

UW Extension Department of Agriculture and Life Sciences

Tenured Faculty Review

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General Overview of Programming

Over the past five years I have continued programming in livestock and non-traditional agricultural producers. The greatest expansion in my programming was in the area of swine production as I am a member of the statewide swine team. In addition to the two main areas that I have traditionally programmed in, I have made efforts to expand in agronomy/crop production and agricultural awareness. Many of my educational efforts have been the result of cooperation between many counties including Monroe, Crawford and Grant. The sharing of expertise and resources has helped bring many educational opportunities to this region of the state.

Beef Programming

Richland County agriculture is still primarily based around animal agriculture. Milk and Cattle & Calves accounting for two of the county's top three agricultural commodities according to the 2012 US Agriculture Census data. Most of the work in this area has been focused on the beef industry in Richland County. Local beef programming has been enhanced and strengthened by my relationship with the Richland County Beef Producers. Since 2012 I have been able to work with the group planning and delivering educational seminars at the annual meetings and at a co-sponsored summer field day. Over the course of the past five years, we have been able to reach many beef producers and provide them with timely and relevant information. An example would be the drought year of 2012. One of the topics for summer field day that year was managing nutrition during the drought and strategies for forage management. As a result three producers used the emergency forage recommendations of the university and planted a variety of emergency forages including: peas and oats, Sorghum-Sudan, millet, and forage radishes. These conversations lead to working with two producers that were treating lower quality forages with a protein supplement. We took forage samples prior to pouring and during the winter feeding period to determine the cost effectiveness of the feed additive and how the additive moved through the bale. I ended up collecting complete data from one producer. The test results were varied and provided an opportunity to talk about forage quality and the testing as a topic in the 2013 beef producers' field day meeting.

I have also continued with the Beef 101 classes in 2012, 2013, and 2015. This class is designed for new and beginning beef farmers. Class numbers in 2012 and 2013 were very small, with 2 & 4 participants respectively, causing me to not offer the class in 2014. I had received some questions about the class when it was not offered so in 2015 I held the class again but earlier in the year versus the November/ December time frame in the past. In 2015, the class saw a jump in participation to 15 participants. The classes are set up as a four night class. On the first night

we talked about the beef industry in general, the types of beef enterprises, and basic business planning. After the first session, the class had a discussion on the topics for the next three classes. This process worked well and provided value and ownership by the students. Evaluations at the end of the last class showed that all of the topics discussed the participants gained knowledge. All the survey respondents indicated that they would recommend the class. When asked what changes they will make as a result of the class, handling/ facilities, marketing, and genetics were mentioned the most. This current year, based off of recommendations from past classes, the classes are being conducted in the spring so I can have one of the class sessions on- farm to further enhance the educational program.

In addition to working with the Richland County Beef Producers, I have been involved with the Livestock Teams Cattle Feeders work group. I have been a part of the planning committee for the past five years and have presented at various locations. In 2016, I presented at seven locations on the topic of the Veterinary Feed Directive (VFD). We had approximately 250 participants at the seven locations around the state. There were 101 surveys returned for a return rate of 40 percent. Ninety-nine (99%) percent of participants rated the workshops as good to excellent and worth their time to attend. The 101 respondents represented a total of 12,763 head of beef cattle marketed annually. Eighty-eight (88%) percent of respondents indicated that they learned at least one thing that they were going to implement on their farm as a result of attending these workshops. Participants were asked to rate their knowledge on the topics before and after the workshops on a Likert scale of 1 (low knowledge) to 5 (high knowledge) to provide an estimate of knowledge gained. Participants rated their knowledge of the subject on The Veterinary Feed Directive topic at 2.2 before the workshop and at 4.02 after the workshop for a gain of 1.82 units on a 5 unit scale. In 2017, I co-hosted a workshop in Boscobel with Kory Stalsberg, Grant/Lafayette County Dairy & Livestock Agent, to try to expand the influence of the cattle feeders program. We had 26 in attendance and 22 evaluations returned ([Exhibit 1](#)). The 22 respondents represented 3,745 head of cattle finished annually and 557 head of stocker calves. Sixteen of the 22 respondents had never attended the Cattle Feeders meeting in the past, and 19 out 22 rated the program as good and excellent.

Another major project that I was involved with was the UW Extension Holstein Steer Finishing Yardage Cost Survey. I am one of the co-authors of the summary and worked on the team that developed, implemented, and interpreted the data. This Holstein Steer Finishing study focused on overhead, labor, bedding and related costs generally associated with yardage but did not include feed, animal, and veterinary related costs. This project was funded with USDA Risk Management Agency grant funds and was conducted in cooperation with UW Extension and UW-River Falls. The objective of this survey was to gather information on yardage costs of production for Wisconsin dairy steer feedlot enterprises. Information was obtained from feedlot operations feeding at least 50% dairy steers. The data collected was producer's annual costs for finishing dairy steers from at least 300 pounds or reported higher placement weights though finishing. This data was then used to calculate costs on a daily basis. Data was gathered by UW Extension agriculture agents from cooperating producers in 2012. There were 17 farm operations that had complete enough information to be included in the analysis. These

operations ranged in size from 34 head on feed to 1000 head on feed. The average number of head on feed was 178 and the median was 127 head on feed. This wide range is typical of the variability of feedlot enterprise size that we see in Wisconsin. The average total yardage (overhead & allocations, labor, management, and bedding) cost for cooperating farms was \$0.96 per head per day, with a range of \$0.47 - \$1.45 per head per day. The results of this data were drafted into a report titled the *UW Extension Holstein Steer Finishing Yardage Cost Survey* ([Exhibit 2](#)). Locally the individual producers that participated in the project received a report with their individual yardage cost and a comparison to the aggregate of the survey. I have been able to use the survey data as part of a presentation at the Richland County Beef Producers Annual Field Day.

I have been able to use my experience in this area to work with other agents and faculty to enhance their educational programs. I presented on visual appraisal and body score condition of beef cattle to a grass fed beef group that Gene Schriefer, Iowa County Agriculture Agent, was working with in Iowa County. In 2014, I was asked to update my information on *Composting Livestock Mortalities* and present to a group of producers and industry professionals as part of Feedlot Short Course held by the University of Wisconsin – River Falls. Again in 2016, I was asked to give the presentation at a Regional Cow-Calf meeting, held in Minong, WI. This presentation was filmed for University Place and has since been broadcast on the Wisconsin channel of Wisconsin Public Television nine times; it is also available on YouTube, and at <http://wpt.org/University-Place/composting-animal-carcasses>.

Swine Team

The second largest area of programming in the livestock area has been my work with swine. In 2012, UWEX needed to fill an opening they had on the UWEX Swine team. I was asked to fill one of those roles and have been part of this team ever since. While on this team, one of my main roles and responsibilities has been on Quality Assurance trainings for the swine industry in Wisconsin. In this role I am certified as an advisor with the National Pork Board in Pork Quality Assurance (PQA), and Transporter Quality Assurance (TQA). Through these trainings I have been able to certify 67 individual producers in PQA, 31 individuals in TQA, and I have performed 24 PQA Site Assessments. Within those totals, I have been able to work with a group that has traditionally not worked with the PQA program. In 2015, I was able to partner with Organic Prairie/ Organic Valley to assist their producers in meeting the PQA requirements of the packing plant they are contracted with. The processor that they were working with went through a management change and established a policy where all pigs that were harvested in the facility were to come from PQA Site Status farms. I was contacted by Josh Joseph, one of the meat pool coordinators, on how we could work together to meet this new requirement. As a result, I provided two PQA Certification trainings where 26 adult individuals were certified. While the training adhered to the principles of the PQA program, I was able to stress points that would be especially important to organic producers and help them see the value of the training in their system. At this point, in cooperation with Josh, we set up the site assessments as co-visits. We traveled together to each farm and went through the standard site assessment to help producers work through any management or husbandry issues that might be present on the farm. In this process, we visited and conducted PQA Site Assessments on 11 organic swine farms.

Overall, the site assessments have given me the opportunity to work with all sectors of the swine industry in Wisconsin. Through my work, especially with the site assessments, I have been able to gain a larger appreciation for the diversity of the swine industry and in turn, those experiences into advice on management and husbandry on other farms. As part of the site assessments I have been able to stress the importance of record keeping, standard operating procedures, and public perception.

In addition to working on quality assurance issues, the Swine Team has established an annual Swine Symposium meeting. This is truly a joint effort by the Swine team members and the Wisconsin Pork Association (WPA). This program was started in 2013 and was held at UW–Platteville Pioneer Farm with 25-30 people in attendance. Topics covered were the research conducted at the Arlington Swine Unit, Porcine Reproductive and Respiratory Syndrome (PRRS), and the dangers of foaming pits in swine confinement buildings. That first year my role in the program was to secure the out of state speakers in the morning session. I also gave a presentation on a white paper the team had developed titled *An Assessment of the Wisconsin Swine Production Sector* ([Exhibit 3](#)). The program from that first year has since rotated between UW-River Falls, UW-Madison, and UW-Platteville. The success of the program has been growing with the last Swine Symposium having 91 that attended the symposium with 41 completed evaluations for a return rate of 45%. A pre- post- evaluation with a Likert scale from 1 to 4 was utilized to capture knowledge gained from speakers. For each topic, there was an overall average gain in knowledge of 1.06 points. Participants that completed an evaluation, 63% of respondents indicated that they would make changes on their operations as a result of this program.

The collaboration with the WPA and the National Pork Board (NPB) has been a very positive one. Because of the collaboration, I have been a member of the WPA Animal Health Committee. This committee was started as a way for the state to look at controlling PRRS. As a result of working with this group, I wrote a news article summarizing PRRS disease and developed a display on the facts of PRRS that was used in the Swine Team Booth at Farm Technology Days. I also worked on the WPA Animal Health committee and started a small surveillance program for PRRS at county fairs. As part of this project, rope kits were hung at various locations where pigs had access to chew on them. The saliva is then collected and sent to a lab where a Polymerase Chain Reaction (PCR) test is conducted to determine if the pigs are shedding any of the PRRS virus. In 2013, Porcine Endemic Diarrhea Virus (PEDv) entered the United States, the testing program expanded to test for PEDv as well. In addition to adding PEDv the sample were then tested using a PCR test for PRRS virus an Enzyme-Linked Immunosorbent Assay (ELISA) test for PEDv titers showing they had been exposed. Since 2014, 6-10 county fairs have annually participated. In that time there have been no pigs found to be actively shedding either virus; however, there have been cases where ELISA has shown positive for PRRS.

The introduction to PEDv posed a new challenge to US swine producers and to youth livestock projects. In response to the new disease, the emphasis on biosecurity became extra important. In 2013, I co-authored a fact sheet with Liz Binversie, Dairy and Livestock Educator Outagamie County, titled: *General Swine Project Disease Prevention Guidelines*. This factsheet was geared for small hobby type producers and started a series of factsheets and articles that targeted that sector of the swine industry. In 2014, I started working with the Pork Center of Excellence and Dr. Pete Lammers on a joint effort to write some factsheets for small and beginning hog farmers. In 2015 two factsheets that I co-authored with Dr. Lammers were published on the Pork Information Gateway. The two publications are: *Introduction to Swine Genetics for Small and Beginning Pig Farmers* ([Exhibit 4](#)) and *Pig Breeding Systems for Small and Beginning Farmers*. These factsheets were then followed up with a press release to the state agricultural newspapers with two articles, *Resources for Small Scale Swine Production* and *Direct Marketing Pork*.

Poultry Programs

Poultry programming for me has always been slanted to the backyard flocks, and what I would call extra income type enterprises. Through this work, I have built many relationships and, in 2012, I was contacted by a loan officer with one of our local banks looking to gather information regarding a loan request he had received. The request was for money to convert a duck farm into a layer facility. Looking at resources that I had developed, I modified my *Simple Breakeven Calculator for Poultry* spreadsheet and added a tab for laying hens ([Exhibit 5](#)), along with added instruction on how to use the meat bird tab to determine cost for pullet rearing. Using these tools, I was able to provide the loan officer with enough feedback to help them make a decision on the loan.

As I updated the break even spreadsheet, I had been in communication with Richard Brzowski, Extension Educator in Maine. Richard had used the original spreadsheet for a SARE program in Maine. He, and some other Extension educators, had started doing some e-XTENSION Webinars and in October of 2012, I conducted a Webinar as part of this series on the *Simple Breakeven Calculator for Poultry*. The webinar was viewed nationally and I had 19 county agents and over 70 producers present on the webinar. The webinar gave the background on the spreadsheet, uses of the spreadsheet and did examples - one for market birds and one for layers. The program was well received and I conducted follow up feedback with five producers from around the country that used the spreadsheet on their operations.

The Poultry program has been a great way for me to connect agriculture in the classrooms. This started locally working with my daughter's third grade class in the fall of 2014. Emma wanted to do a show and tell with her birds. Working with the teacher, I was able to develop a lesson that matched up with the life cycle science lesson they were teaching. This lesson was given to all three third grade classes at the school. I have continued to share that lesson in the third grade classrooms in 2015 and as part of a summer school class in 2016. Using live birds and allowing children to connect agriculture to science has been very valuable. I was able to share this education as part of a greater 4-H Science, Technology, Engineering and Mathematics (STEM) Project that was held at UW-Platteville. I was also able to modify the program and

spent the morning hosting a group of 15 third and fourth graders from South Korea as part of an exchange STEM opportunity provided by the University of Wisconsin- Richland Continuing Education program. Working with our 4-H program, I was able to participate in Ag in the Classroom Project to 6th graders at the Richland Middle School highlighting commercial meat and egg production. I was also asked to be part of a Farm to School program in Walworth County, where I presented to 100 middle school students about egg production and marketing.

In addition to poultry in the classroom, there is a growing interest in local food and home food production and poultry seems to be a way for people to feel more connected to the food supply. This interest in backyard poultry has not wavered over the past few years, and I have been able to do various workshops around the state and locally on basics of poultry production. I have been a speaker at several events that work at bridging the agriculture and urban gap, talking about the basics of backyard poultry. These events include Fermentation Fest in Reedsburg, Ag Day on the Farm in Platteville, and multiple displays for Farm Technology Days including the past event in Walworth County where I brought live birds and resources. This demand is growing. I am currently planning to do an event in Jackson County, and have been working with Jennifer Blazek in Dane County and Ron Kean, UW Poultry specialist, to offer a series of poultry events in Dane County that focuses on Hispanic and Hmong populations. I am also currently working with Cooperative Extension Publications on an update of the Chicken Breed Publication and plan to have that updated and in print this summer.

Agronomy/ Crop Production

During the front half of my extension career, the focus of my work has centered on animal based agriculture. The main reasons for this are that I had an Animal Science background and informally the CNRED agent in the office, during that time, had been a split appointment in agriculture focusing more on the agronomy side. When he retired, the need for program coverage in this area increased. As a result, I have been able to collaborate with a number of colleagues and agencies to meet the needs of Richland County.

I worked with Richland and Vernon County Land Conservation Departments (LCD) to have an Organic Field Day in 2013, hosted by the Parker Family, an organic dairy farm in northwest Richland County. The event focused on the use of winter wheat as a weed mitigation strategy. The setup of the program was some of the soybean fields had the winter wheat cover crop and some did not. In the spring, the wheat was crimped and rolled, and the beans were planted into the crimped wheat. Video was taken during the crimping process. The other soybean strips were managed using the traditional organic cultivated system. In August we held the field day. Speakers from UW-Madison, Iowa State, and I presented information about trials done at the two universities and the agronomic advantages of cover crops. The Crimping video from the spring was played and was shared on YouTube. The crimping video can be seen at <http://www.youtube.com/watch?v=a7cXGxxEkqM>. The group walked the fields to look at the fields and the comparison of weed pressures and pod growth.

Working with Richland County Land Conservation Department (LCD), we held a soil testing workshop in the fall of 2013 that led to the planning of a Nutrient Management Class for Farmers. In the winter we then hosted a four session nutrient management class that walked producers through the SNAP plus software for writing nutrient management plans. As part of the class, I learned SNAP plus and did the teaching aspect of the class, with the Land Conservation providing technical support and maps. The producers in this group were mostly older small operations that were pasture based. We had three producers complete and turn in a plan and had ten attend the class on a regular basis.

In 2015, working with Bill Halfman and Carl Duley, Buffalo County Agriculture Agent, we were able to organize a multi-location winter crops day. This was the first of these types of meetings held in Richland County in a number of years. This meeting consisted of three speakers. The response to this meeting was extremely poor with only three people in attendance. I still held the meeting and, because of the driving situation for one of the speakers, we were able to do one presentation through a google hangout. The participants who did attend the meeting were industry professionals and, through conversations with them, they encouraged me to continue to have meetings and have since become an advertising outlet for me. That same year, I collaborated with Bill Halfman and held an on-farm meeting at Junction View Dairy in August that covered corn production, low lignin alfalfa, and technologies for nutrient utilization. I hosted a land rent and crops outlook meeting in December. As a result of the summer field days and the advice given by one of our specialist, a producer told me they were extremely glad they attended the workshop and they had saved \$10,000 by deciding not to spray fungicide. Again in 2016, I offered two crop production meetings during the year. The Winter Crops meeting included the following topics - emerging technologies in Agriculture, managing fertilizer inputs for 2016, potassium research trial update, and field corn disease management update. The second meeting was hosted by Perkins Farms and the discussion was based on crop scouting, field pest, and disease issues for 2016.

Shifting Gears

In a project started by Joy Kirkpatrick, I was part of a team of extension agent that developed a two day workshop series to help producers explore their ideas for shifting gears in later years and learn about issues surrounding retirement and/or farm succession. The project team also included Kari Apel, CPA, and Roger Williams, consultant and mediator. The workshop included: determining living costs and estimating the nest egg needed for retirement; evaluating the assets and which would be used/sold for retirement needs; lifestyle values and choices - what will you do if you're not farming 24/7; tax consequences; social security benefits, and estate planning. Participants were also offered financial coaching or succession planning facilitation after the workshops ended. The workshop series was piloted in three locations: Abbotsford, Richland Center, and Oshkosh. A total of 32 people participated in the workshops. Pre-workshop surveys indicated that while a majority of the pilot workshop participants have considered the financial issues of retirement, less than half have considered their lifestyle plans as they transition into retirement. Their three top concerns were: financial security in their later years, how to transfer assets to the next generation, and how to scale back on the work yet stay involved with the farm. End of session evaluations indicated participants' knowledge

levels increased on all topics presented in the workshops. The participants indicated the resources provided in the workshop binder were very useful. A follow up evaluation will be conducted at the beginning of 2013 (is this year correct as you didn't say what year you did this at the beginning) to determine any decisions made or steps taken as a result of their participation in the workshops. The project team also provided training to 17 county educators and as a result six additional workshops were offered with a total of 99 participants.

Other Programs Offerings

For three years I was able to work with Confined Animal Feeding Operations (CAFO) Meetings, where I got to meet and work with some of the larger dairies in Richland County and help them develop worker trainings that focused around OSHA Regulation and the Dairy LEP. In addition to the CAFO, there have been many new changes to the Farm Bill and rules and regulations from both the state and federal sides. I worked with the Richland County Highway Department to co-host a workshop on the new Implements of Husbandry Rule. I co-hosted Farm Bill meetings in partnership with FSA. I co-hosted two dairy meetings with Vernon County. The first was a Dairy Welfare meeting and how to handle downer cows and the second was a meeting regarding the Dairy Margin Protection Program as part of the new Farm Bill. I have been able to work with produce growers in the county and hosted an on farm safe produce handling workshop where 12 growers attended the workshop. I also offered an Ag Grants workshop in the fall working in cooperation with the DATCP and Michael Fields. The workshop addressed various grant opportunities, tips for successful grant writing, and other resources besides grants for funding.

While these are just a sampling of the many varied programs that I have been involved with over the past 5 years, I still maintain a strong working relationship with individuals and do numerous one-on-one projects. I have been continuing to expand and develop new relationships with a wide variety of partners in the county.