

U.P. Ag Connections Newsletter

Upper Peninsula Research and Extension Center Field Day

Michigan State University has a long history of agricultural research in the Upper

Peninsula, spearheaded by the staff at the Upper Peninsula Research and Extension Center

(UPREC). That tradition continues and the research portfolio at the farm is as diverse as ever! Please join local and statewide University experts, for an informative day in the field

learning about the exciting research that is ongoing at the station. The event will start at

9:30 am with registration at the South Farm, located at E3774 University Drive, just south of Chatham on Highway M-94. The morning program will highlight the University's work in

the field of soil health, followed by a free lunch, sponsored by the local Hiawathaland Farm

Bureau chapter. In the afternoon, participants will have the choice to attend sessions at

either the South or North Farm. The South Farm will highlight the grass-finished beef

showcase their work in organic small grains, perennial berry crops, and equipment and

operation along with ongoing work in small grains and forages. The North Farm will

Agricultural News from MSU Extension and AgBioResearch

scheduled for Saturday, July 29th

Volume 21 Issue 7

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	tools for the	small scale vegetable grower. The Field Day will conclude at 3 pm with			
Page 6	optional farm tours. New this year—registration strongly encouraged—see link below!				
New Nutrient Management Tool	UPREC Field Day Agenda – Saturday, July 29 th				
Classifieds	9:30 am	Check-in/registration at South Farm			
Market Report	10:00 am	Welcome – Ashley McFarland			
	10:15 am	Introduction to Soil Health Indicator Assessment – Monica Jean			
Page 7	10:30 am	Utilizing soil health indicators in the field (field activity)			
MSU Corn Stover Project	11:15 am	Closing the nutrient loop – manure composting to maximize soil health –			
		Paul Naasz			
Page 8	Noon	Lunch – Sponsored by the Hiawathaland Farm Bureau			
Calendar of events	1:00 pm	Travel to afternoon track (choose between the South and North Farms)			
	1:15 pm <u>North Farm Track</u>				
	Organic Small Grains – Collin Thompson				
Follow the farm on Facebook:	Perennial Berry Crops – Collin Thompson				
	Equipment and tools for the small scale vegetable grower –				
www.facebook.com/		Collin Thompson			
MSU.UPREC/	Seed saving garden – Abbey Palmer				
		South Farm Track			
		UPREC grass-finished beef update – Dr. Jason Rowntree & Paul Naasz			
		3-year mixed pasture/winter annual grazing study – Dr. Jason Rowntree			
		Crop update (forages, pea and oat, heritage malting barley) –			
		Christian Kapp			
	3:00 pm	Field Day concludes – optional farm tours available			
		Registration is not required, but strongly encouraged:			
Michigan State University		https://events.anr.msu.edu/UPRECFieldDay17/.			

Michigan State University

AgBioResearch

If you are interested in agricultural research in the Upper Peninsula or have any questions about the field day, contact Ashley McFarland at 906-439-5176 or <u>ashleymc@anr.msu.edu</u>.

MICHIGAN STATE UNIVERSITY Extension

Organic grains featured at the North Farm Short Course

By Abbey Palmer, the North Farm Education Coordinator

Organic Small Grains Short Course looks at the viability of growing grains like oats, barley, and field corn in the U.P.

The primary goal of <u>The North Farm</u>, a collaborative operation supported by <u>Michigan State University Extension</u> and <u>Michigan State University AgBioResearch</u> located in Chatham, Michigan, is to support the growth of new farmers producing nutrient-rich food for Upper Peninsula markets.

The North Farm is hosting a series of MSU Extension short courses starting in May on topics designed for market gardeners, small farms, and skill-seekers interested in diversified vegetable production. These short courses are an in-depth exploration of farming fundamentals and best practices for diversified vegetable growers. All workshops will be held on-farm starting at 1 pm EST and will include a



combination of experiential and classroom-based learning.

Organic Small Grains, to be held on July 13th, will examine the potential for growing small grains like oats, barley, and field corn for applications like on-farm production of animal feed. The course will begin with an overview of variety trial research conducted in 2017,



marketing strategies for an organic market, a comparison of fertility recommendations and costs in an organic system, and a tour of the UP Research and Extension Center (UPREC) Grain Lab, where germination, moisture content, crude protein, and mycotoxins can be tested. The course will spend much of the day in the field looking at how plots are laid out, variety selection and observation, and the equipment needed to produce small grains on a small to medium farm scale.

These courses are in their third year. The instructor roster for this course includes Christian Kapp, grain researcher at UPREC and Collin Thompson, farm manager of MSU North Farm. Short courses qualify for education hours through the <u>MSU Extension Master Gardener program</u>. Residents of Menominee County can qualify for a full scholarship to the program through the E.W. and Dorothy Granskog Memorial Fund; apply at <u>http://mmcommunityfoundation.org/</u> <u>index.php/e-w-and-dorothy-granskog-memorial-fund</u>

Registration is required for these events and can be accessed at <u>http://www.msunorthfarm.org/short-courses.html</u> Questions? Contact Abbey Palmer at palmerab@msu.edu or 906-439-5058.

Hemlock Wooly Adelgid Quarantine

The Michigan Department of Agriculture and Rural Development (MDARD) has established the Hemlock Woolly Adelgid Interior Quarantine to protect Michigan's native and cultivated hemlock trees from hemlock woolly adelgid. On 5 June 2017, MDARD Director Jamie Clover Adams signed the quarantine which will go into effect on 5 July 2017. A copy of the quarantine and cover letter are attached. The HWA Interior Quarantine regulates movement of hemlock within Michigan, whereas the pre-existing HWA Exterior Quarantine already in place will continue to regulate movement of hemlock from out-of-state sources. Questions regarding the two HWA quarantines may be sent via email to Mike Bryan, Plant Industry Specialist at <u>bryanm@michigan.gov</u> or by fax to (517) 335-4540.

Rain, rain, go away!

By Monica Jean, MSU Extension Field Crop Educator

"Rain, rain go away..." is the tune Upper Peninsula growers are singing. This has been a wet start to the season compared to the last five years. When we look at historical data reaching back to 1981 and compare it to this spring season (March-June) the growing degree day (GDD) accumulation does not significantly differ. Some areas are even showing a week ahead like southern Schoolcraft County (figure 1). Average temperatures are also similar to the last five years. Rain has been the culprit for our delayed season. We are nearing 5 inches of additional rain this spring compared to the last 5 years accumulated spring rainfall (figure 2). The rainfall does vary within the region with the central and western regions of the Upper Peninsula seeing more then the eastern. In the past month, the central region averaged 5.68 inches of rainfall (Chatham-5.46 in, Escanaba-5.54 in, Stephenson-6.04 in) compared to 3.34 inches in Newberry. The 10-day forecast is showing more rainfall with 60% confidence in the prediction. The 2-week forecast is showing rain and cooler temperatures with only 10% confidence.

The current planting season is on its way for many of the field crops, but several commodities were planted behind schedule. Many growers were able to get in potatoes and corn, with planting done several weeks ago. Corn planting was a couple weeks behind, and potatoes were close to the normal time. Dry bean farmers have started planting in the past week or two, but many acres are unplantable. The first alfalfa and hay crop is ready to go but wet conditions are preventing their harvest.

Right now pest pressures are low in the Upper Peninsula, but integrated pest management (IPM) scouting are recommended. Currently, Lower Michigan is seeing high risk for corn rootworm and low risk of corn earworm. There has also been a high amount of black cutworm in southern Michigan. Potato leaf hopper has been very aggressive this year on ornamentals and trees so they are predicting a bad year for alfalfa. Volunteer survival for potato is between moderate and high due to warmer winter temperatures. Michigan State University Extension recommends integrated pest management scouting and considering volunteer elimination programs in adjacent crops and non-potato crops if herbicides are registered.

-Monica Jean, MSUE Field Crops Educator

atkinmon@anr.msu.edu, (906) 786-3032

Heat accumulation compared with normal (in days): March 1 - June 21, 2017



Figure 1. Comparison of GDD for 2017 spring to previous springs (2016-1981).



Figure 2. Spring Rainfall accumulation (in.) for 2012-2017





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New Staff at the North Farm

CO-01

Newly hired Assistant Production Manager, Allison Stawara, developed a love for food at an early age cooking in the kitchen with her family; this passion then blossomed into a career in farming after four years at Michigan State University, where she earned a Bachelor's in Sustainable and Organic Horticulture. Allison has worked on several farms throughout Michigan, and her love for the Mitten State brought her all the way to Chatham, where she aids in management of the vegetable production at the North Farm. Some of her favorite crops to grow include hot peppers, carrots, ginger, culinary herbs and hakurei turnips. When she's not playing in the soil, Allison enjoys hiking through the woods, cooking food with her friends, attending concerts and comedy shows, and reading under trees. Help us welcome Allison to the U.P.!

Ag Innovation Day scheduled for August 24th at the Lake City Research Center

Michigan State University Agriculture Innovation Day is an annual event which focuses in-depth education on a single topic. The event rotates to various locations throughout the state where experts deliver innovative information to help producers take the next step in improving their bottom line while maintaining environmentally sound practices on their farms. The <u>2017 MSU Agriculture</u> <u>Innovation Day: Focus on Forages and the Future</u> will take place on August 24, 2017, at the Lake City Research Center, Lake City, Michigan.

MSU Agriculture Innovation Day Focus on FORAGES and the FUTURE

"We're bringing together experts to teach exceptional forage production that efficiently & sustainably improves milk & meat production."

> Ron Bates, MSU Extension director of agriculture & agribusiness programs



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Grazing School 2017

Grazing School provides a hands-on experiences for those interested in starting or improving grazing management. Grazing School attendees can expect to learn a variety of tools and subsequently choose to integrate the methods that are most suitable for their particular grazing system. Additionally, attendees will have the opportunity to work with Michigan State University (MSU) experts to collectively graze a group of MSU livestock during the course of the Grazing School.

Grazing school will be held on Sept. 21 and 22, 2017 and will begin at 8 a.m. on Thursday and concluding at 4 p.m. on Friday

The two-day school will be offered at the MSU W.K. Kellogg Biological Station Farm and Dairy Meeting Room in Hickory Corners, Michigan The goal of the school is to blend classroom instruction with in-field education and the latest animal/forage research to give participants an in-depth introduction to grazing management.

Feature presentations will cover approaches to:

- Introduction to managed grazing
- Pasture management and decision making
- Livestock nutrition and requirements on pasture
- Forage yield determination and pasture allocation
- Grass and legume species identification
- Pasture soil fertility and management
- Grazing systems, layout and design
- Water systems and requirements
- Building and using fence for grazing
- Pasture establishment and improvement

Grazing School is taught by a dedicated team of professionals with many combined decades of expertise in crop, soil, and animal sciences. Team members hail from all over the state to give a varied perspective on the variety of local conditions found across Michigan. Many have farms of their own from which to draw nspiration and examples.

- Dean Baas, Cover Crops Educator, MSUE
- Kim Cassida, Ph.D., MSU Forage Specialist
- Richard Ehrhardt Ph.D., MSU Small Ruminant Specialist
- Kevin Gould, Beef Educator, MSU Extension
- Phil Kaatz, Forage Educator, MSUE
- Howard Straub III, Pasture Dairy Manager, W.K. Kellogg Biological Station
- Santiago Utsumi Ph.D., Assistant Professor of Animal Science
- Brook Willke, Ph.D., Kellogg Farm Manager, W.K. Kellogg Biological Station

Registration information:

Registration details can be found at the registration page: https://events.anr.msu.edu/GrazingSchool/

Discounts available to multiple attendees from the same farm operation. Early registration due September 18th.



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New nutrient management tool developed to help livestock producer improve water quality

The MSU EnviroImpact Tool is a new online tool that provides maps showing short-term runoff risks for daily manure application planning purposes. This "Runoff Risk Decision Support" takes into account factors such as precipitation, temperature, soil moisture and landscape characteristics. Farmers handling and applying livestock manure in Michigan can use this tool during any time of year to determine how risky it will be to spread manure on their fields. While the purpose of this tool is to help reduce the risk of applied manure leaving agricultural fields, it is very important that farmers also follow Manure Management Plans and assess the risk for each field prior to manure applications. Livestock producers and manure applicators can contact their local Conservation Districts or MSU Extension for help in developing a Manure Management Plan. Another resource for making manure application decisions is MDARD's Right to Farm Generally Accepted Agricultural Management Practices for Manure Management and Utilization.

Those interested in viewing or using the MSU EnviroImpact Tool can visit www.enviroimpact.iwr.msu.edu. For questions or comments, please contact Shelby Burlew at MSU Extension at bollwah1@anr.msu.edu; Jason Piwarski at the MSU Institute of Water Research at piwarsk1@msu.edu; tools or Kip Cronk at Michigan Sea Grant at cronkkip@msu.edu.

Classifieds

2500 small square bales, excellent quality, early June cutting. 200 round bales about 350lb, good quality, Bruce Crossing 906-827-3827

Market Report						
Choice Steers		\$110—\$138 per 100 lbs.				
Holstein Steers		\$90—\$120 per 100 lbs.				
Hogs		\$85—\$87 per 100 lbs.				
Lambs \$170—\$21			per 100 lbs.			
Cull cows		\$50—\$75 per 100 lbs.				
Calves		\$125—\$215 per 100 lbs.				
Goats		\$125—\$150 per 100 lbs.				
Breeding and Feeder Animals						
Grade Holstein cows \$1000—\$1500/head						
Grade Holstein bred heifers \$1500—\$2500/head						
Feed Prices across the U.P.						
	Avg. \$/cwt	Avg. \$/ton	Price Range			
Corn	\$9.91	\$198.25	\$145-244			
Soymeal	\$21.76	\$435.25	\$360-536			
Oats	\$10.04	\$200.80	\$190-230			

\$183.40

\$9.17

Average price/100 wt. for 1 ton lots

Barlev

\$140-242

Michigan Corn Stover Project

By Monica Jean, MSU Extension Field Crop Educator

The Michigan Corn Stover Project was a collaborative effort at Michigan State University Extension to investigate the uses of corn stover and potential impacts of harvest in Michigan. This effort was comprised of on-farm and small scale research conducted across lower Michigan. It included a cattle feeding study, integration of a cover crop, bale storage study, harvest time evaluation and the impact of stover removal on yield of the subsequent crop. Funding for the multi-year project was obtained from the Michigan Corn Marketing Board and MSU's Project Green (Generating Research and Extension to meet Economic and Environmental Needs).

The cover crop integration study evaluated the yield and quality of mixed biomass feedstocks resulting from the addition of an inter-seeded winter annual cereal cover crop, cereal rye (*Secale cereale* L.) or triticale (*Triticale hexaploide* Lart.), with corn stover. Agronomic decisions about planting densities, hybrid selection, nutrient management, and herbicide application followed local best management practices as recommended by MSU Extension. Cropping systems evaluated included:

- Corn stover only, harvested in the fall
- Corn stover only, harvested in the spring
- Corn stover with a winter cereal cover crop harvested in the fall and spring
 - The fall harvest feedstock was primarily corn stover due to the limited time frame for growth of the fall-planted winter cereals

- The spring harvest consisted primarily of winter annual cereal crop biomass since the stover fraction had been effectively removed during the fall harvest.
- Corn stover with a winter cereal cover crop only harvested in the spring

Key Findings:

- In the interseeded systems, the two-harvest system of a fall corn stover harvest followed by a subsequent spring cereal cover crop harvest, had greater dry matter, ethanol, crude protein and energy content compared with the spring oneharvest system.
- Depending on fall and spring weather, in some years there may be no economic advantage to a two-pass (fall and spring) harvest system.
- In the 2x harvest system cycles evaluated in this study (Fall '14 + spring '15; and Fall '15 + spring '16) the fall harvest (primarily consisting of corn stover) had a greater yield potential for ethanol production than the following spring harvest (primarily consisting of winter cereal biomass).
- If harvesting stover for cattle feed, stover should be harvested in the fall to avoid the biomass yield loss associated with over-wintering.
- If harvesting a spring forage, a winter annual cover crop should be interseeded to offset the stover's decrease in yield, crude protein and digestibility.
- Although triticale's nutritive concentration was higher, it's yield was lower, making the rye and triticale cover crops equally beneficial.



Pictures taken at fall harvest time of an interseeded plot with no harvest, an interseeded plot that was harvested and a stover-only plot that was harvested.

Picture taken at spring harvest time of an interseeded plot with corn stover harvested in the fall, stover-only plot and interceded plot with corn stover. AgBioResearch <u>MICHIGAN STATE</u> UNIVERSITY NON-PROFIT ORG U.S. POSTAGE PAID PERMIT #157 MARQUETTE, MI 49855

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Calendar of Events

July 29 Upper Peninsula Research and Extension Center Field Day, Chatham, MI

August 24 MSU Agriculture Innovation Day, Lake City, MI

The North Farm Short Course Series (each event running 1–6 pm), Chatham, MI

- July 9 Organic Small Grains
- August 13 Insects on the Farm

Eating Through the Eastern U.P. Series

On Saturdays from 10 am - 12, Seasonal topic and food at each location July 15-Pickford August 19-Newberry September 16-Rudyard October 21-Sault November 18-Brimley

Grazing School

September 21-22, KBS Farm in Hickory Corners, MI

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