

Statement of Professional Contributions and Scholarship

Introduction

Agriculture in Marathon County creates over 11,745 jobs and accounts for \$2.7 billion in economic activity (Deller, 2014). As of April 2015, there were 582 dairy farms in Marathon County providing housing for 63,791 milk cows with herds ranging in size from nine to over 3,000 head. In 2012, a needs assessment survey of all 693 dairy farms in Marathon County was conducted by this agent ([Exhibit 1](#)). The agricultural operators responding (n=197) (2 = highest priority, 0 = lowest priority), thought the highest priorities of the Agriculture Agent should be as an information source for producers (1.50) and to do on-farm consulting (1.27). Topics of interest to respondents were nutrition and feeding (1.55), milk quality (1.52), herd health (1.51), and reproduction (1.48). Using the survey results, exit comments made by the previous agriculture agent, and personal observations, this agent identified the following major areas to focus programming efforts: 1) Dairy Production Management, 2) Farm Business Management, and 3) General Gardening Practices. General observations within the community lead this agent to include agricultural awareness as part of the programming efforts.

Dairy Production Management

The dairy industry remains paramount to the success of agriculture in Wisconsin. Dairy profitability is affected greatly by various factors, including the rearing of dairy replacements. Dairy replacements are key to maintaining a financially positive dairy operation as they provide genetic progress and improvement for the dairy herd. A consistent supply of dairy replacements is essential for the production of a continuous supply of milk, which is needed for income. Dairy programming in Marathon County has revolved around helping farmers maintain a healthy supply of replacement heifers.

Dairy farmers regularly seek out ways to improve their herd genetics. The primary way most farmers accomplish this is through the use of artificial insemination (AI) of their herd. Many producers are not trained to AI their animals and are therefore dependent on an AI technician to do so. Small farms have fewer animals to breed and AI technicians give preference to large farms that have more animals. In many cases smaller farms are unable to find an AI technician to breed their animals. At the end of 2012 AI companies discontinued the practice of teaching farmers how to breed their own cattle.

To aid farmers in their ability to breed their own cattle this agent conducted five two-day AI clinics. Seventy - three people attended the five AI training sessions. Class size was capped at 15 people to allow everyone adequate time with practice animals. Participants were from 50 different farms with four of the farms located in Michigan, one farm located in Minnesota, and two of the farms located in Illinois. Twenty-seven of the farms were dairy farms and 23 were beef farms. The curriculum for this program was developed by this agent and the Taylor County Agriculture agent. This agent received a Henry L. Ahlgren Award to attend an AI training program in Olds, Alberta Canada with the intent of refining the developed course curriculum. After attending the course in Olds, Alberta Canada additional handouts were created for use in the AI programs. For these clinics this agent taught producers:

- The advantages and disadvantages of artificial insemination and natural service
- How to pass an insemination rod through the cervix of a bovine reproductive tract that has been excised during the slaughter process and a live animal
- How to correctly remove semen from the semen tank and load the semen into the insemination gun

Due to the importance of genetic selection this agent discussed the process of selecting animals that will be parents of the next generation and the tools available to help with this selection process. This agent created a fact sheet on selection which was peer reviewed and edited by colleagues before being distributed to farmers attending these programs ([Exhibit 2](#)). The fact sheet has been distributed to

farmers attending other meetings and can be found on the UWEX Dairy Team website under Reproductive and Genetic Resources. This fact sheet was developed into an article titled "Get the herd

Statement of Professional Contributions and Scholarship

Dairy Production Management (continued)

you want via selection" for the *Wisconsin Agriculturalist* magazine, with a circulation of 25,000 ([Exhibit 3](#)).

Participants were asked to evaluate the AI trainings with a post meeting evaluation and a long term evaluation to see what practices were implemented. Evaluations immediately after the program (n = 73) showed that on average participants increased their knowledge about AI from 2.1 to 3.5 on a Likert scale from 1 = very little knowledge to 4 = a lot of knowledge ([Exhibit 4](#)).

Successful completion of this program resulted in students that were able to inseminate their own cattle. Long term evaluation of both 2015 classes and the April 2016 class were conducted (n=12) ([Exhibit 5](#)). Results showed that three participants were each able to decrease the number of bulls on their farm by one animal. Research done by Mississippi State University estimated the cost of owning a bull at \$1,445 per year. A decrease in three bulls results in a total savings of \$4,335 for the three farms. Six farmers indicated that they were able to breed their own cattle due to participating in this course. A total of 107 animals were bred by participants of the course. The average breeding charge per animal by the AI companies was reported as \$9.50. This resulted in first year savings of \$1,017 because the animals were bred by the farmer. This agent presented a poster at the 2016 Agriculture and Natural Resources Extension conference on the results and impacts of this program ([Exhibit 6](#)). This project won the State Search for Excellence award in Livestock Production in 2017. Agents Schlessler and Stuttgart presented to colleagues about this project at the 2017 Joint Council of Extension Professionals meeting. Attendees were given a pre-post style evaluation to assess their understanding of the AI program. Evaluations immediately after the program (n = 9) showed that on average participants increased their knowledge about the importance of hosting an AI course from 2.1 to 3.8 on a Likert scale from 1 = very little knowledge to 4 = a lot of knowledge.

The recognition of this agent's knowledge of reproduction by peers led to programming opportunities with beef producers as well as dairy reproduction.

While cow reproduction affects the success of both dairy and beef producers, beef producers also depend on the reproductive success of the bull. In 2014 this agent was part of a team of agents that presented at Cow/Calf meetings across the state. As part of these meetings this agent created and gave a presentation on bull reproductive health. This presentation has been used by two other agents in their own programming on bull reproductive health. This agent developed a fact sheet on bull reproductive health, which was peer reviewed by fellow agents, to accompany the presentation ([Exhibit 7](#)). This fact sheet was submitted for a WACAA communication award, where it won second place. This agent created a YouTube video on bull reproductive anatomy ([Exhibit 8](#)). The fact sheet and video can be found on the Wisconsin Beef Information Center website. An evaluation of the 2014 Cow/Calf meetings showed an increase in knowledge from 1.99 to 3.32 (n = 78) (Likert scale: 1 = very little knowledge, 4 = a lot of knowledge) ([Exhibit 9](#)). Several participants commented that they planned to semen test their bull the following year as a result of this program. Drovers CattleNetwork shared this agent's fact sheet and YouTube videos which resulted in this agent being contacted by Ag News 890; a radio station in Fargo, North Dakota; to do an interview regarding bull reproductive health.

This agent's work with the Cow/Calf meetings led to the opportunity to participate in two Farmer-to-Farmer projects in Nicaragua. This agent educated producers, technicians and veterinarians on bull reproductive health. This agent conducted a five-day workshop in March of 2015 with technicians and veterinarians training them how to properly conduct a bull health examination and what needed to be assessed during this exam. In February 2016 this agent was asked to return to Nicaragua to do a train-

the-trainer session with technicians from Comisión Nacional Ganadera de Nicaragua (CONAGAN). This agent spent two weeks working with technicians teaching them how to conduct a proper breeding soundness examination along with checking sperm morphology and motility. Technicians were taught how to properly use a microscope and how to collect semen samples using an electroejaculator. Results from these breeding soundness examinations were given to the farm owners. A checklist in Spanish of **Statement of Professional Contributions and Scholarship**

Dairy Production Management (continued)

what to look for during a breeding soundness examination was created for the technicians ([Exhibit 10](#)) and is available through CONAGAN. Technicians working for CONAGAN continue to do the breeding soundness examinations ([Exhibit 11](#)) and have found that out of 350 bulls tested 20% had poor sperm quality. One technician that attended the 2015 course, commented at the end of the 2016 training, "I did not recognize the value of checking the bull before, even after the last class I did not think it was valuable. However, after seeing the semen analysis and feeling the deformities in the testis I appreciate the training more, and understand that both the bull and the cow have to be tested. "

The cost of raising heifers is important to farmers because while necessary to guarantee a future supply of replacement animals, these animals produce no income for the farmer until they have their first calf. In 2013 the UWEX Dairy Team conducted a statewide Intuitive Cost of Production Analysis (ICPA), which examined the cost of raising calves and heifers across the state. This agent collected survey data from four Marathon County farms of varying size and management styles to assist with this study ([Exhibit 12](#)). The data collected was included in the state-wide data set ([Exhibit 13](#)). The cost of raising calves on these four farms ranged from \$5.01 to \$9.96 per calf per day with the average being \$6.43 per day over 68 days which is \$1.09 more than the state average. The cost of raising a dairy heifer from weaning to freshening on these four farms ranged from \$2.69 to \$5.63 per heifer per day with the average being \$3.77 per day which is \$0.73 more than the state average. The results of the ICPA study were presented by this agent at the annual Heifer Raising Meeting put on by UWEX Clark, Marathon, and Taylor Counties in 2014 and again with updated feed data in 2015.

While collecting ICPA data this agent collected data on the age of heifers at first calving from each of the farms. Using the UWEX Heifer Pregnancy Rate Tool this agent determined that two of the farms had excessive rearing days, which indicated they were not getting heifers pregnant as soon as they should which meant increased cost for the farms. This agent worked with both of the farmers and suggested management changes, specific to each farm that would allow the producers to reduce the age of heifers at first calving. When this agent started consulting with one of the producers, the age at first calving on their farm was 28.1 months. This was significantly more than the accepted industry goal of 24 months for first calving. As a result this producer was incurring an additional cost of \$271 per heifer, or \$14,881 on a per herd basis based on industry standards. After implementing some of the suggested management practices, the producer was able to reduce the age of heifers at first calving to 25.2 months and was able to reduce the excess rearing cost to \$95 per heifer, or \$2,281 on a per herd basis. This resulted in a savings for this farm of \$12,600 ([Exhibit 14](#)). The UWEX Heifer Pregnancy Rate Tool was presented to producers along with results from working with these two producers at the annual Heifer Raising Meeting put on by UWEX Clark, Marathon, and Taylor Counties in 2015.

Milk quality is a vital area of interest to farmers in Marathon County. Overall production loss due to milk quality issues for the average U.S. Dairy Farm is estimated at \$110 per cow annually (Pinzon-Sanchez, Cabrera, and Ruegg; 2011). Bulk tank sampling tells you the farms' total somatic cell count and can even give an indication if a problem exists, but it does not pinpoint the culprit animals. Some dairy producers have employed the use of Dairy Herd Improvement (DHI) companies to tell them somatic cell count (SCC), butterfat and protein percentages. Although DHI testing gives a reliable and accurate estimation of SCC, it does not identify which quarter or quarters are affected with mastitis. DHI testing takes a composite sample of all four quarters, giving you one score for each animal. Early detection of

the presence of an infection can lead to timely management decisions which can reduce the economic impact of mastitis. In 2017, this agent and the Taylor County Agriculture Agent applied for and received a North Central Region Innovative Grant to conduct a milk quality study. This study was designed to collect milk samples from all four quarters of 200 animals. Samples were collected prior to the attachment of the milking machine after the cow was prepared for milking. The SCC in each sample was calculated using the Dairy Quality RT10 device and DHI. The Dairy Quality RT10 device is a cow-side meter that allows farmers to test the SCC in the milk and make a determination to treat or not. A

Statement of Professional Contributions and Scholarship

Dairy Production Management (continued)

worksheet was developed to collect the same information from each farm ([Exhibit 15](#)). Samples were collected from 20 farms with one farm being collected twice due to discrepancies in the SCC obtained from the RT10 device and DHI. The RT10 device was designed to be used as a cow-side test to measure somatic cell counts as a composite of all four quarters. Farmers in this study were interested in knowing the SCC in individual quarters. When conducting this study it was determined that milk samples from individual quarters needed to settle after collection and prior to being read by the RT10 device. Air bubbles obtained during the sample collection process obscured the viewing lens of the RT10 device and prevented the device from obtaining an accurate reading. If farmers want to collect samples from individual quarters they need to let the air bubbles dissipate prior to using the RT10 device. The correlation of SCC obtained by the RT10 device and DHI are being analyzed with the help of Dr. Matt Akins, Extension Dairy Specialist and Dr. Pam Ruegg, UW-Madison Milk Quality Specialist. Preliminary results indicate there is a 96% correlation between the SCC obtained by the RT10 device and DHI. Utilizing the RT10 device allows producers to measure SCC in individual quarters and treat only those that are affected. DHI takes a composite milk sample which can result in a dilution effect so subclinical or clinical mastitis in a quarter is not detected. The standard threshold for subclinical mastitis is 200,000 cells/ mL while the threshold for clinical mastitis is 400,000 cells/ mL. If a composite reading was taken with the RT10 device in this study subclinical mastitis would have been missed in 21 quarters and clinical mastitis in seven quarters ([Exhibit 16](#)). The RT10 device allows farmers to quickly and accurately identify quarters that need treatment. This tool helps them to react sooner and to catch a cow before signs of clinical mastitis are evident. Research shows that early detection results in improved cure rate and lower SCC (Virginia Tech). This could lead to direct economic benefits in the form of SCC premiums, decreased discarded milk, and the prevention of the spread of a contagious organism to other cows.

Another challenge to the dairy industry is consumer opinion toward farmers. In 2014, Mercy for Animals released two animal abuse videos. In response to the videos this agent applied for and received an animal safety grant to conduct train-the-trainer sessions for animal handling. This grant provided the opportunity for this agent and the Taylor County Agriculture Agent to collaboratively develop four bilingual train-the-trainer sessions. These sessions educated 51 people on proper animal handling and dairy beef quality assurance. This agent taught part of the dairy beef quality assurance curriculum and developed an animal handling presentation. This agent developed a pre- and a post-test for participants to complete ([Exhibit 17](#)). The participants were required to teach employees of the host dairy farm how to move cattle. This agent supervised this process and gave feedback and advice to the class participants. Farm owners indicated that they liked the hands-on training the workers received and felt this practice helped to solidify the concepts that were taught.

Employee management is an issue that many farmers struggle with. As a farm operation grows the need to have and manage employees is inevitable. To help farmers manage their employees this agent was part of a team of agents that developed and presented a program titled, "How Prepared Are You? Managing Dairy Employees Effectively." This program was a two day event that was offered in two different locations on the Eastern side of the state. This agent taught attendees how to conduct a

performance review ([Exhibit 18](#)). The program was for farm owners and managers, and was offered in both English and Spanish. The presentations were all translated into Spanish and an interpreter was used for each of the programs. In 2016 this program received the ESP Distinguished Team Award and the Diversity Multi-Cultural Team Award.

Observations of the community lead this agent to include programming on agricultural awareness. Through this programming, efforts were made to reach agricultural professionals and the general public. Networking is important for agriculture professionals as a way to stay up-to-date with current farming practices. This agent coordinates a quarterly agricultural professional's breakfast with an average attendance of 14 people. Attendees of this breakfast are from various departments within USDA, as well as bankers, lawyers, educators, and employees of local agriculture cooperatives. Long term survey

Statement of Professional Contributions and Scholarship

Dairy Production Management (continued)

of attendees shows that they benefit professionally by attending these meetings and that they see value in having the meetings on a quarterly basis (n=15) ([Exhibit 19](#)).

Respondent's comments on outcomes they have from attending these breakfasts included:

- "I pass the information along to instructors and students. It is another connection to help students achieve their goals. For example the FSA loan information, we have posted on the bulletin board for the students."
- "In my business, it is important to understand daily process for Ag/Dairy businesses. I have often related what I learn back to my sales team so they know/understand their customers better."

This agent developed strong working relationships with the two local television stations in order to educate the public on agricultural and horticultural issues. Over the last four years this agent has been able to reach households in 12 Central Wisconsin counties through live interviews each week. This agent is responsible for developing the topics and scripts for the weekly interviews. Topics range from animal agriculture questions to home horticulture. This agent attempts to keep topics relevant and timely. An evaluation of this effort was sent to contacts of this agent, and a request to complete the evaluation was made on each television station and through their social media sources. Responses to the evaluation were positive overall and were from seven farmers and 55 non-farmers (n = 62) ([Exhibit 20](#)).

Respondent's comments on these segments included:

- "She is a wealth of information about many agriculture and horticulture topics. I watch Heather mainly for the horticulture segments, but it's amazing what I learn about agriculture along the way."
- "She has reinforced (and some times (*sic*) expanded on) topics in the Level One Master Gardener class. She also provides timely information about area events, pest management, etc."
- "Heather is very informative. Easy to understand. She explains things in a very easy manner to understand. I have recorded many segments to share with my family if they are not in to watch her."

Respondents were asked if they were less fearful of food production as a result of the news segments. The average score was 4.39 (Likert scale: 1 = Disagree, 5 =Strongly Agree) showing that consumer opinion of animal agriculture has become more positive as a result of watching the interview segments done by this agent. Comments from respondents indicated that watching these interview segments increased their knowledge of animal agriculture and home horticulture, and in some cases allowed respondents to better communicate with farming relatives. Changes in behavior were noted in both the farming responses and the non-farming responses. Some respondents indicated that they now used calf blankets or better understand when calves get cold. Other respondents indicated that they now look for pests in their garden or they control disease issues as they arise.

Outreach through various forms has been critical for this agent. In 2014 this agent created a Facebook page and a Twitter account dedicated to agricultural events going on in Marathon County. The

two accounts were linked together to allow simultaneous posting in both places. Upcoming events or web-posts are shared through social media. This agent creates weekly web-posts on the Marathon County UWEX website. Every Monday a new post is published regarding animal agriculture. Subscribers to the site receive an email notifying them of the new post. Creating various and diverse ways to network with clientele is important to the relevancy of UWEX. To further diversify outreach efforts this agent has created several YouTube videos that have been shared and posted on the UWEX Dairy Team website, the Wisconsin Beef Information Center Website, and the Marathon County UWEX website. Information on social media efforts was shared with 81 colleagues at the 2016 JCEP meeting, and was shared with attendees at the Wisconsin Associated County Extension Committees (WACEC), Inc. North Central Region meeting, and the State WACEC meeting. In February of 2017 this agent presented a poster "Using Social Media and Web-based Technology to enhance the reach of Extension Programming" at the National JCEP Leadership Conference in Orlando Florida.

Statement of Professional Contributions and Scholarship

Farm Financial Management

Keeping adequate financial records is important for any business, including farming. The financial accounting software program QuickBooks®, a computerized financial recordkeeping tool, has become popular among farm owners and managers. Training for this software program is limited and may not be specifically provided for agricultural clientele. In 2014, 2015, and 2016 this agent collaborated with the University of Wisconsin Center for Dairy Profitability (UW CDP) Assistant Director, Jenny Vanderlin, and UW-River Falls Department of Agricultural Economics Professor, Dr. Stan Schraufnagel, to offer three workshops in Marathon County. Participants developed a set of farm financial records while learning basic accounting skills and how to modify the QuickBooks® software program to meet their farm business recordkeeping needs. In 2015 and 2016 this agent developed and presented a lesson on the Financial Model, stressing how record keeping is part of the equation for making long term business decisions. As part of the post program survey in 2016 participants were asked if they understood the importance of recordkeeping and how records fit into the Financial Model, seven respondents strongly agreed, three agreed, and one was unsure (n = 11) ([Exhibit 21](#)). In 2017 this agent partnered with Sandy Stuttgen, UWEX Taylor County, Simon Jette-Nantel, UW-River Falls and UWEX, Nate Splett, Outreach Specialist, UW CDP, and Jenny Vanderlin, Assistant Director of UW CDP, to host a two-day farm financial workshop. Pre- and post-workshop evaluations were used to determine attendees' value and understanding of the topics. All rankings were selected using a Likert Scale, 1=low and 5=high. Participants rated the usefulness of "Understanding the Financial Model" as 4.7; average attendee change in knowledge was 3.3 to 4.3 (n = 7) after hearing the topic presented by this agent. Participants rated the usefulness of "Understanding Record Keeping" as 4.8; average attendee change in knowledge was 3.1 to 4.3 (n = 7) after hearing the topic presented by Schlessler, Stuttgen and Vanderlin.

Programming for women in agriculture is greatly needed as surveys have shown that farm women are an underserved audience. For the last five years this agent has partnered with the Wood County Agriculture Agent to offer an annual Heart of the Farm Conference. The principle behind this program is to give women a place to feel they can ask questions and learn without feeling like they are being judged by male farmers. In 2016, this agent discussed the use of social media to promote the farm business. Participants showed a change in knowledge from 3.1 to 4.2 (n = 24) (Likert scale: 1 = poor, 5 = excellent) ([Exhibit 22](#)). To further educational efforts for women, this agent organized a Quarterly Farm Women's Luncheon group. This group met for the first time in February 2015 and has had a total of eight luncheons. Topics for these luncheons have included; financial management, genomics 101, food preservation, calf care 101, soil testing, milk testing, straw bale gardening in large round bales, straw bale gardening in square bales. This agent taught the presentations on genomics, soil testing, and both straw bale gardening presentations. Typical attendance was seven women with the first and the last

luncheon each having 24 participants. Participants of these luncheons were polled on the value of the program (n = 5), ([Exhibit 23](#)). While the survey results indicated there was interest from program participants, the number of participants was low. This agent plans to work on branding and publicizing this program to grow program attendance in 2018.

The continuation of the family farm is dependent on not only having knowledgeable people to take over but is also dependent on having a smooth transition from one generation to the next. This agent has worked with three families in Marathon County on farm succession. This agent collaborated with UW CDP Outreach Specialist Joy Kirkpatrick when working with the first farm. With the second farm, this agent took the lead role, and consulted with the Wisconsin Farm Center to conduct the financial analysis of the farm and the younger generation. This agent worked with the first two families on communication and strengthening business relationships and responsibilities of the younger generation. The dynamics of the third farm were such that they did not need help with strengthening the relationship between the older and younger generation.

Statement of Professional Contributions and Scholarship **Farm Financial Management (continued)**

In 2016, the UWEX Agriculture Agents from Clark, Lincoln, Marathon, and Taylor Counties and the Clark County Family Living Agent partnered to hold an educational program on farm succession. Forty-five people attended this workshop. This agent took part in planning the program and co-presented the "5 D's: Disagreements, Death, Divorce, Disaster, and Disability." Fifteen people attended the session on the 5 D's and completed the post-workshop evaluation. Respondents showed an increase in knowledge from 2.4 to 4.13 (n = 15) (Likert scale: 1 = low, 5 = high) after listening to the presentation. Participants indicated that as a result of this program they planned to implement family meetings, and begin estate planning ([Exhibit 24](#)). Long term evaluations were sent to all forty-five attendees, seven of the evaluations were returned. Twenty-nine percent of the respondents were 75% completed with their transfer plan, 14% were 50% completed, 29% were 25% completed, and 29% had not started a transfer plan. Forty-three percent of respondents had completed 75% or more of their will or estate plan as a result of their attendance at this meeting.

General Gardening Practices

Interest in home gardening and sustainability has increased in recent years. In 2011 the Marathon County Board adopted a resolution to become the Healthiest County in the state. One way in which the county strives to accomplish this goal is by increasing residents' knowledge about proper eating and exercise habits. Part of this educational effort relies on teaching residents how to be sustainable and how to grow their own produce. UWEX and the North Central Wisconsin Master Gardener Association actively work to promote best practice principles that result in healthy lawns, gardens, and gardeners in Marathon County. Starting in 2009 the Marathon County Extension office offered a raised bed gardening program for low income families. In 2013, this agent took over the project and created separate lessons for the youth that attended the program. Through the funding of a North Central Region Innovative grant this agent was able to hire an intern. From 2013 to 2014, 25 families gained knowledge about growing produce in their own "backyard". "Backyard" was defined as containers on a patio; or in a community garden; or their own backyard. The impacts of this project were presented at the North Central Region All Colleague Conference in 2015 and were demonstrated through a poster presented at the Local Food Summit and the JCEP meeting in 2015 ([Exhibit 25](#)). One participant commented: "It is something my family can do together outside. It is exciting to watch seeds sprout/plants grow/ harvest food."

In 2015, the efforts of this garden project were expanded to work with 4-year-olds from the local Young Men's Christian Association (YMCA). A series of six classes were held during the summer to

engage youth in the gardening process. Classes were held at the Weston YMCA and the Wausau YMCA. Throughout the summer youth were exposed to various vegetables from the garden and asked if they had ever tried the vegetables before. After trying each vegetable youth were asked if they liked it, and if they would try the vegetable again. At the end of the summer a parent survey was sent home with the students. Parents were asked if they had any knowledge of the program from conversations with their students, if they noticed a change in the students attitude toward vegetables, and if they planted a garden or would plant a garden in the future as a result of the summer program. Results of this effort were presented at the North Central Region Wisconsin Associated County Extension Committees meeting and the UWEX North Central Region Meeting ([Exhibit 26](#)). From the survey results we learned that eight out of nine parents felt the program positively altered their children's eating habits. All respondents planned to plant a garden the following year as a result of the child's enthusiasm for the project.

Being able to grow vegetables from seed is very rewarding to someone that wants to be sustainable. In 2015, 2016, and 2017 this agent worked with the local television station to teach the viewing audience how to start seeds ([Exhibit 27](#)). During the presentation this agent discussed when to start seeds, various ways of starting seeds, and tips on how to have healthy seedlings to plant in the garden.

Statement of Professional Contributions and Scholarship

General Gardening Practices (continued)

This agent has developed a presentation and taught training sessions in 2016 and 2017 on seed starting and square foot gardening for Wausau Urban Community Gardens. One participant stated, "So pumped I am going to menards (*sic*) for boards and compost, then going home to paperplate!" (n = 7) ([Exhibit 28](#)). Starting seeds on a paper plate was discussed in the class and believed to be what this comment is referring to.

Volunteer leadership is important for an association to prosper. In 2015, this agent offered two Master Gardener Volunteer (MGV) Level one classes. During the second class, this agent enlisted the help of current MGVs to teach some of the course content ([Exhibit 29](#)). The MGVs were given a guide to the course content and allowed to use predeveloped lessons and to add to the lessons as they felt necessary. Seven MGVs took part in this opportunity. Each of the MGVs met with this agent several times before the lesson to go over the course content and to identify what was missing and what needed to be added. With guidance from this agent, the MGVs were responsible for developing the curriculum for the course they chose to teach. Students in the class were very happy with the presentations given by the MGVs. The MGVs had a great time adapting the lessons to their style of teaching and appreciated the opportunity to practice their teaching skills. This agent appreciated learning from the MGVs and picked up a few ideas to help enhance future classes.

To provide more horticultural information to the county residents in 2014, this agent created a Facebook page dedicated to the horticultural needs of the community. Master Gardener events are posted to this page along with current horticultural information. This agent created a horticultural website that is linked from the main Marathon County UWEX website. The site was created so visitors to the page could sign up to receive recent posts.

Summary of Programming

Programming efforts of this educator were assessed in a survey sent to all program participants in August 2016. Survey participants have either attended a program relating to animal agriculture or home horticulture. Respondents were asked to assess their overall satisfaction with the agent, and to comment on changes they have implemented as a result of attending various programs (n = 33) ([Exhibit 30](#)). Respondent's comments on this agent's programming included:

- "I have been able to share information in various content areas with my students and their parents that have impacted thousands over the past four years. Many of my students have

participated in a number of education programs offered by Heather. I greatly appreciate the partnership that we have with the Extension Office and Heather's willingness to work with my students and provide opportunities for them."

- "Relationships. she does great job on building relationships which builds trust. great lady. very helpful (*sic*)."

The long term programming analysis shows that the work done by this agent is relevant and valued by the program participants. It is the goal of this agent to continue to offer relevant programming to the farmers in Marathon County and the surrounding area. This agent plans to develop programs with office colleagues to reach wider and more diverse audiences. Hispanics are employed on larger farms leading to a need for bilingual employee management programs. Women in agriculture have traditionally been an underserved audience in the farming community. This agent plans to increase programming related to Hispanic employee training and women in agriculture. Work with reproduction has provided this agent an opportunity to program with the UWEX Beef Team. As Extension reorganizes I look forward to a future where I can use innovative media, such as Twitter, Facebook, and YouTube to deliver relevant, cutting edge, research based information to dairy and beef producers across the state.