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LEADERSHIP STYLES AND BARRIERS TO LEADERSHIP FOR WOMEN IN AGRICULTURE: A MIXED METHODS STUDY

by

Erica Ramsey Louder

A thesis proposal submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Agricultural Extension and Education

Approved:

Rebecca G. Lawver, Ph.D. Major Professor	Rose Judd-Murray, Ph.D. Committee Member
Ann Berghout Austin, Ph.D. Committee Member	D. Richard Cutler, Ph.D. Interim Vice Provost of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2020

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ABSTRACT

Leadership Styles and Barriers to Leadership for Women in Agriculture: A Mixed Methods Study

by

Erica Ramsey Louder, Master of Science

Utah State University, 2020

Major Profession: Rebecca G. Lawver, Ph.D.
Department: Applied Sciences, Technology, and Education

Women are a growing demographic in agriculture. Thirty-six percent of farms in the United States are led primarily by women, and women are outpacing men in bachelor's degrees earned in the fields of agriculture and natural resources. However, women are underrepresented in leadership in nearly every facet of the industry. The dated image of a man leading and a woman helping remains a fixture in the rural landscape and the broader industries of agriculture.

Through the lens of social role theory, this study brought together the perspective of 161 women in agriculture from various backgrounds. The researchers conducted this study using a mixed-methods research design, which included a three-round Delphi. This research examined women's leadership styles in agriculture and their barriers as they advanced in leadership.

The study found that women in agriculture resonated with relationship-based leadership styles, such as transformational, authentic, and servant leadership. It also

found that women in agriculture experienced leadership barriers that did not impact their male colleagues. The researchers organized the barriers into the themes of life issues, self-perception issues, gender issues, and organizational issues. The study surfaced recommendations for organizations, educators, and women leaders to improve the underrepresentation of women in agriculture, including:1) discouraging "boy's club" practices, 2) encouraging women networking events, 3) creating fair policies for the use of family leave, and 4) ensuring the timely and organized transition of leadership. It also recommended that future research should examine the leadership styles and barriers for minority women in agricultural leadership.

(145 pages)

PUBLIC ABSTRACT

Leadership Styles and Barriers to Leadership for Women in Agriculture: A Mixed Methods Study

Erica Ramsey Louder

Women are a growing demographic in agriculture, yet women holding positions in agricultural leadership is limited. This research sought to identify the ways women in agriculture lead by examining their leadership styles and the barriers they face as they strive to advance within their professions.

The results show that women are relationship-based leaders and that there are significant barriers that inhibit women's advancement in agriculture. Many of these barriers are related to gender bias, self-perception, and life issues such as stress and workload.

DEDICATION

I am dedicating this thesis to women in agriculture. To the women of the past who plowed, pushed, and paved a way to ensure the farm stayed afloat and dinner was on the table, to the women of today who make their voices heard by not asking but taking a seat at the table, and to the future women of our industry. I hope you will read these struggles as issues of the past as you take your rightful spot as leaders in our industry.

Most of all, this thesis is dedicated to the women who participated in the study. Thank you for your candidness and your belief that this industry is worth improving.

ACKNOWLEDGMENTS

I would be remiss if I didn't take a few sentences to express my appreciation for those who made this endeavor possible. Dr. Rebecca Lawver, thank you for your constant encouragement (even during those early drafts), your belief in the value of the study, and your belief in me as a researcher. Dr. Rose Judd-Murray, thank you for your sharp eye during edits and your thought-provoking questions that pushed the study to be better. Dr. Ann Berghout Austin, thank you for helping me see the perspective beyond agriculture and cheering me from the sidelines as I sought to better my industry for women. The three of you provided a backdrop of women leaders who strive and succeed.

I'd like to thank my mother, Corinne Christenson Ramsey, who was my first muse of a working woman. Thank you for sharing your stories from the early days and the work you did and still do for yourself and our family. While not in so many words, you were the first to inspire me with the thought that it ought to be better.

I'd like to thank my husband, Craig Louder for being a sounding board on these ideas as I put them into this paper as theory and into practice in our marriage. Your support is second to none. Last, I'd like to thank my children, Cora, Clara, and Ethan. I look to you as the future of agriculture.

Erica Ramsey Louder

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CHAPTER I

INTRODUCTION

The involvement of women in agriculture is growing in nearly all facets of the industry. The most recent Census of Agriculture found that 56% of farms in the United States have at least one female operator and that women are the primary operators on 36% of farms (National Agriculture Statistics Services, 2017). The number of young women involved in agricultural youth organizations is also increasing. Female members make up nearly half of the National FFA Association (Flatt, 2019) 4-H membership (4-H, 2019). When we consider educational achievements, women are outpacing men in agriculture and natural resources bachelor's degrees awarded, receiving 52.8% of the degrees (National Center for Education Statistics, 2018). However, this growth is not always translating into women in leadership roles within agricultural industries.

Statistically speaking, this underrepresentation of female leadership is well documented. Women hold 23% of management positions in agribusinesses, despite outpacing men in bachelor's degrees awarded since 2012 (National Center for Education Statistics, 2018; U.S. Bureau of Labor Statistics, 2015). At four-year universities, women hold 41% of faculty positions in biological, agricultural, and environmental life sciences, yet only account for 10% of deans and vice presidents of agricultural colleges at land-grant universities (Griffeth, 2013; U.S. National Science Foundation, 2017). Furthermore, females in state departments of agriculture led those departments in only 13 of the 50 states (Crampton, 2019). The Women's Leadership Committee of the American Farm Bureau Federation completed a "Women in Ag" questionnaire in 2015. The questionnaire found that 90% of responders felt there needed to be more representation of women in agricultural leadership roles (American Farm Bureau, 2015; Griffeth

et al., 2018). Women are involved in agriculture but underrepresented in leadership capacities. The lack of women's advancement into agricultural leadership was ironically named the "grass ceiling" by Australian sociologist Margaret Alston (1998).

This discussion involving women leaders within the agriculture industry is timely, but for many women, acceptance as *farmers*, let alone as agricultural leaders, is an uphill battle. In many agricultural organizations, the cultural framework is still based on rural hegemony, where the masculine *farmer* reigns supreme, and the *farm wife* is his feminine helper (Keller, 2014; Pini, 2002). This gendered regime is well described in a Facebook post by Sue Tebow, founder of the popular Facebook page, agri.CULTURE. She emphasized stereotypical gender roles within agriculture and advised women to, "Let the men lead us on the dance floor, in prayer, and life." The popularity of this sentiment was staggering in its viral reaction on social media. On the Facebook platform, it resulted in 52,290 shares, and 62,000 likes to date (Tebow, 2019). In the literature and modern cultural norms, the perspective of a man leading and the women helping remains prevalent in agriculture. This reality contributes to the ongoing masculinity of the industry.

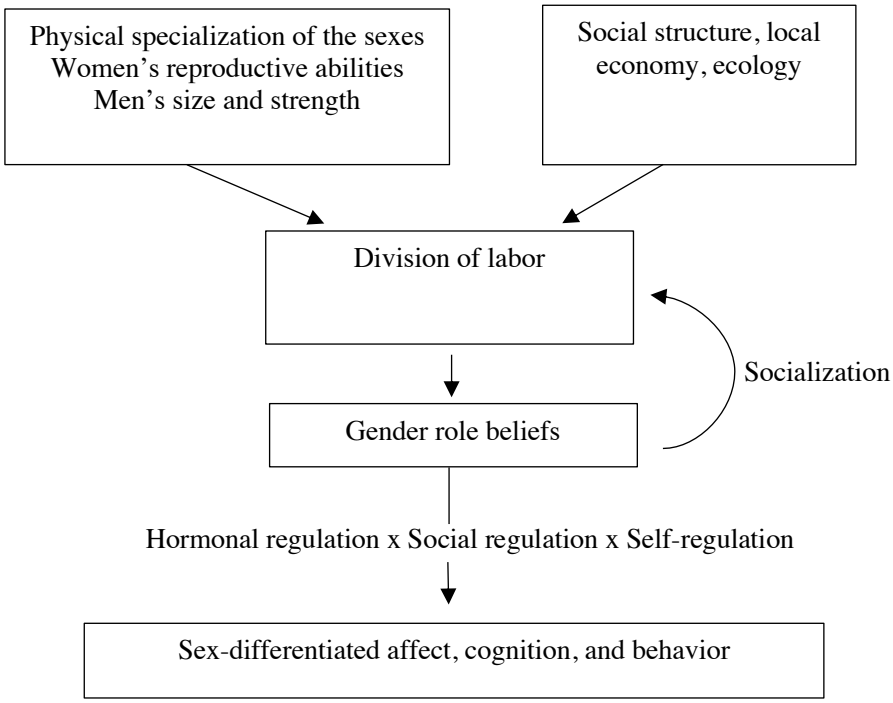
Theoretical Framework

The pushback against gender inclusiveness in leadership is not unique to agriculture. Gender and gender relations within the scope of leadership is a widely researched topic. Social role theory (Eagly, 1987) emerged as one explanation for perpetuating stereotypical gender roles within leadership (Figure 1). The theory hypothesizes that men's and women's differences and similarities are due to their social roles within society. The theoretical social roles for men are associated with power and physical strength; they are the leaders and the breadwinners. Women's social roles are associated with their reproductive and nurturing characteristics; they

are the homemakers and helpers (Eagly, 1987; Eagly & Wood, 2011). As we socialize girls and boys with gender expectations, men and women's behavior will continue to support a traditional labor division (Eagly & Wood, 2011). In agriculture, the social role theory plays out from the context of the *farmer* and the *farm wife* (Keller, 2014). These roles perpetuate a traditional labor division and are an obstacle as women seek leadership roles within agriculture.

Figure 1

Social Role Theory



Note: This chart represents how the division of labor began and how gender role beliefs provide feedback to perpetuate a gendered division of labor. Adapted from Eagly, A.H. & Wood, W. (2011). Social role theory. Van Lange, P.A., Kruglanski, A.W., & Higgins, E.T. (Eds), *Handbook of theories in social psychology*, Vol. 2, (pp 458-476). SAGE Publications.

When it comes to leadership, prescribed gender roles have shaped the way men and women lead. This is well described in literature in the Full Range Model (cite), which includes

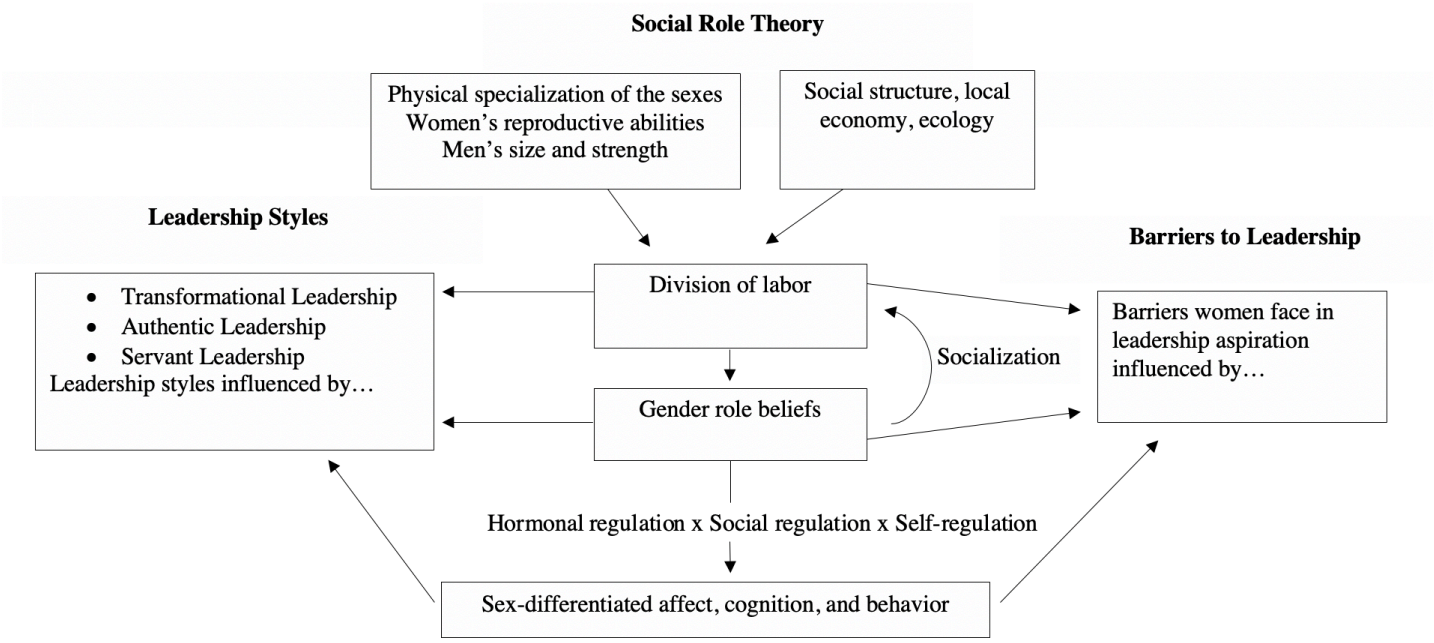
transformational and transactional leadership. A transformational leader is an individual that focuses on relationships, collaboration, and motivation (Bass, 1985; Burns, 1978). A transactional leader concentrates heavily on a give-and-take relationship between manager and follower (Bass, et al. 1996; Northouse, 2018). Through a meta-analysis, Eagly et al. (2003) confirmed that women tend to have more transformational leadership styles than men, who favor transactional leadership. Additionally, they found that when women were in a non-gender-traditional role, like leadership, they tended to lead in a way that expressed gender stereotypical characteristics. Many of these female-typical characteristics were similar to the characteristics of a transformational leader (Bass et al., 1996). Authentic leadership and servant leadership are also leadership styles that focus on what we might call feminine or relationship-based leadership (Avolio & Gardner, 2005; Greenleaf, 1977). These theories have become popular in recent years as companies and organizations strive for flatter, team-oriented cultures (Gibson et al., 2017).

Conceptual Model

With modern agriculture undergoing constant scrutiny, the industry could undoubtedly benefit from the qualities associated with these feminine leadership styles, yet barriers exist that inhibit women's leadership advancement. In this study, we examined the impact the social role theory had on women's leadership styles and the leadership barriers they faced. The model framework depicted in Figure 2 describes the interaction between the social role theory, leadership styles, and barriers to leadership success.

Figure 2

Conceptual Model



In the current literature on this topic, we found limited research that explored the connection between women's leadership in agriculture and the impact of the stereotypical social roles and leadership. This research sought to explore that connection.

Statement of the Problem

Women are becoming more involved in agriculture (4-H, 2019; Crampton, 2019; Flatt, 2019; Griffeth, 2013; National Agriculture Statistics Services, 2017; U.S. Bureau of Labor Statistics, 2015; U.S. National Science Foundation, 2017), yet they remain underrepresented in leadership positions within agricultural jobs. This study explored the leadership styles of women in agriculture and their barriers as they advanced in leadership. Study results could help

organizations, post-secondary education, and extension education in the development of leadership programming suited to meet the needs of modern agriculture.

Purpose and Research Objectives

This study aimed to describe the leadership styles of women in agriculture and explore the barriers to women's participation in agricultural leadership. The results of this study will help organizations, post-secondary education, and extension education in the development of leadership programming that is suited to the needs of modern agriculture. We utilized a mixed-method approach for this study, including qualitative analysis and the Delphi model. We used the Grounded Theory approach to identify themes in leadership styles' and the Delphi method to develop consensus on leadership barriers. The following objectives guided this study:

Objectives:

1. Determine select demographics of study participants, including age, ethnicity, education, current leadership role(s), involvement in agriculture, marital status, and the number of children/dependents.
2. Explore and describe the leadership styles of women in the agricultural industry in the United States.
3. Explore and describe the barriers to leadership for women in the agricultural industry in the United States.

Definitions

We operationally defined the following terms for this study:

Leadership: "A process whereby an individual influences a group of individuals to achieve a common goal" (Northouse, 2018, p. 5).

Leadership Role: Individual who serves in a leadership capacity.

Agricultural Industry: "The broad industry engaged in the production of plants and animals for food and fiber (and fuel), the provision of agricultural supplies and services, and the processing, marketing, and distributions of agricultural products" (Troeh & Donahue, 2003). For this study, the definition also included agricultural education, including secondary, post-secondary, and agricultural extension education.

Production Agriculture: Involved with the farming of commodities used for food, fiber, and fuel. In this study, we used production agriculture to describe individuals actively involved in farming or ranching.

Farm Operator: Person who runs the farm, making the day-to-day management decisions. The operator could be the owner, hired manager, cash tenant, share tenant, and/or partner. The 2017 UDSA census divided farm operators into two potential statuses, "primary" or "secondary" as determined by the operators (United States Department of Agriculture, 2019).

Family Farm: A farm in which ownership and control of the farm business are held by a family of individuals related by blood, marriage, or adoption (United States Department of Agriculture, 2019)

Delphi Method: A communication process structured to produce a detailed examination of a topic and discussion from the expert panel, but it is not a process that forces a quick compromise (Linstone & Tuoff, 1975).

Glass Ceiling: A metaphor that describes the invisible barriers or deficiencies that women in leadership can face that may keep them from attaining their ultimate career and leadership goals (Morrison & Von Glinow, 1990).

Glass Cliff: A metaphor to describe women who have made it through the glass ceiling and obtained a position of power but are set up to fail because of the lack of resources and/or support from the organization (Ryan & Haslam, 2005).

Assumption

The individuals who completed the questionnaires self-identified as women, were involved in agriculture and are involved with an agricultural leadership job or role.

Limitations

This research was conducted with the following limitations:

1. We utilized electronic questionnaire instruments for this study and used electronic correspondence for the recruiting and follow-up procedures. This contact method may have caused concern with email blocking systems, and email addresses errors may have eliminated participants from being contacted.
2. We limited the study to the selected women that participated as experts in the Delphi panel and other research questions. It will not accurately represent the views of all women in agricultural jobs in the United States.

3. The interpretation of the questionnaire results was subject to our perceptions and understanding.
4. We collected data for this study during the initial COVID-19 pandemic shutdown in the spring of 2020. The shutdown may have impacted response rates.

Significance of the Study

Many researchers have studied women in leadership, and several qualitative studies relating to women in agricultural leadership are available. Yet, few quantitative studies are available on the topic (Brawner, 2016; Giffeth, 2013; Kleihauer et al., 2013). The impact of the social role theory has also been studied, but not from the perspective of agriculture. This study provides insight into the leadership of women in agriculture by examining their self-perceived leadership styles and the barriers they've faced as they advanced in leadership. Using a mixed-methods research design, this study combined the advantages of quantitative and qualitative methods to develop data-driven results that are rich in holistic understanding.

The study identified specific barriers that hindered women from advancing in leadership roles in agriculture. Literature shows the prevalence of the glass ceiling and, based on the lack of women in leadership, that glass or "grass" ceiling undoubtedly exists in agriculture (Alston & Wilkinson, 1998; Ezzedeen et al., 2015; Pini, 2002). These barriers are often a result of traditional gender roles (Keller, 2014; Eagly & Johannesen-Schmidt, 2001). Having identified the barriers, this research will help agricultural associations, universities, and extension services develop programming specific to meeting the needs of women in agricultural jobs. It will support business and workplace policies that strengthen women within their organizations. It also will

provide agricultural specific data on women in leadership to further the conversation around women in agriculture in organizations.

By understanding the value of women in leadership, through their self-perceived leadership styles and the barriers they face, this study will improve the underrepresentation of women within the ranks of agricultural leadership

CHAPTER II

LITERATURE REVIEW

This section serves as a review of the literature on the topic. We broke this review it into three overarching sections. They are (a) leadership, (b) women in agriculture and, (c) theoretical and conceptual frameworks. The first section will address leadership, leadership styles, and leadership styles and gender. The women in the agriculture section will address the roles and identities of farm women, women in agricultural leadership, and leadership barriers for women in agriculture. The conceptual framework section brings together the literature review findings and illustrates it through the lens of social role theory. Researching this topic included in-depth searches of *The Leadership Quarterly, Psychological Bulletin, Journal of Extension, Journal of Agricultural Education, Rural Sociology,* and the *Journal of Leadership Education*. Additional research included internet-based searches through Google Scholar and ProQuest. We completed the searches using the following terms or in a combination thereof: women in agriculture, farm women, leadership, female leadership, leadership styles, transformational leadership, authentic leadership, servant leadership, and social role theory.

Leadership

As a focus of research, people have studied leadership for more than a century. Initially, the research subject was a white male who worked in a private company within the United States (Avolio et al., 2009). In 1927 researchers well described this narrow focus in this published definition, "the ability to impress the will of the leader on those led and induce obedience, respect, loyalty, and cooperation" (Northouse, 2018, p. 2). In the intervening years, what defined a leader and leadership changed to a universal perspective. Today, leadership is still a fluid

concept. The almost inexhaustive literature on the topic suggests there are as many definitions of leadership as researchers studying the topic. For this study, we relied on the definition of leadership from Northouse (2018) p. 5: "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal."

Leadership Styles

In the process of researching leadership, we explored the leadership styles that emerged in the literature. Leadership style, by definition, is

> "leadership behavior with two clearly independent dimensions: the task dimensions that include goal setting, organization, direction, and control; and the relationship dimension involving support, communication, interaction, and active listening" (Hersey and Blachard, 1969, p. 24).

In simpler terms, we can express leadership style somewhere on two intersecting axes, one axis related to task and one related to people (Gibson et al., 2017). When researchers first studied leadership, the focus was on a leader's personality traits, later on, their skills, and now on a leader's style. The style approach shifted the idea from what a leader was to what a leader did and how they acted (Northouse, 2018). When interpreting the leadership style axis, how a leader manages tasks and people determines their style.

Today, leadership styles that attract the most attention focus on the relationships between leader and follower (Gibson et al., 2017). We identified three of these styles as key for this study. They are transformational leadership, authentic leadership, and servant leadership. The next several sections give greater detail to their significance.

Transformational Leadership

Transformational leadership emerged in the 1980s. It differed from previous theories because it focused on intrinsic motivators and characteristics, rather than specific traits or skills (Northouse, 2018). By definition, transformational leaders seek to transform people and organizations. They strive to shift the followers' beliefs, needs, and values (Kuhnert & Lewis, 1987). They seek to individualize their followers' needs and focus on their personal development (Northouse, 2018).

Contrasting transformational leadership is transactional leadership. Transactional leadership, like the name suggests, denotes a transaction. A leader exchanges something of value with the follower. Unlike transformational leadership, where leaders seek to transform the followers' desires, followers in a transactional leadership situation do what the leader wants because it is in their [the employee's] best interest (Kuhnert & Lewis, 1987).

A third type of leadership factor emerged later in the research around transformational leadership. This leadership is called laissez-faire. Bass and Avolio (1990) described laissez-faire leaders as leaders who do not intervene with their followers. They do not seek to correct, motivate, or to have constructive transactions with the groups they lead. It denotes taking a hands-off approach and letting things happen as they will (Northouse, 2018). Together these three leadership styles, transformational, transactional, and laissez-faire, make up the Full Range Leadership Model.

In Avolio's book, *Full Range Leadership Development* (2011), he describes leadership not as an achievement but rather as a system. He says a person's leadership style not rigid but changes with a leader's growth and maturity (Avolio, 2011; Kuhnert & Lewis, 1987). The Full Range Leadership Model identifies transformational leaders by four characteristics, *idealized*

influence, inspirational motivation, intellectual stimulation, and *individualized consideration*.

Table 1 and Figure 3 defines these characteristics.

Table 1

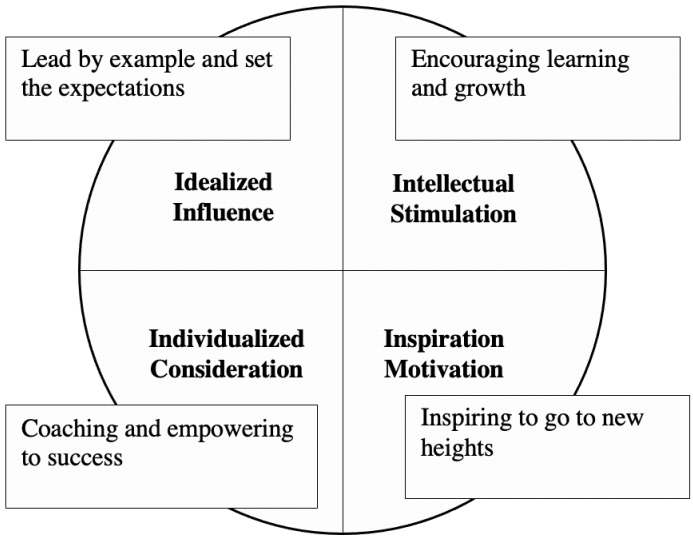
Factors of Transformational Leaders

Factor 1 *Idealized Influence*	• Leader seeks to be a role model • Leader has high moral and ethical character • Leader is admired and respected by followers
Factor 2 *Inspirational Motivation*	• Leader creates and communicates visions for the future • Leader motivates other to achieve success • Leader seeks to develop a team spirit
Factor 3 *Intellectual Stimulation*	• Leader encourages creativity and innovation in problem solving • Leader does not publicly criticize mistakes • Leader seeks input from followers
Factor 4 *Individualized Consideration*	• Leader treats followers like individual and coaches in an individualized way • Leader provides a supportive climate for communication • Leader delegates tasks and shares responsibility between themselves and followers

Adapted from Hickman, G. R. (2010). *Leading organizations: Perspectives for a new era*. SAGE Publications and Northouse, P. G. (2018). *Leadership: Theory and Practice*. SAGE Publications.

Figure 3

Transformational Leadership Model



Adapted from Education Business Articles. (ND). Transformational leadership: leading change through growth and empowerment. Education Business Articles. https://www.educational-business-articles.com/transformational-leadership/

On the other hand, transactional leaders do not individualize their followers' needs or focus on their development. They seek to exchange things of value with their followers and provide input only when issues arise. The factors influencing transactional leaders are labeled *contingent reward* and *management-by-exception*, both active and passive. Figure 4 displays the interaction between these items. Table 2 includes the "non-factor" in the Full Range Leadership Model, the laissez-faire leader. It is important to note that both transformational leadership and transactional leadership can be effective styles, even though they are different. (Kuenhert & Lewis, 1897)

Table 2

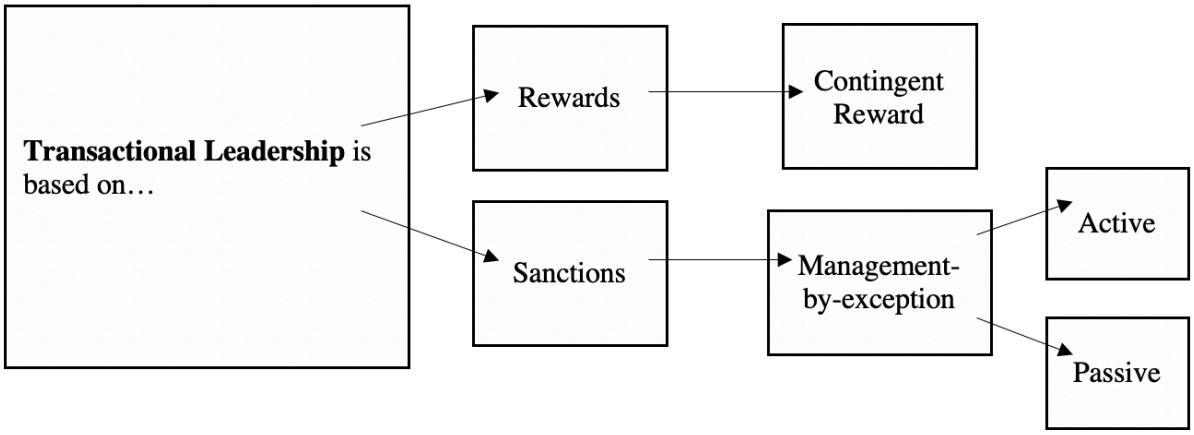
Factors of Transactional Leadership

Factor 5 *Contingent Reward*	• Leader "strikes a deal" with the follower to complete specific tasks with the promise of a specific reward
Factor 6 *Management-By-Exception*	• Leader utilizes negative reinforcement to correct mistakes, can be active or passive. • Leader monitors for mistakes or issues and then takes corrective action (active). • Leader intervenes only when standards have not been met or problems arise (passive).
Non-leadership Factor *Laissez-Faire*	• Leader abdicates responsibility, delays decisions, does not provide feedback or direction • Leader does not exchange with followers and does not help followers grow

Adapted from Hickman, G. R. (2010). *Leading organizations: Perspectives for a new era*. SAGE Publications and Northouse, P. G. (2018). *Leadership: Theory and Practice*. SAGE Publications.

Figure 4

Transactional Leadership Model



Adapted from Free Management Books. (ND). Transactional leadership definition. Free Management Books. http://www.free-management-ebooks.com/faqld/leadership-04.htm

Authentic Leadership

Researchers proposed authentic leadership in the early 2000s, amid political and socio-economic turmoil. The news blasted companies for corruption and unethical behavior. In response, theorist proposed the concept authentic leadership to guide organizations (Avolio & Gardner, 2005). Bruce Avolio, who helped develop the transformational leadership theory, aided in developing authentic leadership theory. Avolio et al. (2004) p. 3 defined authentic leaders as,

> "Those who are deeply aware of how they think and behave and are perceived by others as being aware of their own and others' values/moral perspective, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient, and of high moral character."

The authentic leadership theorists keyed in on two tenants, the concept of the true self and a strong connection with ethics and morality. Researchers pointed out that authenticity in leadership was not something leaders "had," it was something leaders "did" (Lui et al., 2015). The true self-tenant of authenticity comes from the idea that authentic leaders have in-depth self-awareness and trust in their feelings, thoughts, and motives (Avolio et al., 2004). They understand their strengths and weaknesses. Their behavior is consistent with their core values. Their decisions are guided by a concern for the well-being of others, and they actively solicit ideas that challenge their own. Authentic leaders do not succumb to outside pressures. They look internally to make decisions. They are expressive and open about their inner thoughts and have high moral character (Walumbwa et al., 2008; Lui et al., 2015).

These principles guide the various frameworks of authentic leadership, yet there is no one definition of authentic leadership. As a theory, it is still in its infancy. Thus, it is hard to quantify an authentic leader or develop a process to identify authentic leaders. Figure 5 displays one researcher's model of the authentic leadership theory and it provides a visual to understand the

theory. Researchers have developed several measurements for authentic leadership. The Authentic Leadership Questionnaire (ALQ) has proven to have the most validity and reliability. Walumba et al. (2008) described the ALQ as having four distinct but related components that measured how individuals displayed characteristics in their leadership through peer and self-assessment. The components are *self-awareness*, *relational transparency, internalized regulation*, and *balanced processing*. Table 3 displays the definitions of these characteristics.

Table 3

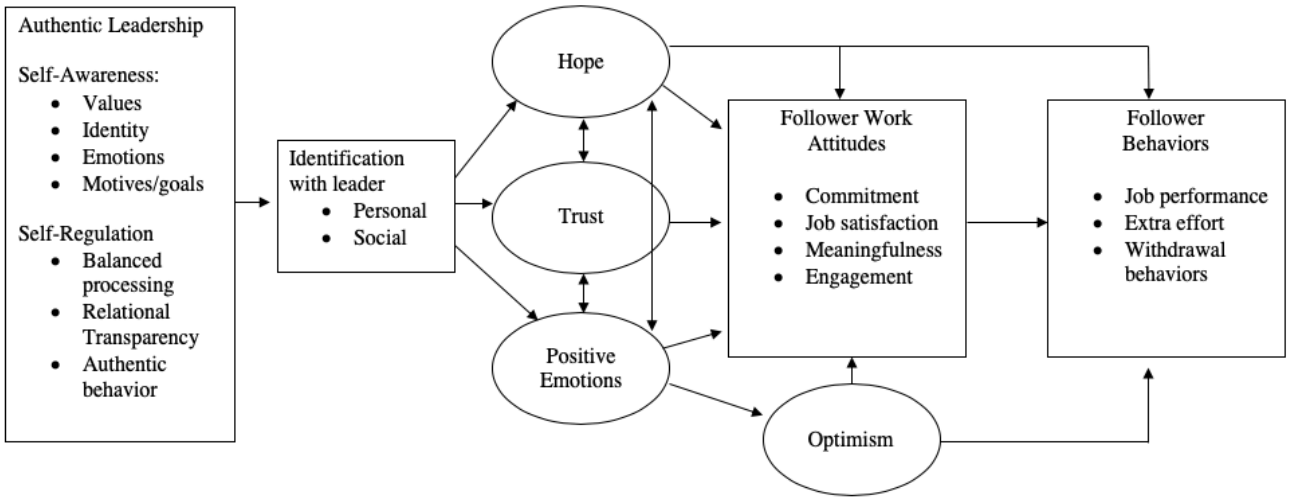
Authentic Leadership Questionnaire Sample Items

Item 1: *Self-awareness*	• Leader seeks feedback to improve interactions with others • Leader accurately describes how others view his or her capabilities
Item 2: *Rational transparency*	• Leader says exactly what they mean • Leader is willing to admit when they make mistakes
Item 3*: Internalized moral perspective*	• Leader demonstrates beliefs that are consistent with actions • Leader makes decisions based on their core beliefs
Item 4: Balanced processing	• Leader solicits views that challenge their deeply held positions • Leader listen carefully to different points of view before coming to conclusions

Adapted from Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic Leadership: Development and validation of a theory-based measure. *Journal of Management*, *34*(1), 89-126.

Figure 5

Authentic Leadership Model



Adapted from Avolio, B.J., Luthans, F., & Walumbwa, F.O. (2004) Authentic leadership: Theory building for veritable sustained performance. Working paper.

Due to the high importance authentic leadership and transformational leadership place on moral character, some researchers argue that authentic leadership is simply an extension of transformational leadership (Bass & Steidlmeier, 1999). While they are similar, most of the literature contends they are not the same. Walumbwa et al. (2008) p. 103 says,

> "We believe a key distinction is that authentic leaders are anchored by their own deep sense of self; they know where they stand on important issues, values, and beliefs, and they are transparent with those they interact with and lead. With that base, they display internalized moral perspective and self-regulation by staying their course through difficult challenges and convey to others, oftentimes through actions and words, what they represent in terms of principles, values, and ethics."

Servant Leadership

Servant leadership is gaining recognition due to its focus on the altruistic characteristics of leadership. Servant leadership differs from transformational and authentic leadership as it maintains that the premise of a leader should be to care for followers (Northouse, 2018). Robert

K. Greenleaf (1977) was the first to first propose servant leadership. In his writings, he outlines that when a leader consciously chooses to serve and met others' priorities, they are helping their followers become more autonomous and, eventually, more like the leader (Greenleaf, 1977). There are a variety of theories and models attempting to quantify servant leadership. In 2002, Spears and Lawrence identified ten characteristics in Greenleaf's writing that serve as the premise of servant leadership. They are as follows: 1) listening, 2) empathy, 3) healing, 4) awareness, 5) persuasion, 6) conceptualization, 7) foresight, 8) stewardship, 9) commitment to the growth of people, and 10) building community (Spears & Lawrence, 2002). We developed Table 4 from the Northouse (2018) text to define servant leadership characteristics, and Figure 7 is Paul Wong's (2004) take on servant leadership as a defined theory.

Table 4

Characteristics of Servant Leadership

Item 1: *Listening*	• Leader communicate by listening first
Item 2: *Empathy*	• Leader seeks to truly understand one's perspective and feelings
Item 3: *Healing*	• Leader support followers by helping them overcome personal problems
Item 4: *Awareness*	• Leader seeks to be receptive to outside environment and the impact leader has on others
Item 5*: Persuasion*	• Leader models clear and persistent communication that convinces others to change
Item 6*: Conceptualization*	• Leader provides a clear sense of goals and directions. • Leader seeks the "big picture"
Item 7*: Foresight*	• Leader has ability to predict the future by knowing what occurred in the present and past
Item 8*: Stewardship*	• Leader takes responsibility to carefully manage the organization • Leader holds the organization in trust to the greater good of society

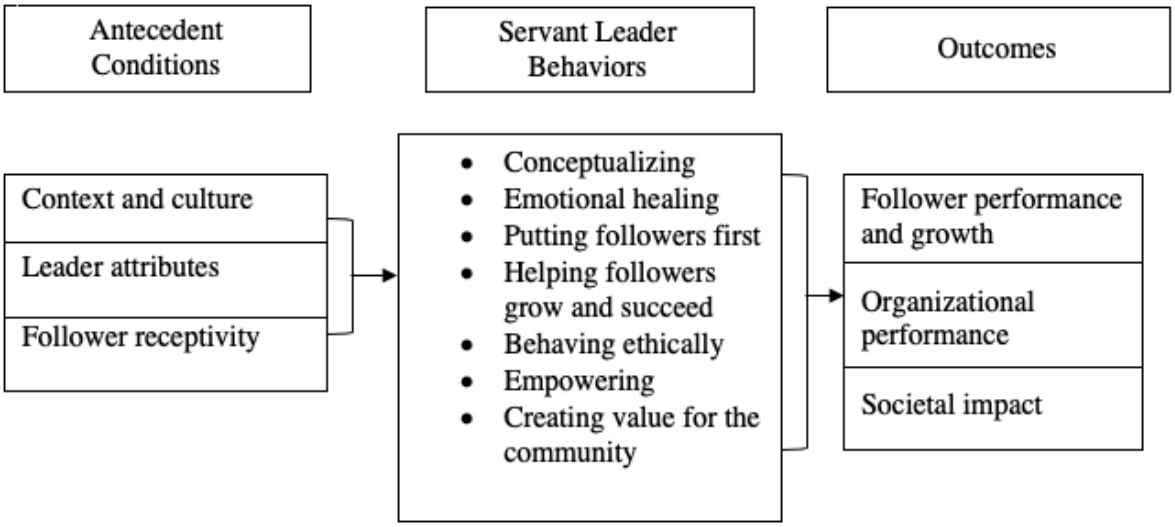
Table 4 continued

Item 9: *Commitment to the growth of the people*	• Leader is committed to help each person in the organization grow personally and professionally
Item 10: *Building community*	• Leader fosters the development of a community where people can feel safe and connected to others

Adapted from Northouse, P. G. (2018). *Leadership: Theory and Practice*. Publications.

Figure 6

Servant Leadership Model



Adapted from Wong, P. (2004). The paradox of servant leadership. Dr. Paul Wong. http://www.drpaulwong.com/the-paradox-of-servant-leadership/

Like authentic leadership, servant leadership development as a theory is limited. Researchers do not accept one model as the overarching theory. Rather, several models have emerged as researchers seek to quantify a servant leader. However, many organizations use servant leadership as their leadership approach. Companies like Southwest Airlines, Men's Warehouse, and The Toro Company use servant leadership principles as guiding forces within their organizations (Northouse, 2018).

In all the literature and models developed around servant leadership, the underlying philosophical positions remain the same. Servant leadership requires individuals to be altruistic and humanistic. They seek the greater good of their followers and society. As Graham (1991) describes it, servant leadership extends beyond an organization to the "have nots" in society.

Leadership Styles and Gender

Researchers have long analyzed the ways women lead in comparison to their male colleagues. They argued that when a woman excelled in leadership, it was because she exhibited a more masculine style (Appelbaum & Shapiro, 1993). However, that supposition has proven faulty. Many organizations are adopting flatter structures, emphasizing employee development and team-based management (Bass & Riggo, 2006; Trinidad & Normore 2004) or we might call a feminine or relationship-style approach to their leadership.

The literature describes feminine leadership as leadership focused on relationship-oriented goals compared to task-oriented goals (Rigg & Sparrow, 1994). Not unlike the two axes of leadership style—relationships and tasks. Women leaders tend to be more interactive (Rosener, 1990), authentic, and transformational in their approach (Eagly & Johnson, 1990). They encourage participation among their followers, share power and information, enhance followers' self-worth, and seek the overall good of the group rather than self-interest (Trinidad & Normore, 2004). Male leadership is considered structured, autocratic, transactional, instruction-giving, and business-oriented. Female leadership is considered considerate, transformational, participative, socio-expressive, and people-oriented (Appelbaum et al., 2003). Researchers interpret feminine leadership as nurturing, understanding, socially sensitive, and cooperative (Bass et al., 1996; Eagly & Johnson, 1990).

Transformational Leadership and Gender

When examining feminine leadership characteristics from the perspective of the Full Range Leadership Model, we would expect women to exhibit more transformational leadership styles. The literature confirms this assumption.

In 1996, Bass et al. completed the first large scale study examining men and women's transformational and transactional styles. Utilizing three focus groups, men and women leaders, were evaluated by their direct superior using the Multifactor Leadership Questionnaire (MLQ), the instrument developed to identify transformational leadership. The results found that women leaders scored higher on all four transformational leadership factors and the transactional factor, of *contingent reward* when being evaluated by both male and female. Men scored higher on active and passive *management-by-exception* transactional factors and the laissez-faire non-leadership factor (Bass et al., 1996). These results were repeated in 2003 when Eagly et al. completed a meta-analysis of 45 studies that measured transformational and transactional leadership in men and women. Like the 1996 study, it found that overall, women scored higher in the factors associated with transformational leadership, particularly, the *individualized consideration* factor. Similarly, men scored higher in active and passive *management-by-exception* factors, and women scored higher in the *contingent reward* factor. This meta-analysis found a small statistical difference in laissez-faire factors, with men scoring slightly higher (Eagly et al., 2003).

Furthermore, managerial specific research showed the value of what we consider female or androgynous characteristics for leadership. Some of these skills are negotiation, cooperation, diplomacy, team building, and inspiring others (Eagly & Carli, 2004). Stereotypical masculine characteristics, like intimidation, abrasiveness, and arrogance, are ineffective leadership traits

that parallel transactional leadership style, particularly in the *management-by-exception* factor (Diekman & Eagly, 2000).

Authentic Leadership and Gender

Researchers ascribe authentic leadership to leaders who are particularly well-suited for dealing with rapid changes, business challenges, and economic crises. In the wake of the global financial crisis, society and the business community criticized business leaders for poor leadership. These leaders had focused their efforts on uber-competitive behaviors, what Liu et al., (2015) p. 237, describe as "a hyper-masculinist culture that encouraged risky 'cowboy'-style behavior." This macho culture of the banking world led to one newspaper lamenting, "if only it had been the Lehman sisters" in the article's title (Morris, 2009). The stereotype that women make better leaders in times of crisis is based on the glass cliff analogy. Since authentic leadership is ideal in times of crisis, glass cliff scenarios would suggest that women are more likely to be authentic leaders. However, most literature describes authentic leadership as gender-neutral and not necessarily more prevalent in one gender than another (Avolio et al., 2004; Walumbwa et al., 2008)

Eagly (2005) was the first researcher took a look at authentic leadership and gender. She argued that leadership's authenticity is a two-sided coin, and it is not just about a leader prescribing a set of authentic behaviors. A leader must be true to their moral compass and self-worth, but they also need to represent the ideals of the group they represent. She stated that followers need to first accept the leader as a legitimate champion to their collective interest to be seen as authentic. Her research showed that women leaders often belong to the outsider social group, and, that they face great difficulty gaining acceptance as an authentic leader.

In another study on authenticity and gender, researchers observed two CEOs of major Australian banks through the global financial crisis. They built on the theory that authentic leadership is something leaders "do" rather than something leaders "have." The case study found that how the public viewed the leader's authenticity depended on how well the leader was authentic to prescribed gender norms. The public found the male CEO to be more authentic when he displayed "raw intelligence, natural aggression, and heterosexual machismo." Whereas, the public found the female CEO to be more authentic when she displayed actions that focused on nurturing and communal behavior. When she was decisive and aggressive, they called her authenticity into question (Lui et al., 2015).

From both of these studies, we see that the tenants of authentic leadership, self-awareness, and a high-moral compass are highly individualized and dependent on public perception. Authenticity will look different for different leaders and for the public there is the perception of that authenticity is tied to socialized gender roles. Even with a theorist trying to quantify authenticity, a leader acting authentically will often be "in the eye of the beholder."

Servant Leadership and Gender

Researchers have not widely studied servant leadership in terms of gender, and like authentic leadership, much of the literature would describe servant leadership as gender-neutral (Barbuto & Gifford, 2010; Walumbwa et al., 2008). Contrary to the argument of a feminine approach to leadership, some scholars attribute leadership style to personality, age, or education (Babuto et al., 2003) more than to gender. Barbuto and Gifford (2010) argued that servant leadership characteristics encompass both agentic and communal styles. Agentic, being male leadership and defined as a leader with give-and-take tendencies, is assertive, and utilizes

resources as leverage for obtaining goals (Eagly, 1987). In contrast, feminine leadership is considered communal, focusing on interpersonal relationships, caring, nurturing, and empathy.

Within their 2010 study, Barbuto & Gifford utilized the previous work of Barbuto & Wheeler (2006) that categorized Spears and Lawrence's (2002) ten characteristics of servant leadership into five items, 1) altruistic calling, 2) emotional healing, 3) wisdom, 4) persuasive mapping, and 5) organizational stewardship. They hypothesized that altruistic calling, emotional healing, and organizational stewardship were communal qualities of servant leadership. Wisdom and persuasive mapping were considered agentic attributes of servant leadership. In the 2010 study of 75 leaders and 388 raters (using the Servant Leadership Questionnaire developed by Barbuto, & Wheeler, 2006), there were no significant differences between male and female leadership with both genders displaying equal levels of communal and agentic servant leadership style. Despite these findings, we are critical of this study by Barbuto and Wheeler (2006), as there is limited evidence of the validity and reliability of their instrument. However, in the context of this research, it does provide an argument to the idea that leadership styles should not be gendered.

Female Leadership Issues

As we embrace feminine or relationship-based approaches to leadership, it is important not to stereotype women leaders in the ways we expect them to lead. While the characteristics associated with feminine leadership are traits researchers tend to see in female leaders, they are not the way all women lead (Gibson et al., 2017). This generalization of female leaders can put women leaders at a disadvantage if their style does not reflect a stereotypical feminine style. Eagly and Johannesen-Schmidt (2001) p. 786, explain this dichotomy,

> "… female leaders' choices are constrained by threats from two directions: conforming to their gender role can produce a failure to meet the requirements of their leader role, and

> conforming to their leader role and produce a failure to meet the requirements of their gender role."

Eagly and Carli (2007) and Hyde (2005) suggest that gender differences in leadership styles are overemphasized and overstated.

To further understand the complexities of gendered leadership, researchers hypothesized why women tended to lead with more communal and relationship-based styles than men. The first argument relates to evolutionary ideas. Some researchers argue that nature has endowed women with feminine characteristics to ensure the species' survival; that it is an innate part of being female (Archer, 1996). The other hypothesis is related to the societal socialization of the genders. Throughout history, a woman's position in a society dictated her roles and responsibilities to focus on nurturing, teaching, and valuing individuals. Starting from a young age, girls take on these characteristics because society dictates that she does. When she does those characteristics become part of her identity (Eagly & Wood, 2011).

Additionally, when a woman exhibits a masculine leadership style, she is often devalued compared to her male colleagues, even if they display the same leadership characteristics. This devaluation is particularly true when women work in traditionally male-dominated industries (Eagly et al., 2003) like agriculture. For women to succeed in a leadership role and overcome that incongruity, she must conform to her gender role expectations by displaying the expected feminine characteristics of leadership. Furthermore, not only do women need to exhibit these characteristics, they need to demonstrate them at an even higher degree than men in a similar situation because the expectation for men as relationship-based leaders is lower. This expectation difference remains the basis for the prejudice women face in the workplace and a significant contributor to the glass ceiling theory (Eagly et al., 2003)

In conclusion, gender impacts transformational, authentic, and servant leadership styles but it more complex than the concession that women are more relationship-based leaders. The ongoing research of Eagly and her colleagues suggests that women are relationship-based leaders, not just because it is part of their feminine identity, but they must do so to succeed.

Women in Agriculture

Women have long played a role on the farm and agriculture, yet until recently, their contributions went mostly unnoticed. They labored in the background of the family farm, performing necessary and everyday tasks of agriculture (Foust Prater, 2018). Given the traditional patrilineal property ownership, women were only connected to the farm through their father or their spouses (Shortall, 2002). Because of this, we rarely considered women as farmers in their own right. While the legality of female property ownership's legality has changed, literature still shows that current women-farmers almost always access farm ground through a male (Pilgeram & Amos, 2015).

With women's land ownership limited, so was their education related to agriculture. In the early modern era, the transition of agriculture from a knowledge-based to a science-based industry pushed women further from agricultural jobs due to the limited access to higher education. Professional education in agriculture sciences did not have a place for women (Inhetveen, 1998). The agricultural-focused land-grant universities in the United States admitted women from their inception, yet, initial enrollment was limited. Over time female enrollment grew, but most women felt restricted to fields of home economics. Even those with advanced degrees were barred from fields outside traditional female industries and only rarely seen as

faculty in agricultural sciences (Thorne, 1985). As a result, modern agriculture now exists as a male-dominated industry in terms of farm ownership and agricultural education.

Roles & Identities of Modern Farm Women

The literature on modern farm women presents a complex reality of identity. Historically, the farm woman gained her identity from her relationship with a male relative. Braiser et al., (2014) p. 285, describes that identity this way, "…a women's sense of belonging in farm communities operated through a heteronormative nuclear family and their associated gender norms." She was the mother, daughter, or sister to the farmer. For much of history, women and men defended the patriarchal farming practices and traditional gender roles on their farms. Women felt they gained economic security, respectability, and prestige from their identity as farm wives (Fink, 1992). This description is outdated for modern sensibilities and leads us to the question, who is the modern American farm woman?

From a statistical perspective, we know the number of farms operated by women is growing. The 2017 Census of Agriculture found that women are the primary operators on 36% of farms in the United States. Thirty-four percent of those farms are between 10-49 acres, and 26% are between 50-179 acres. These are considered small to average-sized farms. Women farmers are more likely to be engaged in raising beef cattle and crop farming and are more likely than men to be involved in goat, sheep, and equine production, considered niche markets (National Agriculture Statistics Service, 2017). Furthermore, women are 40% of the community-supported agriculture operators and 21% of organic farmers (Pilgeram & Amos, 2015). These statistical indicators help us identify where and what women are currently doing, but when we consider the "modern woman in agriculture," we are looking at much more than the women who classify themselves as primary operators of their farms.

An empirical study completed by Brasier et al. (2014) in the Northeastern United States sought to describe modern farm women's multiple identities. Braiser et al. (2014) asked the study participants to identify to what degree they identified with specific descriptors related to their identity on their farms. The respondents had a high degree of salience with identities like "farm operator," "farm entrepreneur," "farm business partner," "farm wife/domestic partner," "farm bookkeeper," and "off-farm professional." They had a low degree of salience with "farmworker/apprentice" (Braiser et al., 2014).

This research suggested that farm women saw themselves as more equal partners on their farms, even in their role as farm wives. Not only this, but farm women resonated with multiple roles on and off the farm. Functioning within these roles is what Tutor-Marcom et al. (2014) called *chameleonic*. Their 2014 research found that none of the participants identified solely as a "farm wife" or "mother." The participants described themselves as having multiple responsibilities on and off the farm, including things like managing livestock, farm administration, childcare, volunteering, and running the household.

Tutor-Marcom et al.'s (2014) study hypothesized about the *third shift*. The third shift is the idea that farm women maintain three working "shifts" that include managing the household and children, maintaining off-farm employment, and performing their farm duties. Bharadwaj et. al (2013) further explored the concept of off-farm work of farm women. They questioned 1,488 farm women across the United States who worked off the farm. They found the primary motivation for working-age women (18-65 years old) to work off the farm was financial. Sixty-eight percent of respondents found it "very important" to work off the farm to cover household expenses, and 45% found it "very important" to receive employer-provided benefits. For farms that carried more than $50,000 of debt, women had strong motivations to maintain off-farm

income to "support the farm operation." This study showed that farm women take on the role of breadwinner to support their household and sometimes even the farm.

Finally, a woman's struggle to claim the title of a farmer is an identity issue. Researchers and writers on this subject use the descriptors of "woman" or "female" when referencing a female who is involved with farming. For a male farmer, no such descriptor is necessary. Societal norms have dictated the gendered symbols of *farmer* and *farm wife*. When one imagines a farmer, they imagine a man. The farm wife is then the long-suffering "do whatever work needs done" domestic partner—not unlike the attitude of Sue Tebow's Facebook post included in the introduction (see Appendix A). The farm or ranch wife runs the household, cooks for the farmhands, feeds the cows, and operates equipment. Yet, despite doing both the work of the farm wife and the farmer, she is not named farmer. Keller (2014) p. 86, stated, "the farmer symbolically occupies the position of hegemonic masculinity in the gender hierarchy, and the farm wife occupies the symbolic position of hegemonic femininity." She argued that by a woman intentionally claiming the title of farmer, she interrupts the regime. As that regime is interrupted again and again by the female farmer, it begins to break down, and the societal norms that created gender barriers in agriculture also breakdown (Ball, 2014; Keller, 2014).

The identity of a woman involved in production agriculture is complex. The increase in the number of female farmers is causing the gender barriers that prevent women from being farmers to break down (Ball, 2014). Women are establishing their identity as a farmer, though that identity always embraced in their community (Keller, 2014.) Many farm women maintain the title of *farm wife,* which entails all the traditional divisions of labor relegated to women and embracing the title of *farmer* or at least farm partner. Given the desire for economic stability within their households and farms, many women find themselves juggling the *third shift* as they

work to succeed in both spaces. The roles and identity of farm women will continue to evolve and will inevitably need to change as they embrace the title of *leader*.

Women in Agricultural Leadership

In 2014, the American Farm Bureau Women's Leadership Program conducted an informal study that surveyed women in agriculture about their goals, aspirations, achievements, and needs, specific to their agriculture roles. More than 2,000 women completed the survey and showed their overwhelming desire for leadership opportunities for American farm women. Over 90% of the respondents believed there should be a higher representation of women in agricultural leadership. This survey work highlighted the desire agriculture women have to participate in leadership and it showed the need for leadership development yet today. Due to this response and feedback, the American Farm Bureau Federation (AFBF) released a follow-survey in 2019, that focused on women in leadership. A news release from AFBF said, "Data from respondents will be used to gauge trends related to the achievements of women in agriculture, including leadership positions, business successes and election to public office" ("*Women in ag survey underscores the need for leadership skills,"* 2015). We are currently waiting for the results of this survey and the insight it will give on women in agriculture and their leadership.

Aside from this informal data from AFBF, we found almost no literature relating to women in leadership within agricultural associations in the United States. For this review, we relied on fewer than ten peer-reviewed sources. There are some theses and doctoral dissertations on women's agricultural leadership, yet much of that is limited to agricultural academia, not farm women or agri-business women. We found two exceptions in the *Journal of Extension* and the *Journal of Leadership Education*. A lack of literature highlights the need for agricultural leadership research as it relates to farm and agribusiness women.

Of the studies relevant to this work, one showed that women developed more confidence in their leadership skills when their agricultural leadership course was gender specific. Gender specific courses allowed women more opportunities to make decisions, defend their choices, take responsibility for the outcome, and see other women (their peers) in leadership capacities (Thorp et al., 1998). Researchers suggested that the presence of men in classrooms led to "men performing and women watching." However, a study published in 2019 found benefits to both men and women of seeing women in leadership roles (Cline et al., 2019). This concept is expressed frequently in women in leadership literature. When women and men view women in leadership, it breaks down the gender stereotype of the traditional masculine leader and changes our perceptions of a leader (Dasgupta & Asgari, 2004). In addition to the importance of viewing other women in leadership roles, Griffeth et al. (2018) suggested that women in agriculture with leadership aspirations should connect with a mentor, envision themselves in leadership, and seek to support one another as they work towards greater representation in leadership.

Barriers to Leadership for Women in Agriculture

Within the literature, researchers discussed the barriers preventing agricultural women from leadership advancement in depth. Alston (1998,) p. 392, called these barriers the "farm woman's grass ceiling." This play on words connects the glass ceiling many women leaders experience to agriculture. Alston (1998) says the grass ceiling is the invisible barrier preventing farm women from achieving leadership roles. And, for those who have gained leadership roles, they often continue to struggle with obstacles related to gender role stereotypes as they function within that leadership role (Kleihauer et al., 2013). The following sections discuss the common barriers that agricultural women have experienced.

Masculine Culture

Evidence both inside and outside agriculture suggests that masculine culture can hinder women in leadership. Alston & Wilkinson (1998) and Pini (2002) frequently found women using the term "boys club" or "good old boys club" to describe the environment within agricultural membership associations, intimating that women were either unwelcome or unable to fit it due to their gender. In Pini's 2002 study, one woman expressed that her husband encouraged her participation in the farm organization. Yet, her involvement seemed to be an "indication something was lacking in her spouse" by other members. One study found organizations that lacked term limits on board positions had more overtly masculine culture and organizations that had term limits had greater diversity in their board positions (Alston & Wilkinson, 1998).

Gender Bias

Gender bias is another barrier women face as they advance in leadership. It is often a product of the masculine culture of organizations, especially in traditionally male industries, like agriculture. In Kleihauer et al. (2013), five of the six female Deans of Agriculture shared accounts of the gender discrimination they faced in their careers. The same study also found that the Deans, early in their careers, struggled to convince male supervisors and colleagues that they were capable of the farm work required for their research. At the time of the Alston & Wilkinson (1998) study, women in rural Australia were twice as likely as men to have post-secondary education. Yet, male board chairmen frequently used "lack of proper education" as a reason for not appointing women to the board.

Another bias is based on traditional gender roles or what we've described as the male hegemony in rural society. In that hegemony, women are relegated to only domestic and family spheres. If a woman steps outside that sphere, society diminishes her femininity and thereby her

value. She is simply not considered suited for leadership because she is a woman (Pini, 2002; Keller, 2014).

Lack of Education or Experience

The literature suggests that women may often feel unsuited for leadership due to a lack of education and experience (Kleihauer et al., 2013; Alston & Wilkinson, 1998; Pini, 2002). Although this perception is not statistically substantiated as rural women are often better educated than their male peers (National Educational Statistics, 2018). However, a woman's perception is an essential consideration related to her self-confidence to lead (Pini, 2002).

Lack of experience is another relevant barrier. A woman's work experience can be hindered by family obligations. Women, more than men, adjust their careers for children, which can limit their experience and education when compared to a male peer ("*On pay gap, millennial women near parity—for or now*," 2013). Alston & Wilkinson (1998), p. 402, best describe this scenario by writing, "A family increases men's work experience and reduces a woman's."

Finally, the professional experience a woman is often related to a women's age and where she defines her current career stage. Robertson (2017) defined early career as a woman between the ages of 19 and 35, mid-career as 35-44, and late careers as 45-64. A woman in her early career has a lack of experience and significant life milestone that occur for many women during that age, like marriage and childbirth. On the other hand, a woman may be in the period defined as mid or late career but is early in her career and experience level because she took off time for child-rearing. Both of these situations are significant barriers for women in leadership.

Lack of Support

Lack of support from a spouse, an organization, or other people was also a well-documented barrier. Women who participated in Pini's 2002 study detailed the lack of support

from a spouse or spouse disapproval as the highest factor impacting their agricultural leadership involvement. Lack of support from one's organization and community followed lack of spousal support. Finally, the lack of support from other women impacted women's leadership involvement. In Pini's (2002) study survey participants felt that "other woman" disapproved of women who involved themselves in "men's affairs" (Pini, 2002; Alston & Wilkinson 1998). Still other women felt a lack of support from other women leaders who viewed them as "competition." (Griffeth et al., 2013; Cline et al., 2019).

Lack of Interest

The literature also noted lack of interest in the organization or lack of interest in leadership as reasons why women do not seek to lead in agriculture (Shortall, 2001; Alston & Wilkinson 1998). In organizations where membership is associated with the farm family, a lack of interest from a woman who is married to a farmer but does not consider herself a farmer is expected. Additionally, a lack of interest in leadership could be a by-product of any of the other leadership barriers, or it could simply be a disinclination to lead.

Multiple Responsibilities

The barrier to leadership most often mentioned in the literature was the varying and multiple responsibilities that most farm women experience. We documented these roles in the section titled *Roles and Identities of Farm Women*. From the texts we referenced, farm women lacked the time to take on the additional responsibilities of leadership. The lack of time is often a result of the lack of support from a spouse or community. As we've discussed some of the barriers that have prevented women from taking on the title of *farmer* are breaking down, but we are not necessarily seeing a role reversal. Women take on the farm role that men traditionally occupied, but men are not taking on the roles that women have traditionally occupied, as

housekeepers or childcare providers. Because of that, women are assuming the *third shift* by default. As Pini (2002) p. 282 described it, "Farm women undertake almost all household and domestic labour, regardless of other variables such as if they farm in their own right or if they undertake off-farm work." Alston (1998) added that most farm men have complete freedom from household work. Recent literature outside agriculture suggested that a traditional division of labor are breaking down in many households ("*On pay gap, millennial women near parity – for now*," 2013). This is positive, yet we can assume, given the pace of past progress, the progression towards equality will be slower in agricultural regions.

Lack of Land Ownership

A final reason farm women are not involved in agricultural leadership is the ownership of farmland. As Shortall (2001) p. 164 puts it, "entry into agriculture is dependent on access to land. Unlike other occupations, the vocational-education link is reversed; people often know that farming will be their occupation before training is undertaken." It is well-established that farm women generally access land through a male, most often a spouse (Shortall, 2001; Pilgeram & Amos, 2015). Even a woman born into a farming family is unlikely to inherit the land due to the patrilineal tradition of agriculture. Shortall (2002) ascertains that one of the reasons women do not participate in leadership within agriculture because the farm is "her husband's." With her husband maintaining individual ownership of the farm, he might limit in her ability to make decisions, change or improve the farm, or advocate on behalf of the industry. Without owning the land, she may not consider herself a farmer even though she works the land.

Theoretical Framework

Stereotypical gender roles are central to this study's framework. Society defines feminine styles of leadership in terms that conform to the stereotypical gender roles of women. Some

researchers consider transformational, authentic, and servant leadership traits to be feminine. Additionally, women may feel pressured to conform to societal norms for leadership. What we've discussed so far in this literature review outlines the impacts that gender roles have on-farm women. These impacts include the struggle to be taken seriously as farmers and advance in leadership positions in their careers. The social role theory describes the concept of gender roles and their prevalence in modern society. It served as the framework as we analyzed the leadership styles of agricultural women and the barriers they faced in leadership.

Social Role Theory

Research about the differences between men and women began in the 1950s and intensified in the wake of second-wave feminism of the 1970s. When the work began to mature in the 1980s, there were clear correlations between what people believed or perceived about the differences between the genders and the social behaviors and personality traits they exhibited (Eckes & Trautner, 2012; Eagly & Wood, 2012). The social role theory of gender differences emerged during that time to understand the causes of gender differences and the origins of gender stereotypes (Eagly, 1987).

Eagly's theory explained that the inherent physical differences between men and women led to divisions of labor in society. Early societies associated men with their physical strength and women for their reproductive biology. By enacting this labor division in an economic and social structure, the differences led to gender roles and stereotypes. Society expected men and women to behave in ways that reflected their gender roles. In daily life, people played out their gender roles because that is what they observed, what society expected of them, and what society prepared them for (Eagly & Wood, 2012). Because gender roles seemed to reflect men and women's innate biological characteristics, they appeared inevitable and natural. Children and

adolescents were prepared for eventual familial and employment responsibilities by societies that socialized boys and girls to gendered skills that enhanced their gender role performance. These gender stereotypes then served as a self-fulfilling prophecy (Eagly, 1987; Eagly & Wood, 2012; Eagly & Wood, 1999).

The "self-fulfilling prophecy of gender roles" is outlined in Figure 8. The gender role beliefs held by society continued to reinforce the divisions of labor by providing people with constant feedback for the expectations. The social role theory expanded to include the impact of the hormonal processes of men and women (more specifically, testosterone and oxytocin), which influenced the genders' behaviors (Eagly & Wood, 2011). However, for this study, we focused on the main body of the social role theory—the interaction between divisions of labor and the socialization of gender roles and stereotypes.

Modern Impact of the Social Role Theory

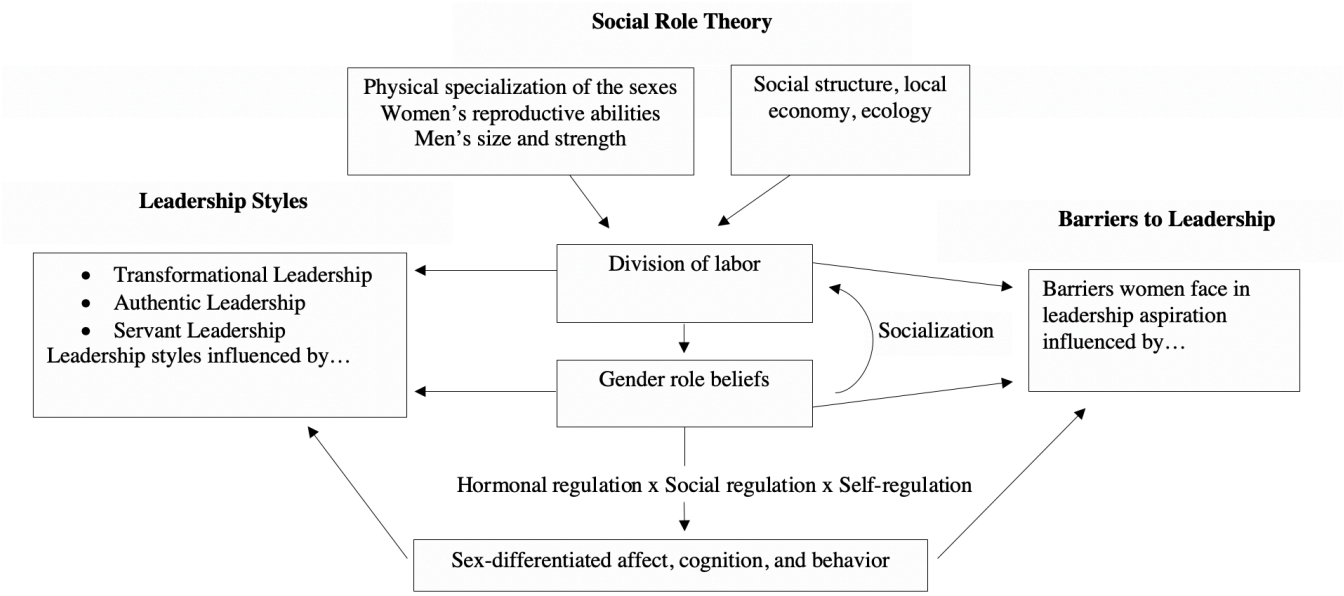
In modern, post-industrial societies, the physical differences between men and women are a non-issue, yet the stereotypes persist due to long-held cultural socialization (Eagly & Wood, 2012). In the United States, women make up a large portion of the workforce. They are most likely to be found in careers that conform to gender stereotypes, like education or nursing (U.S. Bureau of Labor Statistics, 2015). They are also generally paid less and are less likely to be found in the highest level of corporations and governments (Catalyst, 2019; Center for American Women and Politics, 2019). In effect, they are wielding less power, status, and wealth than men. While labor divisions have weakened over time, it remains an issue, particularly in traditionally male-dominated industries.

When it comes to leadership styles, female and male leadership expectations tend to follow the social role theory. Society expects women leaders to be nurturing, communal, and

cooperative, all constructs of their traditionally prescribed role as a nurturer and homemaker. In emphasizing gender roles and leadership roles, social role theorists argue that leaders occupy roles defined by their specific position in a hierarchy and simultaneously function under the constraints of their gender roles (Carli & Eagly, 1999). In leadership, researchers have found women are more likely to use leadership styles considered communal. In contrast, men's styles are more likely to be considered agentic, which confirms the assumptions we hold about gendered based roles, even in leadership (Bass, Avolio, & Atwater, 1996).

Figure 7

Conceptual Model



Summary

Leadership styles that focus on intrinsic qualities of leaders are increasingly popular as organizations strive to build flatter, team-oriented cultures and maintain the need for transparency and high moral conduct in leadership (Gibson et al., 2017; Avolio & Gardner,

2005; Bass & Riggo, 2006; Trinidad & Normore, 2004). Leadership styles, like authentic leadership, servant leadership, and transformational leadership, focus on these intrinsic qualities. Transformational leaders seek to inspire, motivate, and challenge their followers through considerate, people-oriented action (Burns, 1987; Bass, 1985). Authentic leaders exhibit self-awareness and have high moral character. Servant leaders seek to put their followers' interests first and look to their community's greater good. In several meta-analyses that sought to validate the efficacy of the MLQ, researchers found that women, more than men, exhibited transformational leadership styles (Bass & Avolio, 1996; Eagly et al., 2003). The qualities of transformational leadership line up with what we have long considered a feminine style of leadership. We associate feminine leadership with terms like cooperative, nurturing, and people persons (Appelbaum et al., 2003). Other literature on leadership styles substantiates the evidence that women lead differently than men. We see women as communal leaders and men as agentic leaders.

Through the lens of the social role theory, we began to understand why women, more than men, exhibit leadership styles that are considered feminine. The social role theory explains that labor division occurs based on men's and women's unique physical abilities. Men take on roles that benefit from their physical strength. Women adapt to roles that benefit from their reproductive biology such as, nurturing, teamwork, and cooperation. Over time, the necessitation for a division of labor dwindled, but the gender stereotypes continued (Eagly, 1978; Eagly & Wood, 2011). Society continues to socialize women and men with specific gender roles. The socialization factors now blur into other characteristic depictions, like leadership. (Carli & Eagly, 1999). Women not only display these female leadership characteristics to a higher degree

because they may feel more natural, but they also tend to display them because of the societal expectations for women leaders (Eagly et al., 2003).

The conservative and cultural normatives of rural life, embraced by those involved in agriculture, perpetuate traditional gender roles. We see these gender roles most clearly in the identities of the *farmer* and the *farm wife*. Researchers call these roles the rural hegemony. That hierarchy is a long-held tradition in rural America (Keller, 2014). As the growth of women in agricultural jobs continues, particularly for as farm operators and owners, the traditional divisions of labor breaks down (Ball, 2014; Keller, 2014). Many farm women consider themselves full partners in their farming operations, and society is beginning to recognize that status to an ever-increasing degree. However, while women are adding the role of a farmer to their job descriptions, the roles of a farm wife, mother, and often off-farm employee are not relinquishing. Farm women are becoming a part of the farm and leadership, but male counterparts do not carry their load in the household as an equal partner. This inequality leads to farm women taking on multiply identities and juggling various roles (Braiser et al., 2014; Tutor-Marcom et al., 2014; Bharadwaj et al., 2014).

The multiple identities of farm women limit their agricultural leadership engagement (Alston & Wilkinson, 1998; Pini, 2002). They lack the time and capacity to devote to more responsibility. Farm women also face ongoing prejudice within leadership pursuits. When coupled with the masculine culture of farm organizations, a lack of confidence to lead, a lack of experience and/or education, the lack of desire, the lack of support from a spouse or others, and the patrilineal nature of farm ownership, the challenges become overwhelming (Alston & Wilkinson, 1998; Kleihauer et al., 2013; Griffeth et al., 2018; Pini, 2002). The lens of social role theory allowed for the examination of how gender roles shaped rural communities.

The gendered roles of the farmer and the farm wife combined with the impacts of gender roles are preventing women from advancing in leadership. Ironically, however, relationship-based leadership style has its foundations in traditional gender roles. It appears that the very thing that could make women strong leaders may also prevent women from leadership success. This study examined the leadership styles of women in agriculture and the barriers that prevented them from leadership participation through that lens.

CHAPTER III

METHODS

This study aimed to describe the leadership styles of women in agriculture and explore the barriers to women's participation in agricultural leadership. The results of this study will help organizations, post-secondary education, and extension education in the development of leadership programming that is suited to the needs of modern agriculture. We utilized a mixed-method approach for this study, including qualitative analysis and the Delphi model. We used the Grounded Theory approach to identify themes in leadership styles' and the Delphi method to develop consensus on leadership barriers. The following objectives guided this study:

Objectives:

1. Determine select demographics of study participants, including age, ethnicity, education, current leadership role(s), involvement in agriculture, marital status, and the number of children/dependents.
2. Explore and describe the leadership styles of women in the agricultural industry in the United States.
3. Explore and describe the barriers to leadership for women in the agricultural industry in the United States.

Research Design

This research study used a mixed-methods research design to assess women's leadership styles in the agricultural industry and identify leadership barriers for women in agriculture. This study sought to answer the following questions: What leadership styles do women in agricultural leadership personally exhibit? What leadership styles do women in agriculture appreciate about a leader? What barriers do women in agricultural leadership face when seeking leadership

opportunities? With this knowledge, this study may provide a framework for recommendations for the agricultural industry.

We used a Grounded Theory design to analyze objective two of the research objectives. Glasser and Strauss (1967) describe the Grounded Theory process as a method to identify concepts, principles, and features of the phenomenon of interest. In this case, that phenomenon is leadership styles. This Grounded Theory research design relied on the first of three questionnaires to gather data.

The Delphi method, developed by Dakley and Helmer (1963) and the Rand Corporation in the 1950s, was used to analyze objective three, barriers to leadership. The Delphi method began as a tool for national security research, but today, it is a widely used in the social sciences and health industries. It has been used extensively in agricultural education research and is a valuable approach in Extension research (Lundry, 2013; Roubal, 2017; Ludwig, 1997). For this part of this research, we circulated the Delphi three times, using three questionnaires. The first questionnaire was used to gather data on all three research objectives. The second and third questionnaires were used in the Delphi process for only objective three. The literature has shown that two to three rounds are preferred and sufficient to achieve consensus in a Delphi (Hasson et al., 2000; Hsu & Sandford, 2007).

Sample Population

The literature agrees that the most important step in the Delphi process is selecting participants as the participants directly influence the quality of the study's results (Hsu & Sandford, 2007; Hasson et al., 2000; Ludwig, 1997). Non-probability sampling, like purposeful or criterion sampling, is the appropriate sampling type for a Delphi as researchers should select participants for their specific expertise in the subject matter (Hasson et al., 2000). We followed

this guideline in creating our sample population. In determining the individuals for the study, there are four characteristics suggested that each individual possesses. Those include 1) knowledge and experience with the issue under investigation, 2) capacity and willingness to participate, 3) sufficient time to participate and, 4) effective communication skills (Skulmoski et al., 2007). For this study, in addition to the criteria mentioned above, we set the following criteria for consideration in our Delphi: 1) Participant identifies as a woman, 2) Participant is involved in agriculture in some capacity, 3) Participant is perceived as a leader by themselves or others. The individuals who met those criteria points were considered the panelists or panel of experts and were invited to participate in the study.

To recruit individuals for the study, we connected with agricultural organizations, agribusinesses, and industry experts representing various agricultural production practices located throughout the country. The list of organizations we contacted can be seen in Appendix N. We requested recommendations of individuals who met the pre-identified criteria for the panel of experts. Ludwig (1997) recommends this approach to solicit a panel of experts. We sought recommendations until we reached the appropriate sample size.

Sample Characteristics

When seeking our recommendations, we placed high importance on finding a heterogeneous panel. This study aimed to provide data that applied to women in agricultural jobs from all backgrounds. We sought to provide a diversity of thought and perspective in our panelists. Heterogenous agriculture involvement included women involved in production agriculture, agribusiness, agricultural education, secondary and post-secondary capacities, and involvement in government regulatory agencies related to agriculture.

Sample Size

To determine the appropriate sample size, we relied on data and estimates from government agencies. At the time of this study, the USDA Economic Research Center estimated that agriculture and its related industries provided 3% of United States employment. The USDA did break that statistic by gender, yet the US Department of Labor estimated the number of employed women in the US to be 74.6 million in the civilian workforce. With these statistics, we estimated that the number of women employed in agriculture could be more than 2.2 million. Based on the research completed by Krejcie and Morgan (1970) on determining sample sizes for research purposes, populations over 1 million require a sample size of $N = 384$ individuals. Further literature suggests that studies with a heterogeneous sampling (compared with a homogenous sampling) need a larger sample population for the validity and relatability of the findings (Hsu & Standford, 2007; Skulmoski et al. 2007; Iqbal & Pipon-Young, 2009). For this study, we sought a sample size of at least $N = 384$, and ultimately, we achieved a sample size of 413 individuals.

Instrumentation

This study utilized three online questionnaires delivered on Qualtrics, an online questionnaire software. Qualtrics and online questionnaire research are useful for collecting, organizing, and analyzing data (De Vaus, 2013). The use of electronic correspondence also reduced collection time.

Objective one and two, the demographics and leadership styles, relied on the first instrument to gather qualitative data. For objective three, we used a three-round Delphi method to explore and describe the leadership barriers women faced within the agricultural industries. A consensus method like the Delphi is useful in social sciences because it improves the decision-

making process and can expand knowledge on the topic (Hasson et al., 2000). The following sections outline the instruments used in the three rounds of the study.

Round 1

The Round 1 questionnaire (Appendix B) included the letter of information, criteria questions, qualitative portion of the study, and the demographic questions. Once the potential panelists reviewed the letter of information (Appendix E), the questionnaire asked the criteria questions: 1) Do they identify as a woman? 2) Are they involved in agriculture? 3) Do they consider themselves a leader? If they answered "no" either of the first two criteria questions, they were sent to the end of the questionnaire with a thank you message. If they responded "no" to question three, they were asked a final question, "Why do you not consider yourself a leader?" Once that response was recorded, they were sent to the end of the questionnaire with a thank you message.

The questionnaire continued with a section for instructions on the Delphi and how we'd organized the additional rounds. This section also included definitions pertinent to the study, including a definition of agriculture, leader, and leadership style. The respondents who answered favorably to the criteria questions established our panel of experts from the sample population. Following the instructions and definitions, we asked the panelists three open-ended qualitative questions. Those questions were:

1) What are three to five characteristics would you use to describe your leadership style?
2) What five characteristics do you believe are the most beneficial in a leader?
3) What barriers or obstacles have you experienced as you have participated in agricultural leadership?

After panelists completed these questions, we asked demographic questions about age, ethnicity, education level, marital status, number of dependent children, roles in agriculture, and leadership roles.

Round 2

The second round occurred once the panelists returned the Round 1 questionnaire. We analyzed the results from questions one and two (What 3-5 characteristics would you use to describe your leadership style? What five characteristics do you believe are most beneficial in a leader?) using Grounded Theory coding procedures. This data did not move on to the next round of collection.

We organized the data from question three (What barriers or obstacles have you experienced as you participated in leadership within agriculture?) into a series of statements and themes using the constant comparative method of the Grounded Theory coding process. These statements provided the basis for the second questionnaire, which can be found in Appendix C. In the second questionnaire, we used a 7-point Likert-type scale to ask the panelist to describe their level of agreement on each of the statements from the barrier question (1.00-1.49 = Strongly Disagree, 1.5-2.49 = Disagree, 2.5-3.49 = Somewhat Disagree, 3.5-4.49 Uncertain, 4.5-5.49 = Somewhat Agree, 5.5-6.49 = Agree, 6.5-7 = Strongly Agree). The participants had an opportunity to add additional items during this round that they would rate in Round 3.

Round 3

For Round 3 we developed the instrument using the statements that did not achieve consensus in Round 2. These were the statements that had a mean rating considered “uncertain” on the Likert scale mentioned earlier. In the round three instrument, we used a 2-point scale of agree or disagree. By using a 2-point scale the panelists had to rank their level of salience with

the statement definitively. They were also asked to rate any additional statements that were added in Round 2. The final questionnaire can be viewed in Appendix D.

Expert Panel Participation and Retention

We provided the expert panelists opportunities to submit responses to each round of the questionnaire. Therefore, submission of a previous round questionnaire was not required for the panel of experts to receive and submit a later questionnaire. Failure to submit a later questionnaire did not exclude any earlier submissions of the panel of experts.

Reliability

According to Hasson et al. (2000) p. 1012, "reliability is the extent to which a procedure produces similar results under constant conditions on all occasions." Past studies have shown safety in numbers when using a Delphi design, meaning that the reliability of consensus is strengthened with a sufficient number of participants. Dalkey & Rourke (1972) found that for a Delphi panel with 11 participants, you can achieve a correlation coefficient of .70. With 13+ participants, you can achieve a .90 correlation coefficient. Given our sample population's heterogeneous nature and the anticipated drop out of participants, we sought a total number of 25 panelists to maintain reliability. Overall, we achieved this goal, with 115 panelists completing the third iteration of the Delphi process. We feel confident that the relationship between the data we gathered, and the panelists are reliable.

Validity

The face and content validity of this study was confirmed by regular peer reviews of the questionnaires by the research team and Utah State University faculty who are experts in the field and competent in questionnaire development.

Our expert panel strengthened the validity to the degree that they had appropriate expertise in the subject (Goodman, 1987). We asked questions directly related to their experiences as leaders and women in agriculture. If they met the criteria questions (Do they identify as a woman? Are they involved in agriculture? Do they consider themselves a leader?), they had sufficient expertise to speak to their leadership and agriculture experiences.

Collection of Data

Figure 8 illustrates the process we used in data collection. We started by identifying potential panelists through the recommendation process. We did this by sending organizations that aligned with the study's purpose the Request for Recommendations Letter (Appendix F) via email. A list of the organizations we contacted is included in Appendix N. Once we achieved the appropriate number of recommendations and were granted IRB approval, we finalized the potential panelist list. We began data collection with a pre-notice email, per the recommendations of Dillman (2014). The following section outlines the communication that occurred during the three rounds of the Delphi process.

Round 1

Ten days following the receipt of the pre-notice email, we sent the potential panelists an electronic notice shown in Appendix G. This letter included the link to the first questionnaire and instructions for accessing it. One week later, we sent an email to express appreciation and encourage non-respondents to reply (See Appendix I).

Round 2

A month following the closing of the first questionnaire, we sent an email (see Appendix J) to the respondents of Round 1 who responded favorably to the criteria questions. These respondents were our panel of experts. In this email, we identified the timeline and the

instructions for accessing the next questionnaire. One week following, we sent an email (see Appendix K) to express our appreciation and encourage non-respondents to reply.

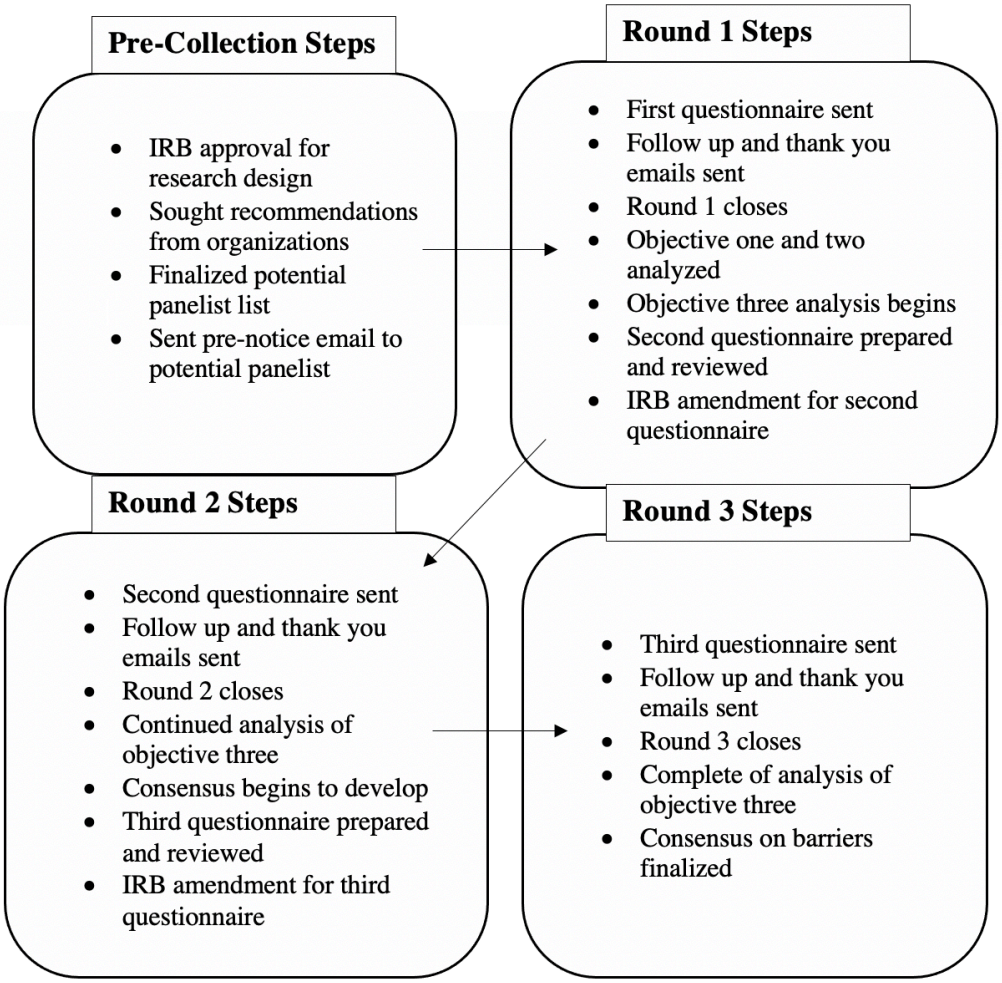
Round 3

Two weeks following the second questionnaire's closing, we sent an email (see Appendix L) to the panelist, identifying the timeline and the instructions for accessing the final questionnaire. One week following, we sent an email expressing appreciation and encouraging non-respondents to reply.

In each questionnaire, we included the instructions, deadlines, and submission details to guide the panelist through the study. We obtained Institutional Review Board (IRB) approval before beginning data collection and again after each additional questionnaire was prepared. The potential panelist and the panelist were not directly identified, although we gathered email addresses for electronic communication.

Figure 8.

Data Collection Process



Data Analysis

We analyzed the data using Microsoft Excel and SPSS. We calculated participation rates for each round to determine the effectiveness of our communication methods for future Delphi methods. The following sections outline how we analyzed each study objective.

Objective 1

We collected age, ethnicity, education, and family status data and analyzed it using frequencies and percentages. We did this to determine the demographic make-up of our panel of experts. For the data on the leadership roles in agriculture and individual involvement in agriculture, we analyzed using percentages.

Objective 2

The qualitative data gathered from the first and second open-ended questions in the Round 1 questionnaire addressed objective 2, women's leadership styles in agriculture. The panelists used various ways to answer those questions, including single words, statements, and stories. We analyzed this data using Grounded Theory analysis guidelines from Strauss and Corbin (1990). We began data analysis with open coding to break down, examine, compare, and categorize the data. This required us to take the words, sentences, and stories and create connections, so we could combine and simplify into specific leadership characteristics. We then used open coding axial coding to identify procedures to make connections between the characteristics. This included grouping similar characteristics into categories, themes, and ideas. We relied on the relationship or feminine-based leadership literature and the autocratic or masculine-based leadership literature to provide the backbone for the categories, themes, and idea grouping. Finally, we used selective coding to validate the relationships and refine the data's themes systematically. This process continued until a strong theoretical understanding of the leadership themes emerged. For this last step, we honed in on the literature from three leadership styles that we've focused on in this study, transformational, authentic, and servant leadership. We organized each characteristic using the leadership style that exhibited a strong relationship with that particular characteristics. In many cases, the characteristic fit under more than one

style. The style we felt had the most substantial relationship was listed first in the results. We utilized an excel spreadsheet as a codebook, providing a detailed description of each code, inclusion and exclusion criteria, and examples of each theme (MacQueen et al., 1998).

Objective 3

Data analysis for objective 3, the barriers to leadership for women in agriculture, was derived from the answered generated from the third opened ended question in Round 1. That qualitative data was gathered and compiled into a series of statements based on the questionnaires in Round 2 and Round 3, per the Delphi method. Like in objective two, the panelists answered the open-ended questions using words, sentences, and stories. We used a similar process as discussed above to combine the words, sentences, and stories and identify themes among the answers. Once we'd identified the statements and themes, they were set for the Delphi's following rounds. The panelist rated those statements using the Likert-type scale discussed in the instrument section.

The primary objective for our Delphi was to develop consensus on the barriers among the panel of experts. This was done by analyzing the results of the second and third questionnaires. The statements from Round 2 that met a priori consensus thresholds were considered to have achieved consensus and did not progress to Round 3. We identified a mean of 4.5 or higher as the threshold for an "agree" consensus and 3.49 or less for a disagreed consensus. The statements that moved on from Round 3 met a priori consensus when 60% of the respondents agreed on the statement.

CHAPTER IV

RESULTS AND FINDINGS

This study aimed to describe the leadership styles of women in agriculture and explore the barriers to women's participation in agricultural leadership. The results will help organizations, post-secondary education, and extension education in the development of leadership programming suited to the needs of modern agriculture. We utilized a mixed-method approach for this study, including qualitative analysis and the Delphi model. We used the Grounded Theory approach to identify themes in leadership styles' and the Delphi method to develop consensus on leadership barriers. The following objectives guided this study:

Objectives:

1. Determine select demographics of study participants, including age, ethnicity, education, current leadership role(s), involvement in agriculture, marital status, and the number of children/dependents.
2. Explore and describe the leadership styles of women in the agricultural industry in the United States.
3. Explore and describe the barriers to leadership for women in the agricultural industry in the United States.

Response Rates

The individual who provided the findings presented in this chapter consisted of individuals within the United States who identified as a woman, who were involved in agricultural industries, and who considered themselves leaders in agriculture. We invited four hundred and thirteen individuals (N = 413) to participate. One hundred and eighty-eight

participated in the first round, of which 186 (N = 186) met the qualifications to participate as an expert panelist in the Delphi process. One hundred and sixty-six individuals completed the first questionnaire, resulting in a response rate of 39% (n = 161). One hundred and twenty-four of the panelists completed round two, resulting in a response rate of 67% (n = 124). One hundred and fifteen of the panelists completed round three, resulting in a response rate of 62% (n =115). Table 5 outlines these results.

Table 5

Response Rates During Delphi Process

	Round 1 N=413, n=161	Round 2 N=186, n=124	Round 3 N=186, n=115
Questionnaires Completed	161	124	115
Response Rate (%)	39	67	62

Objective One: Determine select demographics of study participants, including age, ethnicity, education, current leadership role(s), involvement in agriculture, and marriage/family status.

Sample Population Characteristics

The following paragraphs outline the demographic profile of our 186 expert panelists.

Age

The majority of the expert panelists were 45-64 years old or defined themselves as "late-career" (n = 65; 40.4%). This was followed by panelists in their "mid-careers" (n = 54, 33.5%), and "early careers" (n = 35, 21.7%). Seven panelists were at the retirement age of 65 or more. This study's average panelist was 44 years old (SD = 12) and bordered on mid- to late-career.

Role in Agriculture

The panelists' role in agricultural work varied, with many having multiple roles. The majority of respondents identified as farm or ranch operators (*n* = 56, 35.2%). They were followed by individuals employed in agricultural education (*n* = 53, 33.3%), volunteer leaders for agricultural youth organizations (*n* = 52, 32.7%), individuals involved in agricultural commodity groups (*n* = 47, 29.56%), individuals employed in agribusiness (*n* = 39, 24.53%), individuals employed in agricultural Extension *(n* = 20, 12.58%), and individuals employed in government regulatory agencies related to agriculture. *(n* = 3, 1.89%). Other involvement in agriculture included agricultural research, agricultural marketing and publishing, agricultural advocacy, community agriculture, and agricultural non-profit employment.

Leadership Roles in Agriculture

When we questioned the panelists about their leadership roles in agriculture, 43.2% (*n* = 69) responded they were leaders in state or national-level agricultural associations, 37.7% (*n* = 44) were primary or co-primary operators on their farms or ranchers, 35.2% (*n* = 56) were leaders in local level agricultural associations, 30.8% (*n* = 59) were volunteer leaders for agricultural youth organizations, 23.3% (*n* = 37) were administrators in secondary or post-secondary agricultural education, 15.7% (*n* = 25) were mid-level managers in agribusiness or government, 10.1% (*n* = 16) were upper-level managers in agribusiness or government, 0.6% (*n* = 1) were elected government officials. Other responses included team leader, but non-managerial, nonprofit directors or management, founders of a company, and an editor for an agricultural publication.

Education

A majority of the panelists had completed post-secondary education. Thirty-four percent responded that their highest degree was a doctorate degree (*n* = 55), followed by a bachelor's degree (*n* = 50, 31.1%), then master's degree (*n* = 33, 20.5%), and professional degree (*n* = 2, 1.24%).

Marital Status

When we questioned the panelist about their marital status, 75.5% (*n* = 116) reported they were married, 18.13% (*n* = 29) were single or never married, 6.88% (*n* = 11) were divorced or separated, and 2.5% (*n* = 4) were widowed.

Children

We asked the panelists to report their total number of children and the number of children they current provided primary care for at home. The panelists reported 30.3% (*n* = 49) had no children, 44.7% (*n* = 72) had 1-2 children, 19.9% (*n* = 32) had 3-4 children, and 5.0% (*n* = 8) had more than four children. Of that, 56.9% (*n* = 91) had no children at home, 31.9% (*n* = 51) had 1-2 children at home, 10.6% (*n* = 17) had 3-4 children at home, and 0.6% (*n* = 1) had more than four children at home.

Ethnicity

Panelists identified ethnicity as follows: 92.6% (*n* = 149) identified as White, 2.5% (*n* = 4) identified as Hispanic or Latino, 1.7% (*n* = 3) identified as Black or African American, 1.9% (*n* = 3) identified their ethnicity as other, and 1.2% (*n* = 2) identified as Asian. Details of the demographic characteristics are outlined in Table 6.

Table 6

Demographic Characteristics of Delphi Expert Panelist (n=186)

Characteristic	*f*	%	M	SD
Age			44	12
Late career	65	40.4		
Mid-career	54	33.5		
Early career	35	21.7		
Retirement	7	4.5		
Role in Agriculture				
Farm or ranch operator	56	35.2		
Employed in agricultural education	53	33.3		
Volunteer for youth agriculture program	52	32.7		
Involved in agricultural commodity organization	47	29.6		
Employed in agribusiness	39	24.5		
Employed in agricultural extension	20	12.6		
Employed in agricultural government	3	1.9		
Role in Agricultural Leadership				
Leadership on state or national agricultural association	69	43.4		
Primary or co-primary operator on farm or ranch	44	37.7		
Leadership on the local level agricultural association	56	35.2		
Volunteer leader in youth organization	49	30.8		
Administration in agricultural education	37	23.3		
Mid-level management in agribusiness or government	25	15.7		
Upper-level management in agribusiness or government	16	10.0		
Elected government official	1	0.6		
Education				
High school diploma or equivalent	3	1.9		
Some college, no degree	8	5.0		
Trade/technical/vocational certificate	2	1.2		
Associates degree	8	5.0		
Bachelor’s degree	50	31.0		
Master's degree	33	20.5		
Professional degree	2	1.2		
Doctorate	55	34.1		
Marital Status				
Single, never married	29	18.13		
Married or equivalent	116	75.50		
Divorced or separated	11	6.88		
Widowed	4	2.5		
Number of Children				
0	49	30.4		
1-2	72	44.7		
3-4	32	19.9		
More than 4	8	5.0		

Table 6 continued

Number of children at home, with primary responsibility		
0	91	56.9
1-2	51	31.9
3-4	17	10.6
More than 4	1	0.6
Ethnicity		
White	149	92.6
Hispanic or Latino	4	2.5
Black or African American	3	1.9
Other	3	1.9
Asian	2	1.2

Note: Early career, 19-25 years old, mid-career 35-44 years old, late-career 45-64 years old, retirement 65 or older (Robertson, 2017).

Objective Two: Explore and describe the leadership styles of women in the agricultural industry in the United States.

Self-Perceived Leadership Styles

In the first three questionnaires, we asked the panelists to answer two open-ended questions related to leadership style. The first was about their self-perceived leadership style. The question asked, "What 3-5 characteristics describe your leadership style?" There were 144 unique statements and 85 statements with two or more responses.

Using the Grounded Theory approach (Glasser & Strauss, 1967) and leadership styles of interest (Northouse, 2018) and other literature related to leadership style, we compiled and categorized the statements by transformational leadership, servant leadership, authentic leadership, or a combination of any of the three. Many of the characteristics identified by the panelists carried over into all three leadership styles. The differences in the styles were often due to the leader's motivation rather than the characteristics they exhibited. As we did not capture motivation in this study, we used the literature as a context for defining the use of that

characteristic in relation to a specific style. It became the indicator we used to categorize the word or statement. It is important to note, specifically when analyzing Tables 9 and 10, that if a particular style was not applied to a characteristic, it did not mean that a leader exhibiting that style did not have those characteristics. It simply meant we did not include it as a hallmark of that style. Table 7 shows the unique statement, the number of responses, and the leadership style theory applied to that characteristic. It includes all statement which received five or more responses.

Table 7

Delphi Study Round 1: Self Perceived Leadership Styles (n=85)

Leadership Characteristics	Responses (*f*)	Leadership Style[a]
Communication	43	Transformational, authentic, servant
Listening skills	35	Transformational, servant, authentic
Organized*	26	
Collaborative	25	Servant, authentic
Teamwork	16	Servant, authentic
Positive	15	Authentic
Visionary	15	Transformational, Authentic, servant
Delegate	15	Servant, transformational
Honesty	15	Servant, authentic, transformational
Inclusive	14	Servant
Lead by example	14	Transformational, authentic
Creative	13	Transformational
Supportive	12	Transformational, servant, authentic
Direct	12	
Motivational	11	Transformational, servant
Passionate	11	Authentic
Empowering	10	Transformational, servant
Open-minded	10	Authentic, servant
Servant leader	10	Servant
Trustworthy	9	Servant, authentic, transformational
Integrity	9	Transformational, Authentic, Servant
Strategic	9	Transformational
Encouraging	9	Servant, transformational, authentic
Relationships	9	Servant, authentic
Empathy	8	Servant, authentic
Goal-oriented	8	Transformational, authentic

Table 7 continued

Task-oriented*	8	
Engaging	7	Transformational
Hard-working	7	Authentic
Research focused*	7	
Mentor	7	Servant, transformational
Coach	6	Servant, transformational
Inspirational	6	Transformational
Cooperative	6	Authentic, servant
Problem Solver	6	Authentic
Confidence	6	Transformational, authentic
Facilitator*	5	
Connector	5	Servant
Respectful	5	Servant, authentic
Democratic	5	Servant, authentic
Transformational	5	Transformational
People-person	5	Servant, authentic

Note. Leadership Style was determined based on the use of that word or phrase in the literature from Leadership, Theory & Practice by Peter G. Northouse (2018) in the respective chapter on each style. A characteristic with an asterisk denotes a characteristic that did not fit into any of the three key leadership styles.

Beneficial Leadership Styles in Others

The second open-ended question in the questionnaire asked the potential panelists about characteristics they generally liked to see in a leader. The question read, "What characteristics do you believe are most beneficial for a leader?" There were 157 unique responses, with 85 statements with two or more responses. We used the same analysis process for this section as in the self-perceived leadership style section. We labeled each characteristic with one or more of the three leadership styles. Table 8 shows the unique statements, number of responses, and the leadership style theory applied to that characteristic. The table includes all responses that received five or more responses.

Table 8

Delphi Study Round 1: Beneficial Leadership Styles in Others

Leadership Characteristics	Responses (*f*)	Leadership Style
Communication	66	Transformational, authentic, servant
Listening	55	Transformational, authentic, servant
Visionary	31	Transformational, authentic, servant
Honesty	27	Authentic, servant, transformational
Organized*	21	
Integrity	20	Transformational, authentic, servant
Passionate	17	Authentic
Teamwork	16	Servant, authentic
Confidence	16	Transformational, authentic
Delegate	15	Transformational, servant
Inspirational	15	Transformational
Trustworthy	15	Transformational, authentic, servant
Empathy	14	Servant
Empowering	12	Transformational
Open-minded	12	Authentic, servant
Knowledgeable	12	Authentic, transformational
Strategic	11	Transformational
Positive	11	Authentic
Committed	10	Authentic
Goal-oriented	10	Transformational, servant, authentic
Humility	10	Servant
Motivational	9	Transformational
Personable	9	Authentic
Supportive	9	Servant
Engaging	9	Transformational
Collaborative	9	Transformational, authentic
Lead by example	8	Transformational, authentic
Accountable	8	Authentic
Flexible	8	Authentic
Caring	8	Servant
Respectful	8	Servant
Compassionate	7	Authentic, servant
Works hard	7	Authentic
Patient	6	Servant
Relationship-Oriented	6	Transformational, authentic, servant
Learns from mistakes	6	Transformational, authentic
Reliable	6	Authentic
Mentor	6	Transformational,
Self-motivated	5	Authentic
Creative	5	Transformational
Participation	5	Servant

Note. Leadership Style was determined based on the use of that word or phrase in the literature from Leadership, Theory & Practice by Peter G. Northouse (2018) in the respective chapter on each style. A characteristic with an asterisk denotes a characteristic that did not fit into any of the three key leadership styles.

Objective Three: Explore and describe the barriers to leadership for women in the agricultural industry in the United States.

Round 1

The third open-ended question from the first-round questionnaire asked, "What barriers or obstacles have you experienced as you have participated in agricultural leadership roles?" We invited the panelists to list any barriers they faced. In some instances, the panelists shared short stories or quotations about the barrier. In analyzing the statements and quotations, we used the constant comparative method from Glausser & Strauss (1967) to combine similar statements and identify themes. The constant comparative approach focuses on the meaning of the items, allowing the researchers to group similar items emerging from the data, resulting in overarching themes with similar characteristics (Glaser & Strauss, 1967). To accomplish this, we analyzed the characteristics identified by the panelists to ensure inter-rater reliability (Privitera, 2017) and grouped them into emerging themes. This process generated 96 unique statements and seven overarching themes that we used as the basis for the next two rounds of the Delphi process. Table 9 outlines the themes that emerged from the data and the number of the original 96 unique statements that fit into each category. Table 10 includes each unique statement in its own theme.

Table 9

Themes of Barriers to Leadership for Women in Agriculture

Theme*	Number of Responses in Theme
Issues related to my self-perception	22
Organizational issues	14
Exclusion issues	14
Gender issues	13
Characteristics of others	12
Issues related to people's perception	8
Life issues	7
Characteristics of my leaders	4
Characteristics of my followers	4

Note: Themes are viewed from the context of how that issue inhibits leadership participation

Table 10

Delphi Round 1: Barriers to Leadership for Women in Agriculture as Identified by the Panelist and Organized into Major Themes (n=96)

Theme	Barrier
Life Issues	Time
	Stress
	Children
	Affordable childcare
	Lack of family support
	Location
	Multiply responsibilities
Gender Issues	
	Gender Bias
	Jealously from male colleagues
	The reluctance of others to be led by a female
	Being delegated stereotypical "women's work."
	The perception that women are not fit for agricultural work
	Being judged for not being feminine enough
	Glass ceiling
	Gender wage gap
	Misogyny
	Customers/clients who do not like working with women
	Not feeling safe when working with men
	Judgment based on appearance
Organizational Issues	

Table 10 continued

	Limited leadership opportunities
	Limited resources
	Lack of training opportunities
	Male-dominated industry/organization
	Cultural barriers
	Organizational politics
	Lack of support
	"Old guard" or boy's club attitude
	Having ideas that are not mainstream
	Unexpected turnovers in management
	A large workload
	Bureaucracy
	Tokenism
	Layoffs
People's perception	
	Apprehension about my skills
	Lack of respect
	Being underestimated
	Judged based on career choice
	Not being allowed to, or shamed for showing emotion
	Being perceived as a complainer
	Questioning my loyalty to the organization
	Judged for personal motives for seeking a leadership role
My self-perception	
	Not feeling confident
	Imposter syndrome
	Fearing change
	Feeling intimidated
	Fearing judgment
	Fearing failure
	Trying to keep the peace
	Not asking for help
	Lacking leadership skills
	Not being assertive enough
	Not trusting my decision-making skills
	Needing to seek approval
	Fearing a loss of control
	Struggling to be patient
	Struggling to connect with others
	Not remaining positive
	Having too much compassion (wrong to)
	Having a lack of empathy

	Struggling to take criticism
	Feeling guilt
	Needing to be perfect
Characteristics of others	
	Poor communication in others
	Lack of commitment from others
	Lack of participation from others
	Lack of trust in others
	Lack of accountability in others
	Poor listening from others
	Human resource management struggles
	Lack of creativity in others
	Lack of teamwork in others
	Misaligned priorities between myself and others
	Narrowmindedness in others
	Bullying from others
Characteristics of my leaders	
	Top-down directives
	Other leaders' reluctance to give up control
	Unclear expectation from leaders
	Micromanagement from leaders
Characteristics of followers	
	Struggling to mentor followers
	Challenges to my authority
	Lethargy from followers
	Lack of ability or skill in followers
Exclusion Issues	
	Ageism, being too young
	Ageism, being too old
	Inexperience
	Generational differences
	Lack of respect for experience
	Racism
	Inequality
	Being rejected
	Voice not being heard
	Lack of network
	Feeling taken advantage of
	No mentorship
	Feeling excluded due to religious affiliation
	Cronyism

Round 2

In Round 2, we asked the panelists to use a 7-point Likert scale to determine their agreement level for the 96 statements that emerged in Round 1. They considered the statements from the perspective of the theme and its impact on their leadership participation, both presently and in the past. Of the ninety-six statements, twenty-nine scored a combined mean score of less than 3.5, which we considered a "disagree" consensus. We removed those statements from the Delphi process. Fifteen of the statements had a combined mean score of more than 4.5, which was considered agreement, and were moved into the “agree” consensus. The remaining 54 statements, which had a mean score of 3.5-4.5, were deemed "uncertain" and moved into Round 3. Table 11 illustrates the statements the panelists identified as an “agree” consensus in Round 2. From the perspective of importance, we would consider these the most important barriers to leadership participation for the panelists.

Table 11

Barriers to Leadership Participation for Women in Agriculture where Consensus was Identified During Round 2 (n=15)

Barrier to leadership	***M***	***SD***	**Level of Agreement**
Time	5.02	1.50	Agree
Multiple responsibilities	4.93	1.55	Agree
Lack of accountability from others	4.89	1.39	Agree
Poor listening from others	4.85	1.50	Agree
Lack of commitment of others	4.82	1.52	Agree
Lack of participation in others	4.81	1.52	Agree
Other leader's reluctance to give up control	4.76	1.63	Agree
Poor communication from others	4.78	1.51	Agree
Unclear expectation from leaders	4.75	1.72	Agree
Organizational politics	4.73	1.80	Agree
Large workload	4.74	1.49	Agree
Fear of failure	4.61	1.80	Agree
Old guard or boy's club	4.59	1.89	Agree
Male-dominated industry	4.57	1.77	Agree

Table 11 continued

Stress	4.56	1.58	Agree

Note: 1.00-1.49 = Strongly Disagree, 1.5-2.49 = Disagree, 2.5-3.49 = Somewhat Disagree, 3.5-4.49 Uncertain, 4.5-5.49 = Somewhat Agree, 5.5-6.49 = Agree, 6.5-7 = Strongly Agree

Round 3

In Round 3, we organized the remaining 54 statements into the pre-identified themes. Then we asked the panelists to rate the statements using a two-point scale of agree or disagree. Statements that achieved a 60% majority after Round 3 were considered an "agree" consensus. Table 12 highlights each barrier presented in Round 3 and how the panelists scored the statement. Following this round, nine of the statements moved to disagree, and nine of the statements moved to "agree" consensus.

Table 12

Results of Delphi Round 3:Barriers to Leadership Participation for Women in Agriculture with a Mean of 3.5-4.5 "Uncertain" During Round 2 (n=53)

Theme	Barrier	Disagree (%)	Agree (%)	Level of Agreement*
Life	Children	62.4	37.6	Disagree
	Location	58.9	41.1	Uncertain
Gender	Gender bias	34.6	65.5	Agree
	Jealously from male colleagues	58.2	41.8	Uncertain
	Reluctance to be led by a female	42.3	57.7	Uncertain
	Being delegated "women's work"	39.1	60.9	Agree
	Being told you are too assertive	65.4	43.6	Disagree
	Glass Ceiling	52.7	47.3	Uncertain
	Gender wage gap	41.8	58.2	Uncertain
	Misogyny	56.4	43.6	Uncertain

Table 12 continued

	Judgment based on appearance	46.0	54.1	Uncertain
Organization	Limited leadership opportunities	56.0	44.0	Uncertain
	Limited resources	56.0	44.0	Uncertain
	Cultural barriers	76.2	23.9	Disagree
	Lack of support	56.0	44.0	Uncertain
	Having ideas that are not mainstream	50.5	49.5	Uncertain
	Unexpected turnovers in management	64.8	35.2	Disagree
	Bureaucracy	34.3	65.7	Agree
	Tokenism	63.6	36.5	Disagree
People's perception	Apprehension about my skills	50.0	50.0	Uncertain
	Lack of respect	55.1	45.0	Uncertain
	Shamed for showing emotion	54.1	45.9	Uncertain
My self-perception	Not feeling confident	42.7	57.3	Uncertain
	Imposter syndrome	53.6	46.4	Uncertain
	Feeling intimidated	45.5	54.6	Uncertain
	Fearing judgment	37.3	62.7	Agree
	Trying to keep the peace	37.3	62.7	Agree
	Not asking for help	56.4	43.6	Uncertain
	Not being assertive enough	55.4	45.6	Uncertain
	Need to seek approval	45.5	54.6	Uncertain
	Fearing loss of control	60.0	40.0	Disagree
	Struggling to be patient	44.6	55.5	Uncertain
	Struggling to take criticism	51.8	48.2	Uncertain
	Feeling guilt	45.5	54.6	Uncertain
	Needing to be perfect	30.0	70.0	Agree
Characteristics of Others	Lack of trust from others	40.4	59.6	Agree
	Human resource struggles	61.1	38.9	Disagree

Table 12 continued

	Lack of creativity in others	54.7	45.3	Uncertain
	Lack of teamwork from others	36.5	63.6	Agree
	Misaligned priorities between myself and others	42.1	57.9	Uncertain
	Narrow mindedness in others	41.1	58.9	Uncertain
Characteristics of Leaders	Top down directives	43.1	56.9	Uncertain
	Micromanagement from leaders	51.4	48.6	Uncertain
Characteristics of followers	Lethargy from others	54.2	45.8	Uncertain
	Lack of ability or skill in followers	70.1	29.9	Disagree
Exclusion	Ageism	60.6	39.5	Disagree
	Inexperience	60.6	39.5	Disagree
	Generational differences	38.3	61.5	Agree
	Lack of respect for experience	44.0	56.0	Uncertain
	Voice not being heard	45.0	55.1	Uncertain
	Feeling taken advantage of	56.4	43.5	Uncertain
	No mentorship	57.4	42.6	Uncertain
	Cronyism	45.4	54.6	Uncertain

After Round 3, we reviewed all barriers that reached consensus. Overall, the panelists identified 23 of the statements as barriers to leadership for their participation in agricultural leadership. These barriers are shown in Table 14, organized by their themes.

From the 95 original, unique statements, we found consensus on 66% of the statements. We did not seek another round. We felt that there would always be a certain number of statements where consensus would not be achieved due to the group's diversity.

Table 13

Final Results of Barriers to Leadership Participation for Women in Agriculture as Identified by Panelists after Delphi Round 3 (n=23)

Theme	Barrier
Life	Time Stress Multiple responsibilities
Gender	Gender bias Being delegated stereotypical "women's work"
Organization	Male-dominated industry or organization Organizational politics Bureaucracy "Old guard" or boy's club attitude Large workload
Self-perception	Fearing failure Fearing judgement Trying to keep the peace Needing to be perfect
Characteristics of others	Poor communication in others Lack of commitment from others Lack of accountability in others Lack of trust in others Lack of teamwork from others Poor listening from others
Characteristics of leaders	Other leaders' reluctance to give up control Unclear expectation from leaders
Exclusion	Generational differences

CHAPTER VI

CONCLUSIONS AND RECCOMENDATIONS

This study aimed to describe the leadership styles of women in agriculture and explore the barriers to women's participation in agricultural leadership. The results will help organizations, post-secondary education, and extension education in the development of leadership programming that is suited to the needs of modern agriculture. We utilized a mixed-method approach for this study, including qualitative analysis and the Delphi model. We used the Grounded Theory approach to identify themes in leadership styles' and the Delphi method to develop consensus on leadership barriers. The following objectives guided this study:

Objectives:

1. Determine select demographics of study participants, including age, ethnicity, education, current leadership role(s), involvement in agriculture, marital status, and the number of children/dependents.
2. Explore and describe the leadership styles of women in the agricultural industry in the United States.
3. Explore and describe the barriers to leadership for women in the agricultural industry in the United States.

Conclusions and Discussion

Based on this study's findings, we made several conclusions related to the leadership styles of women in agriculture and the barriers they faced in agricultural leadership roles. First, the women in agriculture who participated in this study perceived themselves as relationship-

based leaders and sought to be led by those who exhibited relationship-based style leadership characteristics. They displayed leadership styles consistent with the literature, relating to transformational, authentic, and servant leadership.

Leadership Styles

Many of the leadership characteristics we gathered to fit into the tenants of transformational, authentic, and servant leadership styles. Some of the characteristics identified were considered major tenants of one specific style. In the next section, we discussed the characteristics that fit into each style and the kind of leadership expected from female agricultural leaders, based on the data and our Grounded Theory analysis.

Transformational Leadership

The hallmark of transformational leadership is a leader's ability to be visionary, inspirational, lead by example, and be empowering. Our panelists described transformational leadership in various ways. One panelist said, "As a leader, I look to provide the big picture goals and vision to my followers. It is my job to show the team where we are going." Another said, "I am a leader who leads by example. I look to be every bit a part of the team and am often found doing the small tasks. I wouldn't ask my followers to do anything I was unwilling to do." Another panelist described herself directly as a transformational leader stating, "I strive to be a transformational leader. I want to motivate others, build effective teams, and motivated team members." The women in this study possessed other transformational leadership skills like confidence and engagement with their team and the public. Many described themselves using terms like engaging, outgoing, confident, and tenacious. One educator wrote, "I am a transformational leader, especially when working with students. I want to motivate students to develop skills that will help them be successful in their future." Throughout the data, many of the

panelists were self-described transformational leaders, and many more contained transformational leadership characteristics in their approach to leadership.

Authentic Leadership

Authentic leadership skills were also present throughout the data. Many of the women in this study possessed the authentic leadership skills of honesty, open-mindedness, collaboration, and trustworthiness. Honesty was one of the most used terms in the dataset. One panelist summed up her approach by saying, "I am honest. I maintain creditability with my followers through honest and truthful communication, even when it's hard." Another described her authentic leadership in these words, "I really encourage active listening and communication. I want all individuals to have an opportunity to engage in the discussion of group planning. I recognize that individuals have differing preferences for how they communicate and try to honor those differences." Many described themselves as hard-working and problem solvers who eliminate barriers for their followers. One panelist emphasized this by saying, "I want to be a mentor or coach to my team members. I want to help them enhance their performance and achieve their goals." Fewer of the women used the term "authentic leadership" to describe their style compared to the use of "transformational leadership" or "servant leadership." However, through the characteristics they used to describe their style, it was apparent that many of the panelists are authentic leaders and value, authentic leaders.

Servant Leadership

In the study, the panelists used many characteristics that indicate a servant leadership approach to describe their style, and some used the actual term "servant leadership" or "servant leader." As servant leaders, the panelists shared how they focused their leadership efforts on teamwork and the needs of their followers. One panelist wrote, "I am a servant leader. I ask my

team what I can do to support their efforts." The panelists described their leadership style using the terms inclusive, supportive, empathetic, and connecting their organization with their communities. One commented, "I try to be accepting of all ideas. I believe every individual deserves to be heard." Another said, "Empathy is part of my leadership approach. I look to understand other's situations and show leniency when needed." One panelist summed up her leadership style with three phrases, "Nurturing of others, apprenticeship model-guided practice towards mastery, and servant leadership style." The term "servant leader" or "servant leadership" was used as a descriptor ten times in the dataset.

Feminine Leadership Approach

All three leadership styles encompass leadership actions with high moral components, characterized by the panelists using the terms honesty and integrity. Good communication and listening skills were by far the most notable characteristics were and are mentioned in one form or another in the literature for all three leadership styles. Strong listening skills are a hallmark of servant leadership, as noted in Spear and Lawrence's (2002) analysis of Greenleaf's work on servant leadership. Panelists identified with the characteristics of all relationship-based styles but slightly favored servant leadership as the one they most identified with. Overall, there was a strong resemblance to the existing literature on feminine leadership. The use of the descriptors teamwork, empathy, inclusion, communication, and nurturing all speak to a method that is in direct conflict with masculine leadership, which is autocratic, singular, and aggressive.

Interestingly, however, the characteristics of organized, direct, task-oriented, and research-focused methods and ideas were also in the dataset to a considerable degree. They are considered hallmarks of a task-based style of leadership. The characteristic of organization the panelists very consistently applied that term to their leadership style. This lapse from what we

considered relationship-based leadership affirms the diversity of style and unique approaches for women in agricultural leadership.

Beneficial Leadership Styles in Others

When we look at the data on what the panelists used to describe the beneficial leadership styles in others, we see the same characteristics from the self-perceived data repeated. Not only are the panelists identifying as relationship-based leaders, but they are also seeking leaders who exhibit those same characteristics. If we described that data here, we would replicate almost the exact same results with minor word count differences.

These results affirm that women in agricultural leadership exhibit what the literature calls a feminine or relationship-based approach to leadership, with some noted variance. It also confirms that women in agricultural leadership seek to be led by leaders who exhibit those traits. This study indicates that female leaders perceive themselves as leaders that fit well into a leadership culture that is less hierarchal and more relationship-focused. Both aspects are vital to the future of agriculture as many agricultural organizations see the need to meet the demands of modern consumers who are asking for greater transparency and communication.

Barriers to Leadership

The second conclusion we made from this study is related to the barriers to leadership that agricultural women face. Through the Delphi process, we began to understand why women remain underrepresented in agricultural leadership, despite their apparent aptitude. From our data and the literature, we've seen barriers to leadership participation that hinder or, in some cases, inhibit their leadership aspirations.

Some of the barriers identified in the study may be faced by most leaders, regardless of gender. These include the barriers that we placed under the theme of "characteristics of others,'

"characteristics of my leaders," and "characteristics of followers." These barriers are related to other people that the individual person dealing with that barrier may have little control over. A few examples of this from the data are micromanagement by superiors, lack of engagement from team members, or poor communication from others. The main issue is with another person, not the leader themselves. These barriers were repeated often in the first round of the Delphi, and a consensus was found on some of them as early as the second round. Undoubtedly these barriers are universal, and we didn't see that gender played a large part, at least from our analysis. With that noted, in the following sections, we identified and described the barriers where gender plays a primary or secondary role in their severity.

Life Issues

The most common barrier the panelists listed was time, followed by multiple responsibilities. Both barriers where we believe were gender plays a significant role. While both male and female leaders may face barriers related to time, the Tutor-Marcom et al. (2014) study identified farm women functioning in an environment of multiple responsibilities. Responsibilities included off-farm employment, on-farm duties, housekeeping, childcare, and volunteer work. The range of responsibilities, with specific emphasis on housework and childcare, was also apparent in the studies on the topic by Shortall (2001), Pini (2002), and Alston (1998). Women lacked the capacity for leadership, not because they were inept, but because they lacked time or support to take on any other responsibilities. The barrier of multiple responsibilities leads to barriers of time, stress, and a large workload. All four are interrelated, and, unsurprisingly, consensus was found on them during just the second round of the Delphi. So, while these barriers may be barriers both genders face, being female is a significant factor in amplifying their severity. Women are being asked to maintain their household and have primary

childcare responsibilities while juggling their career and leadership roles. Taking it back to the social role theory, we see that these barriers result from only a partial breakdown of stereotypical gender roles (Pew Research Center, 2013). Meaning male roles, like breadwinning and leadership, are more androgynous, yet stereotypical female roles like childcare or housework remain, very much, a woman's role regardless of her other responsibilities. That reality is apparent in the data, as the panelists repeatedly talked about time and multiple responsibilities as barriers. Others were more specific and used childcare, housework, and gender roles to describe their barriers. From our analysis, we see this as the panelists saying the same thing using different words.

Self-Perception Issues

While the barriers under the life issues theme were some of the first in the Delphi to achieve consensus, the barriers under the self-perception theme had the highest number (21) of barriers from the initial 95 statements. The barriers to keeping the peace, fear of failure, fear of judgment, and the need to be perfect all feed into women's societal expectations. This again highlights the impact the social role theory and gender expectations have on women. Society expects women to be peacemakers, caretakers, communal, cooperative, and detail-oriented (Appelbaum et al., 2003; Eagly & Johnson, 1990; Rigg & Sparrow, 1994; Rosener, 1990; Trinidad & Normore, 2004). In this study, it was apparent that if women felt like they failed to uphold these traits, it was a barrier to their leadership advancement. The literature further substantiates this finding. The research on authentic leadership completed by Lui et al. (2015) showed that when female leaders failed to be feminine, their followers felt them to be unauthentic. Exhibiting or failing to exhibit feminine leadership traits was a double-edged sword

for both women's self-perception as a good leader and their followers' perception of them as a good leader.

The life issues and self-perceptions themes include barriers that both men and women can experience, but many have gendered components driving the outcomes. The next section focuses on issues that are specific to women leaders.

Gender Issues

Past research on this topic, misogyny, and gender bias took the forefront of women's leadership barriers in agriculture (Alston, 1998; Pini, 2002; Shortall, 2001). In the nearly twenty years since that literature was published, we have found some indications that agriculture may be making headway in breaking down those gender-based barriers. Of the original 95 statements, we categorized 12 under the theme of *gender issues*. Several others were related to gender in the themes of exclusion, organization, and self-perception, where we thought gender to be a factor. Of these original barriers related to gender, the panelists only reached consensus on four, including gender bias, delegated stereotypical women's work, male-dominated industries, and a boy's club. A consensus quickly developed on the barriers associated with male-dominated industries and the boy's club. While women are increasingly involved in agriculture, the panelists still keenly felt that working in a male-dominated industry was a barrier to their success. This may be because women feel that while they are involved in agriculture, men still control agriculture. According to past Deputy Secretary Krysta Harden of the Department Agriculture, agriculture is male-dominated because 1) men control agricultural policy, 2) men tend to control the surplus and profits produced by farms of all size, and 3) representation of farmers overwhelmingly tend to be male (Tepper Paley, 2015). This kind of control leads to the feeling of male-domination and the general boy's club attitude that is pervasive throughout

agricultural industries. From this barrier, we could say that women feel a part of agriculture and have little control of agricultural decisions, culture, or other leadership capacities.

The other barriers related to gender were gender bias and being delegated stereotypical women's work. These both emerged in Round 3 of the Delphi. The barrier of gender bias is probably a catch-all phrase used to categorize any number of other barriers, including jealously from male co-workers, reluctance to be led by a female, and the perception that women are not fit for agricultural work. Those three barriers did not reach Delphi consensus but were present in the discussion.

Being delegated stereotypical women's work was an issue that many women expressed their frustration with. One panelist wrote, "The assumption is that as a woman, I am the one who should be in charge of coordinating and planning events." Speaking on the same issues, another panelist said, "I am tired of being delegated to traditional female roles–preparing the coffee, preparing the handouts, and organizing the meeting, rather than being included in the discussion." However, despite these apparent barriers, it was positive that of the 23 statements reaching consensus, we found only four directly related to gender. This could be for a couple of different reasons. The first may be a continuation of the same attitude or culture highlighted in Sue Tebow's Facebook post (Appendix A). Women in agriculture, even the women leaders, still feel most comfortable letting men lead and take control. Or more to the point of Ball (2014), as women continue to participate and lead in the agricultural community, fewer women will experience blatant gender bias and gender-related barriers.

Rejected Barriers

While barriers that we've discussed so far are ones the panelists achieved consensus on, it is important to discuss the barriers the panelists rejected. Ageism, specifically being too young,

was repeated many times in Round 1 of the Delphi, yet it did not emerge in the final consensus. Considering the demographics of the panelists, with a mean age of 44, ageism was impacting the respondents at this point in their careers. Though it may have been an issue when they were younger, and it may become an issue when they are older. Additionally, the panelists brought up issues related to children, such as affordable childcare and a lack of maternity leave in Round 1. However, the panelists rejected children and the barriers associated with children as barriers. Again, the demographics revealed why they rejected them. Fifty-seven percent of the panelists did not currently have any children at home. While we asked the panelists to consider the barriers from both their past and present leadership experiences, one panelist shared this in her comments:

> "If I was thirty years old again, with three children at home and taking this survey, the barrier of children may have been a bigger deal. I look back on those days with rose-colored glasses. The children don't seem quite such a big deal because I am not in the middle of raising them anymore."

Considering how demographics shaped the outcomes of this study, racism was another barrier seen early on, but not in the final analysis. That panelists were overwhelmingly white, which is evident why racism wasn't a significant factor impacting their leadership potential. One panelist offered insight into this currently relevant barrier by stating:

> "I feel like I am dealing with the impacts of being a "double minority" by being a black-woman in agriculture in America. The barriers I face may mirror the rest of you in some instances and may be vastly different and amplified in others."

These barriers that did not reach consensus are valuable for those looking to use this study to gain greater insight. They are important when we consider how often we overlook minority populations. When working with populations and averages, we should not ignore the voice of the person, in this case, the women who make up the study's foundations.

Final Conclusions

From the discussion on leadership styles, we know that these women are suited for modern leadership, yet the barriers impact their greater involvement within agricultural industries. Some barriers affect men and women, and some are specific to gender. Many are by-products of our gender-based society that socialize men and women to particular roles. Stereotypical male-gendered roles break down as women take on the roles of breadwinner and leader, yet the social role theory remains in place as long as female-gendered roles stay intact. This study concludes that women are shouldering the responsibilities of childcare, household management, and the stereotypical "women's work" in the workplace, all while navigating their professional responsibilities. They are also dealing with the societal expectations of what it means to be feminine and a female leader. Women leaders in agriculture continue to face issues related to gender bias in male-dominated industries. These responsibilities, expectations, and biases lead to the barriers that are preventing women from leadership participation. Agricultural stakeholders need to recognize that the social roles associated with women are embraced by men and that they must equally shoulder the tasks related to household, childcare, and office management. They also need to do away with the expectations of what a female leader is and what a male leader is and embrace what a good leader is. In essence, as gendered roles breakdown, we need to ensure that as they breakdown entirely. Women should not be left carrying all the responsibilities formerly relegated to them as women, as well as their newfound responsibilities and power as leaders.

Recommendations and Implications

This study finds that women are prepared and have a natural aptitude for relationship-based leadership, but barriers prevent them from aspiring further in agricultural leadership. Agricultural organizations, businesses, commodity-based groups, agricultural educators, agricultural extension services, and farming operations should use the data to develop policies, practices, programming, and resources to navigate and overcome these barriers. Furthermore, the data should highlight the gender discrepancies in the female workloads within our agricultural communities and industries. We recommend that organizations consider the following measures as they strive to improve women's representation in agricultural leadership. Organizations seeking gender equity must view all of the barriers identified by the panelists and earnestly consider how they can break down those barriers for the women in their organizations.

Recommendations for Organizations and Businesses

1. Organizations should examine regular assignments given to women in a professional setting. Consider if they have implications stemming from the social role theory.
2. Organizations should seek to eliminate any formal or informal "boy's club" practices and include women in a variety of events.
3. Organizations should assign and encourage mentoring relationships among individuals without consideration of their gender. Instead, consider their aptitude and compatibility.
4. Organizations should examine policies and company cultural behaviors that inhibit employee productivity, employee retention, or employee advancement.

Seek employee input through roundtable discussions. Include women and men in these discussions equally.

5. Organizations should have paid family-leave policies that allow parents, both women, and men, to support their children, spouses, and aging parents during periods following birth, adoption, or other medical needs.
6. Organizations should lay out clear expectations during leadership transitions that allow the new leader to assume responsibilities.
7. Organizations should lay out clear expectations and benchmarks for leaders as they strive to meet organizational goals.
8. Organizations should provide ongoing training on stress and stress management techniques to help leaders and employees reduce stress levels.
9. Organizations should consider childcare options including daycare and multi-day meeting care when feasible.
10. Organizations should adjust employee compensation packages to ensure equality among male and female employees in the same pay grade.
11. Organizations should provide female-specific leadership training to allow women to learn, network, and discuss leadership goals together.
12. Organizations should encourage leaders and employees to examine internally held bias, particularly relating to gender, by allowing training and discussions on the topic.
13. Organizations should discourage a company culture where employees feel pressured to be available or on-call. Encourage employees to use vacation and sick leave without workplace repercussions.

Recommendations for Educators

1. Post-secondary educators and administrators in agricultural education should include leadership education in degree programs.
2. Educators who teach leadership education courses should include sections in their curriculum on women and male leadership styles and common barriers to leadership.
3. Educators who teach leadership education courses should ensure women's participation to avoid "men performing and women watching" and allow opportunities for both men and women to see women in positions of authority.
4. Educators should include stress management, time management, and workload management in their leadership curriculum.
5. Extension educators should develop programming supporting women leaders in agriculture by bringing women together to learn, network, and socialize.
6. Educators should seek unique ways to bring attention to surrounding women in agriculture by hosting workshops, breakout sessions, training, and podcasts on the related topic.

Recommendations for Women Leaders

1. Women leaders should support other women in their organization or workplace. They should avoid competitive behaviors and attitudes that seek to bring down or discourage other women.
2. Women leaders should lean into leadership responsibilities, including committee assignments, promotions, and other opportunities to lead.

3. Women leaders should consciously seek out other women to include on teams, on committees, and for promotions.
4. Women leaders should seek to be a mentor to other women.
5. Women leadership should seek mentorship for themselves.
6. Women leaders should vocally advocate for themselves and other women in meetings and conversations.

Recommendations for Further Research

Based on the findings of this study, future research should include:

1. Research should be conducted to analyze the barriers to leadership participation for black, indigenous, and women of color (BIPOC) within agricultural work.
2. Research should be conducted that analyzes the barriers to leadership participation for early-career women in agricultural work.
3. Research should be conducted that makes a side-by-side comparison of women and men's leadership styles in agricultural work in relation to their organizations'.
4. Research should be conducted into potential barriers for men in agricultural leadership and compare it to those of women within agricultural leadership.

By utilizing these recommendations, agricultural organizations and companies can continue to break down barriers impacting women's leadership aspirations. We hope that organizations taking a stance on these issues will encourage individuals to consider gender roles and their impact on their personal and professional lives. We will only eliminate female-specific barriers to leadership when the social role theory fades into the past, and children are socialized equally for their roles in society and home.

Final Statement

As outlined by Eagly (1987), the social role theory is a social construct that socializes children and adults to gendered roles within society. Over time, the necessity of those gendered roles has all but disappeared. Yet, we continue to feel its impact on society through the modern-day roles and responsibilities of men and women. This is especially prevalent in male-dominated industries, like agriculture, often with men and women upholding and defending the outdated structures. This study shows that women are relationship-based leaders, identifying with the styles of transformational, authentic, and servant leaders. Today's society is looking for leaders who thrive in a flat organizational structure. With agriculture's need to meet a new consumer's demands, it needs a new leadership approach, preferably, one which women could fill successfully. Yet, barriers exist that prohibit women's involvement. By identifying these barriers, we must now prepare women leaders, organizations, post-secondary education, and extension educators to facilitate their removal through policy implementation and systematic curriculum and program development. Modern-day agricultural endeavors cannot afford to ignore the growing numbers of women that can improve the industry from the inside out.

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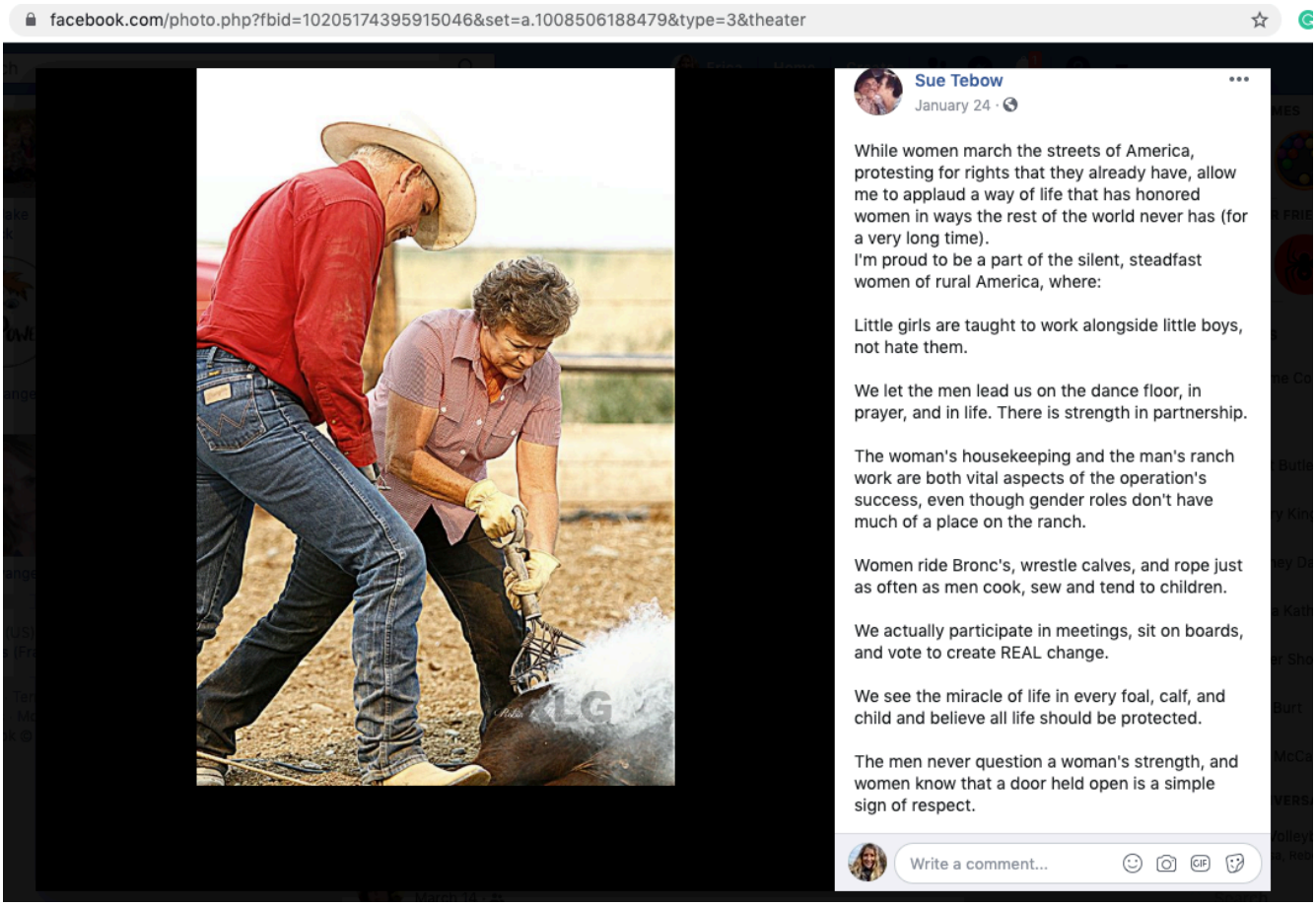
APPENDICES

Appendix A. Sue Tebow Facebook Post



Appendix B. Delphi Round 1 Instrument

UtahState University

Informed Consent Letter

Thank you for your interest in this study! Please review the letter of information below and type your name and email address in the boxes provided. You will not be able to move forward in the survey until you have completed those boxes.

Letter of Information 2.pdf

Type your name here

Please provide your preferred email address

The next set of questions will ensure you meet the qualifications for participation in this study. Proceed by clicking the arrow below.

Parameters for Participation

Do you identify as a woman?

- ○ Yes
- ○ No

Agriculture is defined as the broad industry engaged in the production of plants and animals for food, fiber, and fuel, the provision of agricultural supplies and services, and the processing, marketing, and distributions of agricultural products. For the purpose of this study the definition also includes agricultural education including secondary, post-secondary, and agricultural extension education and government agencies involved in the regulation of agricultural products.

With that definition in mind, are you involved in agriculture?

- ○ Yes
- ○ No

We have defined leadership as "a process whereby an individual influences a group of individuals to achieve a common goal. If you have influence on others working together on a common goal, you would be considered a leader.

With that definition in mind, do you consider yourself a leader?

- ○ Yes
- ○ No

Why do you NOT consider yourself a leader? Please describe.

Instructions for Delphi & Definitions

Instructions for this Delphi Study:

Thank you for your willingness to participate in this study. This study utilizes a Delphi approach to gather the data. A Delphi study is a multi-round instrument that seeks a variance of opinions on a subject and comes to consensus. It works under the thought that "several heads are better than one."

We are excited to hear your thoughts about women in leadership.

This Delphi will be composed of three surveys.

1) The first survey (this one) will include demographic questions relating to our panelist (you) and will ask you to answer three open ended questions relating to our research.

2) The second survey will take the answers from the open-ended questions from round 1 and ask that you to rate the level which you agree with the statements.

3) The third (and final) survey will use the statements we have compiled from round 1 as well as the results from round 2. We will provide you with the group average and will ask that you rank how you agree with the results of round 2 as it pertains to the statement.

Each survey is designed to take 15-20 minutes.

Before you begin this survey, we'd ask you to review these definitions and keep them in mind as you complete the questions.

Leadership: For the purpose of this study we have defined leadership as "a process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2018). If you have influence on others working on goals together, you would be considered a leader.

Leadership Style: Leadership style, by definition, is "leadership behavior with two clearly independent dimensions: the task dimensions that includes goal setting, organization, direction, and control; and the relationship dimension involving support, communication, interaction, and active listening" (Hersey and Blachard, 1969). To put it in visual terms, leadership style is expressed by evaluating two intersecting axes, one axis related to task and one related to people.

Barriers to Leadership: Any obstacle or hinderance (could be mental, physical or emotional) that prevents, limits, or slows your aspiration in leadership.

To proceed to the survey to the questions, click the arrow below.

Open-ended questions

What 3-5 leadership style characteristics would you use to describe your leadership style? Please list

What five characteristics do you believe are most beneficial to a leader? Please list

What barriers or obstacles have you experienced as you have participated in leadership? Please list

Demographic Questions

This final section of our survey will ask you to share some basic characteristics with us.

What is your age?

Select the role(s) that best describe your involvement in agriculture? Check all that apply

- ☐ Farm or ranch operator
- ☐ Employed in agribusiness
- ☐ Employed in education about agriculture (high school or post-secondary education)
- ☐ Employed in agricultural extension
- ☐ Employed in agricultural government

Qualtrics Survey Software

- ☐ Involved in agricultural commodity organization (Farm Bureau, Grange, Cattle Association, etc.)
- ☐ Volunteer for agricultural youth program (4-H, FFA, etc.)
- ☐ [ ] Other, please describe

Select the role(s) that best describes your leadership involvement in agriculture? Check all that apply

- ☐ Mid-level management in agribusiness or government
- ☐ Upper-level management in agribusiness or government
- ☐ Elected government official
- ☐ Leadership on local level agricultural association
- ☐ Leadership on state or national agricultural association
- ☐ Primary operator or co-primary operator of farm/ranch
- ☐ Administration in secondary or post-secondary agricultural education
- ☐ Volunteer leader in youth organization
- ☐ [ ] Other, please describe

What is the highest level/degree of school that you have completed? *If currently enrolled, highest level/degree received.*

- ○ Some high school, no diploma
- ○ High school diploma or equivalent
- ○ Some college, no degree
- ○ Trade/technical/vocational certificate
- ○ Associates degree
- ○ Bachelors degree
- ○ Masters degree
- ○ Professional degree
- ○ Doctorate degree

What is your martial status?

- ○ Single, never married
- ○ Married or equivalent
- ○ Divorced
- ○ Separated
- ○ Widowed

How many children do you have?

- ○ 0
- ○ 1-2

- ○ 3-4
- ○ 4+

How many children under 18 currently live at home that you have primary care for?

- ○ 0
- ○ 1-2
- ○ 3-4
- ○ 4+

Please specify your ethnicity.

- ○ American Indian or Alaska Native
- ○ Asian
- ○ Black or African American
- ○ Hispanic or Latino
- ○ Native Hawaiian or Pacific Islander
- ○ White
- ○ Other
- ○ Prefer not to answer

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Appendix C. Delphi Round 2 Instrument

Default Question Block

Thank you for your ongoing participation in this study! Please review the letter of information and type your name in the box provided.

Note: The letter of information does not appear to be displaying properly in some browsers. We recommend using Chrome to see the letter or you can email us and we can send you a copy. This is the same letter as the previous survey, so you have viewed the information before.

Letter of Information 2.pdf

Type your name here

Proceed by clicking the arrow below.

Block 1

Instructions for Round 2 of this Delphi Study:

If you completed any of the questions from Round 1, you are included in our "expert panel" for this study. Aside from this survey there will be one final survey we will ask you to complete in a few weeks.

We took your answers from the open-ended questions from Round 1, compiled and organized them into a series of words and statements.

As you may remember, questions 1 and 2 on the first survey were related to leadership styles.

We've compiled two word clouds based on your responses to those questions. In the first section of this survey, you can view those word clouds. They are simply informational, there is no need for you to do anything.

The second block of the survey relates to barriers or obstacles you've experienced in leadership. Using a 7-point scale we will ask you to determine the level you "agree" with each word or statement as it applies to the barrier to leadership. These barriers were compiled from the responses you gave us and has been organized into themes. At the end of the section, you will have an opportunity to add additional barriers

To proceed in the survey, click the arrow below.

Block 2

Responses to the question: What 3-5 leadership style characteristics would you use to describe your leadership style?

Responses to the question: What five characteristics do you believe are most beneficial to a leader?

These are simply informational, no need to answer anything. To proceed to the next section, click on the arrow below.

Block 3

Please answer the level you agree with each of the following statements as they apply to barriers or obstacles you've experienced in your leadership, both past and present. Each of the statements are organized into themes. Consider each statement from the context of that theme. The theme is listed above each block of question.

For example, if the theme is "Characteristics of followers or other leaders that are inhibiting my leadership" and the statement is "poor communication of others" it means the communication skills of other people you work with is a barrier to leadership. Not that your communication skills are a barrier to your leadership.

Definitions you may need:
Misogyny: dislike of, or contempt for, or ingrained prejudice against women.
Tokenism: the practice of making only a perfunctory or symbolic effort to do a particular thing, especially by recruiting a small number of people from underrepresented groups in order to give the appearance of sexual or racial equality within a workforce.
Cronyism: the appointment of friends and associates to positions of authority, without proper regard to their qualifications.
Glass Ceiling: an unofficially acknowledged barrier to advancement in a profession, especially affecting women and members of minorities.
Imposter Syndrome: the persistent inability to believe that one's success is deserved or has been legitimately achieved as a results of one's own efforts and skills.
Ageism: prejudice or discrimination on the grounds of a person's age.

THEME: Life issues that inhibit my leadership.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Time	○	○	○	○	○	○	○
Stress	○	○	○	○	○	○	○
Children	○	○	○	○	○	○	○
Affordable childcare	○	○	○	○	○	○	○
Lack of family support	○	○	○	○	○	○	○
Location	○	○	○	○	○	○	○
Multiple responsibilities	○	○	○	○	○	○	○

THEME: Gender issues that inhibit my leadership.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Gender Bias	○	○	○	○	○	○	○
Jealously from male colleagues	○	○	○	○	○	○	○
Reluctance of others to be led by a female	○	○	○	○	○	○	○
Being delegated stereotypical, "women's work"	○	○	○	○	○	○	○
Perception that women are not fit for agricultural work	○	○	○	○	○	○	○
Being told you are too assertive, a "bitch"	○	○	○	○	○	○	○
Being judged for not being feminine enough	○	○	○	○	○	○	○
Glass ceiling	○	○	○	○	○	○	○
Gender wage gap	○	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Misogyny	○	○	○	○	○	○	○
Customers/clients who do not like to work with women	○	○	○	○	○	○	○
Not feeling safe while working with men	○	○	○	○	○	○	○
Judgement based on appearance	○	○	○	○	○	○	○

THEME: Issues within my organization or company that inhibit my leadership.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Limited leadership opportunities	○	○	○	○	○	○	○
Limited resources	○	○	○	○	○	○	○
Lack of training opportunities	○	○	○	○	○	○	○
A male-dominated industry	○	○	○	○	○	○	○
Cultural barriers	○	○	○	○	○	○	○
Organizational politics	○	○	○	○	○	○	○
Lack of support	○	○	○	○	○	○	○
"Old guard" or boy's-club attitude	○	○	○	○	○	○	○
Having ideas that are not mainstream	○	○	○	○	○	○	○
Unexpected turnovers in management	○	○	○	○	○	○	○
A large workload	○	○	○	○	○	○	○
Bureaucracy	○	○	○	○	○	○	○
Tokenism	○	○	○	○	○	○	○
Layoffs	○	○	○	○	○	○	○

THEME: Issues related to other people's perception of me that inhibit my leadership.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Apprehension about my skills	○	○	○	○	○	○	○
Lack of respect	○	○	○	○	○	○	○
Being underestimated	○	○	○	○	○	○	○
Judged based on my career choice	○	○	○	○	○	○	○
Not be allowed to, or shamed for showing emotion	○	○	○	○	○	○	○
Being perceived as a complainer	○	○	○	○	○	○	○
Questioning my loyalty to the organization	○	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Judging personal motives for seeking leadership role	○	○	○	○	○	○	○

THEME: Issues related to my self perception that inhibit my leadership (i.e. how I see myself).

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Not feeling confident	○	○	○	○	○	○	○
Imposter syndrome	○	○	○	○	○	○	○
Fearing change	○	○	○	○	○	○	○
Feeling intimidated	○	○	○	○	○	○	○
Fearing judgment	○	○	○	○	○	○	○
Fearing failure	○	○	○	○	○	○	○
Trying to keep the peace	○	○	○	○	○	○	○
Not asking for help	○	○	○	○	○	○	○
Lacking leadership skills	○	○	○	○	○	○	○
Not being assertive enough	○	○	○	○	○	○	○
Not trusting decision-making skills	○	○	○	○	○	○	○
Needing to seek approval	○	○	○	○	○	○	○
Fearing loss of control	○	○	○	○	○	○	○
Struggling to be patient	○	○	○	○	○	○	○
Struggling to connect with others	○	○	○	○	○	○	○
Not remaining positive	○	○	○	○	○	○	○
Having to much compassion (wrong to)	○	○	○	○	○	○	○
Having a lack of empathy	○	○	○	○	○	○	○
Struggling to take criticism	○	○	○	○	○	○	○
Relating to physical health	○	○	○	○	○	○	○
Feeling guilt	○	○	○	○	○	○	○
Needing to be perfect	○	○	○	○	○	○	○

THEME: Characteristics of followers or other leaders that inhibit my leadership practices.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Poor communication with others	○	○	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Lack of commitment in others	○	○	○	○	○	○	○
Lack of participation from others	○	○	○	○	○	○	○
Lack of trust in others	○	○	○	○	○	○	○
Lack of accountability from others	○	○	○	○	○	○	○
Poor listening from others	○	○	○	○	○	○	○
Human resource management struggles	○	○	○	○	○	○	○
Lack of creativity in others	○	○	○	○	○	○	○
Lack of teamwork from others	○	○	○	○	○	○	○
Misaligned priorities between myself and others	○	○	○	○	○	○	○
Narrowmindedness in others	○	○	○	○	○	○	○
Bullying from others	○	○	○	○	○	○	○

THEME: Characteristics of my leader(s) that inhibit my leadership.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Top-down directives	○	○	○	○	○	○	○
Other leaders' reluctance to give up control	○	○	○	○	○	○	○
Unclear expectation from leaders	○	○	○	○	○	○	○
Micro-management from leaders	○	○	○	○	○	○	○

THEME: Characteristics of my followers (or subordinate staff) that inhibit my leadership.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Struggling to mentor followers	○	○	○	○	○	○	○
Challenges to my authority	○	○	○	○	○	○	○
Lethargy from followers	○	○	○	○	○	○	○
Lack of ability or skills in followers	○	○	○	○	○	○	○

THEME: Issues related to exclusion that inhibit my leadership.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Ageism, being too young	○	○	○	○	○	○	○
Ageism, being too old	○	○	○	○	○	○	○
Inexperience	○	○	○	○	○	○	○
Generational differences	○	○	○	○	○	○	○
Lack of respect for experience	○	○	○	○	○	○	○
Racism	○	○	○	○	○	○	○
Inequality	○	○	○	○	○	○	○
Being rejected	○	○	○	○	○	○	○
Voice not being heard	○	○	○	○	○	○	○
Lack of network	○	○	○	○	○	○	○
Feeling taken advantage of	○	○	○	○	○	○	○
No mentorship	○	○	○	○	○	○	○
Feeling excluded due to religious affiliation	○	○	○	○	○	○	○
Cronyism	○	○	○	○	○	○	○

Are there other barriers to leadership you have experienced that are not covered in these statements? Please share them.

Block 4

Thank you for your participation!! We look forward to hearing your responses.

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Appendix D. Delphi Round 3 Instrument

Default Question Block

Thank you for your ongoing participation in this study! Please review the letter of information and type your name in the box provided.

Note: The letter of information does not appear to be displaying properly in some browsers. We recommend using Chrome to see the letter or you can email us and we can send you a copy. This is the same letter as the previous survey, so you have viewed the information before.

Letter of Information 2.pdf

Type your name here

Proceed by clicking the arrow below.

Block 1

Instructions for Round 3:

If you completed any of the questions from Round 1, you are included in our "expert panel" for this study, so even if you did not complete Round 2, you are invited to participate in this final round.

We've taken the results from Round 2 are beginning to form a consensus on the barriers to leadership women in agriculture are facing. Based on the mean (average) response we've organized the barriers to three categories: disagree (mean <3.5), uncertain (mean 3.5-4.5) and agree (mean >4.5).

Through your input in this process, we've found that the following are barriers to leadership women in agriculture are experiencing:
-Time
-Stress
-Multiple responsibilities
-Male-dominated industry
-Organizational politics
-The "old guard" or 'boys club"
-A large workload
-Fear of failure
-Poor communication in others
-Lack of commitment from others
-Lack of participation in others
-Lack of accountability from others
-Poor listening in others
-Other leader's reluctance to give up control
-Unclear expectations from leaders

Any of the statements that had a mean score of less 3.5 in Round 2 were eliminated from this round of the study. That doesn't mean we don't recognize them as a barrier you are experiencing in your personal journey to leadership, but they are not necessarily representative of the group.

The statements that had a mean score of 3.5-4.5 moved into this round of the survey. In this round, we will ask if you disagree or agree that the statements are barriers you've experienced **(BOTH past & present)** as you've aspired in leadership. At the end of the section, we will ask you to rate the new barriers you noted from the last survey in the same format.

To proceed in the survey, click the arrow below.

Block 2

Block 3

Please answer you agree or disagree with each of the following statements as they apply to barriers or obstacles you've experienced in your leadership, both past (when you were younger) and currently. Each of the statements are organized into themes. Consider each statement from the context of that theme. The theme is listed above each block of question. In parenthesis is the mean group score from the last round.

Definitions:
Misogyny: dislike of, or contempt for, or ingrained prejudice against women.
Tokenism: the practice of making only a perfunctory or symbolic effort to do a particular thing, especially by recruiting a small number of people from underrepresented groups in order to give the appearance of sexual or racial equality within a workforce.
Cronyism: the appointment of friends and associates to positions of authority, without proper regard to their qualifications.
Glass Ceiling: an unofficially acknowledged barrier to advancement in a profession, especially affecting women and members of minorities.
Imposter Syndrome: the persistent inability to believe that one's success is deserved or has been legitimately achieved as a result of one's own efforts and skills.
Ageism: prejudice or discrimination on the grounds of a person's age.

For your reference this is the scale for the mean scores of each statement:
1- Strongly disagree
2- Disagree
3- Slightly disagree
4- Neither agree or disagree
5- Slightly agree
6- Agree
7- Strongly Agree

THEME: Life issues that inhibit my leadership.

	Disagree	Agree
Children (M=3.79)	○	○
Location (M=3.73)	○	○

THEME: Gender issues that inhibit my leadership.

	Disagree	Agree
Gender Bias (M=4.31)	○	○
Jealously from male colleagues (M=3.72)	○	○
Reluctance of others to be led by a female (M=4.19)	○	○
Being delegated stereotypical, "women's work" (M=4.2)	○	○
Being told you are too assertive, a "bitch" (M=3.81)	○	○
Glass ceiling (M=4.08)	○	○
Gender wage gap (M=4.27)	○	○
Misogyny (M=3.84)	○	○
Judgement based on appearance (M=4.13)	○	○

THEME: Issues within my organization or company that inhibit my leadership.

	Disagree	Agree
Limited leadership opportunities (M=3.7)	○	○
Limited resources (M=3.87)	○	○
Cultural barriers (M=3.5)	○	○
Lack of support (M=3.76)	○	○
Having ideas that are not mainstream (M=4.09)	○	○
Unexpected turnovers in management (M=3.56)	○	○
Bureaucracy (M=4.38)	○	○
Tokenism (M=3.5)	○	○

THEME: Issues related to other people's perception of me that inhibit my leadership.

	Disagree	Agree
Apprehension about my skills (M=3.79)	○	○
Lack of respect (M=3.55)	○	○
Being underestimated (M=4.28)	○	○
Not be allowed to, or shamed for showing emotion (M=3.57)	○	○

THEME: Issues related to my self perception that inhibit my leadership (i.e. how I see myself).

	Disagree	Agree
Not feeling confident (M=4.22)	○	○
Imposter syndrome (M=4.04)	○	○
Feeling intimidated (M=3.94)	○	○
Fearing judgment (M=4.15)	○	○
Trying to keep the peace (M=4.4)	○	○
Not asking for help (M=3.84)	○	○
Not being assertive enough (M=3.56)	○	○
Needing to seek approval (M=3.76)	○	○
Fearing loss of control (M=3.76)	○	○
Struggling to be patient (M=4.23)	○	○
Struggling to take criticism (M=3.81)	○	○
Feeling guilt (M=3.73)	○	○
Needing to be perfect (M=4.27)	○	○

THEME: Characteristics of followers or other leaders that inhibit my leadership practices.

	Disagree	Agree
Lack of trust in others (M=4.31)	○	○
Human resource management struggles (M=3.89)	○	○
Lack of creativity in others (M=3.78)	○	○
Lack of teamwork from others (M=4.1)	○	○
Misaligned priorities between myself and others (M=4.31)	○	○
Narrow mindedness in others (M=4.2)	○	○

THEME: Characteristics of my leader(s) that inhibit my leadership.

	Disagree	Agree
Top-down directives (M=4.4)	○	○
Micro-management from leaders (M=3.98)	○	○

THEME: Characteristics of my followers (or subordinate staff) that inhibit my leadership.

	Disagree	Agree
Lethargy from followers (M=3.87)	○	○
Lack of ability or skills in followers (M=3.57)	○	○

THEME: Issues related to exclusion that inhibit my leadership.

	Disagree	Agree
Ageism, being too young (M=3.7)	○	○
Inexperience (M=3.58)	○	○
Generational differences (M=4.03)	○	○
Lack of respect for experience (M=4.12)	○	○
Voice not being heard (M=3.85)	○	○
Feeling taken advantage of (M=3.67)	○	○
No mentorship (M=3.76)	○	○
Cronyism (M=3.86)	○	○

Additional statements surfaced from Round 2

	Disagree	Agree
Lack of spousal support	○	○
Lack of co-worker support	○	○
Poor leadership in your leaders	○	○
Organizational history, stuck in the past	○	○
Lack of merit based pay	○	○
Struggles from being a dual minority	○	○
Search committees & interviews skewed toward men	○	○

Block 4

Thank you for your participation!! We look forward to hearing your responses.

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Appendix E. Letter of Information

Page 1 of 1
Protocol #
IRB Exemption Date:
Consent Document Expires:

v.9

Letter of Information

Leadership Styles and Barriers to Leadership for Women in Agriculture: A Delphi Study

You are invited to participate in a research study conducted by Dr. Rebecca Lawver, Interim Department Head and Erica Louder, graduate student in the Department of Applied Sciences, Technology and Education at Utah State University.

The purpose of this research is to examine the leadership styles and barriers to leadership faced by women in agriculture in the United States. Specifically, we are interested in learning about how women in agriculture lead and the struggles they may face as they aspire in leadership roles. You are being asked to participate in this research because you've been recommended to the researchers as an individual who has experience in agriculture and leadership.

Your participation in this study is voluntary and you can end your participation at any time for any reason.

If you take part in this study, your participation will involve completing three surveys relating to your experiences as a leader in agriculture. They will take place over a series of approximately 90 days. The first survey will include three open ended questions relating to leadership styles and barriers to leadership. It will also include demographic questions, including age, ethnicity, education level, marriage and family status, involvement in agriculture, and involvement in agricultural leadership. This survey is designed to take less than 20 minutes. The second survey will be built from the results of the open-ended questions completed in the first survey. It is designed to take 15 minutes to complete. The third survey is a reiteration of the second survey with the results from that survey provided. It is also designed to take 15 minutes to complete. Your total participation in this study is expected to be less than one hour. We anticipate that 384 people will participate in this research study.

The possible risks of participating in this study include a loss of confidentiality. We have worked in a variety of ways to minimize this risk, including assigning you a respondent number and using password protected files and computers. Although you may not directly benefit from this study, it has been designed to learn more about the leadership styles and barriers to leadership for women in agriculture. We believe this data collected from this study will help future generations of women as they aspire in agricultural leadership. That impact cannot be overstated.

We will make every effort to ensure that the information you provide remains confidential. We will not reveal your identity in any publications, presentations, or reports resulting from this research study. However, it may be possible for someone to recognize the specifics you share with us. We will collect your information through Qualtrics, an online survey response site. Online activities always carry a risk of a data breach, but we will use systems and processes that minimize breach opportunities. This information will be securely stored in a restricted-access folder only available to the researchers. No other individuals will have access to the data. Your responses to surveys are stored separately from your name using assigned respondent number; it will not be linked to your personal identifying information. All identifying information will be destroyed at the end of the study, or by January 2021.

For your participation in all three rounds this study you will be entered to win one of two $25 Amazon gift cards.

If you have any questions about this study, you can contact the principal investigator Rebecca Lawver at 435-797-1254. Thank you again for your time and consideration. If you have any concerns about this study, please contact Utah State University's Human Research Protection Office at (435) 797-0567 or irb@usu.edu.

By typing your name below, you agree to participate in this study. You indicate that you understand the risks and benefits of participation, and that you know what you will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your participation in the study if you choose to do so. Please be sure to retain a copy of this form for your records.

Appendix F. Request for Recommendations Letter

November 20, 2019

Good Afternoon,

I am reaching out because you were referred to me as an organization that could help with the research I am working on for my master's thesis. I am organizing a study that examines the leadership styles of women in agriculture and the barriers to leadership those women face. We hope that the results of this study can help institutions and organization develop programming and policies that help women in agriculture succeed in leadership aspirations.

We are seeking experts to participate in the research, will be conducted using a Delphi method which is described below. The criteria for participation are, 1) individual who identifies as a woman and, 2) is involved in agriculture, and 3) considers themselves or is considered by others as a leader. I am looking for recommendations on women who would fit into this criterion and may be interested in participating.

This Delphi method will include three rounds of surveys which will be distributed electronically. The first questionnaire will be structured as an open-ended question design. The subsequent surveys will all be quantitative. The purpose of the three rounds is to try to develop consensus on the subject area, which in this case, is leadership of women in agriculture.

Do you know of individuals in your organizations that may be interested in participating? Or are interested personally in participating? If so, please respond to this email with name and contact information (preferably email address). You are welcome to forward this email to those you have in mind and they can reach out to me directly as well.

As a note to confidentiality, prior to beginning the study we will seek approval from Utah State University Institutional Review Board. The utmost confidentiality will be taken with the participants and their information as this study is completed.

Thank you in advance to you help as we develop a panel of experts for this study. We hope that through this process we can help the agricultural industry move into the future.

If you have any questions, please feel free to contact Erica Louder at 208-731-3863 or at erica.louder@aggiemail.usu.edu.

Sincerely,

Erica Louder
Graduate Researcher
Utah State University
Cell: 208-731-3863
Erica.louder@aggiemail.usu.edu

Rebecca Lawver
Assistant Professor, Agricultural Education
Utah State University
Agricultural Systems, Technology & Education
Office: 435-797-1254 Cell: 435-535-5846

Appendix G. Questionnaire Link Electronic Letter

February 17, 2019

Good Afternoon,

You are receiving this email because you were recommended by an organization you are affiliated with as an ideal participant in this study which is looking at women in agriculture. In the next few weeks you will be receiving and email for a study entitled Leadership Styles and Barriers to Leadership for Women in Agriculture: The email will be your official invitation to participate in the study to collect data about leadership styles and barriers to leadership for women in agriculture.

If you agree to participate in the study, you will be asked to complete an initial questionnaire about your leadership styles, characteristics you feel are beneficial in a leader, and any obstacles you've experienced as a leader in agriculture. This is a research design is a Delphi method, which is a multi-round approach that seeks to find consensus on the topic. If you participate with the first round, you will be asked to participate in two follow up surveys that compiled the results of the first round. Each survey is designed to take approximately 20 minutes to complete.

Thank you in advance for your participation in this study. We hope the data we collect in this study can help current and future women in agriculture aspire in their profession and our industry. You input is very much appreciated.

As a note to confidentiality, this study is approved by Utah State University Institutional Review Board. The utmost confidentiality will be taken with the participants and their information as this study is completed.

If you have any questions, please feel free to contact Erica Louder at 208-731-3863 or at erica.louder@aggiemail.usu.edu.

Sincerely,

Erica Louder
Graduate Researcher
Utah State University
Cell: 208-731-3863
Erica.louder@aggiemail.usu.edu

Rebecca Lawver
Assistant Professor, Agricultural Education
Utah State University
Agricultural Systems, Technology & Education
Office: 435-797-1254 Cell: 435-535-5846

Appendix H. First Round Questionnaire Link Electronic Letter

February 24, 2019

Good Afternoon,

I hope this email finds you well. As you may remember, about 10 days ago you received an email asking for your participation in a study entitled *Leadership Styles and Barriers to Leadership for Women in Agriculture: A Delphi Study*. The letter mentioned that you would receive a link to the survey as your official invitation for completion.

The time has come! The survey window it now open and to ask for your expertise as a woman in agriculture to provide insight into leadership styles and barriers to leadership for women in our industry. We cannot do this without your help!

Please take 20 minutes to complete this first electronic questionnaire. With participation in this first questionnaire, you will be considered an "expert panelist" for our Delphi study and will be invited to participate in the two subsequent surveys, which will follow at 2-3-week increments. The entire study should take place over approximately 90 days. At any time if you do not wish to continue your participation, you may end participation at any time without explanation.

Click the link directly below to begin the first questionnaire.

Follow this link to the questionnaire:

Take the questionnaire

Or copy and paste this URL below into your internet browser:

If you have questions, please do not hesitate to contact me. Alongside future women in agriculture, I thank you for your time and willingness to help us conduct valuable research on women in our industry.

Erica Louder
Graduate Researcher
Utah State University
Cell: 208-731-3863
Erica.louder@aggiemail.usu.edu

Rebecca Lawver
Assistant Professor, Agricultural Education
Utah State University
Agricultural Systems, Technology & Education
Office: 435-797-1254 Cell: 435-535-5846

Appendix I. First Round Thank You/Reminder Electronic Letter

March 2, 2019

Good Afternoon,

Recently, I asked for your help in completing a survey on women in agricultural leadership. If you have already completed the first survey of the study, **thank you**! Your responses will help us identify leadership styles and the barriers to leadership many women in our industry experience.

If you have not yet responded, please do so today. In just 20 minutes you can make a difference for your colleagues and future generations of women in agriculture. Click on the link directly below to begin.

Follow this link to the questionnaire:
Take the Questionnaire
Or copy and paste the URL into your internet browser.

If you have any questions, please feel free to contact me at 208-731-3863 or via email at Erica.louder@aggiemail.usu.edu.

Sincerely,

Erica Louder
Graduate Researcher
Utah State University

Appendix J. Second Round Questionnaire Link Electronic Letter

April 7, 2020

Good Afternoon,

If you are receiving this email you participated in the first round of our Delphi study that is examining the leadership styles and barriers to leadership for women in agriculture. Your input is very much appreciated.

It's time for the second round of the study. This survey is built from the results of you and your fellow panelist provided. Unlike the first round, the questions are all qualitative and you will be answering using a Likert-type scale. Full directions are included in the survey. It should take 20 minutes to complete.

The survey window is now open. Click on the link to begin completing this portion of the study.

Follow this link to the Questionnaire:

Take the Questionnaire

Or copy and paste the URL into your internet browser.

If you have any questions, please feel free to contact me at 208-731-3863 or via email at Erica.louder@aggiemail.usu.edu. I appreciate your time and willingness to participate.

Sincerely,

Erica Louder
Graduate Researcher
Utah State University

Erica.

APPENDIX K

Second Round Thank You/Reminder Electronic Letter

April 13, 2020

Good Afternoon,

I appreciate your participation in this study on women in agricultural leadership. If you have already completed the second survey of the study, **thank you**! Your responses will help us identify the barriers to leadership many women in our industry experience.

If you have not yet responded, please do so today. In just 20 minutes you can make a difference for your colleagues and future generations of women in agriculture. Click on the link directly below to begin.

Follow this link to the Questionnaire:
Take the Questionnaire
Or copy and paste the URL into your internet browser.

If you have any questions, please feel free to contact me at 208-731-3863 or via email at Erica.louder@aggiemail.usu.edu.

Sincerely,

Erica Louder
Graduate Researcher
Utah State University

Appendix L. Third Round Questionnaire Link Electronic Letter

April 27, 2020

Good Afternoon,

If you are receiving this email you participated in the first round of our Delphi study that is examining the leadership styles and barriers to leadership for women in agriculture. Your input is very much appreciated.

It's time for the third round of the study. This questionnaire is built from the results of you and your fellow panelist provided in the first round and the input from the second round. Like round 2 this questionnaire is qualitative. You will be given the statements generated in Round 1 along with the mean (average) results from Round 2. Using the same Likert-type scale you will rate the level you agree with that average results as it applies to the statement. Full directions are included in the survey. It should take 20 minutes to complete.

The survey window is now open. Click on the link to begin completing this portion of the study.

Follow this link to the Questionnaire:

Take the Questionnaire

Or copy and paste the URL into your internet browser.

If you have any questions, please feel free to contact me at 208-731-3863 or via email at Erica.louder@aggiemail.usu.edu. I appreciate your time and willingness to participate.

Sincerely,

Erica Louder
Graduate Researcher
Utah State University

Appendix M. Third Round Thank You/Reminder Electronic Letter

May 4, 2020

Good Afternoon,

We've almost made it! Thank you for your participation thus far in this study on women in agricultural leadership. If you have already completed the third survey of the study, **thank you**! Your work with this study is completed. I sincerely thank you for the time and energy you put into the responses. I truly believe we are making an impact on our industry.

If you have not yet responded, please do so today. In just 20 minutes you can make a difference for your colleagues and future generations of women in agriculture. Click on the link directly below to begin.

Follow this link to the Questionnaire:

Take the Questionnaire

Or copy and paste the URL into your internet browser.

As a final thought, we've completed the compilation of the results from Round 1, question 1 on women's leadership styles. Follow this link to see those results.

If you have any questions, please feel free to contact me at 208-731-3863 or via email at Erica.louder@aggiemail.usu.edu.

Sincerely,

Erica Louder
Graduate Researcher
Utah State University

Appendix N. Organization Contacted for Recommendations for Study Participants

Agriculture Future of America
American Agri-Women
American Association for Agricultural Education
American Farm Bureau Partners in Advocacy Leadership
American Farm Bureau Women's Leadership Committee
American Goat Society
American Grassfed Association
American Sheep Industry Association
Animal Agriculture Alliance
Blaine County Farm Bureau
California Department of Food and Agriculture
California Women in Agriculture
California Young Farmers and Ranchers
Colorado Department of Agriculture
Dairy West
Farm Journal
Farmers Market Coalition
FarmHer
Idaho Farm Bureau Federation
Midwest Organic and Sustainable Education Service
Missouri Department of Agriculture
Montana State University
National Agriculture in the Classroom
National Cattleman's Beef Association
National Farmers Union
National Grange
National Sustainable Agriculture Coalition
National Women in Agriculture Association
National Women in Agriculture Association – Alabama Chapter
National Women in Agriculture Association – Georgia Chapter
National Women in Agriculture Association – Montana Chapter
National Women in Agriculture Association – South Carolina Chapter
National Women in Agriculture Association – Tennessee Chapter
National Women in Agriculture Association – Texas Chapter
National Women in Agriculture Association—North Carolina Chapter
National Young Farmers Coalition
Ohio Department of Agriculture
Oklahoma Department of Agriculture

Oregon Department of agriculture
Pennsylvania Farmers Union
Pennsylvania State University
Practical Farmers of Iowa
South Dakota Department of Agriculture
University of Idaho
University of Nebraska
USDA Advisory Committees
Utah Farm Bureau Federation
Utah State University
Washington State University Women in Agriculture Conference
Western Growers
Western United Dairyman
Wisconsin Farmers Union
Women and the Environment
Women in Agribusiness Association
Women in Agribusiness Summit
Women Organizing Change in Agriculture
Women, Food and Ag Network