

**Department of Agriculture and Life Sciences (DALs)
Post Tenure Review**

Faculty Member: Kevin Jarek
Title/Rank: Crops, Soils, and Horticulture Agent/Professor
County/Department: Outagamie/DALS
Review Period: 2014-2018 Program Years
Date of Review: November 29, 2018

Program Responsibilities
0% Administrative
100% Agriculture
0% Youth

I. Major Programs/Development/Implementation/Teaching/Impacts:

During the five-year period from 2014-2018, I continued to work from the most recent needs assessment conducted jointly by Outagamie and Calumet Counties in 2013. This is the same needs assessment that was used to develop my 2014-2018 Multi-Year Plan of Work. This assessment revealed three main program areas of emphasis: 1) *Farm Profitability* 2) *Water Quality* 3) *Agricultural Literacy*.

Agronomy (Farm Profitability)

Outagamie Forage Council Reduced-Lignin Alfalfa Research Project

Situation:

There are approximately 1.25 million cows in Wisconsin. There are also approximately 1.25 million acres of alfalfa grown and harvested across the state each year to provide forage to these dairy animals. From the period of 2007-2017, the average harvest date for 1st crop alfalfa was May 29th or later in 8 out of 11 of those years (source, Wisconsin Alfalfa Yield and Persistence Project, WAYP 2017). As a result, harvesting high quality 1st crop alfalfa has been difficult recently. Due to the late harvest dates, alfalfa begins to lignify quickly once it begins to mature, thereby decreasing forage digestibility. The lower the digestibility, the less Milk Per Ton (MPT) produced by dairy cattle utilizing this forage as a part of the ration.

Response:

Industry has recognized the need for high quality alfalfa and has since developed varieties that are advertised as anywhere from 7-15% lower in lignin. If these new varieties are indeed lower in lignin, they would in theory increase the length of time that alfalfa could remain in the field before harvesting, whether it was to accumulate more dry matter tonnage or the result of unexpected delays due to Mother Nature. Regardless, the private sector has products that are now available to farmers and many of those farmers want UW-Extension to advise them to the level of benefits that exist from using these new varieties. As a result, I organized an effort to test Alforex Hi-Gest 360 (reduced-lignin) alfalfa versus Pioneer 55V50 (standard conventional) and WL 363 HQ (improved conventional) at two different locations in Outagamie County during the 2016, 2017, and 2018 growing seasons. Scissors clip samples from three replications of two varieties each were compared over a six-week period.

Outcomes:

The results showed that the Alforex Hi-Gest 360 maintained a higher Relative Forage Value (RFV) than either of the two conventional varieties it was compared to during the critical week 3 (May 24th) and week 4 (May 31st) sample dates in 2016 and 2017. At one site it was 20-30 points higher while the other site showed an increase of about 15 points RFV. This is important because this spring if you did not have your hay out of the field by about May 22nd or so each of the two past years, it rained for a week and many farmers ended up harvesting a significant portion of their 1st crop alfalfa at significantly lower quality levels than expected. After a full statistical analysis was performed on the 2016 data, it was revealed that the Alforex Hi-Gest 360 was statistically lower in Neutral Detergent Fiber (NDF) in three of the five cuttings (1st P = 0.003, 2nd P = 0.02, and 4th P = 0.04 crops) at the Van Wychen location suggesting that the forage is more digestible. The 2017 weekly scissors clip results have shown the low lignin alfalfa has held a higher level of RFQ and RFV compared to the previous year. As of the time of this review, the final analysis has not yet been completed for the 2018 sites where data was collected.

In addition to being presented at the Outagamie Forage Council meeting in January 2017 and 2018, my colleagues have affirmed the value of my work in this area by inviting me to present the results of this research project at the Calumet County Forage Council Annual Meeting (February 2017), the Shawano County Forage Council Annual Meeting (February 2017 and 2018), the Manitowoc County Forage Council Annual Meeting (March 2017), the Waupaca County Forage Council (February 2018) and the Kewaunee/Door County Summer Field Day (May 2017).

I also was the lead/co-lead agent for the Team Forage Displays at Wisconsin Farm Technology Days 2017 held in July in Kewaunee County and Wood County in July 2018.

As a result of the retirement of the state forage agronomist from UW-Extension in July 2016, I was also asked to present at the ninth bi-annual state Team Forage Teaching and Technology Educational Conference held in September 2017. I was the only county agricultural agent on the program as state specialists were asked to fill the remaining presentation slots. I became the UWEX designee to the World Forage Superbowl in 2018 overseeing not only judging, but responding to and answering questions for participants at the World Dairy Expo (WDE) display.

UW-Extension Team Forage - Alfalfa Pure Live Seed (PLS) Survey Project

Situation:

The Wisconsin Alfalfa Yield and Persistence (WAYP) project (2007-2017) has revealed that most Wisconsin farmers are planting alfalfa at rates of 15-17 lbs. of seed per acre at the time of establishment. On average, there are five seeds per sq. ft. for every one pound of alfalfa planted. Seeding rates during the lifetime of the WAYP project show a range of 12 lbs. – 28 lbs./acre. So, the question would be ***“What seeding rate should we be using to maximize our plant establishment?”***

A typical 15 lbs./acre seeding rate would result in approximately 75 seeds/sq. ft. Once emergence is complete in 3-4 weeks, only approximately 50-70% of those seeds planted will have established as seedlings (leaving us with 45 plants/sq. ft). Another 40-50% of those plants will no longer be present by the following spring, resulting in approximately 25 plants/sq. ft. heading into the 1st full production year.

The most recent alfalfa seeding recommendations suggest that Wisconsin farmers should be planting **10 lbs. of PLS (Pure Live Seed)** per acre to maximize plant establishment and overall yield. **PLS** is determined by multiplying the **% germination and hard seed** by the **% pure seed** and dividing by 100. *Example: (95% germination and hard seed X 70% pure seed)/100 = 66.5% PLS*. Using this example, we would need to seed this particular alfalfa at **15 lbs/acre** to get **10 lbs. of PLS (15 lbs. X 66.5% PLS = 9.975 lbs. PLS)**

Response:

As a member of the Agronomy Production Workgroup of Team Forage, I took the lead in developing a protocol for a statewide survey in 2015 that would help us determine what producers were actually planting in the field. Data from the “new seeding year” was reviewed and I took the lead to collaboratively develop a “1st Full Production Year” (2nd year) survey as a follow-up effort for 2016, and a “2nd Full Production Year” (3rd year) survey in 2017, and a 3rd “Full Production Year” survey in 2018. The existing protocol, 1st year data collection sheet, 2nd year data collection sheets, 3rd year data collection sheets, and 4th year data collection sheets were distributed statewide to members of Team Forage to keep data collection going on stands already a part of the effort and encourage new participation from those who may not have decided to be a part of the project in previous years.

Outcomes:

Beginning in 2015, agricultural agents/educators in the counties of Clark, Shawano, Outagamie, St. Croix, and Calumet participated, while individuals in Chippewa and Buffalo Counties joined in 2016. While many fields were lost due to winterkill, the projects continued in 2018. We tracked all of the production information related to the stands through their useful production life, and then I worked with Mark Renz and determine which items could be analyzed to identify what, if anything was statistically significant.

The results of the Badger Plot survey project have revealed the following:

- A. Three different types of seed (heavy coated, about 34%; light coated, about 9%; and no coating) continue to be planted by farmers statewide. However, there is a definite trend to used seed that is coated vs. non-coated.
- B. In several instances, higher plant counts after 30 days were observed in stands where farmers exceeded the recommended seeding rate of 10 lbs. PLS. However, it still needs to be noted that plant counts 30 days after establishment continued to vary widely across the state.
- C. Despite the establishment of higher numbers of live plants after 30 days for seeding rates that exceeded 10 lbs. PLS, after 5 months, stands saw significant reductions from 40-60+ plants per sq. ft. down to approximately 20-25 plants/sq. ft.

- D. At the conclusion of the 2nd year of data collection, we saw some stands thin all the way down from 20-25 plants to just 4 or 5 plants at some locations. Before the University of Wisconsin Cooperative Extension changed the recommendation for an “economically viable” stand to the current suggestion of “55 stems” per sq. ft, the previous recommendation was 4 plants per square foot.

In addition to being presented at the Outagamie Forage Council meeting in January 2017 and January 2018, my colleagues have affirmed the value of my work in this area by inviting me to present the results of this research project at the Calumet County Forage Council Annual Meeting (February 2016 and 2017), the Shawano County Forage Council Annual Meeting (February 2017 and February 2018), the Manitowoc County Forage Council Annual Meeting (March 2017), the Waupaca County Forage Council (February 2018) and the Kewaunee/Door County Summer Field Day (May 2017). I also was the lead/co-lead agent for the Team Forage Displays at Wisconsin Farm Technology Days 2017 held in July in Kewaunee County and Wood County in July 2018. The Midwest Forage Association published the results in their lead up “*Clippings*” electronic newsletter located at <https://www.midwestforage.org/pdf/1212.pdf.pdf>

At the conclusion of 2017, the data was statistically analyzed and revealed that there was not a statistical difference (P=0.23) in plants per square foot in the fall 2 years after planting between alfalfa seeded at 8-12 lbs. PLS/acre, 12-15 lbs. PLS/acre, or 15-18 lbs. PLS/acre. In addition, there was also no statistical difference observed in stems per square foot measured in the fall 2 years after planting (P=0.15) at the same corresponding seeding rates. Results were presented at the 2018 Wisconsin Agribusiness Classic and can be found at <https://vimeo.com/253646012> (*Exhibit I*).

UW-Extension Team Forage - Wisconsin Alfalfa Yield and Persistence (WAYP) Project

Situation:

Alfalfa Management Practices vary widely from one farm to another not only in Outagamie County, but statewide. As a result, the WAYP Project was developed to collect “*on farm*” data from fields across the state of Wisconsin.

Response:

In 2007, Team Forage began collecting data from alfalfa fields in their first full year of production (not the seeding/establishment year). Since the project’s inception eleven years ago, as of 2017 Outagamie County has collected data for **43** of the **89** fields (**48.31%**) involved in the study which amounts to **4,303.7** of the **5,993.21** total acres (**71.81%**) for this effort. Outagamie has collected more data for this statewide project than any other county.

Outcomes:

The WAYP effort has been used to communicate the importance of forage production for not only economic reasons, but environmental ones as well by the Midwest Forage Association (MFA) when they speak with legislators on the state and national level. Data from the WAYP was used in the development of the most recent farm bill as reported by the MFA. In addition to presenting and sharing this information with the Outagamie Forage Council every year at our annual meeting, I have successfully recruited neighboring Forage Councils (Manitowoc) to participate in the data collected located at <https://fyi.uwex.edu/forage/files/2018/02/2017-WAYP-Summary.pdf>.

Midwest Forage Association (MFA) - Evaluating Twin-Row Corn Silage Production Research Paper Update

Situation:

No other state harvests more corn silage than Wisconsin. Corn silage production is a major part of any successful forage operation in the state. In 2010 and 2011, I conducted research on twin-row corn silage and published the initial findings of my work in early 2012. Additional data was collected during the 2012 and 2013 growing seasons.

Response:

Working with Joe Lauer, UW-Extension Corn Agronomist, we added the additional data that was collected to the original findings a few years earlier. The paper includes results covering a four-year period and multi-county area.

Outcomes:

The Midwest Forage Association (MFA) featured the work I did in “*Evaluating Twin-Row Corn Silage Production (updated)*” in the November 29, 2017 MFA Clippings Electronic Newsletter showing members how their research dollars are put to use located at <https://www.midwestforage.org/pdf/1174.pdf.pdf>. The original white paper has been referenced by multiple state specialists who have received questions over the years, and fortunately, the added

data did not change any of the original major conclusions we had reached... while plant density does have a significant impact on corn silage quality, plant spacing does not affect yield or quality (*Exhibit 2*).

Forage Council Outreach and Support to Agricultural Producers and Professionals

Situation:

Outagamie is a leader in Forage Production statewide. We grow approximately 50,000 acres of alfalfa annually and harvest another 30,000 acres of corn silage. Forage quality and quantity are high concerns to Outagamie producers.

Response:

There were more than 400 silage samples tested at Forage Council sponsored Corn Silage dry-down events from 2014-2018. The total number of acres impacted by our results is greater than 30,000 each year. Predictive Equations for Alfalfa Quality (PEAQ) stick readings and alfalfa scissors clip samples have been collected from four farms until harvest began in late May/early June from 2014-2018 impacting about 40,000 acres of alfalfa each year.

Results:

Crop Consultants, Agronomists, Farmers, and Dairy Nutritionists have shared with me in face to face conversations on the farm how important these outreach activities are and that we continue to provide clientele with these services.

Farm Financial Analysis (Farm Profitability)

Whole Farm Production Management and Crop Enterprise Budget Management Outreach

Situation:

Due to the downturn in agricultural commodity values late in 2015, continuing in 2016, 2017, and 2018 many dairy and cash crop producers requested that I focus efforts on how to help them determine whether or not they could continue to afford to not only rent land, but, which, if any crops in particular they should be able to make adjustments in the variable costs (seed, fertilizer, chemical, etc...) to help ensure a profit at the end of the year.

Response:

I presented information at the 2017 Northeast Wisconsin Grain Crops Production Clinic in Pulaski and the Farm Management Update for Agricultural Professionals meetings in 2017 and 2018 to address "***Crop Enterprise Budgets in a Low Commodity Price Year***". The three meetings totaled more than 150 people in attendance. In addition, I also focused my March 9, 2017 **Wisconsin Agriculturist Field Fodder** article "***It will take a lot more than yield to be profitable in 2017***" on using contracts to protect price and manage margins.

Results:

Evaluations from the two Farm Management Update for Agricultural Professionals combined evaluations (n=60) from 2017 and 2018 were the most comprehensive and showed the following:

- A. Using a Likert Scale, (1=Low, 3=Moderate, 5=High), participants rated my 2017 presentation a **4.45/5** when asked to "***Please rank the relevance of the topic to your business***". This was the second highest ranking of the seven presentations made that day.
- B. When asked to identify "***Was the information useful for your business?***" Everyone who responded replied "***yes***". Only one of the other seven topics in 2017 received a perfect score as well.
- C. Lastly, when asked to "***Please rate the speaker***", I received a rating of **4.45/5.0**. I am very happy about this as it was once again one of the highest ratings for this category overall received across all presenters/presentations.
- D. Additional comments in 2018 included: "***Kevin Jarek – always good!***" and "***Loved Kevin's section – fun, yet informational.***" "***Before***" Knowledge - **3.12/5.0** whereas "***After***" Knowledge - **4.10/5.0** – highest of the event.

FinPack Whole Farm Financial Analysis

Situation:

The average age of a farmer according to the most recent Wisconsin Agricultural Statistics Survey (WASS) results in 58 years old. Due to this impending "transition" which will occur over the next several years, I have had

agricultural professionals indicate to me that this is an area in which I need to spend more time and emphasis. As we have many younger individuals expressing an interest in taking on adult roles in the existing family farm operations, there is a greater need for Farm Financial Education and Outreach for the agricultural producers here in Outagamie County. As a result of this heightened interest, I have also experienced an increase in the number of requests that I receive for FinPack whole farm financial analysis.

Response:

I have communicated my desire to participate in more of the professional development opportunities offered by the Center for Dairy Profitability. The reason is that I knew I would have to “sharpen my saw” if I wanted to be able to provide the agricultural producers that were requesting assistance with the financial analysis that they would need to be able to work with agricultural lenders to move forward in their expansion, modernization, or farm transfer plans. I was a key committee member and co-chair of the fundraising committee that planned and presented the “*Farming Forward – Planning Your Farm’s Future*” Conference on November 30, 2017 at Doxbee’s in Seymour which was attended by more than 40 participants seeking help with the difficult decisions surrounding family farm transfer to the next generation. We have planned a follow-up workshop for December 19, 2018 at Doxbee’s in Seymour.

Outcomes:

Whole farm financial analysis was presented to or conducted with 97 different farm operators/agricultural professionals during the past two years. Unfortunately, due to the downturn in the farm economy, the results were not what most had expected. Many determined that they could not move forward with their potential plans. Again, due to low commodity prices, the necessary financial ratios/indicators did not turn out to be particularly favorable. However, this does not mean these analyses were unsuccessful. One particular situation saw the eldest son realize that in its current financial state, the farm operation would not be able to provide him with the salary/family draw that he would need to be able to support a family of his own, thereby preventing inevitable disappointment.

Horticulture (Water Quality and Agricultural Literacy)

Water Quality and Quantity Outreach

Situation:

While phosphorus is our primary quality concern on surface waters, it is Nitrate-nitrogen (NO₃) that is the single greatest nutrient contaminant concern in our groundwater supplies. The concern is verifiable as 4% (n=293) of the wells in Outagamie County already exceed the safe/acceptable level standard of 10 parts per million (ppm.) for nitrate for drinking water/consumption purposes according to the United States Geological Survey (USGS, 2006). Wisconsin residents sometimes falsely believe that they do not need to be concerned about abundant and clean freshwater/groundwater *supplies* – or do they? In the western United States, water rights disagreements have made their way to courtrooms on a regular basis as agriculture competes with urban needs. As a result, this is not only a *quality issue*, but a *quantity* one as well. When addressing surface and groundwater quality, we would all be wise to consider “*quantity*” or availability as well.

Response:

The Outagamie County Master Gardener Association Education Committee has developed an enhanced curriculum that fully meets the requirements set forth by the state Master Gardener Basic Training Standards for certification. However, as advisor, I suggested that we go further by including a specialized effort to include not only a dedicated section to water but that we work with individuals who express an interest in installing a rain garden or rain barrel on their properties. “*Saving for a Rainy Day*” is a presentation I created for MG’s and other audiences as well.

Outcomes:

Eighty-six new Master Gardener volunteers were trained on the importance of Water Quality/Quantity from 2014-2018. After demonstrating Rain Garden construction and installation using the UW-Extension Rain Garden, 41.9% of class participants (36/86) indicated they would consider installing a rain barrel or rain garden on their property.

Master Gardeners/Horticultural Inquiries

Situation:

Appleton and the Fox River Valley Area are heavily populated and rapidly growing parts of the state. The town of Greenville and town of Buchanan continue to grow at rates significantly higher than any other in the county. As the number of housing units increases, so does the pressure for horticulture programming and resources. It is estimated

that landscaping alone can add anywhere from 15-25% to the value of a home. Today's homeowner does not only view their landscape as a past time or leisure activity, but instead as an investment as well.

Response:

The Outagamie County Master Gardener Association (OCMGA) was established to help address some of those horticultural interests and needs. This group consists of past Master Gardener graduates who will be utilized in a variety of ways to improve the quality and quantity of horticultural programming available to the residents of Outagamie County. Horticultural information demanded by the public varies tremendously with the type of season we are having (hot/cold, wet/dry, etc..) as well as the specific pest and disease pressure that is present. In addition, as the lead Horticulture Agent, when there are particularly difficult or expensive cases to deal with like pesticide drift that could result in potential court cases, I expend a lot of time and effort to do what I can to resolve the issue for both parties in a fair and equitable manner while remaining unbiased during the course of the matter.

Outcomes:

In terms of Horticultural Inquiries to the UW-Extension office, the Seasonal Horticulture Assistant and I have responded to more than 6,000 requests for assistance from the public the during 2014-2018. During the 2018 calendar year, the OCMGA had 140 local or state dues paying members. Statistics of note for 2017 would include the fact that we provided a total of 10,383 volunteer hours in the form of support and education to others. When it comes to single county associations, we rank 2nd in the state in total hours volunteered. I believe this actively demonstrates that we have members who are involved and engaged in this organization for the right reason. Since 2000, the Outagamie County Master Gardener Association has provided Outagamie and the surrounding Fox Cities with more than 135,060 hours of volunteer service with a value of more than \$2,599,239. As a part of my horticulture programming and outreach, I have had articles published in the Wisconsin Master Gardener Association (WIMGA) *Volunteer Vibe* addressing responsible lawn and turf grass solutions to high pH soils at <https://goo.gl/nxwzMm>.

II. Examples of Team Work –Within UW-Extension and with External Partners:

I have collaborated with several of the UW-Extension state specialists to offer area and regional programs to clientele. After 19+ years, I have worked with nearly all UWEX state specialist who have a crops or soils emphasis. I enjoy working with a dedicated team of professionals, and that is what we have in agronomy.

When I have been approached by the Outagamie 4-H Leaders Association for assistance with their 4-H Officers Leadership Training workshops I have agreed to help. I conducted the most recent of several workshops in February 2017 after providing extensive help and assistance with their fall officer training workshop in 2016 as well as their constitution and by-laws in 2015. As a product of the 4-H program, I am quick to offer help as needed.

The Outagamie County Master Gardener Association (OCMGA) continues to invest heavily in the UW-Extension office, the grounds and covers the copying expenses of clientele information. The OCMGA hosted the WIMGA state conference “Garden Expectations” March 2014. Over 448 attendees participated, resulting in a \$7,000 profit for WIMGA and placing second all-time compared to 2006 OCMGA hosted conference with 463 participants.

The Wisconsin Association of Professional Agricultural Consultants (WAPAC) is a statewide organization representing the interests of agriculture. I have been a member for more than a decade and continued to serve on the Executive Board and as parliamentarian during official business meetings until 2017. I am a more effective agricultural agent due to the contacts I have statewide as a result of my participation in this organization and UW-Extension benefits from having a county agent at the table with these dynamic leaders in the agronomic sector.

I continue to work diligently to get Extension information to the mass media. Mike Austin, WFRV T.V. 5, area agriculture reporter conducted field crop updates with me on a weekly/bi-weekly basis during the past several growing seasons. This includes WFRV, TV Channel 5 (CBS affiliate) and WTAQ radio. I continue to be a contact/contributor to the Green Bay Press Gazette (Nathen Phelps) and the Milwaukee Journal Sentinel (Rick Barrett). Additionally, the Wisconsin State Farmer, Agri-View, and Country Today covered multiple meetings and published several stories detailing my outreach efforts. Other television contacts included WBAY TV 2 ABC affiliate and WLUK TV 11 FOX affiliate. Additional radio stations that have received and/or used content from me include WHBY – Appleton, WOSH – Oshkosh, WTCH – Shawano, WNCY – Winnebago, Brown, Outagamie, and WDEZ – Wausau. Mike Austin has indicated “*Nobody has done more television and radio outreach for UW-Extension sharing agronomic, research-based information with farmers throughout NE WI than Kevin Jarek*”.

I have partnered with Fox Valley Technical College (FVTC) to organize Safe Operation of Tractors and Equipment Certification Courses for the past 19 years. A special, on-site course was offered at the Oneida Nation Conservation Field Office in northern Outagamie County in 2017. When there has been no agricultural agent in neighboring counties, I also coordinated with Jerry Fischer, FVTC Agricultural Instructor, to ensure that offerings were provided for residents. One hundred twenty-four students successfully earned licensure from 2014-2018.

In addition, I have built external relationships with professional crop consultants, local agronomic cooperative personnel, seed company representatives, and implement dealers by reaching out to involve them in forage/grain production field days and/or agricultural workshop planning and participation.

I developed several multimedia presentations as a part of my North Central Region (NCR) Agriculture and Natural Resources (ANR) Cropping Academy effort. I continue to collaborate with those on my work team to this date. As a member of the NCR ANR Cropping Academy, I teamed with Meaghan Anderson, Iowa State University Extension, Angie Johnson, North Dakota State University Extension, Wayne Ohnesorg, University of Nebraska-Lincoln Extension, and Brian Luck, University of Wisconsin to develop a number of resources to addressing the topic of clean-up and sanitation of agricultural equipment to prevent the unintentional spread of herbicide resistant weeds. The presentation highlighting resources we developed is housed on the *eXtension Learn* website located at <https://learn.extension.org/events/3328> and <https://www.youtube.com/watch?v=g0vuLUIFNvg&feature=youtu.be> (*Exhibit 3*). The video “*How to Clean a Combine to Limit the Spread of Weed Seeds*” was filmed with the help of Dan Smith, Nutrient Pest Management (NPM) Program, University of Wisconsin-Madison and has 857 views located at <https://www.youtube.com/watch?v=D75GLtAWgJU&t=29s> (*Exhibit 4*).

III. Contributions to the Profession/University

A. Program Area Contributions and Leadership

I am currently an active member of Team Forage, the Grains Team, and the Nutrient Management Team. As it relates to Team Forage, for the past few years I continued to take the lead with the administration of the Badger Plot Pure Live Seed/Plant Stand Establishment Survey. As a member of the Grains Team, working with area farmers, we host both state corn and state soybean maturity plots in Outagamie County. I have assisted state specialist by monitoring the soybean plots for aphids in the summer and maturity/disease information in the fall. We host one of only a few statewide North Central Region Multi-State Soybean Aphid Monitoring Stations.

Outagamie County currently serves as a host for the Pest Management Update Meetings (November) and the Agronomy Update Meetings (January) which are both held at Liberty Hall in Kimberly. Over the past several years I have worked cooperatively with state specialists to make sure that these events are well planned, well hosted, and well attended. High attendance and participation at both of these meetings is not an accident as they are highly publicized and promoted through the agronomic contacts, I have developed over the last 19+ years in this position. State specialists provide us as agents with feedback when it comes to these events and the numbers do not lie. No other site has had more attendees on average than we have the past four years at The Pest Management Update meeting hosted in Kimberly or the Agronomy Update meeting in January.

I have served as an agronomy and horticultural resource for the other agricultural agents in the northeastern part of the state. Calumet, Door/Kewaunee, Manitowoc, Oconto, Waupaca, and Shawano were just a few of the Forage Council annual meetings or summer field days I presented alfalfa research related information at or developed resources for the agents/educators to use over the past few years.

I have spent a great deal of time answering calls, making site visits, coordinating alfalfa research, organizing field days, and advising the Forage Council in Calumet County in late 2016, 2017 and early 2018 until a new hire in June 2018. Vacancies existed in 2018 once again in neighboring Shawano and Winnebago Counties.

Over the past five years I have been involved with the state Horticulture Team through a subgroup that took the award winning and highly successful Urban Forestry Specialized workshops developed by Brown, Winnebago, and Outagamie Counties from a regional effort, and expanded the program to cover areas statewide.

While at the National Association of County Agricultural Agents (NACAA) Annual Meeting and Professional Improvement Conference (AMPIC) in 2017, I was recognized with the Distinguished Service Award.

B. Academic Department and Governance Contributions

I am serving my second three-year term as member of the Department of Agricultural and Life Sciences (DALSS) Standards, Rank, and Promotion (SRP) Committee. As a member of SRP up until 2017, I had already been serving on Liz Binversie's, Darrell McCaulley's, and Annie Deutsch's mentor teams. As a result of the reorganization, all three of these individuals are now academic staff or no longer employed in UW-Extension. In 2017, I also served on Patrick Robinson's mentor team due to the changes as a result of the reorganization. In addition, I was the primary reader for Jennifer Blazek's portfolio and served as secondary reader for Patrick Robinson's portfolio which were presented to SRP in the fall of 2017. On July 1, 2018 I accepted a three-year term to serve on the Professors Committee previously serving as an alternate on Faculty Senate for Barb Larson.

I was assigned as Annie's mentor when she was hired three years ago and I continue to actively assist her with program planning and advice. I have provided advice, materials, and visited with Annie about what an agricultural educator needs to be able to do in order to be successful in providing effective education and outreach to the clientele we serve. I am "unofficially" assisting new hires that have reached out to me for help.

IV. Applied Research/Publications

The Team Forage Alfalfa Seeding Rate Survey Badger Plot Project is multi-year, multi-county, statistically analyzed data shared with local and statewide audiences. An abstract of the findings (p. 58-60) was published in the *2018 Wisconsin Agribusiness Classic Proceedings* located at http://agclassic.org/proceedings/2018_Proceedings.pdf

The *Outagamie Forage Council Low-Lignin Alfalfa Project* is multi-year, multi-site research that has been statistically analyzed and results have been shared with local and statewide audiences.

The *Evaluating Twin-Row Corn Silage Production (updated)* whitepaper is multi-year, multi-county, statistically analyzed research. The results were published and shared by MFA in the September 2017 Clippings Electronic Newsletter located at <https://www.midwestforage.org/pdf/1174.pdf.pdf> or the full findings are shared as Exhibit #2.

The *Wisconsin Alfalfa Yield and Persistence (WAYP) Project* is published annually (whitepaper) as a part of UW-Extension Team Forage and the Midwest Forage Research Proposal (MFRP) project funds. The document can be viewed online at <https://fyi.uwex.edu/forage/files/2018/02/2017-WAYP-Summary.pdf>

V. Administrative Responsibilities and/or Research Programs:

I actively supervise the UW-Extension Outagamie Horticulture Assistant Kaitlin Bricco. Kaitlin was our fifth individual in this position in seven years during the 2018 calendar year meaning I spend a lot of time onboarding.

VI. Professional Development (past five years)

I did not receive support for a number of state or national level professional development activities for which I sought participation prior to 2017, so, much of what I did was in-state. However, after support from the ANRE Associate Program Leader, I did apply for and successfully participate in the 2017 North Central Region (NCR) Agriculture and Natural Resources (ANR) Cropping Academy. In 2017, my peers nominated me for the National Association of County Agricultural Agents (NACAA) Distinguished Service Award, so, I did participate in the NACAA Annual Meeting and Professional Improvement Conference (AMPIC) in Salt Lake City, Utah as well.

VII. Future Plans for Professional Improvements for the Next Five Years:

Please see my Professional Development Plan (PDP) for 2019-2023.

VIII. Additional programs, awards, or information you want to highlight and share:

2017 National Association of County Agricultural Agents (NACAA) *Distinguished Service Award (Exhibit 5)*
2017 Wisconsin Association of Professional Agricultural Consultants (WAPAC) – *Executive Council Recognition*
2016 ANRE Program Area *Program Innovation Award* – Corn Silage YouTube Podcast Series
2016 ANRE Program Area *Team/Workgroup Leadership and Responsiveness Award* – Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) Workgroup partnering with Farm Service Agency to delivery program
2014 Wisconsin Association of Professional Agricultural Consultants (WAPAC) – *President's Award for Service*