ABILITY TO AVOID CONTAMINATED WATERWAYS (CHEMICALS, NUTRIENTS, ETC.)	3.86	**4.00**	**4.00**	3.50	3.75	3.83	**3.90**
RELIABILITY IN PAYING RENT ON TIME	3.50	3.67	**4.00**	**3.90**	3.75	3.17	3.50
ABILITY TO AVOID SOIL EROSION	3.86	**4.00**	3.67	3.60	3.75	**4.00**	3.88
THAT I LIKE THEM AS A PERSON	**3.88**	3.86	3.60	3.70	3.75	**4.00**	3.40
THAT THEY CARE ABOUT ME	3.25	3.57	**4.00**	3.10	3.75	3.67	3.20
AMOUNT OF RENT THEY WILL PAY PER ACRE	3.25	3.50	3.60	3.40	3.75	2.17	2.67
ABILITY TO MAINTAIN WILDLIFE HABITAT	2.86	3.14	3.25	3.20	3.75	3.83	3.40
LENGTH OF TIME THEY (OR THEIR FAMILY) HAVE RENTED FROM MY FAMILY	2.00	3.00	2.40	2.60	3.75	3.17	2.50

* On a scale where 1=Not at all important, 2=Slightly Important, 3=Somewhat Important, 4=Very important

Interest in Land Management Information Activities

WNOLs want to receive more information and connect with their peers. Across all regions, when asked about their level of interest in six types of land management information activities, either "Having access to educational materials developed expressly for women like you" or "Belonging to a network of women farmland owners who face similar challenges as you do" received the highest ratings (Table 7). Additionally, WNOLs in the Northern Plains, Delta, and Lake States indicated that "Participating in free discussions with your peers on a regular basis to compare notes/ chat with women conservation professionals" was something they were interested in. While "working with a government agency in providing conservation services targeted to women landowners" received a level of interest among WNOLs in all regions, this level of interest was lower than the other information activities offered. Finally, "Working with a private business that specializes in providing conservation services targeted to women landowners" was the least important of the types of information activities offered.

TABLE 7. LEVEL OF INTEREST IN LAND MANAGEMENT INFORMATION ACTIVITIES*

	APPALACHIA (N=8)	CORN BELT (N=7)	NORTHERN PLAINS (N=5)	SOUTHERN PLAINS (N=10)	DELTA (N=4)	NORTHEAST (N=6)	LAKE STATES (N=10)
ACCESS TO EDUCATION MATERIALS DEVELOPED EXPRESSLY FOR WOMEN LIKE YOU	**3.63**	**3.14**	3.40	**3.50**	**3.50**	**3.83**	**3.50**
BELONGING TO A NETWORK OF WOMEN FARMLAND OWNERS WHO FACE SIMILAR CHALLENGES AS YOU DO	**3.63**	**3.00**	**3.60**	3.30	2.75	**3.67**	3.40
PARTICIPATING IN FREE DISCUSSIONS WITH YOUR PEERS ON A REGULAR BASIS TO COMPARE NOTES/CHAT WITH WOMEN CONSERVATION PROFESSIONALS	3.25	2.71	**3.60**	3.40	**3.25**	3.20	**3.50**
WORKING WITH A GOVERNMENT AGENCY IN PROVIDING CONSERVATION SERVICES TARGETED TO WOMEN LANDOWNERS	3.13	**3.00**	3.00	**3.60**	3.00	3.33	2.90
WORKING WITH A PRIVATE BUSINESS THAT SPECIALIZES IN PROVIDING CONSERVATION SERVICES TARGETED TO WOMEN LANDOWNERS	2.75	2.57	2.60	2.20	2.75	1.80	2.50

* On a scale where 1=Not at all interested, 2=Somewhat Interested, 3=Interested and 4=Very interested.

Conclusions

WNOLs are both regionally distinct but also similar. The data reveal that WNOLs in the various regions have distinct characteristics when it comes to various demographics and land use characteristics.

Regarding decision making on the land, all regions tend to share responsibilities with their operators, as very few WNOLs indicate they are the primary decision maker for particular decisions. Interestingly, when asked in general terms whether they consider themselves to be the primary decision maker on the land, WNOLs in all regions indicate themselves as so, most notably regarding conservation practices. For each region, WNOLs tend to agree that the priority should be given to decision making regarding conservation on their land. All considerations regarding conservation are important but all regions tend to agree that "neighboring landowners" and "surrounding communities" tend to be less important influencers.

Although there are differences, the data suggests that all regions have low enrollment in conservation programs, as well as financial or technical support. Lease and operator characteristics tend to be relatively uniform across all regions. The predominant type of lease is a written cash rent with a fixed payment renewed on a year-to-year basis, almost exclusively to male operators. The most common relationships for WNOLs to have with their operators is either as a "friend of the family" or "neither relative or friend." WNOLS also agree on the qualities they use to evaluate current or potential renters, with "trustworthiness" being the most important quality, followed by "they care about my land" and "their reputation as a good farmer." Lastly, all regions have a high interest in participating in land management information activities.

Hints of regional differences may indicate a need for region-specific outreach strategies. A vast number of similarities exist between the regions, but the data also reveals trends that indicate interesting differences. This suggests that as more data is collected, different conclusions may be drawn that will allow for the development of specific conservation outreach strategies, targeted to each region.

Women Non-Operating Landowners invisibility. The "invisibility" of WNOLs contributes to less interaction by the women with local natural resource agency offices and lower levels of involvement in state and federal government conservation programs. For example, the 2014 TOTAL results show WNOLs are much less likely than male non-operator landowners to participate in conservation decisions and programs on their land (Bigelow et al. 2016). Those working in agricultural conservation policy are very concerned about these findings, for they suggest that these agencies are not reaching the underserved populations that are a part of their mission and are missing out on potential implementation of conservation practices on the land.[10]

This invisibility was made readily apparent to the project team while we were attempting to find WNOLs across the United States to invite them to participate in the focus groups detailed

10. Since our first draft of this white paper in 2014, USDA NRCS has taken meaningful steps to intentionally include WNOLs and has made the commitment to expand Conservation Learning Circles to cover all USDA NRCS regions and establish new connections, conduct needs assessments, provide information on conservation technical assistance and program signups and rekindle enthusiasm for conservation work.

here. Our team searched for USDA agency staff who work with WNOLs in California (a state that has several counties with rental rates of farmland over 60%—Bigelow et al. 2016). We could not locate anyone in the list below who, if they responded to us, indicated that they (1) either know anyone who works with WNOLs directly or (2) work with WNOLs themselves, despite being the agencies and representatives that are the traditional avenues for conservation outreach:

- University of California Davis, Dean of Extension Office
- University of California Cooperative Extension, North Bay Food Systems Advisor
- California Agricultural Experiment Station
- Natural Resources Conservation Service, California State Office
- Farm Advisor for University of California Cooperative Extension, Napa
- University of California Cooperative Extension Sustainable Food Systems Strategic Initiative Leader
- University of California Davis, Office of the Dean of Agricultural and Environmental Sciences

The list contains only the names of public agencies/representatives, and specific county and individual names have been removed to protect privacy. In addition to reaching out to these traditional agencies in 2014–2015, we also reached out to numerous nongovernmental organizations but were unsuccessful in finding anyone either working with WNOLs or knowledgeable about anyone working with WNOLs. We faced similar challenges in the Mountain and Southeast regions of the country. Thus there is no data in this report from these regions due to being unsuccessful in finding anyone either working with WNOLs or knowledgeable about anyone working with WNOLs.

Next steps. We began surveying NOLs, both male and female, in March 2018. Eleven states, in eight USDA Production Regions are being surveyed: Iowa, Illinois, Indiana, Ohio (Corn Belt), Washington and California (Pacific), Arkansas (Delta), Kansas (Northern Plains), North Carolina (Appalachian), Texas (Southern Plains), and New York (Northeast).

References

Adcock, L. 2012. Sustainable Agriculture Research and Education Project 2012 Final Report. Project LNC10-317. 8 pp.

AELOS (Agricultural Economics and Land Ownership Survey), 1999. National Agricultural Statistics Service, United States Department of Agriculture, Washington, DC.

Bigelow, D., Borchers, A. & Hubbs, T. *U.S. Farmland Ownership, Tenure, and Transfer,* EIB-161, U.S. Department of Agriculture, Economic Research Service, August 2016.

Bregendahl, C. and M. Hoffman. 2010 Women, Land, and LegacySM: Change Agents and Agency Change in Iowa. Evaluation Results. Leopold Center for Sustainable Agriculture. Iowa State University. 52 pp.

Carolan, Michael S. 2005. "Barriers to the Adoption of Sustainable Agriculture on Rented land: An Examination of Contesting Social Fields." Rural Sociology 70:387–413.

Constance, D.H., Rikoon, J. S., Ma, J.C., 1996. Landlord involvement in environmental decision making on rented Missouri cropland: pesticide use and water quality issues. Rural Sociology 61: 577–605.

Duffy, Michael and Ann Johanns. 2012. Farmland Ownership and Tenure in Iowa 2012. Ames: Iowa State University Extension PM 1983 Revised.

Duffy, Michael and Darnell Smith. 2008. Farmland Ownership and Tenure in Iowa 2007. Ames: Iowa State University Extension PM 1983 Revised.

Eells, Jean C. 2008. The land, it's everything: Women farmland owners and the Institution of Agricultural Conservation in the U.S. Midwest. PhD dissertation, Department of Agricultural Education, Iowa State University.

Eells, Jean and Leigh Adcock. 2012. Women Caring for the LandSM: Improving conservation outreach to female non-operator farmland owners. Ames, IA: Women, Food and Agriculture Network. http://www.wfan.org/Women_Caring_files/WCLManualForWeb3-12.pdf

Effland, A.B., D.M. Rogers, and V. Grim. 1993. Women as agricultural landowners: What do we know about them? Agricultural History 67: 235–261.

Fairchild, E., Briggs-Ott, M., & Petrzelka, P. (2018). *Testing the Women Landowner Conservation Learning Circle Model: Results from Illinois and Indiana.* Final report to the American Farmland Trust, retrieved from www.farmland.org/initiatives/womenfortheland.

Gilbert, Jess and Thomas M. Beckley. 1993. "Ownership and control of farmland: landlord- operator relations in Wisconsin." Rural Sociology 58:569–579.

Gilbert, J., and C.K. Harris. 1984. Changes in type, tenure, and concentration of U.S. farmland owners. Rural Sociology and Development 1:135–160.

Harris, M. 1974. Entrepreneurship in agriculture. Agricultural Law Center. Monograph 12. Iowa City, IA: University of Iowa.

Harvey, D. 1982. The limits to capital. Chicago, IL: University of Chicago Press.

Mooney, P. 1983. Towards a class analysis of Midwestern agriculture. Rural Sociology 48: 563–584.

Neocosmos, M. 1986. Marx's third class: Capitalist landed property and capitalist development. Journal of Peasant Studies 13: 5–44.

Nickerson, Cindy, M. Morehart, T. Kuethe, J. Beckman, J. Ifft and R. Williams. 2012. Trends in U.S. Farmland Values and Ownership. USDA ERS Economic Information Bulletin No. 92. February 2012.

Petrzelka, Peggy. 2014. Report on Survey Results of Absentee Landowners in Utah.

Petrzelka, Peggy. 2012. "Absentee Landowners in the Great Lakes Basin: Who They Are and Implications for Conservation Outreach." Society and Natural Resources. Vol. 8:821–832.

Petrzelka, Peggy and Sandra Marquart-Pyatt. 2011. "Land Tenure in the US: Power, Gender, and Consequences for Conservation Decision Making." Agriculture and Human Values. 28:549–560.

Petrzelka, P., Buman, T., Ridgely, J., May/June 2009. Engaging absentee landowners in conservation practice decisions: A descriptive study of an understudied group. Journal of Soil and Water Conservation 64, 94A–99A.

Pfeffer, M. 1983. Social Origins of Three Systems of Farm Production in the United States. Rural Sociology 48(4):540–562.

Redmon, L.A., Clary, G.M., Cleere, J.J., Evers, G.W., Habry, V. A., Long, C.R., Nelson, L.R., Randel, R.D., M. Rouquette, Jr., Smith, G.R., Thrift, T.L., 2004. Pasture and livestock management workshop for novices: a new curriculum for a new clientele. Journal of Natural Resource Life Sciences Education 33, 7–10.

Rogers, D.M., and A.M. Vandeman. 1993. Women as farm landlords: does gender affect environmental decision making on leased land? Rural Sociology 58: 560–568.

Salamon, S. 1992. Prairie patrimony. Chapel Hill: University of North Carolina Press.

USDA (United States Department of Agriculture) Census of Agriculture. 2014. Tenure, ownership, and transition of agricultural land survey (TOTAL). Accessed 2 January 2017. https://www.agcensus.usda.gov/Publications/2012/Online_Resources/TOTAL/index.php

Wells, M.J. 1987. Sharecropping in the United States. In Farm work and fieldwork, ed. M. Chibnik, 211–243. Ithaca, NY: Cornell University Press.

Wells, B., and J. Eells. 2011. One size does not fit all: Customizing conservation to a changing demographic. *Journal of Soil and Water Conservation* 66:136A–39A. doi:10.2489/jswc.66.5.136a

Women Caring for the Land (WCL): Improving Conservation Outreach to Female Farmland Owners. 2013. Edited by J. Eells and L. Adcock. http://wfan.org/curriculum-manual/. Retrieved 23, April 2014.

To learn more about our Women for the Land National Initiative,
Visit **www.farmland.org/intiativesw/womenfortheland**
or contact Jennifer Filipiak, AFT's Midwest Director, at
jfilipiak@farmland.org or (515) 868-1331.

American Farmland Trust

SAVING THE LAND THAT SUSTAINS US