

## **Statement of Professional Contributions and Scholarship**

### **Situation statement**

Dane County is unique, as it is one of the most populous counties in Wisconsin, with a population of over half a million people, and it is one of the most productive agricultural counties in the state. Dane County ranks first in acres of corn for grain production with 190,500 acres, second in acres of soybean production with 85,400 acres of soybeans and first in wheat production with 14,900 acres. It is also the 5th largest dairy production county in Wisconsin with 45,600 acres of corn silage and 35,893 acres of hay (USDA Agricultural Statistics, 2016). The agricultural industry in Dane County is also diversified with a growing number of small-scale farms that direct market their products to consumers through Community Supported Agriculture, farmers markets, or sell to restaurants and other institutions.

In 2014, I collaborated with the Dane County Dairy and Livestock Educator to conduct a needs assessment survey to assess the agricultural educational needs of the farmers in the county (**Exhibit 1**). The survey was distributed by mail, email and handed out at educational programs. Survey respondents (n=236) indicated that the top educational priorities within the area of Grain and Forage Production were Weed Management (133 respondents), Variety and Hybrid Selection (107 respondents) and Cover Crops (107 respondents). Close behind these topics were No-till/ Conservation Tillage (105 respondents) and Soil Testing (106 respondents). Within the category of Farm Business Management, the top ranked educational areas were Farm Transfer/Succession (102 responses), Cost of Production (92 responses), and Renting and Lease Arrangements (84 responses). Within the category of Vegetable Production, the top ranked educational areas were Weed Management (19 responses), Insect Management (14 responses) and Soil Fertility (14 responses). Based on these results, my programming is concentrated in the areas of Soil and Water Conservation, Farm Business Management and Pest Management. Political and social pressures on farmers in Dane County and growing interest in cover crops from farmers across Wisconsin led to Soil and Water Conservation programming taking a higher priority than the initial needs assessment suggested.

### **Soil and Water Conservation**

#### **Cover Crops**

In 2011, in response to political and social pressure to reduce agricultural phosphorous loading into the Yahara Watershed in Dane County, a group of farmers organized into a farmer-led watershed group called Yahara Pride Farms (YPF). Excess phosphorus in streams, lakes and rivers leads to algal blooms and other environmental issues. The primary mechanism for agricultural phosphorus ending up in the watershed is through soil erosion. Phosphorus adheres to soil particles; therefore by reducing erosion, phosphorus loading into the watershed is also reduced. The goal of YPF was to evaluate and adopt cropping practices that reduce erosion and to use what they learn to encourage adoption by other farmers. In 2013, YPF identified cover crops as an important practice to reduce erosion and began raising money to provide funding for farmers in the watershed to incorporate cover crops into their crop rotations. Cover crops are crops planted after the harvest of a cash crop to protect the soil from erosion. Cover crops can provide additional auxiliary benefits such as improved soil quality, improved weed management and reduced disease incidence, but these were not the primary reasons for the YPF farmers utilizing them as a soil conservation tool.

When I began as the Crops and Soils Agent in Dane County in 2013, YPF approached me about collaborating with them on localized cover crop research plots and developing and delivering cover crop recommendations for farmers in Dane County. Our goal was to help farmers make informed cover crop decisions because, although cover crops provide many benefits, they also have the potential to negatively impact cash crops if not managed properly. In response, from 2013 to 2016, I established cover crop plots in the watershed to evaluate various cover crop species, planting dates, planting rates and planting methods to determine how to best manage cover crops to reduce erosion after corn silage harvest, while minimizing negative impacts on the cash crop. I presented my research results at YPF annual

## **Statement of Professional Contributions and Scholarship**

### **Soil and Water Conservation (continued)**

meetings and field days in 2014, 2015 and 2016. There were approximately 100 people at each event, including farmers and agricultural professionals. I presented the results in the form of PowerPoint presentations (**Exhibit 2**) and handouts, specifying the soil erosion reduction benefits from using cover crops and reduced tillage systems (**Exhibit 3**). I also wrote several articles on cover crop selection for the YPF newsletters (**Exhibit 4**).

In February of 2017, I conducted a survey of the YPF farmers to evaluate the long-term impact of the cover crop information that I generated and delivered. The survey was written to evaluate the changes respondents made to their farming operation based on the cover crop information they received from YPF. I created and delivered all the cover crop educational presentations at YPF events so the responses are directly attributable to my work. Nineteen farmers completed the survey (**Exhibit 5**). When asked what percent of their acres were covered in cover crops five years ago, 73% of the respondents indicated less than 10%. When asked what percent of their acres utilized cover crops today, 85% of respondents plant more than 10% of their acreage to cover crops with 31% of respondents planting over 40% with cover crops. When respondents were asked about their knowledge of cover crops five years ago and today on a Likert scale of 1 to 4 with 1 being 'No knowledge' and 4 being 'Very knowledgeable', the average was 1.68 for five years ago and 2.84 for today. Thirty-three percent of respondents said they tried a cover crop for the first time as a result of what they learned about cover crops and 56% and 72% tried a new cover crop or a new way of planting cover crops, respectively.

Further evidence of the impact of my cover crop work with YPF is the increase in the number of acres that their farmer participants planted between 2013 and 2016. In their 2017 report, YPF stated that their participants planted 2,382 acres of cover crops in 2013 and that number increased to 5,851 acres in 2016. Only 1,903 of those acres were funded by YPF while the remainder were planted at the farmer's own expense. The report also states that due to the utilization of cover crops on this many acres, potential phosphorus losses to surface water was reduced by 19,445 pounds from 2013-2016.

In 2016, Jeff Endres, a farmer and president of the YPF board, and I applied for and were awarded the National Wildlife Federation's 'Cover Crop Champion' designation. This designation came with a \$9,600 stipend for our work teaching farmers about cover crops. In exchange for the award, we were required to reach at least 100 farmers with our cover crop message and we far exceeded this goal by reaching over 1,000 people in person and another 200-300 by radio and print.

In 2014, I worked with Extension colleagues to organize a day-long cover crop field day at Arlington Research Station. Participants learned about cover crop research being conducted both at the station and around the state. I presented the results of my YPF plots. The field day was attended by 134 people. I conducted an online survey after the event and had 43 completed surveys (**Exhibit 6**). Ninety-five percent of respondents indicated that the field day was useful or very useful and 97% indicated that what they learned would influence their cover crop recommendations or management practices.

In the fall of 2015, I compiled results from my YPF cover crop plots and other WI cover crop research to develop a 'Cover Crop Basics' presentation (**Exhibit 7**). I gave this presentation nine times between the fall of 2015 and the spring of 2017 in various locations across south-central Wisconsin (**Exhibit 8**). Of the 176 returned evaluations, 45% of the returned evaluations were from farmers, 25% were from ag consultants, 13% were government agency staff, 10% were educators and 15% ranked themselves as something other than these categories. On average, attendees reported they raised their knowledge on cover crops from fair to good as a result of my presentation. Forty percent indicated they would share the information with others. Thirty percent indicated they would use the information to educate their clientele. Fifty-six percent indicated they used the information as professional development. Twenty-two percent indicated they

## **Statement of Professional Contributions and Scholarship**

### **Soil and Water Conservation (continued)**

would use the information to implement practices on their own farms.

In 2015, I took a co-leadership role of the cover crop workgroup that existed within UW Extension's Team Grains. We developed our own workgroup meeting schedule and professional development opportunities, separate from Team Grains, to attract additional colleagues that work with cover crops but were not team members. We decided the *Cover Crops in Wisconsin* website would be our primary tool to communicate Wisconsin-specific cover crop best management practices to farmers and agriculture professionals. I took over website management, re-designed it and continue to manage and update content as needed (**Exhibit 9**). I wrote the pages that provide recommendations for cover crops after corn silage and various other content and engaged colleagues to write cover crop recommendations for the other crop rotations. Since July 15, 2016, 2,040 people have visited the site and there have been 6,982 page views. I also use the website to provide brief and easily understandable results of Wisconsin cover crop research. I wrote the results from my YPF plots (**Exhibit 10**) and encourage other researchers to do similar overviews of their projects.

My research on cover crops was noted by the planning committee for the 2016 World Dairy Expo and I was asked to give a presentation on using cover crops after corn silage for their educational series. My presentation was attended by 62 people. A writer for *Progressive Forage* magazine, a national publication, was in the audience for my presentation and asked if I would also write an article on cover crops after corn silage for the July 2017 edition (**Exhibit 11**).

My work with YPF also led a second group of farmers in Dane County asking me to help them get started as a watershed group in 2015. We received grants from the Department of Agriculture, Trade and Consumer Protection (DATCP) Producer-led Watershed Protection program for \$10,000 in 2016 and for \$20,000 in 2017. Five farmers in the group evaluated new cover crops and cover crop planting methods in the fall of 2016 with the cost share dollars from the grant. They selected their species and planting timing based on my recommendations. I also helped the group organize a lunch-and-learn program in the fall of 2016 and a field day in the spring of 2017. I presented on cover crop selection and management at both events. The lunch-and-learn was attended by 24 people and the field day was attended by 31. Because of these events, six new farmers joined the group and all eleven farmer members will use the grant money to try new cover crop practices in 2017.

As a result of my work with multiple farmer-led watershed groups in Dane County, I was asked to give a presentation at the DATCP statewide meeting for farmer-led watershed groups. The purpose of my presentation was to help the groups think about how to set up cover crop demonstration/research plots and optimal signage for cover crop field days (**Exhibit 12**).

In the spring of 2016, I initiated a local cover crop farmer peer group to both facilitate best management practice sharing between experienced cover croppers and to provide mentoring to farmers that are new to cover crops. We had our first meeting with 18 farmers in March of 2016. We've since had two field days and another winter meeting. At the last winter meeting in April of 2017, we had 27 farmers in attendance. The group named themselves the '*Cover Crop Innovators of Wisconsin*'. I have created an email listserve and a Facebook group for the farmers to facilitate information and picture sharing between the members. Here are a couple of quotes from farmers participating in the group:

*"I've really appreciated being able to network with other farmers about cover crops. This is more of a grass-roots approach and I think it does more to move the practice of cover cropping forward"*

*"Farmers like to experiment. But if they get stung JUST ONCE by a new practice, 90% of the time they will never do that again. Repeatable success can only be expected 80-85% of the time so some failure is going to happen. Now when we get a farmer mentor group together, other farmers can help talk through what happened and typically figure out*

## **Statement of Professional Contributions and Scholarship**

### **Soil and Water Conservation (continued)**

*that what they thought happened wasn't truly the cause. Having many observations on similar practices AND comparing with others, helps folks tweak their practices so they DO work. Now combine that with extension (science) during informal meetings and field walks and you get the best of both worlds. Everyone has a different take on issues and many times science can help explain what happened to cause failures or success"*

In early 2016, a Dane County seed corn producer asked me what the best cover crop is to reduce soil erosion after his seed corn crop. No Wisconsin research or recommendations existed for this so I successfully secured a grant for \$4,500 from the Yahara Water Improvement Network to fund a study to evaluate cover crops after seed corn. We held a field day at the study plots in the spring of 2017 that was attended by 17 farmers. Four of the primary seed corn producers were in attendance and all indicated that they will be using the recommendations developed from the plots.

I wrote an article for the Wisconsin Agriculturist in January of 2015 on mycorrhizal fungi and the influence cover cropping has on their populations in the soil (**Exhibit 13**). Mycorrhizal fungi are beneficial symbiotic fungi that increase the uptake of water and nutrients for crop plants. Cover crops can serve as hosts for mycorrhizal fungi and influence the diversity and abundance of these communities in the soil. This article led to a fact sheet that I coauthored in 2016 with University of Wisconsin Madison and Extension specialists on mycorrhizal fungi (**Exhibit 14**).

To help Wisconsin agricultural service providers and governmental agency staff improve their cover crop recommendations to farmers, Jim Stute from Michael Fields Agricultural Institute, Katie Wantoch, Dunn County Agriculture Agent, and I wrote a professional development grant to the Sustainable Agriculture Research and Education (SARE) program for \$74,023 to conduct cover crop plots in six locations across the state. The purpose of the plots is to assess cover crop practices and use the information to provide professional development to agency staff and agricultural professionals. The grant work will be completed in 2018 but initial results from plots have already been shared at field days and meetings.

The SARE grant plot results were shared at two statewide meetings for agency staff that I planned, coordinated and presented at in the fall of 2016. The meetings were attended by 134 agency staff from across the state (**Exhibit 15**). To facilitate information sharing about cover crops between meeting participants, I designed the meeting format so that experts would seed the conversation with their cover crop recommendations and the audience would be given ample time to react and add to those recommendations. This allowed participants to benefit from a wide range of cover crop experiences and knowledge. I served on the expert panel discussing cover crops after corn silage. Of the 103 meeting participants that completed a meeting evaluation (**Exhibit 16**), 86% rated their knowledge gain as a 3 or 4 on a Likert scale of 1 (did not learn anything) to 4 (learned a great deal). Eighty-six percent indicated what they learned will help them answer questions about cover crops. Fifty-one percent indicated it will improve their cover crop programming and 41% indicated they will cooperate with someone they met at the workshop on cover crop research or outreach.

I also conducted an eight-month post evaluation to assess how the information learned at the agency staff meetings was utilized by participants (**Exhibit 17**). The survey was completed by 76 people. When asked about the unique meeting format, 79% said it was effective, 21% said somewhat effective and no one said it was not effective. Respondents ranked an average of 3.45 on a scale of Likert 1 to 5 for knowledge gained on cover crops (1 being the least and 5 being the most) as a result of meeting attendance. When asked about the corn silage panel that I had served on, 45% of respondents said they had used the information they learned in their work and 18% said they plan to use the information. Seventy-eight percent indicated they shared information they learned with farmers and 52% shared it with other agency staff. Eighty-six percent indicated they had shared the information with more than one person, with 22% indicating they had shared it with 30-50 people and 11% indicating that they had shared it with more than 50 people.

## **Statement of Professional Contributions and Scholarship**

### **Soil and Water Conservation (continued)**

My cover crop work in Wisconsin was recognized nationally when the national SARE coordinators asked me to present on cover crop basics at the National Association of Agricultural Educators' Conference in Las Vegas, NV in December of 2016 (**Exhibit 18**). This conference is attended by vocational ag teachers from across the United States. In my breakout session, all of the 24 seats were filled. Several educators from Wisconsin spoke with me with after my presentation in Las Vegas and these contacts will likely lead to future collaborations.

My work was also recognized regionally when the *Partnership for Ag Resource Management (PARM)* asked me to teach a webinar to participants in the Great Lakes Basin on the various ways to seed cover crops in July of 2017 (**Exhibit 19**). I taught the majority of the webinar and invited my colleague, Dan Smith, to present his research on seeding cover crops into standing corn as well. The webinar was attended live by 125 participants and another 175 will watch the recording, according to PARM estimates based on past webinar records. One participant emailed the organizer after the webinar with this comment:

*"This was the best webinar your organization has produced in my opinion, GREAT JOB! The presenters were great and the information was equally valuable. Thank you for the opportunity to view this, I found it to be extremely valuable as we continue to encourage the utilization of cover crops in MN."*

### **Nutrient Management Planning**

Nutrient management plans (NMP) are planning tools farmers can use to ensure they are applying only the nutrients their crops need. Excess crop nutrients have the potential to leave the farm and lead to environmental degradation. Nutrient management plans are not only an important conservation tool but can also save farmers money by reducing fertilizer applications and maximizing on-farm nutrients, such as manure.

Farmers and agricultural landowners must have a NMP to be eligible to receive a tax credit through the Farmland Preservation Program. Nutrient management plans can be written by farmers only if they have participated in a certified course to teach them how to write a plan, typically offered by UW-Extension or county Land Conservation staff. There was interest from farmers in both Jefferson, where I previously held the position of Agriculture Agent, and Dane counties in such a course so I worked with the respective county's Land Conservation staff to conduct eleven classes from 2010-2016.

In Jefferson County, we taught eight NMP writing classes from 2010-2012. My role in the course was to teach participants proper soil testing technique, crop nutrient needs, and manure and legume nutrient crediting. I also taught participants to use the Snap-Plus software program to write their plans. We had 63 participants complete a NMP at the conclusion of the course, covering 22,104 acres. In the summer of 2013, I conducted an anonymous follow-up phone survey (**Exhibit 20**) with nineteen class participants. Six respondents indicated they decreased fertilizer applications. Two reported that adjustments made to their fertilizer program because of the class had resulted in a yield increase. Five said they had saved money because of crediting on-farm nutrients with savings ranging from \$3 to \$75 per acre. Nine indicated their fertilizer costs had gone down with total savings ranging from \$500-\$5000.

In Dane County, we conducted a NMP writing class for farmers in 2014, 2015 and 2016, with 52 total participants. All farms completed their nutrient management plan at the completion of the course, covering 6,943 acres. In 2014, evaluation for the class was conducted with the *Turning Point* interactive polling system. Participants were asked if they knew specific important details about soil sampling, nutrient spreading restrictions and fertilizer math before and after the presentations. The percentage of the class that answered correctly on the quiz questions increased by 22%.

In 2015 and 2016, written post evaluations (**Exhibit 21**) were used, rather than in-class evaluation. A total

## **Statement of Professional Contributions and Scholarship**

### **Soil and Water Conservation (continued)**

of 25 participants completed the evaluation. Everyone indicated that the training was appropriate for their needs and all but one participant indicated the information presented was at the right level for them. Seventy-eight percent of the participants indicated they understood soil testing, crop nutrient needs, manure nutrient crediting, the nutrient value of legumes and manure spreading restrictions 'well' or 'very well' after the class. Sixty-four percent indicated they would save money as a result of writing a plan and 100% indicated that they intended to keep their plan updated in the future.

### **Pest Management**

#### **Pest management in small-scale vegetable production**

Pest management in small-scale vegetable production can be extremely challenging due to the large diversity of crops, and therefore pests, and limitations in chemical options for controlling pests. There are a growing number of small-scale vegetable growers in Dane County. Although the acreage devoted to this type of production is small, the economic impact is large. In 2014, it was estimated that local food sales accounted for \$2.9 million in economic activity (Deller, 2014).

Organic vegetable growers often cite weeds as the biggest challenge in their production fields. In 2014 and 2015, Claire Strader, Dane County Organic Vegetable Produce Educator, and I successfully secured two SARE mini-grants for \$3000 each to evaluate several cover crops and cover crop mixes for their effectiveness at controlling weeds when grown for an entire season. We hosted field days for farmers in August of 2014 and September of 2015 to share the results from our plots. We collaboratively created handouts for each field day to present findings (**Exhibit 22**). On the evaluation from the 2014 field day (n=13), 77% of respondents indicated they learned a great deal about cover crops from the project (**Exhibit 23**). Sixty-two percent indicated their farming practice(s) would change a great deal from what they learned at the field day. Comments on the evaluation form indicated several participants had learned enough about the cover crop species to utilize them for weed control on their own farms.

In late 2014, a Hmong small-scale vegetable farmer contacted me, asking about Extension classes for Hmong growers to learn more about pest management and pesticides for vegetable production. I contacted the minority farmer educator from DATCP, Jack Chang, who works predominantly with Hmong farmers, and he confirmed a need for pesticide education in the Hmong farming community. We decided to take the traditional Pesticide Applicator Training Program (taught by UW-Extension) and modify it for Hmong farmers. We brought in several UW-Extension and DATCP collaborators to help us modify the curriculum and teach the class. We wrote grants for \$39,000 in 2015 and \$41,000 in 2016 to the North Central Risk Management Education program to fund a total of six Hmong Pesticide Applicator Training classes across Wisconsin from 2015-2017.

We modified the curriculum by expanding sections that needed additional explanation for this specific population and we used visual aids and teaching techniques with pictures and activities, rather than words, for participants that were unable to read English. The program was simultaneously translated into Hmong by knowledgeable translators that were able to help explain the course content in culturally appropriate terms. I wrote and taught the section on Pests and Pest Management principles (**Exhibit 24**).

Typically the goal of the traditional Pesticide Applicator Training program is for farmers to pass an exam that certifies them to purchase certain pesticides. However, our primary intent in teaching this modified course for Hmong growers was to increase the safety of the farmers, their families and the food they are growing. We knew that passing the exam would be difficult because it requires a high level of English reading comprehension, which is not common in this population.

The six classes were attended by 141 Hmong farmers. Evaluations were conducted immediately following

## **Statement of Professional Contributions and Scholarship**

### **Pest Management (continued)**

each class (**Exhibit 25**). The evaluation form was read in Hmong to participants and responses were written in English by the translator. A summary of the responses on the evaluations indicated that, with regard to the section that I taught on Pests and Pest Management, six percent felt that they had learned a few new things, 33% said they learned enough to apply to their farming lifestyle, 35% said they learned enough to use the information and to study for the exam and 26% learned enough to use the information and feel confident enough to take the Pesticide Applicator Certification exam.

In August of 2016, a six-month post evaluation (**Exhibit 26**) was conducted verbally by phone with 33 of the Hmong farmers that participated in the first two classes. All respondents indicated they have used the principles of pest identification and vegetable crop families in their farming operation. Seven of the Hmong farmers felt comfortable enough to take the Pesticide Applicator certification exam and three of them passed. Some of the comments on the six month follow up survey reflect that we met our true goal in conducting the training:

*"Very helpful, the protection part was important to me as I never do that even when I put Sevin on my veggies. I learned so much to change and be better." (sic)*

*"Thank you, even though I'm not taking the test, I still learned a lot. I came to learn more than focus on the test" (sic)*

In October of 2017, another six-month post evaluation will be conducted for the attendees of the last four classes.

### **Farm Business Management**

#### **Farm Financial Management**

Volatility in commodity prices and increases in input costs make it vital for farmers to manage their businesses carefully in order to maintain profitability. Sometimes farmers think that making changes to their various farming enterprises may increase profitability but financial projections should be done to estimate how those changes might impact their entire farm business.

In Jefferson County, I worked with several families that were looking to make changes to their farming operation and wanted help in analyzing how these changes would impact their bottom line. I utilized the University of Minnesota's FINPACK software program to input farm financials and estimate the final consequences of making specific changes to the farm business. The following is an example of my work with one of these families:

*Producer A was interested in selling his 50-cow dairy herd and focusing on his cropping enterprise. He had the opportunity to rent an additional 200 acres and take on some custom work to replace the income from the dairy enterprise. The analysis I ran (**Exhibit 27**) suggested if producer A rented the additional 200 acres and picking up extra work as a custom harvester, he could be more profitable than if he continued to milk his dairy cows. During a follow up call in 2012, the farmer told me he had followed through by selling his herd, renting the additional acreage and taking on the additional custom work and it was the "best decision he had ever made". Not only did he find that he was meeting his personal goal of having more time for his family but he also said 2012 was "his most profitable year in 26 years of dairy farming" and this was even 'during the biggest drought of his farming career'.*

After working with family budgets and farm finances, I saw that health care costs were a major expense in many farm families' budgets. Farm families were forced to choose plans with limited coverage to keep their costs down, which often meant they were not getting the health care they needed. The Affordable Care Act (ACA) that went into effect in 2014 created many changes to the nation's healthcare system and potential healthcare subsidies for farm families and workers. But the new healthcare system was extremely complicated and many Americans, farm families included, were unclear on how the legislation

## **Statement of Professional Contributions and Scholarship**

### **Farm Business Management (continued)**

would impact their healthcare choices.

In late 2013, using resources from UW-Madison's Covering Kids and Families, I put together a presentation on how the ACA will affect farm families and presented it as a webinar to 32 of my agriculture agent colleagues from across the state. They provided valuable feedback and I used this information to revise the presentation. I then delivered a live presentation to Dane County farmers and a statewide webinar for all farmers in December of 2013 (**Exhibit 28**).

The Dane County workshop was attended by 18 farmers and 8 evaluations were returned (**Exhibit 29**). I asked them to rate their knowledge of the impact of ACA on their family's insurance options on a Likert scale from 1-5 (1 being the least and 5 being the most) and the average rating increased from 1.8 to 3.6. I also asked participants to rate their knowledge, using the same Likert scale, of how ACA will impact their farm business and the average rating increased from 1.5 to 3.6. Seven of the participants indicated they would use the information to make decisions about their family's health care and all 8 indicated they would use the information to make decisions for their business.

For the statewide webinar, I had 95 returned evaluations (**Exhibit 30**). I again asked participants to rate their knowledge of how ACA would impact their family's insurance and decisions for their business. The average rating for their knowledge of their family's insurance increased from 1.9 to 3.7. The average rating for their knowledge of how ACA will impact their business increased from 1.8 to 3.4. Out of the 95 evaluations, 89 people indicated they will use the information to make decisions about their family's healthcare options and 79 indicated they would use the information to make decisions for their business.

I also gave this presentation to farmers and agricultural professionals at the Dane County Farm Bureau meeting, the Badgerland Financial Crop Insurance meeting, the Wisconsin Potato and Vegetable Growers Association conference, the DATCP Farm Center professional development meeting and two Landmark Cooperative farmer meetings to a total of 264 additional people. Although I did not conduct any formal evaluation at these meetings due to their structure and format, I received many positive comments about how I made a very difficult topic more understandable and how needed the information was amongst farmers.

### **Summary reflections**

My career with Extension has taken many interesting turns. I began in Jefferson County in 2009 as a general Agriculture Agent and was fortunate to have the opportunity to focus on crops and soils, my areas of expertise, with my move to Dane County in 2013. The unique environmental challenges in Dane County at that time created a need for me to focus a larger portion of my time on soil and water conservation and, more specifically, cover crops. My work with YPF also garnered statewide attention and created many exciting opportunities to work with farmers and cover crops across the state, region and country.

I continue to expand the diversity of my cover crop education and outreach work. In early 2017, I partnered with the Brown County Agriculture Agent, Liz Binversie, and Kevin Shelley from the UW Nutrient and Pest Management Program to conduct four focus groups with farmers, cattle nutritionist and agronomists in both Brown and Dane Counties to get feedback on the challenges and opportunities for feeding cover crops to livestock. We will analyze and summarize our data to present our findings to farmers and agricultural professionals in 2018. I am also planning a statewide cover crop conference for farmers in February of 2018. We hope to attract between 300-400 farmers to this event.

I look forward to continuing to work on practical and economically feasible ways to integrate cover crops into Wisconsin crop rotations. I believe UW-Extension can be at the forefront of helping farmers become more conservation-minded, which will be good for farms and for the people of Wisconsin.