

UW-Extension Department of Agriculture and Life Sciences
Tenured Faculty Review 2017

Ken Schroeder, Associate professor with Tenure
UW-Extension Agricultural Agent, Portage County

Major Programs Development/Implementation/Teaching/Impacts

RESILIENT AND PRODUCTIVE ENVIRONMENTS:

SITUATION: Vegetable production and processing in Central Wisconsin are very important to our State and Nation. Wisconsin ranks 7th in the Nation for farm-gate vegetable sales. Wisconsin ranks 2nd in the U.S. for harvested acreage and total production of processing vegetables and 3rd for production value. Key processing crops include potatoes, sweet corn, green beans, green peas, carrots, cucumbers, and onions. Growers in Central Wisconsin produced 81 percent of Wisconsin's potatoes, 67 percent of the green beans, 62 percent of the sweet corn, 40 percent of the green peas, and 76 percent of Wisconsin's carrots. Nearly all of this vegetable production occurs on irrigated sandy cropland. The groundwater of Wisconsin's Central Sands region is a valuable resource sustaining not only vegetable production but a large processing industry and a dairy industry. Over the past decades, increasing business development, population growth, and an expanding regional market have led to concerns about the long-term quality and availability of our groundwater.

Portage County Farmer-Led Watershed Project

Producer-Led Watershed Protection Groups Take Bull By the Horns to Improve Water Quality in Wisconsin. This is farmers being proactive working to reduce phosphorous loading of Wisconsin's rivers. Over the last few years numerous farmers have come together to improve water quality in their own back yards so to speak.

Why I am engaged in this project: In 2015 a small group of Portage County farmers expressed interest in the water quality in our Mill Creek spanning Portage and Wood Counties. Mill Creek has been listed by the U.S. EPA as degraded 303(d) waters due to lack of dissolved oxygen for extended periods. The watershed includes 165 square miles in eastern Wood and western Portage Counties. Mill Creek is 47 miles long from its mouth at the Wisconsin River to its headwaters, near Marshfield. The watershed is listed by the DNR as being severely affected by nonpoint source (NPS) pollution. NPS controls have the potential to improve groundwater quality.

The process I used to develop this program: Several on-farm informal meetings that initially included 6 concerned farmers, land and water conservation department representatives from Portage and Wood Counties, and myself took place in late 2015 and early 2016 to discuss the challenges of improving water quality of Mill Creek. An opportunity to apply for grant funds to assist with watershed improvements became available from Wisconsin DATCP in early 2016 through a new Producer-Led Watershed Protection Grant program. With my help, the Farmers of Mill Creek Watershed Council was established and we applied and received \$20,000 (Exhibit 1). I serve as fiscal partner for this grant. Funds were targeted for various projects including cost-sharing conservation practices such as no-till planting, cover crop variety demonstration plots, and cover crop planting, an on-farm research project looking at cover crop effects on soil temperature and soil moisture and hosting several field days to inform area farmers about what is happening and to encourage additional participation.

Project focus: The Farmers of Mill Creek Watershed Council will work to reduce phosphorus loading of the Mill Creek from non-point sources (farm fields and barnyards to be specific). This is an opportunity to experiment with and initiate new management practices on the heavy somewhat poorly drained soils in the Mill Creek Watershed. As we develop these new best management practices that work on our farms and on our soils we will continually encourage our neighboring farmers to become involved and to begin tweaking and adapting these practices to their farms.

Goals for the Farmers of Mill Creek Watershed Project:

- Further educate farmers and their neighbors on phosphorus best management practices with the goal of improving water quality of the Mill Creek in Portage and Wood Counties.
- Focus on adopting more environmentally friendly farming practices that will ensure clean water and healthy soils for future generations while maintaining or improving profitability.
- Demonstrate to the public that farmers are conservation leaders – who care about their land and water and are doing everything they can to take care of it.
- The ultimate goal of the Farmers of Mill Creek Watershed Council is to be stewards of environmental sustainability for the land and water in the watershed.

Impact Statement: In 2016, twenty-one farmers installed conservation practices on their farms such as no-till planting, cover crop variety demonstration plots, cover crop planting, waterway buffer strips or hosted an on-farm research project site looking at cover crop effects on soil temperature and soil moisture. These conservation practices covered more than 750 acres. Three field days throughout the year attracted approximately 150 area farmers and local residents to learn about conservation practices that will ensure clean water and healthy soils for future generations while maintaining or improving farm profitability. \$18,900 in cost-share funds were provided to farmers as part of this project with \$8,600 provided by a Wisconsin DATCP Producer-Led Watershed Protection Grant and \$10,300 in additional support from county Land and Water Conservation funds. In 2017, we will be continuing this project with a second WDATCP grant for \$19,975.

Challenges: It has been difficult developing a targeted mailing list for the group. Also, with the wet weather this year we were challenged to get the fall cover crops in and were unable to install our tile drain research project.

Relationships developed: We have established partnerships with the Friends of Mill Creek Watershed, Inc., a citizen-led watershed group focusing on stream improvement and public education projects. The Farmers of Mill Creek Watershed Council will continue to coordinate with the "Friends" group sharing ideas and accomplishments as well as challenges. In 2016, the Friends of Mill Creek Watershed, Inc., were able to acquire two DNR no-till drills for rental and use by farmers in the Mill Creek watershed. This acquisition will allow the Farmers of Mill Creek ready access to a no-till drill that can be modified for inter-seeding cover crops into standing corn, an opportunity that likely would not have come about without the collaboration of the Friends of Mill Creek Watershed, Inc.

The Farmers of Mill Creek have also been working with the Petenwell and Castle Rock Stewards (PACRS) group. In August of 2016, the PACRS invited the Farmers of Mill Creek down to Lake Petenwell for a discussion on blue-green algae and to see firsthand the negative impacts it has on the area. Four of our Watershed Council farmers and I were able to participate in the discussions. We gained a whole new appreciation for the concerns and challenges of elevated phosphorous levels in the Wisconsin River. The trip and time spent were well worth it. A special thanks to the PACRS for their support and encouragement.

We will continue to rely on the expertise of our Portage and Wood County Land and Water Conservation Departments to provide direction on conservation practices and for help with design and implementation. They have been on board from day-one helping us get organized and providing suggestions on appropriate conservation practices to consider.

Other partnerships we have established include: Wisconsin Farm Bureau Federation, the Portage County Forage Council, and several local agribusinesses. These partners will assist us in getting the word out about conservation and what we are doing in hopes of increasing our farmer participation. Additional in-kind support will likely be available from some of these partners going forward. It is hoped that they will provide funds for purchase and distribution of the UW-Extension publication, "Nutrient Application Guidelines for Field, Vegetable, and Fruit Crops in Wisconsin".

Scholarship: I set up on-farm cover crop research trials at three locations looking at cover crop effects on soil moisture and soil temperature in relation to spring planting time and yield of the subsequent agronomic crop which falls in the category of creative intellectual work. This is a multi-year project going a minimum of three years up to five years.

2016 Field days in June, August, and December add to our intellectual history through communication to local farmers and residents the lessons learned from this project. I helped design and plant an on-farm cover crop variety trial and demonstration plot which was used at our August and December field days. I was instrumental in organizing these field days and leading discussions on-site during the field tours.

A poster on the Producer-Led Farmers of Mill Creek Watershed project was presented at the 2016 Agriculture and Natural Resources Extension annual conference in October and participation in a panel discussion at the first annual, Wisconsin DATCP Producer-Led Watershed Protection Project meeting for which I developed and gave a power point presentation on the Mill Creek project (Exhibit 2). This adds to our intellectual history through its communication.

Using Cover Crops for Nitrogen Management in Vegetable Cropping Systems

SITUATION: Cover crops can be used effectively to reduce soil erosion, reduce the need for herbicides and other pesticides, protect water quality by limiting nitrogen (N) leaching, and increasing soil organic matter. All benefits worth considering when thinking about using cover crops. With the high cost of inputs it becomes more important to find ways to conserve fertilizer and/or reduce the need for commercial fertilizers. Using cover crops enhances nutrient recycling by taking up nutrients that would otherwise leach out of the soil profile and potentially end up in the groundwater and local lakes and streams. Nitrate is often present in the soil at the end of the cropping season if not all the N applied was used by the growing crop. Also, decomposing crop residue and animal manures can add to the nitrate-N levels in the soil. Nitrogen in the nitrate form is water-soluble and therefore vulnerable to leaching when it rains.

RESPONSE: How can we recycle nutrients and reduce nutrient loss in vegetable cropping systems? Cover crops reduce nitrate leaching by soaking up available nitrate for their own growth and use available soil moisture, thus reducing water available for leaching nutrients. Small-plot studies by A.J. Bussan, UW-Madison Vegetable Production Specialist demonstrated the potential for perennial legume species to be incorporated into current vegetable rotations in Central Wisconsin. To take this to the production level, Ken Schroeder, Portage County University of Wisconsin-Extension Agriculture Agent arranged and coordinated a series of on-farm field demonstrations integrating red clover in commercial vegetable production systems in 2011, 2012, and 2013. The 2013 demonstration site was part of the USDA NRCS Conservation Stewardship Program to encourage on-farm research and demonstrations. I worked directly with Terence Kelly, WI-NRCS State Agronomist and the local NRCS representative on this Conservation Stewardship Program on-farm research opportunity. Also worked directly with Seneca Foods field representatives for harvesting and yield data collection.

RESULTS: Research findings were presented at several local, regional, and state-wide educational meetings and conferences as the project progressed from 2011 through 2014. Ken Schroeder presented information on the cover cropping trials to 45 to 50 vegetable grower and crop consultants at the Central Wisconsin Processing Crops meetings in March 2011 and 2012 and to approximately 80 growers and crop consultants at the Midwest Food Processors Processing Crops Conference in November 2012. An article entitled Vegetable Farms May Want to Try Using Cover Crops was published in the Wisconsin Agriculturist (circulation 26,000) in August 2012. A second article was published in the UW-Extension Central Wisconsin Agricultural Newsletter. As a result of presentations and publications, Ken Schroeder was invited to and presented his findings at the 2013 Midwest Organic and Sustainable Education Service's (MOSES) Organic Conference in La Crosse, WI (cover crop seminar attendance 90-100). In 2014, I presented a summary of my cover crop research at the statewide Wisconsin Cover Crops Conference in Wisconsin Dells. My presentation entitled Using Cover Crops for Nitrogen Management in Vegetable Cropping Systems (Exhibit 3).

IMPACT: Over the past 4 years, approximately 300 vegetable growers and crop consultants learned in-person about a viable new cropping system to incorporate perennial cover crops in their vegetable production systems. Additionally, many more learned about this option through publication.

The need for environmentally and economically sustainable agricultural practices remains at the forefront of issues in Central Wisconsin. Known benefits of using perennial legume cover crops are: nitrogen and rotational benefits, providing perennial ground cover reducing soil erosion, retaining excess nutrients from crop production to be used by subsequent crops, and a very important benefit, decreasing the impacts of vegetable production systems on groundwater quality. Not surprising, every farming operation is unique and crop rotations can vary substantially. Thus there is no one size fits all system of using cover crops in vegetable production. It is a matter of farmers being interested enough to adapt a proposed system to their situation if adoption is to take place.

Educational Outreach through Wisconsin Farm Technology Days 2014

Wisconsin Farm Technology Days' (WFTD) mission is to promote technologies in agriculture and related industries, provide leadership development and education through businesses, industry, and agencies.

Portage County is located in the heart of the Central Sands region of Wisconsin. With over 50 percent of the harvested cropland under irrigation, high value vegetable crops dominate the landscape. Portage County ranks first in the production of potatoes, processed snap beans and sweet corn and leads the state for market value of agricultural crops sold. Vegetables account for 57 percent of the total value of all agricultural products sold in the county. Non-irrigated land supports the production of cash grains and forages which feed the thriving dairy and livestock industries. Vegetable and dairy processing plants support a broad range of farms and provide significant employment in the County. This unique agricultural production in Central Wisconsin and the scope of WFTDs was the reason Portage County volunteered to host the show in 2014. It was an opportunity to showcase Wisconsin's vegetable production.

In 2011 myself along with our County Executive, two representatives from our Agriculture and Extension Education committee, and a representative from the Stevens Point Area Convention and Visitors Bureau put forth a successful bid to host WFTD in 2014. Throughout the 3.5 year planning and implementation process while serving as executive secretary, I built on my existing

connections to the agriculture community and expanded well beyond into the non-agriculture sector as well. It was vital to the success of the show to access the outreach of key people in the community.

The 2014 show featured the most diverse field demonstrations ever thanks to the many efforts our local vegetable growers, the vegetable industry, and UW-Extension. Attendees learned about potato, sweet corn, green bean, carrot, and cabbage production and harvesting, and alfalfa harvesting.

Thanks to the efforts of the North Central Region UW-Extension agricultural agents approximately 7,000 attendees were educated about water use and drip irrigation for crop production on sandy soil, impacts of nitrogen application rates, planting dates, and irrigation on field corn, and cover crop varieties available to improve soil health. An additional 5,000 attendees toured the Feltz Family Dairy operation learning about cow comfort, feed storage, sand separation from manure, and roof runoff management through the use of rain gardens.

Over 48,500 attendees to the 2014 WFTDs in Portage County learned about the latest ag research and technology, the unique agriculture of Central Wisconsin, current Family Living research and education, and youth hands-on learning thanks in large part to the countless efforts of the Portage County UW-Extension Office and the statewide UW-Extension faculty and staff.

Nineteen County non-profit groups shared \$85,000 for their efforts with the food service and four local FFA groups were given \$1,000 each for their assistance with show set up and tear down. 1,800 local volunteers assisted in hosting this great event. Respondents to a post event volunteer survey indicated the most rewarding part of their experience was meeting new people, feeling like being more a part of the community, and getting to be a part of something so big. Ninety-five percent of volunteers surveyed said they were very likely to somewhat more likely to volunteer in the community in the future as a result of volunteering for FTD in 2014.

It was exciting to watch the community come together around this huge undertaking. I continue to be amazed by all the networks within Portage County. This was truly a leadership building event for our Extension Office and the community as whole. The networks established beyond our normal reach into the community will surely benefit us for a long time into the future.

STRONGER ECONOMIES:

Reducing Late Blight Impact on Potato and Tomato Growers in Wisconsin

Late Blight *Phytophthora infestans*, has been confirmed on potatoes and tomatoes in Wisconsin every year since 2009. Late blight caused the Irish potato famine of the 1850's. It is often referred to as a 'community disease' because it is extremely destructive and easily spread by wind. Left unmanaged, a small outbreak can lead to an epidemic, devastating commercial vegetable fields and gardens alike. Wisconsin produces about 62,000 acres of potatoes annually and when we have a late blight outbreak it is necessary to have all potato and tomato growers aware of the problem, be able to identify the disease and know what to do about it. A rapid response is necessary to minimize the disease spread and protect a \$350 million crop.

Most of our commercial growers know and understand the disease and what to do in response. However, most backyard gardeners and small-scale vegetable producers aren't as well informed and these however small numbers of unprotected plants can lead to increased disease spread and increased costs of production for the potato and tomato industries. This truly is a community disease.

Throughout the years I have been writing news releases (Exhibit 4, resulted in articles in The Country Today 7-15-15, and Portage County Gazette), providing disease photos, holding educational seminars, and providing support to clients with the help of Dr. Amanda Gevens and Brian Hudelson from the UW-Plant Pathology department when their plants become diseased. In 2015 and 2016, I worked with Dr. Gevens to expand our educational efforts by giving away late blight resistant tomato plants to all plant purchasers at our local Master Gardener Volunteer (MGV) plant sale along with information about late blight such as what to look for and what to do if you get late blight. Weekly during the growing season we provide late blight information to the public at our Master Gardener booth at the Stevens Point farmers' market. Additionally, I expanded my awareness building program with MGV and Portage County Board of Supervisors presentations, newspaper articles both statewide and locally and provided press releases to county colleagues for their use locally. Lastly, I developed a website on late blight as a go-to resource with research-based information.

Impact:

200 late blight resistant tomato plants with late blight educational materials were distributed to gardeners in Portage County in 2015 and 2016. Feedback from colleagues and Master Gardeners on the usefulness of the resources provided affirmed the value. In 2015 and 2016 the Portage County UW-Extension office handled an increased number of tomato disease inquiries compared to 2014 and made several on-site visits to backyard gardens and small-scale vegetable growers to assist in tomato disease identification and provide research-based information on how to deal with late blight. Indicative of the effectiveness of these outreach efforts.

Feeding Cull Potatoes to Dairy and Beef Cattle: A Viable Alternative to Alleviate Feed Shortages Due to the Drought of 2012

SITUATION: July 2012 in Wisconsin was the hottest on record along with severe shortages of rain resulting in many farmers finding themselves short of feed for their livestock and wondering how they were going to make it through to next year's harvest. With feed grains and hay in short supply, prices skyrocketed. Wisconsin's potato production on the other hand was shaping up to be one for the records in 2012. In Wisconsin we grow potatoes on about 62,000 acres and produce almost 26 million hundredweight (cwt) of potatoes or 1.3 million tons annually.

Potatoes unsalable because they do not meet size, grade, or quality standards, or potatoes disposed of because of low market value due to over production are considered cull potatoes. This culling occurs at harvest as potatoes go into storage and then again when they are removed from storage and packed for sale. Those that are diseased, damaged, out of grade, or in oversupply are culled and discarded. Due to the increased production, potato packers and processors needed to move these extra potatoes.

RESPONSE: After conversations with a couple large potato packers about the overages Ken Schroeder, Portage County UW-Extension Agricultural Agent suggested feeding these potatoes to dairy and livestock. This is not a new concept, however, not a common widespread practice either, likely due to lack of information on the feed value of cull potatoes and how to handle and feed them.

RESULTS: Ken Schroeder did a literature review on using potatoes for cattle feed, had nutrient analysis done on samples of cull potatoes, and talked with farmers currently feeding cull potatoes. He used the information gathered to write a fact sheet entitled 'Feeding Cull Potatoes to Dairy and Beef Cattle' (Exhibit 5, received WACAA communication award in 2012). This fact sheet was published in the Central Wisconsin Agricultural Specialization team's newsletter and posted on their website <http://fyi.uwex.edu/cwas/files/2012/10/Feeding-Cull-Potatoes-to-Dairy-and-Beef-Cattle-10-24-12.pdf>. Additional postings were made to the UW-Extension Wisconsin Beef Information website <http://fyi.uwex.edu/wbic/> and the UW-Extension Dairy Cattle Nutrition website <http://www.uwex.edu/ces/dairynutrition/>. The factsheet publication resulted in an article 'Potatoes Could Replace Shelled Corn in Beef Cattle Rations' written by Peggy Coffeen and published in the November 8, 2012 issue of the Agri-View newspaper.

IMPACT: In a year where traditional feed is in short supply and grain prices are high, dairy and beef producers were informed about an additional cost effective feedstuff. The factsheet addressed the nutritional value of potatoes, feeding and handling methods, and provided guidelines on what is a reasonable price to pay for cull potatoes. Potato packers and processors were provided information to share with potential buyers of a surplus product that could be utilized for feed rather than land-spread. This is a win-win situation for dairy and beef cattle producers and the potato industry in a year challenged by severe drought.

FOOD SAFETY, FOOD SECURITY, AND HEALTH:

Fresh Fruit and Vegetable Grower Education

Currently, 112 Portage County farms generate \$652,000 in direct-marketing sales adding to the local economy. Portage County farmers sell directly to consumers from roadside stands, farmers' markets, auctions and pick-your-own operations. Growth in this area is expected to continue as more and more people are looking for locally grown foods (Portage County Agriculture: Value and Economic Impact. 2011). A 2012 Stevens Point Farmers' Market vendor survey on educational opportunities of interest to them indicated USDA Good Agricultural Practices (GAP) training, proper harvesting and marketing of fresh produce, and marketing best practices as educational priorities.

According the Center for Disease Control (CDC), food borne illness impacts 48 million Americans each year and costs the economy an estimated \$ 6.7 billion. The majority of these losses are related to fresh fruits and vegetable consumption. To reduce the risk of food contamination, many farms have instituted a collection of principles outlined by the USDA. These principles, called Good Agricultural Practices (GAP) and Good Handling Practices (GHP), apply to on-farm production and post-production processes. Although these principles exist, many small fruit and vegetable growers have not moved toward implementation.

In 2014, I worked with Kristin Krokowski, Waukesha County UW-Extension Horticulture Educator to host a food safety program for fruit and vegetable growers in Stevens Point. The morning program featured Chris Blanchard of Rock Spring Farm and Flying Rutabaga Works. Chris spoke to the audience of his firsthand knowledge of safe food production and handling practices. In the afternoon, I arranged for Jack Chang, Agriculture Program Specialist at the Wisconsin Farm Center of WDATCP to do a live demonstration on how to build an affordable portable hand washing station. The afternoon also featured two local producers talking about the organic certification process and marketing best practices.

Surveys were administered to measure the increase in knowledge of workshop participants in the area of food safety. The average increase in food safety knowledge for the other two locations was 56% (n=42). In addition to measuring the increase in knowledge of participants, each farm business was asked to complete a six page food safety survey. The goal of this survey was to assess the current on farm practices currently being used by Wisconsin fruit and vegetable growers related to food safety. This information is currently being used to identify areas where we can develop "best practices" for on farm processes that may contribute to poor food safety practices. Areas we are currently exploring include safe manure composting practices, safe produce harvesting, safe produce storage techniques and cleaning and sanitizing produce washing equipment. Also gathered information on other areas of interest which included season extension, pest identification and management and additional small business management.

Local fresh market producers increased their knowledge of safe food handling practices, participated in building an affordable portable hand washing station, and had an opportunity to learn from other local producers about organic certification and marketing practices.

On-Farm Food Safety Workshop for Diversified Vegetable Farmers

In 2016, I worked with Erin Silva, UW-Madison Organic Crop Production Specialist to bring this food safety workshop to Stevens Point. This workshop was put on in cooperation with the FamilyFarmed organization. We were able to bring in Atina Diffley, a well-known author and food safety instructor to teach alongside Dr. Silva. Eighteen fresh market vegetable farmers learned about food safety best practices, how to identify the needs of their farm operation through an on-farm risk assessment, aligning with the new FSMA produce rule, profit-related record keeping and traceability systems, human health and hygiene worker training, and how to maximize produce quality while addressing food safety risk.

UW-Extension Master Gardener Level 2 Training: Food Safety

In 2013, I participated in the statewide Master Gardener level 2 training. I produced and narrated a power point entitled "Postharvest Handling of Fruits and Vegetables" which was posted to the training website for participants to view. The week following I did a Q and A with the group.

Expanding Portage County UW-Extension's Outreach through Master Gardener Volunteers

Home horticulture is expanding in Portage County as homeowners are looking to improve their vegetable gardens and surrounding landscape. Many more people are enjoying gardening and generating many questions and concerns about plant growth and development, insects, diseases, and environmental sustainability. In any given gardening season, the Portage County Extension office receives 400 or more calls requesting horticulture related information or assistance. To expand the educational outreach capacity of our office, I train Master Gardener Volunteers (MGV) and supervise the Portage County MGV association.

I personally teach the Portage County MGV training classes with help from my Central Wisconsin Agricultural Specialization Team colleagues. I also teach several of the classes in neighboring counties. This provides our MGVs an opportunity to learn from the local experts familiar with specific environmental conditions of our area in a more personal situation.

Impact Statement: In 2016 Portage County MGVs volunteered 397 hours in youth education, 1,437 hours in adult education, 1,143 hours in support service for a total of 2,977 volunteer hours. Since 2000 the Portage County MGVs have volunteered over 63,105 hours.

In partnership with the YMCA, MGVs planted, maintained and harvested produce from 26 raised beds located at the YMCA. In 2015 and 2016 approximately 60 students each year spent time in the garden learning about growing vegetables and healthy eating. Preschool on Tuesday, school age on Thursday. Even the college aged teachers had fun learning about gardening and new vegetables that they could grow. One teacher said they work to get the students to eat their vegetables for lunch and it's a struggle. In the garden they are eating handfuls of beans, peas, kohlrabi, broccoli and cucumbers and ask "Can we please have more Kale?" The preschool program had an indoor educational time and then a visit to the garden. One MGV stated "It was great to hear the kids repeat what they had just learned inside or see the excitement as they taught us what they knew." Nine hundred to 1,000 pounds of produce was either consumed by the students, their families or donated to the Aging and Disability Resource Center. This continues to be a very rewarding program for the Master Gardener Volunteers.

Supporting Horticulture Education: Each year money raised through our plant sale not only supports our activities but also allows us to help other organizations that promote gardening in our area. In 2016 for example, we donated money to the local 4-H program to help students learn flower arrangement; to the Boston School Forest which educates every student in the Stevens Point School District about environmental and forest management; helped send a local high school student to the National Junior Horticulture Competition; and provided two scholarships to UW-Stevens Point students in horticulture.

Helping Other Organizations Thrive: Money raised through a container raffle, quilt raffle and ticket sales for our Garden Parade was donated to two local groups. \$1,500 to the Green Thumb program of the Boys and Girls Club of Portage Co. will be used for supplies and programming in their five gardens teaching skills and healthy eating. The Hunger & Poverty Prevention Partnership

works with Giving Gardens throughout the county to supply fresh produce to those in need. In 2015, over 1,828 pounds of produce was donated. Our \$1,500 donation will be used to build a shed to house all their garden supplies.

Other educational outreach by our MGVs included a Q&A booth at the Stevens Point Farmers' Market every Saturday from May through September. In 2016 information about late blight, spotted wing drosophila, and Emerald Ash Borer was needed in the community. MGVs were able to communicate with small growers and local homeowners about disease or insect prevention and proper disposal of infested material. This booth also gives the UW-Extension a visible presence in the community as a resource for research-based information. Annually, the Portage County MGVs host a day long winter gardening educational seminar called Garden Dreams which is open to the public and attracts 125 to 130 attendees. In addition, the MGVs help maintain 20 community gardens including libraries, parks, aging & disability resource center, courthouse, veterans memorial, visitors center, riverfront art center, provided mulch, compost, plants and labor; donated to WI Public Radio, helped with judging at the Rosholt Fair, and hosted a booth at the home show to educate citizens of Portage County about horticulture issues.

Farm Safety a New and Ongoing Project

As a result of a tragic farm manure gas accident claiming the life of one of Portage County's young farmers, I became involved in an ongoing project to improve safety on our farms. As encouraged by our Agriculture and Extension Education Committee, I am taking a multi-faceted approach to program development. First, because the farm accident was from manure gas in an open manure pit, I hosted a manure gas safety webinar put on by several specialists from UW-Madison and UW-Extension. TV Chanel 7 attended and interviewed me after the program. I was asked by the Biadasz family to assist them in developing a manure gas safety training program in an effort to prevent other manure-related deaths. They are putting all the proceeds from their son's memorial into a farm safety and education fund. We are in the process of planning a manure pit safety seminar with plans to expand this in the future. Additionally, I wrote an article for the October 2016 Central Wisconsin Ag Specialization newsletter "Think Safety: Especially during Harvest and Manure Hauling Season" to encourage a safety first attitude. I attended two safety programs as professional development so that I can do more to teach and promote farm safety. I was asked by OSHA to develop a safety presentation directed towards potato and processed vegetable growers for presentation at the annual Agricultural Safety Day in January 2018. Again, this is a developing and ongoing project.

Wild Parsnip Management in Portage County

John Eron, a concerned farmer in Portage County approached me for assistance in managing wild parsnip in Portage County. Wild Parsnip is an invasive species classified as restricted in Wisconsin. Sap from the plant can cause a skin rash that may lead to blisters in the presence of sunlight referred to as phytophotodermatitis. From an ecological standpoint, the plant invades prairies, oak savannas, ferns, old fields, pastures, and roadsides. In Portage County we are seeing it pop up in road ditches and untilled conservation reserve fields.

Response: We started in September 2015 with a presentation to the Portage County Towns Association on invasive species to build awareness. I provided UW-Extension Wild Parsnip management bulletins for distribute to farmers and the Friends of Mill Creek Watershed group to help educate people on how to identify and manage this weed. In April 2016, I put together a group of three YouTube videos from UW-Madison weed specialist Mark Renz on invasive weed identification to loop on a laptop and set this up on a display table along with UW-Extension invasive weed management handouts during the spring elections in the Carson Town Hall. Discussion continued on and off throughout 2016. January 2017, I met with Portage County Executive Patty Dreier, John Eron, the Portage County Planning and Zoning and Land and Water Conservation departments, two county board supervisors, and the Wood County Land and Water Conservationist to discuss plans to add wild parsnip to the list of noxious weeds in Portage and Wood Counties. This was just approved at the March 21st 2017 meeting of the Portage County Board of Supervisors. This will allow us to pursue additional action to better manage this invasive weed. Further education and outreach will be needed to be effective.

Future Programming:

The need for environmentally and economically sustainable agricultural practices remains at the forefront of issues in Central Wisconsin. Projects I worked on and continue to be involved with are vital to addressing these challenges. Additional emphasis will be placed on water quality and quantity in Portage County. Just held 2 meetings with a group of farmers from the eastern sandy region of the county to begin a producer-led group focused on groundwater nitrate concerns.

Professional Roles and Contributions

<u>University/Extension</u>	<u>Role</u>	<u>Year</u>
UWEX Small Farms Team	Member	2009-present
Central WI Groundwater Taskforce (UW, UWEX, WPVGA Agricultural Industries and Municipalities)	Member/Advisor	2009-present
Department of Agriculture/Agribusiness	Member	2006-present
Tenured Faculty Review	Member	2015-present
	Chair	2015-present
Standards Rank & Promotion	Member	2014-present
Nominating Committee	Member	2007-present
Strategic Planning Team	Member	2010-2011
UWEX - FMCV Team	Member	2006-present
	Co-Leader	2007-2012
UWEX Horticulture Team	Member	2006-present
UWEX Dairy Team	Member	2006-present
Central Wisconsin Agriculture Specialization Team (CWAS)	Member	2006-present
CWAS Newsletter	Editor	2006-2015
UWEX Portage County Master Gardener Volunteers (MGV)	Advisor/Trainer	2006-present

<u>Profession</u>	<u>Role</u>	<u>Year</u>
WPVGA Grower Education Conference Planning Committee	Member/Coordinator	2007-present
WI Association of County Agricultural Agents (WACAA)	Member	2006-present
WACAA Board-of-Directors Officer	President	2011-2012
WACAA Board-of-Directors	Member	2009-2012
WACAA Professional Excellence Committee	Chair	2007-2010
National Association of County Agricultural Agents (NACAA)	Member	2006-present
Epsilon Sigma Phi (ESP)	Member	2006-present
ESP Board-of-Directors	County Liaison	2009-2011
Joint Council of Extension Professionals (JCEP) Board-of-Directors	Member	2012-2014
Joint Council of Extension Professionals	Member	2010-2011
Annual conference planning committee		

<u>Public Service</u>	<u>Role</u>	<u>Year</u>
Farmers of Mill Creek Watershed Council	Advisor & Fiscal Mgr.	2016-present
Portage County Agricultural Safety Committee	Member	2016-present
Portage County Planning and Zoning		
Groundwater Management Plan Committee	Technical Advisor	2014-present
Farmland Preservation Plan Committee	Technical Advisor	2014-2016
Portage County/Wisconsin Farm Bureau	Member	2007-present
Portage County Dairy Promotion Committee	Advisor	2007-present
Portage County Forage Council	Advisor	2007-present
Central Wisconsin Ag Tour Planning Committee	Member	2007-present
Portage County Emergency Operations Group	Member	2006-present
Portage County Fair Youth Exhibit Committee	Advisor	2006-present
Portage County Market Animal Committee	Advisor	2006-present
Portage County Business Council – Agribusiness Committee	Member	2006-present

Experience with Grants, Collaboration, Supervision

“Central Sands Water Initiative Conference 2011 and 2012” WI Sustainable Agriculture Research and Education \$2,000 Mini-Grant. Grant Writer and Project Leader

“Producer-Led Watershed Protection Grants” 2016 and 2017 Wisconsin Department of Agriculture, Trade and Consumer Protection. Total Project Budget \$20,000 in 2016 and \$19,975 in 2017. I serve as fiscal manager for this project and will coordinate on-farm research and demonstration trials as well as assist with field days, conservation practice installation, and educational programming. Grant Writer and Project Manager.

“Reducing Water Use on Sprinkler Irrigated Lawns in Central Wisconsin” UW-Extension North Central Innovative Grant. Budget \$170. Grant Writer and Project Leader

Awards

<u>Title</u>	<u>Source</u>	<u>Year</u>
Outstanding Contribution to Agriculture	Portage County Business Council	2012
Publication (Communication Award)	WACAA	2012
Achievement Award	WACAA/NACAA	2014