

Agricultural Newsletter

UW-Madison College of Ag & Life Science
University of Wisconsin-Extension



July-August-September
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Removable Insert:

Farm Service Agency Update

Becoming the Employer of Choice

A Human Resource Management Program For Farm Managers and Owners

*Jennifer Blazek, Trisha Wagner and Dr. Simon Jette-Nantel
University of Wisconsin - Extension*

This program is geared for current and future farm managers or owners looking to improve their human resource management skills. The program includes activities to increase management awareness and ability. Interactive sessions aim to build skills in a wide variety of human resource management topics important to farm business. Learn from other farmers and managers to take home effective and practical approaches to human resource management on farms.

The program format is based on a curriculum of seven modules. This curriculum was designed to offer ultimate flexibility to address the specific interest of managers or owners in addressing their needs on their own farms. These modules can stand alone and do not have to be taken in order.

- From Managers to Leaders
- Hiring the Right People
- The Farm Business Culture
- Developing a Motivated Workforce
- Keeping Good Employees: Chalking the Field
- Keeping Good Employees: Reviews & Feedback
- Managing Conflict

The program instructors are:

- Jennifer Blazek, Dane County Dairy & Livestock Agent
- Trisha Wagner, Jackson County Agriculture Agent
- Simon Jette Nantel, UW-River Falls, Ag Economic Specialist, Center for Dairy Profitability
- Jerry Clark, Chippewa County Agriculture Agent
- Steve Okonek, Trempealeau County Agriculture Agent
- Mark Hagedorn, Eau Claire County Agriculture Agent
- Carl Duley, Buffalo County Agriculture Agent

For more information, contact your local Extension Ag Agent, or the Program Administrator, Jennifer Blazek, 608-224-3717, jennifer.blazek@ces.uwex.edu.

Agricultural NEWSLETTER

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and
UW-Madison College of Ag & Life
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University of Wisconsin, United States
Department of Agriculture and Wisconsin
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If you have any special needs or require
special accommodations, please write to
UWEX Area Agricultural Agent, Spoooner Ag
Research Station, W6646 Highway 70,
Spoooner, WI 54801 or UWEX Area
Agricultural Agent, Ashland Ag Research
Station, 68760 State Farm Road, Ashland, WI
54806.

Seed to Kitchen Collaborative Open House to Feature Organic Trials

Niki Lacktorin
UW-Extension Seed to Kitchen Intern

Come for an interactive field day on organic vegetable variety trials and production to be held at the Spoooner Station on Monday, July 17 with a garden walk at 4 PM and formal program beginning at 6 PM. Walk through ongoing trials and ask questions of fellow farmers about current issues, management practices and varieties. We will have special guests Julie Dawson and Ruth Genger from the UW-Madison Department of Horticulture. Julie is an Assistant Professor whose passion for sustainable agriculture, local food systems, and participatory plant breeding has helped lead the way to provide research support for small-scale farm and food enterprises serving regional markets, and community gardens focused on food security. Ruth is an Associate Researcher with her focus on the Organic Potato Project where you will find her working hard in the field, whether it is planting with the crew, assessing plots, or working closely with participating farmers.



Badger Flame organic beet

Since 2015, the Seed to Kitchen Collaborative project has grown from just a dozen to over 60 farms participating in on-farm trials with over 70 varieties of 9 major crops: beets, carrots, cucumbers, kale, onions, peppers, tomatoes, winter squash, and melons. This project also incorporates unique beets and carrots from other participating breeding programs out of UW-Madison.

Seed to Kitchen Collaborative: This collaboration among chefs, farmers and breeders is a unique opportunity to focus on vegetable variety characteristics important to local food systems. Throughout the season, taste evaluations are performed by local chefs, farmers, and the community. Contact Julie Dawson at dawson.horticulture.wisc.edu/chef-farmer-plant-breeder-collaboration/.

Northern Organic Vegetable Improvement Collaborative: We are partnering with organic farmers to breed new varieties and identify the best performing existing varieties. Crop trials this year include sweet and bell peppers, winter squash, and tomatoes. Contact Bill Tracy, Erin Silva at eorganic.info/novic/.

Organic Potato Seed Production and Breeding: We conduct on-farm trials of organic seed potato production, including heirloom, specialty and new potato lines, tracking tuber health and economics. We also teach farmers to make potato crosses and trial the progeny. Contact Ruth Genger, Doug Rouse at organicpotato.wisc.edu.

For more information, contact Julie Dawson dawson@hort.wisc.edu, Kevin Schoessow kevin.schoessow@ces.uwex.edu, 715-635-3506 or Niki Lacktorin at niki.lacktorin@gmail.com. Free admission, RSVP appreciated but not required.

Organic Agriculture in Wisconsin

2017 Status Report - Executive Summary

*Adapted from Lisa Bauer, Cris Carusi, Anders Gurda, Ruth McNair and Erin Silva
UW-Madison Center for Integrated Agricultural Systems and DATCP*

Wisconsin is a national leader in organic agriculture. Wisconsin excels in both the number of farms involved in organic agriculture and the breadth of organic products raised and sold. According to data from the USDA National Organic Program, Wisconsin had 1,334 organic farms in 2015, nearly doubling over the last 10 years. This puts our state in a good position to participate in the growing market for organic food, both in the U.S. and across the globe. The global organic food market is projected to experience a compound annual growth rate of over 14 percent from 2016 to 2021. The U.S. experienced record high organic sales of \$43.3 billion in 2015, up 11 percent from the previous year's record. The 2014 Organic Survey conducted by the USDA National Agricultural Statistics Service provides a wealth of data about the organic sector nationally, as well as in Wisconsin.

This survey shows that Wisconsin remains the second state in the nation in total number of organic farms, second only to California. Wisconsin ranks third behind California and Montana in the number of organic acres, and experienced a 16.9 percent increase in organic acreage from 2008 to 2014. This growth is counter to national trends, with organic acreage in the U.S. as a whole decreasing 10 percent from 2008 to 2014. Wisconsin ranked fifth in dollar value of organic sales in 2014. The value of organic commodity sales from Wisconsin farms increased 51.2 percent from

2008 to 2014, totaling \$200.8 million. U.S. organic commodity sales increased 72.4 percent in that same time period. Wisconsin is the top state for the number of organic dairy farms, with 429 organic dairies. Wisconsin organic milk sales increased 29.8 percent from 2008 to 2014, going from \$85.1 million to \$110.5 million and comprising 55 percent of total organic sales for the state in 2014. Wisconsin also has a strong livestock and poultry sector with 121 organic egg producing farms, the most of any state in the nation. Wisconsin also ranks first in the number of farms producing organic beef, hogs, sheep, goats and broilers. Wisconsin ranks second in the number of organic vegetable and melon farms, rising from its third place spot in 2008. The sales value of field grown vegetable and melons in Wisconsin was \$17.4 million in 2014. Wisconsin ranks first in the number of farms producing field-grown beans for processing, dry onions and sweet corn. Wisconsin ranks second for the number of farms growing organic cranberries, third for organic raspberry farms and fifth for organic strawberry farms. With 909 farms and sales valued at \$25.7 million in 2014, Wisconsin ranks first in the nation for the number of farms growing organic field crops. Wisconsin ranks third in the nation for the number of non-organic farms with transitioning land, which is a key indicator of the potential for growth in a state's organic sector.

Although Wisconsin ranks first in the nation for the number of farms



raising organic livestock and poultry, there are fewer than ten meat slaughter and processing facilities in Wisconsin that are certified organic. Organic processing is a bottleneck for growth in this industry, particularly for small- and mid-scale farms and businesses. Like farmers, many processing plant owners are reaching retirement age, which leads to high turnover across this industry. Organic livestock producers must process their products at USDA-inspected, certified organic plants if they wish to sell their products across state lines, which further limits their options. Growing demand for organic meat could translate into higher profits in the processing business, and more processors seeking organic certification.

Organic vegetable processing faces unique challenges at different scales. Larger vegetable processors in Wisconsin are looking to grow their organic product lines, as the organic market is growing much faster than the conventional market for canned and

frozen vegetables. Year-to-year variation in quality and yield constrains growth in organic vegetable processing, and large retailers like Wal-Mart drive prices, keeping profit margins low. Nonetheless, vegetable canners want to be part of the growing organic market. Smaller scale organic fruit and vegetable farms can boost their profits and make use of blemished produce with value-added processing, if they have access to licensed processing facilities. There is a great need for facilities that serve as food hubs, providing capacity for aggregating product from growers and processing it in certified, shared space. Distribution is also a bottleneck for smaller scale growers producing value-added, processed products, as retail customers rarely purchase their products in enough volume to cover transportation costs.

While the lack of meat and vegetable processing can pose a barrier for organic growers in Wisconsin, this is not the case for organic dairy. Dairy plants across the state have secured organic certification in order to process milk on a contract basis from Organic Valley, an independent cooperative of organic farmers based in La Farge. Most of their organic dairy product line is processed through contracts with over 100 plants across the United States. Organic Valley is an example of how a small, local cooperative grew into a preeminent national label. Wisconsin's agricultural industry would benefit from more support for small organic businesses, particularly in overcoming processing barriers to growth.

Research Update – Spooner Ag Research Station

*Phil Holman
Superintendent
Spooner Ag Research Station*

We have a busy year at the Ag Research Station with 20-25 Agronomic Research Trials and two new large Organic Vegetable Trials, in addition to the demonstration garden. We were able to plant fairly timely in spite of the frequent rain.

Trials of interest:

Cover Crop Impact on Corn Nitrogen Rate Needs: Strips of tillage radish, crimson clover, and both or no cover crop (control) were seeded early last September after harvesting winter rye. This spring, corn was no-till planted for a nitrogen rate trial (0, 40, 80, 120, 160, or 200 lbs/acre) and will be sidedressed with urea. This trial will help determine if cover crops impact the nitrogen needs of the corn. This is the second year of this trial.

Validation of Nitrogen Management in Corn: A nitrogen rate trial was planted in an irrigated corn field. A new CO2 Burst soil health test is being used to predict nitrogen need. Crop Canopy Sensing measurements are being taken at sidedress time. Pre-plant and pre-sidedress soil nitrogen samples are being collected as well. Nitrogen fertilizer is a major cost in corn production and we are always investigating new ways to better manage nitrogen needs. Sidedress nitrogen rates will be 0, 40, 80, 120, 160, 200 and 240 lbs. of nitrogen per acre with urea. This trial is being repeated at several farm locations in Wisconsin. Locally, I added some

ESN (Environmentally Smart Nitrogen) rates to both pre-emergence and sidedress to compare ESN to urea.

UW Crop Variety Testing Programs: Commercial companies pay a fee and submit varieties for testing. The corn grain trial has 55 varieties on three sites (irrigated, dryland and silt loam). The corn silage trial has 44 varieties on two sites (irrigated and silt loam). The soybean variety trial has 38 varieties on two sites (irrigated and silt loam). The oat variety trial has 34 varieties and is a mixture of public released varieties and experimental varieties in the testing process. There are four public barley varieties being tested as well. A unique variety trial has UW-Plant Pathology developing food grade soybean breeding lines and testing resistance to white mold.

Two Large Vegetable Trials: The Northern Organic Vegetable Improvement Cooperative and the Seed to Kitchen trials have tomatoes, peppers, squash, melons, potatoes, kale in a large planting in one of the organically-managed fields. Plastic row covers, drip tape irrigation and ground covers are being used to help ensure successful testing of the vegetable crops.

Harvest of Kura Clover Seed: Without the sheep program, we have pastures that are being converted to agronomic fields. We are saving one of the thickest kura clover pastures and working with a UW Forage Professor and a seed company to attempt to harvest kura seed. Kura is a perennial legume pasture plant with good production and feed quality, but it is slow to establish and has very limited seed available.

Identification Guide for Toxic Plants

Mark Renz
UW-Extension Weed Scientist
608-263-7437
mrenz@wisc.edu

While most plants are safe for livestock to consume, a few plant species can sicken or even kill animals if ingested. Recognizing poisonous plants and knowing proper livestock management are important steps in minimizing the potential for poisoning. We often receive questions about toxic plants, the level of toxicity, and what animals they are toxic to. In this new identification guide, we have close-up pictures of the plants for easy identification, and detailed

information on the most common toxic plants in Midwestern pastures, as well as forage crops.

In addition to identification information about plants, the guide provides detailed information on what the toxin is, what animal species it is toxic to, where the plant is generally found, what parts of the plant are toxic and how long the toxin persists, and what can be done.

The easy to use, spiral-bound book, *Toxic Plants in Midwest Pastures and Forages*, is available online at The Learning Store <https://learningstore.uwex.edu/>. The guide can either be downloaded for free or a hard-copy purchased.

Toxicity in plants is a complex issue as it can occur throughout the year depending on the plant and environmental conditions. Because of

this we encourage landowners and animal owners to inform themselves on plant toxicity so they can make the correct management decision.

If you suspect plant poisoning in livestock, follow these recommendations:

- Remove animals from where the plants are present and remove any affected feed or forage.
- Contact your veterinarian.
- Survey the area to identify any plants that may be the potential source of toxicity. Use a digital camera to compare the images to online identification databases such as <http://weedid.wisc.edu/> or published references. You can also submit unknown images to your county extension agent to confirm their identity.

Farm Technology Days Kewaunee County, July 11-13

Ebert Enterprises E5083 County Road K Algoma, WI 54201

This 3-day outdoor event showcases the latest improvements in production agriculture including many practical applications of recent research findings & technological developments.

UW-Extension's Education Station – Features a combination of hands-on and cutting edge displays and activities. UW-Extension Agents and Specialists will connect visitors with current university research applicable to individual agricultural operations. Displays will focus on animal management, technology, water quality, crop and forage production, farm business and horticulture. UW experts will present short sessions at Specialist Central related to each day's theme: Tuesday – dairy, Wednesday – farm management, Thursday – water quality and soil health. Outdoor exhibits include a soil pit, rainfall simulator and outdoor plots.

Family Living Tent – Exhibits include arts and crafts and historical artifacts. Professionals will share their expertise in health and safety for farm families and all families. This tent also includes a stage for entertainment and educational presentations.

Progress Pavilion – Visit with representatives from Wisconsin state agencies and other agricultural partner organizations.

Youth Tent – Whether you live on a farm or are a city dweller, you will find adventure, knowledge, hands-on experiences, and fun through agriculture in the Family Farm Adventure area.

Field Demonstrations – Demonstrations will take place in the fields around Tent City, mornings and afternoons, weather permitting.

Commercial Exhibitors – More than 500 commercial exhibitors in Tent City are eager to talk to visitors about their machinery, equipment, facilities, products, and service needs.

Salmonella Biosecurity: Protecting Yourself and Your Cattle

Adapted from Sandy Stuttgen, DVM
UW-Extension
Agriculture Educator

Salmonella are widely distributed in our environment. They are commonly associated with animals and animal products such as raw meats, poultry, eggs, raw vegetables, and unpasteurized milk and dairy products. Human risk factors for becoming infected with Salmonella include contact with animals including cattle, horses, poultry, dogs, cats, and reptiles, or their feces. Zoonosis is a term that describes microbial agents that normally exist in animals, and can infect and cause disease in humans exposed to those infected animals. The most common zoonotic agents that can be passed from livestock manure to people include Salmonella, Cryptosporidia, Campylobacter, E.coli, and Giardia. Salmonella is a leading cause of bacterial diarrhea in humans worldwide with 94 million human cases and 115,000 deaths annually. Many people with uncomplicated Salmonellosis may recover on their own or only require fluids to prevent dehydration. Antibiotics and antidiarrheal drugs are generally not recommended to treat human cases of salmonellosis. Only one antimicrobial drug is an effective treatment option for human cases, and no effective treatment options exist for cattle.

On farms, a clean calving environment is important for Salmonella control. Conditions that are muddy, wet, and hot or cold require calves to use energy to

combat high levels of bacteria, including Salmonella. Therefore, calves in such conditions have less energy available for growth. Acute infections present as a high fever, which may persist several days, and scours. Scours may present as watery, voluminous, bloody and contain mucus and fibrinous casts of the intestinal lining. Absence of fever should not rule out Salmonella because transient fevers occur and calves become hypothermic 12-24 hours before death. *Salmonella Dublin* may become host-adapted. Clinical signs reoccur, or are seen in older cattle, and often chronic lung infection and arthritis develop. *S. Dublin* may be diagnosed as a cause of calf respiratory disease at weaning and may cause a gangrenous necrosis of hooves. Subclinical carriers of *S. Dublin* appear normal and go on to shed this bacteria in their feces and milk, thereby maintaining a source of infection in the herd. Calving and calf areas, livestock trailers, and other areas suspect of being contaminated with Salmonella must be cleaned and disinfected to remove “biofilms” (i.e., layers of micro-organisms). All surfaces must be properly cleaned before the disinfectant is applied. If these areas are not properly cleaned, the disinfection step is much less effective at killing pathogens. High-pressure washing should not be used because of the risk of cross-contaminating the environment and aerosolizing contaminated material. While high pressure washing does

remove gross soils, such as dried fecal material, it does not consistently remove bacterial biofilms. Biofilm removal is an essential and vital component of proper cleaning. The Wisconsin Veterinary Diagnostic Laboratory Disinfection and Cleaning Protocol, available at www.wvdl.wisc.edu, lists rinsing and foaming steps using both alkaline and acidic cleaners to remove Salmonella biofilms. Reinfection on the affected premises is highly likely and has been detected; therefore, it is highly recommended to perform environmental testing for Salmonella.

Geography appears to influence the prevalence of Salmonella within beef feeding facilities. Feedlot prevalence increases in the southern United States, with Texas having the highest prevalence of Salmonella. However, very little clinical disease is seen in feedlots. Salmonella on cattle hides is a risk factor for contaminating meat in the packing plant. Risk to humans also occurs when trim containing Salmonella-infected lymph nodes is ground into hamburger.

Horn flies have been implicated in the transmission of Salmonella. Horn flies create skin lesions or take advantage of available lesions to obtain blood. They mechanically inoculate microorganisms found on hides as they feed. Female flies leave cattle long enough to lay eggs in the environment, inoculating additional contamination when they next feed. Salmonella ingested by feeding flies were found to survive in fly intestines

for up to five days, serving as a source of transmission in fly feces.

Good management practices for cattle health:

- Vaccinate for endemic diseases
- Know health/vaccination history of incoming animals
- Isolate new arrivals
- Individually identify every animal
- Monitor and inspect animals daily for signs of illness; early intervention is key
- Do not place cattle of different ages in the same pen
- Clean equipment, boots and clothing between animal groups with different health status
- Work from younger or healthier animals to older higher risk animals
- Invest in laboratory diagnoses
- Develop treatment and vaccination Standard Operating Procedures with your veterinarian
- Promptly euthanize animals that are not going to recover
- Necropsy animals that die from unknown causes
- Promptly remove dead animals from the farm: appropriately compost, render, or bury—do not drag out to the woods!
- Place dead stock removal areas on the farm's perimeter
- Minimize fence line contact with neighboring animals
- Maintain fences to keep your animals in and other animals out
- Purchase feed from reputable sources
- Minimize fecal contact

This Quarter's Events

Contacts: UW-Extension Ag Agents Otto Wiegand or Kevin Schoessow, Spooner Station, 715-635-3506, Jane Anklam, Douglas Co, 715-395-1363, Jason Fischbach or Matt Cogger, Ashland & Bayfield Counties, 715-373-6104, Tim Jergenson, Barron Co, 715-537-6250 for more information.

July 11-13, Tues-Thurs – Farm Technology Days, Kewaunee County – see article

July 17, Mon, 4-8 – Seed-To-Kitchen Field Day, Spooner Station – see article

July 21, Fri – GrassWorks Picnic, Chippewa Co – Cadot, contact Heather, 715-379-3742

July 27-30, Thurs-Sun – Washburn County Fair, Spooner – Fairgrounds

Aug 4-5, Fri-Sat – Silvopasture Workshop, SW Wis & SE Minn – see article

Aug 8, Tues, 6-9 PM – Cow-Calf Meeting, tba, Barron Co? – contact Tim Jergenson, 715-537-6250

Aug 15, Tues, 4-8 – Twilight Garden Tour, Spooner – Ag Research Station Garden

Aug 17-20, Thurs-Sun – Sawyer County Fair, Hayward – Fairgrounds

Aug 24-27, Thurs-Sun – Burnett Agricultural Society Fair, Grantsburg – Fairgrounds

Sept 8, Fri, 12-3 – Pasture Walk, Bayfield Co – Lulich Dairy Farm, Hwy 63 N of Mason, NRCS waterlines, fencing, waterways, treeline projects, supported by Bayfield Extension, Crystal Creek, and Dairy Apprenticeship Program, contact Christie Ketring 715-292-5267

Sept 8-10, Fri-Sun – Sheep and Wool Festival, Jefferson – contact 608-868-2505

Sept 22-24, Thurs-Sun – Central Burnett County Fair, Webster – Fairgrounds

Oct 3-7 – Tues-Sat – World Dairy Expo, Madison – Alliant Energy Center

Oct 14, Sat – Kids & Cows Family Day, Rice Lake – Fairgrounds, N. Wis. Beef Producers, contact Lori Lyons, 715-210-0049

Silvopasture Workshop

August 4-5, 2017, Soldiers Grove, WI, and La Crescent, MN (SW Wisconsin and SE Minnesota)

The University of Minnesota Extension, University of Wisconsin-Extension and the Savanna Institute will jointly host a Silvopasture workshop near La Crescent, MN, about seven miles west of La Crosse, WI and 140 miles southeast of the Twin Cities, MN. The workshop will begin with an optional tour on Friday afternoon, August 4th. The tour is of a silvopasture trial near Soldiers Grove, WI, followed by dinner and a networking session at Hoch Orchard in La Crescent, MN.

The workshop will continue on Saturday morning, August 5th, with presentations on silvopasture establishment and management and a tour of Hoch Orchard, a hog silvopasture. Saturday afternoon will feature visits to two farms practicing silvopasture in Canton, MN. Participants can sign up for both days or just come for the Saturday portion of the workshop.

Silvopasture is a sustainable agroforestry practice where trees and forage crops are grown together on the same piece of land, and grazing animals eat the forages. The livestock provide annual income, and the trees may provide income after a while in the form of wood, nuts or other products. Silvopasture can provide economic and environmental benefits that complement regular forestry and open pasture production, such as shade for livestock and pasture, and habitat for birds and beneficial insects.

This workshop offers eight Continuing Education Units for Foresters and Forest Stewardship Plan Preparers. Participants can reserve rooms at a local hotel or nearby camp ground. Participants are also welcome to just come for the Saturday portion of the workshop. Registration is \$45 for Friday and Saturday, or \$30 for just the Saturday program or \$20 for the Friday program. Register online at <https://www.regonline.com/SilvopastureWS>. Registration will cover one dinner (Friday, August 4), and snacks and lunch (August 5). Contact: Diomy Zamora (612-626-9272, zamor015@umn.edu), or Diane Mayerfeld (608-262-8188, dbmayerfeld@wisc.edu).



Inside

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**Learn how to attract and retain
quality employees with a Human
Resources course**

**An easy-to-use spiral-bound book
will help to identify toxic plants**

**Farm Technology Days is July 11-13
in Kewaunee County**



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Kevin Schoessow
UWEX Area Agricultural Agent