

Congress Sub Theme: Leadership and Organization

**Title: DEVEOLPING LEADERS IN IOWA  
THROUGH WOMEN IN AGRICULTURE CONFERENCES**

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**TITLE**  
**DEVELOPING LEADERS IN IOWA**  
**THROUGH WOMEN IN AGRICULTURE CONFERENCES**

**ABSTRACT**

*From ag lending to livestock production to seed sales, women have vital roles in Iowa's agricultural economy. They are taking on leadership roles and contributing to family farm and agribusiness decisions that keep Iowa agriculture vibrant and resilient. The purpose of the annual Iowa State University Extension and Outreach Women in Ag Leadership Conference is to support women with research-based information and women-centered educational programs. The overarching objectives for the conference are to connect women with other women who inspire their leadership journey, increase their belief in themselves and the power of life-long learning, give them practical leadership skills they can use, and expand their overall level of leadership capacity. The results of five years of conference surveys indicate the conferences were effective in strengthening women's leadership capacity. When Iowa State University Extension and Outreach extends knowledge and empowers women in agriculture, they can become leaders in creating a more sustainable Iowa by expanding businesses, conserving natural resources, and supporting each other as a community of women in agriculture. Women leaders in the agricultural industry are key stakeholders in the production of safe food and agricultural sustainability.*

**KEY WORDS**

women, agriculture, leadership, conference, extension, sustainable

## **PURPOSE**

### **Needs Assessment**

Women in agriculture are an important audience for Iowa State University Extension and Outreach. From ag lending to livestock production to seed sales, women have vital roles in Iowa's agricultural economy. Nearly 35,000 women are making key decisions on Iowa's 86,000 farms every day (NASS, 2017.) The Iowa Farmland Ownership and Tenure survey shows 47% of all acres in Iowa are owned by women (Zhang, 2017.) In addition to women's farming and agricultural production roles, women are a source of essential talent for Iowa's agribusinesses. Both men and women think there is more gender equality in agribusiness than in the overall business world (AgCareers.com, 2020.) These trends are likely to continue as women are more than half (57%) of the 2021/2022 undergraduates in the Iowa State University College of Agriculture and Life Sciences (ISU Institutional Research, 2021.)

As women in agriculture take on challenging leadership roles, there is a critical need for education directed specifically to this group to help them develop skills to lead from the family dinner table to the global boardroom. National survey results indicate 91% of women feel there should be more women in leadership roles in the agriculture industry (AFBF, 2019.) The top barriers women reported to achieving success in the agricultural workplace include doubt in ability, knowledge and/or skills; being taken seriously; and a lack of support and/or validation from leadership. Yet, 80% of women felt optimistic about their opportunity for advancement in ag (AgCareers.com, 2020.) While cultural norms and traditional patriarchal pressures may sometimes constrain women, they are willing to take on influential roles in agriculture with education, researched-based information, and support.

Local anecdotal evidence suggests women farm owners and farm employees, ag students, educators and non-profit professionals, and women working in smaller agribusinesses or cooperatives may lack access to professional development in Iowa. Women working in larger agribusinesses may lack access to the farming community and other agricultural industries, as well as to students or new career entrants. Due to physical distance, male-dominated work environments, or other influences, women may be isolated from their peers and may lack strong support networks. The women in ag leadership conferences were designed to meet the leadership development needs of a broad range of women in agriculture.

### **Response**

The mission of the Iowa State University Extension and Outreach Women in Ag Program (ISU WIA) is to improve the quality of life in Iowa by providing research-based information and educational programs that expand agricultural business, improve natural resource conservation, and support the community of women in agriculture.

As part of our evolving programming, ISU WIA began hosting the annual women in ag leadership conferences in November 2017. To involve stakeholders, we drew together a leadership conference advisory committee made up of women in agriculture. To differentiate the conference from other events, we offered a unique opportunity for women in all walks of agriculture to network, focus on leadership development, and connect with Iowa State University.

The conference goals were to replenish women's spirits and deepen their aspirations to lead. Whether women are leading the transition of the family farm to a new generation, volunteering for a local watershed, or guiding the adoption of new technology in an agribusiness, we hoped the conference would allow them to experience empowering wisdom and lasting friendships.

Specifically, our overarching conference objectives were to strengthen women's leadership capacity by 1) connecting them with other women who inspire their leadership journey, 2) increasing their belief in themselves and the power of life-long learning, 3) giving them practical leadership skills they can use, and 4) expanding their overall level of leadership capacity.

## **METHODS**

### **Program Development**

The in-person leadership conferences consisted of a two-day 12-hour program near the Iowa State University campus in Ames, Iowa in November 2017, 2018, 2019 and 2021. Due to the COVID-19 pandemic, we held a two-day 9-hour virtual conference in 2020. During the five conferences, a range of educational formats encouraged interaction and applied learning through campus tours, intensive workshops, plenary sessions, concurrent sessions, individual and panel presentations, networking activities, and recognition of Women Impacting Agriculture.

The advisory committee and ISU WIA worked together to 1) assess needs and involve stakeholders, 2) develop educational programs and learning objectives, 3) schedule speakers and promote the conference, 4) deliver the conference and give advisory committee members visible roles, and 5) evaluate the effectiveness of the conference and identify improvements.

Figure 1. Program Development Process



To enrich the experience of conference attendees, tours of Iowa State University highlighted agricultural programs such as those at the College of Veterinary Medicine, Department of Agriculture and Biosystems Engineering, Plant and Insect Diagnostic Clinic, Jack Trice Stadium, and Farmhouse Museum. In addition to organizing networking time and encouraging spontaneous mentoring; networking activities were offered such as Ag Web exploration, Lean In Connection Cards, and online conference Bingo. The Women Impacting Agriculture recognition program honors and spotlights women each year who are making positive changes to create a more sustainable Iowa by improving economic resiliency and stability; conserving natural resources; and enhancing the well-being of families and communities through leadership.

Choosing an appropriate mix of conference topics around key themes and vetting conference speakers were critical tasks for ISU WIA and the advisory committee. Generally, about ten talks, panels or workshops were presented each year. A partial summary of topics follows.

Table 1. Summary of Topics Presented at the 2017 to 2021 Leadership Conferences

<i>Category</i>	<i>Topic 1</i>	<i>Topic 2</i>	<i>Topic 3</i>
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<b><i>Skill Building</i></b>	Leadership on cooperative boards	Servant leadership skills	Team building and group dynamics
<b><i>Inspiration</i></b>	Remarkable women lead with confidence	Purpose driven leadership	Leading commodity groups
<b><i>Entrepreneurship</i></b>	Sleep with the cows farm stay	Organic u-pick blueberries	Swine production innovation
<b><i>Being a woman in agriculture</i></b>	Working with HR to build your career	How women of color bring their talents to Iowa ag	Overcoming career challenges
<b><i>Insights from women leaders</i></b>	Entrepreneurial scientist and business owner	Dairy processor CEO who grew up in the business	State Dept. of Natural Resources Director
<b><i>Taking care of yourself</i></b>	Wellness through balance and healthful routines	Stress on the farm and how to support each other	Celebrating with humor, connecting to sisters in ag
<b><i>Planning for leadership</i></b>	Discovering your leadership strengths	Developing your personal brand	Mapping your leadership journey
<b><i>Communication</i></b>	Conflict resolution through a mediator's lens	Communication during a crisis (i.e., disaster, pandemic)	Explaining ag to eaters

## Evaluation

Surveys were designed to assess the overall perceptions of conference attendees and whether their needs and expectations were met. The surveys also assessed how well the conference met the goals and learning objectives established by the advisory committee. Following the conference, attendees were contacted by email and invited to complete an online survey.

To better understand the audience, survey respondents were asked to identify their role in agriculture and their years of experience or age. Participants were asked to assess the extent to which they agreed the women-centered environment was important. To gain further audience insights they were asked why they attended the conference.

Respondents were asked about their learning outcomes from attending conference sessions. Skip-logic was used to assess whether respondents attended a session and if they did, how they rated their knowledge changes for one to three learning objectives. Another way to evaluate learning was to ask respondents to reflect on their top three take-away messages.

Assessing the effectiveness and quality of the conference was an important consideration. Respondents were asked about the extent to which they strengthened their leadership capacity by rating four leadership capacity indicators on a Likert scale. Similarly, survey respondents

were asked to assess the quality of the professional development by rating eight quality indicators on a Likert scale.

Additional open-ended questions provided further insights to help the advisory committee make informed decisions towards continuous improvement. Respondents were asked for suggestions on virtual events, topics for future conferences, and improvements. A final open-ended question asked what else respondents would like to share.

## RESULTS

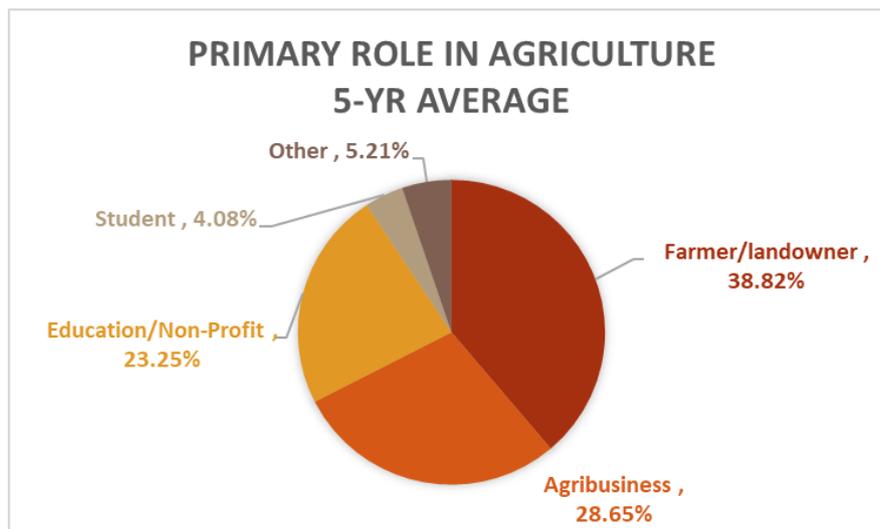
### Participation

The five annual women in ag leadership conferences were attended by a total of 590 people consisting of mostly women and a few men participating as speakers or guests. Over five years, attendees completed a total of 312 surveys for an average response rate of 52.88%.

### Demographics

Survey respondents identified their primary role in agriculture. Women in agribusiness (48.97%) outnumbered women farmers/landowners only the first year. Women in university extension, education, or non-profits represented the highest percentage of attendees (37.35%) for the virtual conference. Students represented less than ten percent of attendees each year.

Figure 2. Primary Role in Agriculture, 5-YR Average



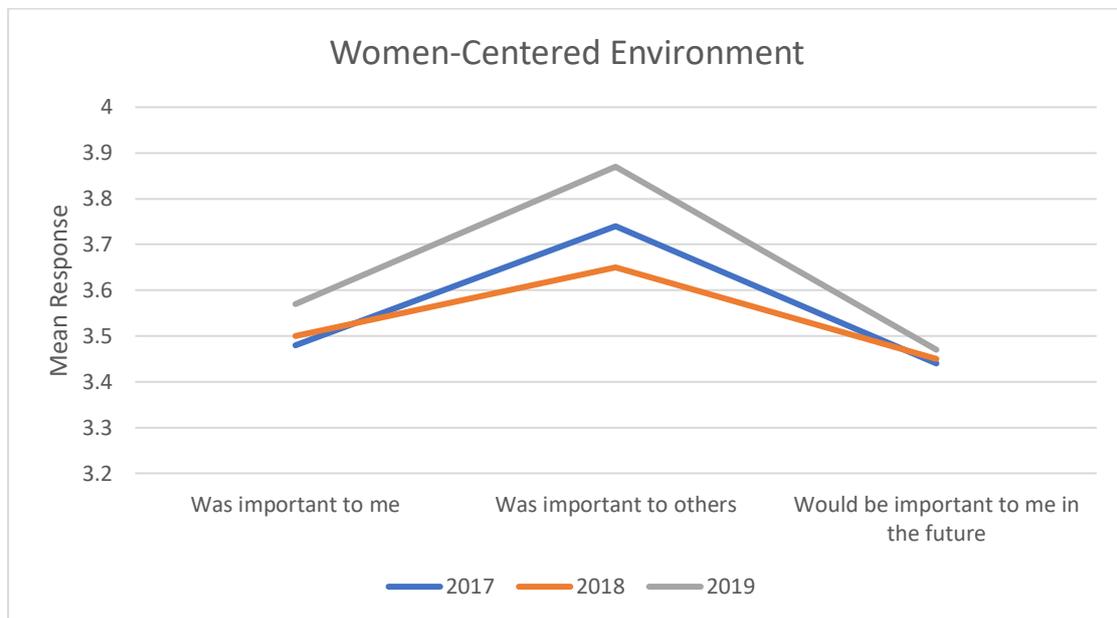
For the three years the surveys asked about experience, respondents indicated on average just over half (51.30%) had ten or fewer years of agricultural experience. Other groups were also

represented: those with 11 to 20 years of experience were 17.60%, 21 to 30 years of experience were 15.76%, and 31 or more years of experience were 15.24% of respondents. For the two years the surveys asked about age, respondents indicated on average, all age groups were represented: those 35 years old and younger were 29.03%, those 36 to 55 years old were 41.08%, and those 56 years old and older were 29.90% of respondents.

### Women-Centered Environment

For the three years (2017, 2018, 2019) questions regarding the importance of the women-centered environment were asked, the scale ranged from 1-4 ('strongly disagree,' 'disagree,' 'agree,' and 'strongly agree'). The average rank for each question ranged from 3.44 to 3.87, indicating participants agreed the women-centered environment was important.

Figure 3. Women-Centered Environment



### Why Women Attended

There were many reasons for attending the conference, including networking with other women in the agricultural industry, gaining new leadership skills and confidence, and being inspired in their leadership journeys.

Women provided the following comments about why they attended.

- a. To gain confidence in my leadership skills as I am responsible for the AITC efforts for five counties.
- b. To gain insight on being a good leader as our son and his wife transition into the farming operation.
- c. To get a better idea of whether pursuing a leadership role at my employer might be right for me, to learn more about my individual leadership qualities.

### Changes in Knowledge

Survey respondents were asked to rank their change in knowledge for each session they attended. One to three learning objectives were identified for the topics, and the scale went from 1-4 ('no change,' 'improved a small amount,' 'improved a moderate amount,' and 'greatly expanded'). Each year a variety of topics covered different aspects of agricultural leadership. Women reported improvements in knowledge for every single session throughout all five years.

### Professional Development

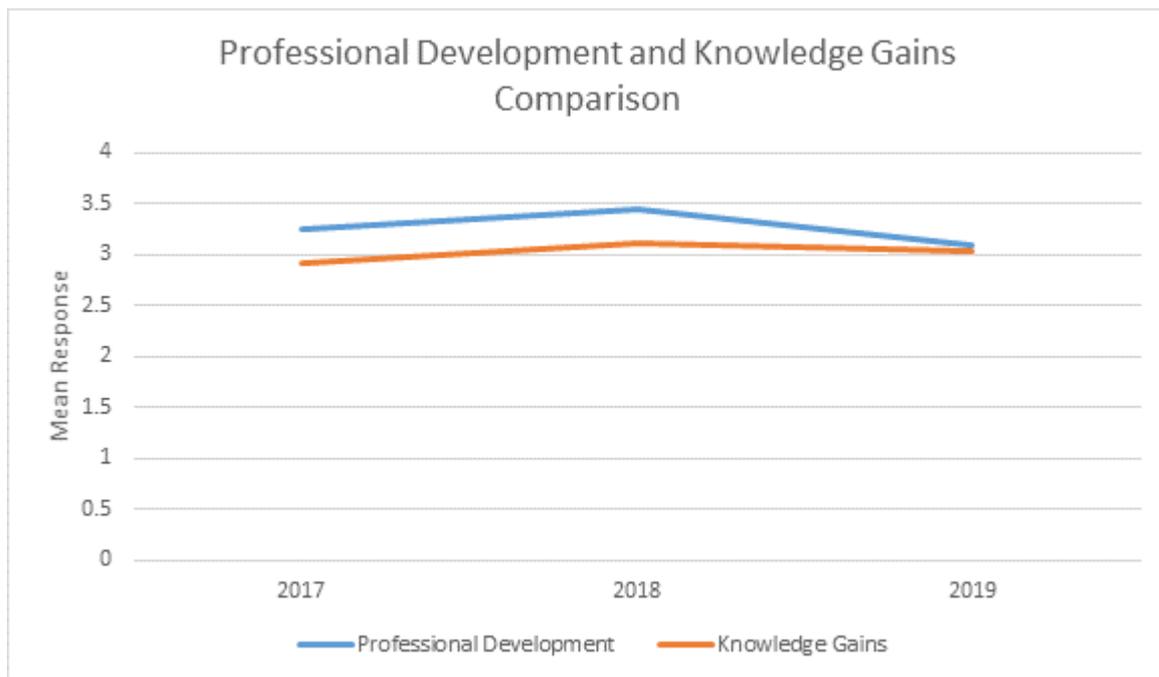
Participants were asked to share their perceptions of the quality of professional development offered. Participants ranked their responses from 1-4 ('poor,' 'fair,' 'good,' and 'excellent'). Average responses in all areas for 2017, 2018, and 2019 ranged from 3.11 to 3.51 ('good' to 'excellent'). Table 2 shows the average responses for the quality of professional development, while Figure 4 shows the comparison of the professional development construct averages and the knowledge gains.

Table 2. Quality of Professional Development

Quality Indicator		2017 (n=112)	2018 (n=20)	2019 (n=47)
Quality of resources and materials	mean	3.29	3.40	3.28
	sd	(0.677)	(0.598)	(0.649)
Interactions among participants	mean	3.35	3.35	3.51
	sd	(0.652)	(0.745)	(0.585)
Interactions with speakers	mean	3.30	3.37	3.26
	sd	(0.677)	(0.597)	(0.675)
Effective use of time	mean	3.11	3.15	3.23

	sd	(0.726)	(0.587)	(0.758)
Selection of topics	mean	3.15	3.16	3.11
	sd	(0.767)	(0.765)	(0.795)
Applicability of information	mean	3.18	3.16	3.23
	sd	(0.865)	(0.765)	(0.758)
Organization of the conference	mean	3.41	3.16	3.43
	sd	(0.607)	(0.765)	(0.580)
Overall quality of the conference	mean	3.34	3.42	3.28
	sd	(0.680)	(0.607)	(0.713)
<i>Professional development construct averages</i>	<i>mean</i>	<i>3.27</i>	<i>3.45</i>	<i>3.10</i>
	<i>sd</i>	<i>(0.540)</i>	<i>(0.565)</i>	<i>(0.636)</i>

Figure 4. Professional Development and Knowledge Gain Comparison



### Take-Home Messages

Women reflected on their top three take-home messages from the conference. Survey respondents often listed a speaker’s key message. Others reflected on women in agriculture in general or wrote about networking and learning from other women. Personal stories and advice from successful women resonated with respondents.

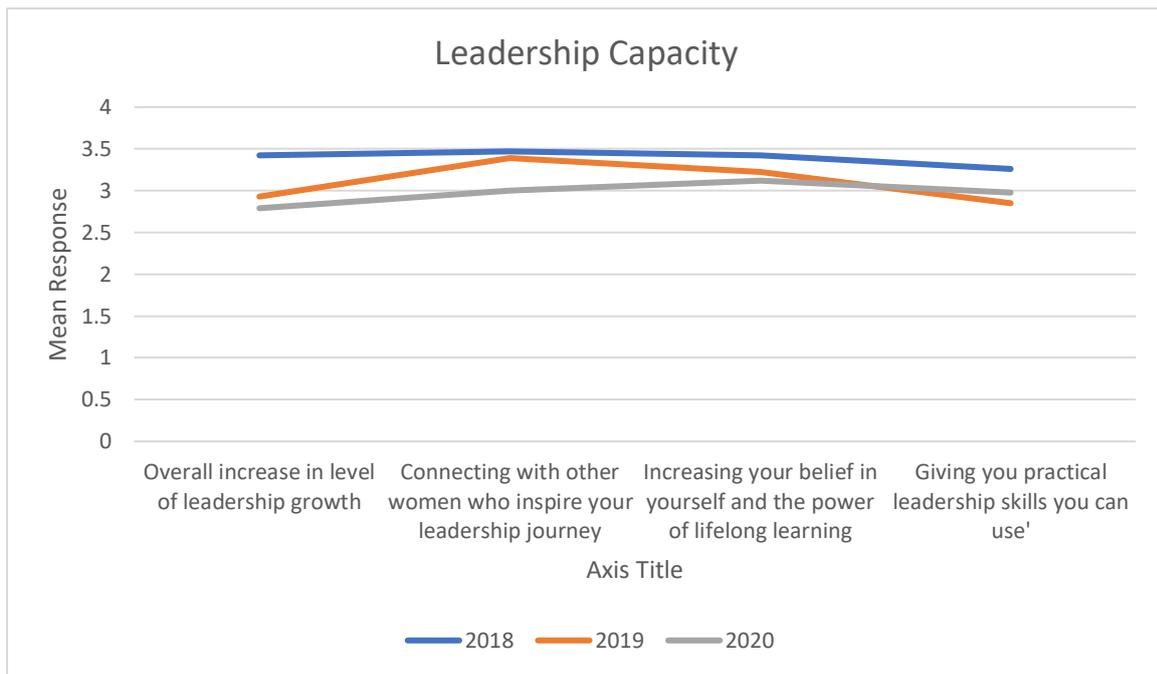
Women provided the following comments about their top take-home messages.

- a. The women in ag community is full of amazing mentors, friends, and role models.
- b. In a crisis situation, take care of the people first.
- c. Have confidence in your abilities to lead in a male-dominated field.
- d. Communication is key and there are practical steps one can take to prepare themselves for tough conversations.

**Leadership Capacity**

Participants were asked if the conference helped strengthen their leadership capacity through four key indicators representing the overall learning objectives. Some years the questions varied, but overall average responses are shown in Figure 2. Responses ranged from 1-4 ('no,' 'a little,' 'moderately,' and 'significantly'). The majority of responses showed the conference moderately or significantly strengthened women’s leadership capacity.

Figure 5. Leadership Capacity



**Virtual Conference**

The virtual conference drew women who otherwise would not have attended, and women requested more virtual opportunities in the future. Respondents requested access to handouts ahead of time so they could print them out and follow along or review instructions for workshop activities.

Women provided the following comments about the virtual conference.

- a. It has been such a challenging year and so grateful it was still held virtually!
- b. It would be great to meet in person when that's possible, but honestly, I'm not sure I would make the trip to Ames (3 hours away), if there could be a virtual option in the future that would be great.
- c. Maybe have a lunchtime breakout where people might be encouraged to eat while they chat with other participants. Publicize this opportunity ahead of the conference so people plan their brown bag lunch!

### Future Topics

Women responding to the surveys offered a variety of suggestions on topics for future leadership conferences, as summarized below.

Table 3. Summary of Topics Suggested for Future Leadership Conferences

<i>Category</i>	<i>Topic 1</i>	<i>Topic 2</i>	<i>Topic 3</i>
<i>Finance</i>	Personal money management	Business debt and business entities	Understanding financial statements
<i>Farm Business</i>	Grain marketing, niche markets	Working with an advisory team	Modernization and efficiency
<i>Teleworking</i>	Re-setting yourself after the pandemic	New rules of remote work	Technology to succeed
<i>Ag Issues</i>	Carbon sequestration	Climate resilience	Advocating for ag
<i>Community</i>	Importance of building community	Intersection of ag and non-profits	Diversity and Inclusion
<i>Being a woman in agriculture</i>	Why and how to encourage women to take on ag careers	Speaking up in a male dominated industry	Juggling on-farm and off-farm work
<i>Insights from women leaders</i>	Perspectives from women scientists	CEOs, top-level managers, farm business owners	More from the Women Impacting Ag Honorees
<i>Women in the workforce</i>	Managing family issues and personal wellbeing	Family leave policies, harassment policies	Mentoring for women in first 5 years of ag career

### Improvements

Survey respondents suggested the conferences could be marketed better to allow more women to attend. Others had logistical suggestions for longer, more in-depth concurrent sessions, and shorter plenary sessions. Some asked for more topics relevant to women

farmers, while others asked for more topics relevant to women in agribusiness. Maintaining an atmosphere of respect for women in agriculture and encouraging peer mentoring was important.

Women provided the following suggestions for conference improvements.

- a. Some of the speakers, especially the keynote speakers, were just too "touchy feely"- I crave practical, usable information that I can apply immediately to my job and daily interactions, especially in a field where I feel, occasionally, that I am not respected or taken seriously.
- b. This year felt very focused on individual action, and I'm really interested in systemic action. What can we do as a community of farmers (with women's leadership) to effect positive change on the landscape, in particular with a changing climate that is demanding that we sequester carbon?

### **What Else They Want to Share**

In a final open-ended question, many survey respondents offered encouragement for continuing the leadership conference.

Women provided the following comments on what else they want to share.

- a. Thanks for the program on leadership. It was good to see so many young women in varying roles in agriculture in our state.
- b. [Women Impacting Agriculture] was a very nice recognition program. I think we all need goals to strive for - and just maybe this is a goal that younger women in ag can strive for - to be recognized for their accomplishments.
- c. I think this event has the ability to really grow wings and have a future impact on women in agriculture. Don't be afraid to raise the bar on what you're trying to achieve. Make a difference!

## **CONCLUSION**

### **Audience Understanding**

Women farmers/landowners, women in agribusiness, women educators and non-profit professionals, and students of agriculture valued the opportunity to network and learn from each other. Generally, ISU WIA and the advisory committee did a good job of reaching these audiences. Students were the exception; indicating we can improve our outreach to them.

Over half of the conference attendees had ten or fewer years of career experience, indicating young women's desire to develop their leadership capacity. The conference also attracted women with many years of career experience, indicating an opportunity to develop intentional mentoring activities.

The women-centered environment was valued by conference attendees. When women are comfortable, they are better able to absorb new information. Networking with other women in the industry was a top reason why women attended. Talking with other women helps them process how to implement new skills and behaviors. Gaining confidence and being inspired were other top reasons. Having strong and successful role models in agriculture encourages women to reach for their goals.

### **Learning Outcomes**

Women gained knowledge through the leadership conferences. Identifying learning objectives and speakers who can deliver practical and clear messages helped women succeed. The change in knowledge trend over the five years of the conferences increased slightly, indicating consistently strong learning outcomes. Survey respondents took the time to reflect on and write about their top three take-away messages. These often resonated around conference themes, indicating they were helpful in deepening learning as topics can be addressed in multiple ways. The responses also echoed strong speaker messages and clear calls to action, indicating this helped women remember information.

### **Quality and Effectiveness**

Survey results demonstrate the conferences were effective in meeting four overarching objectives for expanding women's leadership capacity. Interestingly the more abstract leadership capacity indicators of connecting with other women who inspire their leadership journey and increasing their belief in themselves, and the power of life-long learning were rated the highest. The more practical indicators of giving them practical leadership skills they can use, and overall increasing their level of leadership growth, were rated slightly lower. While women valued practical skills they can immediately put to work, they also recognized the longer-term benefits of gaining confidence, becoming inspired, and sharing their leadership journey with others.

The overall quality of the professional development was highly rated. The trend line indicates a slight improvement over time. Resources and materials, and organization of the conference, were top rated quality indicators each year. This indicates women valued materials and organizational tools they could use to deepen their knowledge and stay engaged. The indicators of interaction with speakers and interaction among participants were highly rated; indicating women valued the friendly supportive atmosphere of the conferences.

### **Insights for the Future**

Women valued both the in-person and virtual conferences. This paves the way for more virtual programming, whether during the annual conference or throughout the year. In addition to hosting the annual conference, we can experiment with more frequent interactions with our audience and create new ways to support them virtually such as peer groups and lunch hour seminars.

Survey respondents gave us relevant and timely topic ideas. Gathering this feedback from our stakeholders is essential for responding effectively to their needs. Women are just as interested in tackling far-reaching topics like climate change, as they are in tackling personal challenges like re-setting themselves and their careers after the pandemic. To make the conferences better, respondents challenged us to keep the conference enjoyable but not too touchy-feely, and to balance the needs and interests of women from all walks of agriculture.

Women were gracious and honest with their feedback. They care about the women in ag leadership conference and want to see more women benefit from this opportunity.

### **Private and Public Value**

When Iowa State University Extension and Outreach extends knowledge and empowers women in agriculture, they can become leaders in creating a more vibrant, resilient, and sustainable Iowa by expanding businesses, conserving natural resources, and supporting each other as a community of women in agriculture. Women leaders in the agricultural industry are key stakeholders in the production of safe food and agricultural sustainability.

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