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Michigan State University



Attend these Michigan agriculture conferences to prepare for the 2020 growing season

I tell people that Michigan agriculture has four seasons: planting, lay-by, harvest and conference season. Winter is when many Michigan farmers gather at educational events across the state to update their knowledge base and skill set in preparation for the year ahead. For researchers like me, conference season is when we get the pleasure of sharing our latest research findings and updated recommendations resulting from another year of field trials. Additionally, these annual events offer all attendees opportunities for fellowship, relaxation and recovery that can be critical for morale at the close of a difficult year like 2019.

As one of the most diverse agricultural states in the nation, home to the premier land grant university and many agriculture trade organizations, the list of winter conferences available to Michigan farmers is nearly endless. Whether you raise crops, cattle, vegetables, or bees, there is likely an event to fit your interests within a half-day's drive. Listed below are some of my favorite winter conferences that you might consider attending. If there isn't room for travel in your schedule and/or budget this winter, a couple of these programs are conveniently available 100% online. I've included short descriptions, and hyperlinks for our digital readers. Additional information can also be found by searching the conference titles using your favorite web browser. I look forward to seeing you at one or more of these events (I'll be at all of them!), and wish you an enjoyable and enlightening conference season!

Great Lakes Fruit, Vegetable and Farm Market Expo

December 10-12 in Grand Rapids, MI

The premier event for specialty crop producers in Michigan. Three days of crop specific educational sessions covering everything from apples to zucchini, plus a massive trade show featuring vendors and products from across the country.

Midwest iHemp Expo

January 10-11 in Lansing, MI

The first year of legal hemp production in Michigan was a whirlwind of regulations, speculation and learning! The first ever iHemp Expo event promises to be an equally dynamic gathering of the top players in this up-and-coming industry. Come to learn about the new opportunities and challenges associated with hemp.

MSU Extension Beginning Farmer Webinar Series

January 15-April 1 live online Wednesday evenings

If you are new to agriculture, or planning to add a new enterprise to your farm, the Beginning Farmer Webinar Series is for you. Join one or more hour-long sessions from anywhere to get started with a variety of topics for the small to medium sized farm. Recordings of past sessions are available free online.

Northern Michigan Small Farm Conference

January 24-25 in Traverse City, MI

This event is oriented toward small farms focused on practicing sustainable agriculture. January 24 is the Farm School pre-conference featuring full day sessions, including hemp, herb and maple syrup tracks this year. January 25 is the regular conference offering a potpourri of sessions on crop, livestock and business management topics. Bring the family and make the most of all that Traverse City has to offer.

Great Lakes Crop Summit

January 29-30, 2020 in Mt. Pleasant, MI

Crop Summit has quickly become the must-attend winter event for field crop producers in Michigan. Two days of business and production oriented sessions from a diverse group of industry representatives, university researchers and farmers. Conveniently located at Soaring Eagle Casino for evening entertainment.

MSU Extension Field Crops Webinar Series

February 10-March 30 live online Monday evenings

Corn, soybean and wheat producers, join these weekly webinars to get the latest information from MSU field crop specialists from the comfort of your home. Register for one session or the whole series, and view recordings of sessions you miss. This program is also a rare opportunity to earn MDARD pesticide applicator recertification credits online.

Michigan Potato Industry Commission Winter Conference

February 12-14 in Mt. Pleasant, MI

Potato growers shouldn't miss the MPIC winter conference. This year's event will feature an interactive workshop session where attendees can rotate through a series of dynamic presentations offering visual and hands-on learning about hot topics in the potato industry.

Great Lakes Hop and Barley Conference

March 5-7 in Ann Arbor, MI

An event targeting malting barley and hop growers and processors. March 5 is an introductory pre-conference session for beginners. Concurrent hop and barley tracks run March 6-7 with plenty of opportunities for socializing over good food and craft beer.

UP Agriculture for Tomorrow Conference

March 11 in Escanaba, MI

Brush-up your farming skills without leaving the UP at this compact one-day event at Bay College. Enjoy a variety of presentations speaking to the needs of UP famers in concurrent tracks for livestock, crops and vegetables. Expand your knowledge, catch-up with your neighbors and be home before dark!

1

Clay soil moisture monitoring project explores U.P. farmers' efforts to improve drainage

This season-long demonstration project compared results of surface drains, deep tillage and field tile on eastern UP farms.

Jim Isleib, Extension Educator

There are two extensive areas of clay soil farmland in Michigan's Upper Peninsula located mostly in Chippewa-Mackinac County area and the Baraga-Ontonagon-Houghton County area. These soils currently support large acreages of perennial hay production supplying beef cow-calf farms, a few dairy farms, and significant hay export activity. Poor soil drainage, naturally low fertility and acidic pH, along with a short growing season, limit the productivity of these soils. Needs assessment round-table meeting with farmers in both of these areas were held in 2014 and 2018. Improving field drainage emerged as a highly important issue in both groups, along with soil biology and fertility, hayfield rejuvenation, grazing season extension, and management of trefoil and other forage species, all strongly related to soil drainage.

Improvement of soil drainage has potential for significant impact on local agriculture based on ability to graze or plant earlier in spring and graze or harvest later into fall. Other benefits include a wider selection of potential crop choices and expanding from the current one-cut hay system to a two-cut system. Traditionally, farms in the eastern UP use surface drains to move excess water off flat fields. Some U.P. farmers have adopted practices to improve drainage on their clay soil fields, including subsurface (tile) drainage installation, deep tillage at hayfield establishment, and use of vertical tillage on live sod, such as use of the <u>Aerway soil aeration implement</u>. To explore differences in soil moisture status between farms using these drainage-improving methods, Michigan State University Extension educators Jim Isleib and Frank Wardynski developed a demonstration project to monitor soil moisture on fields where drainage efforts are in place, versus nearby fields without the effort.

<u>Soil tensiometers</u> were installed on 3 farms in Chippewa County and 3 farms in the Ontonagon/Baraga area. Some tensiometers were backordered and installed after the project began. Drought conditions in the western UP prevented collection of meaningful soil moisture data. However, readings were completed on the eastern UP farms. Participating farms were visited roughly every two weeks. Tensiometers were removed on October 11, 2019 to prevent damage from freezing temperatures. The tensiometer gauge indicates <u>'centibars'</u>, a measure of vacuum created by the soil drawing moisture through the buried ceramic tip of the water-filled tool.

It is important to note with these types of sensors that a lower number indicates a wetter soil. Irrometer readings from 0 -20 indicate a very wet soil. Interpretation of centibar readings based on percent of soil water depletion on a variety of soil types can be found in Irrigation Trigger Levels – Soil Types from Nebraska State University.

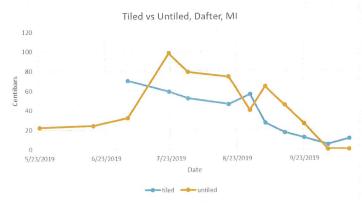


Table 1: Tensiometer readings on Smith farm in Dafter, MI comparing soil moisture in a subsurface-drained and an undrained farm.

Readings suggest that the subsurface-drained field had a generally lower and more stable moisture status than the undrained field. Subsurface drains were installed at 40' spacing in summer 2018 and winter wheat planted. The undrained site was on uncultivated land near the farm buildings.

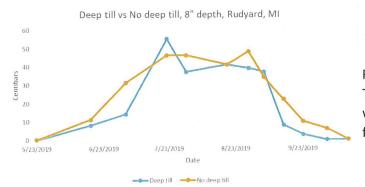


Table 2: Tensiometer readings on Kowalski farm in Rudyard, MI.

Readings suggest little difference in soil moisture between fields. The 'deep till' grass/legume hay field was deep tilled when soil was dry before new seeding in 2015. The similar 'No deep till' field was established without deep tillage in 2007.

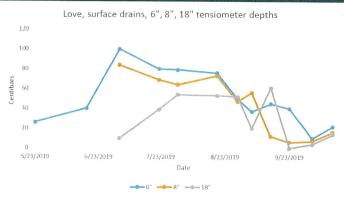


Table 3: Tensiometer readings on Love farm in Rudyard, MI.

Three tensiometers were installed at three different depths in a single location between surfacedrains in a grass/legume hay field. This site was meant to represent the typical surface drainage technique in use on clay fields in the eastern U.P. Readings indicate that the soil is dryer at 6" depth and progressively wetter to 18" depth.

Demonstration summary:

- Ideally, the tensiometer gauges would be read daily, or every few days. Time and budget constraints allowed for much less frequent readings. However, the numbers as recorded provide a series of 'snapshots' to compare soil moisture conditions where the techniques (deep tillage at hayfield replanting, drain tile, surface drainage) are in use.
- During dry periods in the eastern UP, the tensiometers needed recharging with fresh water before readings could be
 taken. In some cases, this maintenance resulted in questionable readings. Severe drought in the western U.P. resulted in
 readings irrelevant, since no differences were apparent and the need for constant maintenance made the tensiometer tool
 undependable.
- This soil moisture monitoring demonstration documented soil moisture conditions over a single season and provides insight into practices currently in place on eastern UP farms.
- See <u>"Agricultural Drainage"</u>, MSU Extension Bulletin E3370 by Dr. Ehsan Ghane, 2018

Keeping Produce Safe in the Off-Season

Landen Tetil, Marquette County Conservation District

Old Man Winter has already made his way to the Upper Peninsula, and not by whispering his arrival with a gentle sprinkling of snowflakes. This year, he woke from his summer slumber with a scream, bellowing his arrival with a swift influx of snowdrifts and frosty temperatures before mellowing into standard November character. In the span of a week, any lingering hopes for an extended autumn were extinguished. Oh, the joys of living in the Great White North.

To Upper Peninsula fruit and vegetable growers, Old Man Winter - whatever the declared conviction against his imminent homecoming among farmer gossip circles - is often inwardly greeted with a welcome home party. To the produce farmer, he is treated as an old friend and icon of slower days, (slightly) shortened to-do lists, and a cozy reprise from grueling summer chores. Winter is an excellent time for reflections on the tomato variety trials, the fertilizer schedule, how effective the deer fence worked but now there's a rabbit problem, the hobbled-together irrigation system that pulled its weight surprisingly well, the new produce safety policies that weren't so bad after all. You get the idea. Winter is also an excellent time to revisit the old Produce Safety Plan – take all those reflections and identify which policies need updating, which gaps need filling.

No one wants to get sick from your broccoli. You don't want to make anyone sick, either. Now is the best time turn a critical eye to your policies and practices and put in the work to minimize all produce safety risks. It may feel tedious, and will almost certainly be boring, but absolutely worth the peace of mind that comes with it. The off-season is the perfect opportunity to add in produce safety basics into your worker training program, write standard operating procedures and corrective action policies, and make infrastructure changes. Even small infrastructure changes can make a huge impact on a farm's overall produce safety, such as constructing a portable handwashing station for the field or building another shelf in the wash-pack shed to separate clean harvesting tools from dirty ones. Minimizing produce safety risks is an affordable endeavor, and a crucial one.

The best part about investing time and resources into produce safety on your farm is that you need not do it completely on your own. UP fruit and vegetable growers have access to Landen Tetil, a Produce Safety Technician, for free, confidential, and voluntary assistance in all things produce safety. This includes help crafting and updating Produce Safety Plans, writing standard operating procedures and corrective actions, and dreaming up creative solutions to on-farm produce safety obstacles, all rooted in science-based food safety research. Classes and workshops relating to produce safety are also available throughout the year; contact Landen at Landen.mqtcondist@qmail.com or (906) 251-3061 for more information and to get started on your farm's produce safety journey.

Review sessions in U.P. with exams for state certified pesticide applicators

MSU Extension is offering pre-exam study sessions in 4 U.P. locations for those seeking state pesticide applicator certification or recertification credits.

Locations/Dates:

- MSU Upper Peninsula Research and Extension Center E3774 University Drive, Chatham, MI Friday, December 6, 2019, 9am - 1pm eastern time State exam offered at 1:00pm eastern
- State Office Building 305 Ludington St, 2nd Floor Conference Room, Escanaba, MI Tuesday, January 7, 2020, 9am-1pm eastern time State exams offered at 1:00pm eastern
- MSU Extension Office, Houghton and Keweenaw Counties 1500 Birch Street, Hancock, MI Monday, January 27, 2020, 9am – 1pm eastern time State exams offered at 1:00pm eastern
- Marquette County Negaunee Service Center (downstairs meeting room) 184 US 41 East, Negaunee, MI Tuesday, February 11, 2020, 9am-1pm eastern time State exams offered at 1:00pm eastern

These 4-hour reviews are intended to help prepare for the State of Michigan commercial and private pesticide applicator certification exams. Four re-certification credits toward renewal of current State of Michigan Pesticide Applicator Certification are available for private applicator 'core', commercial applicator 'core' and categories 1A, 1B, 1C, 2, 3A, 3B and 6. The program will consist of chapter reviews of the National Pesticide Applicator Certification Core Manual and a practice exam. It is strongly suggested that participants acquire copies of the core manual and study it thoroughly before taking the state exam. If seeking

commercial certification or re-certification, the study manual for the category(s) desired should also be acquired and studied. This program will cover only 'core' manual material, no commercial categories. Please note that several other state pesticide applicator exam opportunities are offered in the U.P. without pre-exam study sessions. Check exam dates by entering as a 'guest' at https:// secure1.state.mi.us/opes/Welcome.aspx.

A State of Michigan official will offer state exams after the review is completed. If you plan to take an exam, register at www.michigan.gov/pestexam and be prepared to pay \$50 for the private exam and \$75 for the commercial exam (including any number of categories) by check payable to "State of Michigan". A waiver from the State of Michigan is offered to honorably discharged veterans seeking private pesticide applicator certification. You must provide a copy of your veteran's federal form DD-214 that indicates honorable discharge status along with your application.

Refreshments will be available, but lunch will not be provided.

A \$20 fee, payable at the door, is required for the pre-exam review offered by MSU Extension. If paying by check, make check out to "Michigan State University Extension". This fee covers program costs and refreshments. (Note: This is a separate fee from the State of Michigan exam fee).

For more information, contact Jim Isleib, MSU Extension, at 906-387-2530 or isleibj@anr.msu.edu.



Become an MSUE Master Gardener!

January 25 - May 9, 2020 Saturday classes 10 a.m. - 5 p.m. EST Jan. 25, Feb. 8, Feb. 22, March 14, March 28, April 25, May 9 akeup date for inclement weath

Location:

Peter White Library Heritage Room 217 N. Front St Marquette, MI 49855

The cost of the 7 day (2 sessions each Saturday) program is \$325.00 (this includes the 1,000-page training manual and cost of the criminal history background checks.)

Gain Access to World Class Gardening Knowledge. The 7 day program will provide horticulture training based on university research. This training consists of approximately 45 hours of training with classes on plant science, soil science, integrated pest management, diagnostics, on naming with classes on praint selectice, soil selectice, integrated pest intalgerment, diagnostics, annuals and perennials, woody ornamentals, lawns, vegetables, small fruits, tree fruits, household and nuisance pests and gardening practices to protect water quality.

Have An Opportunity to Serve. After completing the training course, MSU Extension Master Gardener Certification is achieved with completion of 40 hours of horticulture-related volunte

- service. Examples of volunteer projects and service may include.

 Working with students to design an elementary school garden
 - Helping a neighborhood association create an urban garden

 - Designing and caring for gardens at senior centers, parks and other public sites

 - Teaching others how to garden Establishing vegetable gardens to meet local nutritional needs
 - Sharing environmentally-friendly gardening practices at community events
 - Beautifying community sites for special events or community activities that attract local residents and tourism

To enroll in the Master Gardening training, please complete the registration, background check and

agreement forms online https://events.anr.msu.edu/spring20marquette/
Partial scholarships are available. You must first apply and register for the course and apply for a scholarship online at the same site. Completion of all steps of the Volunteer Selection Process is required before scholarships will be awarded. Completion of the community volunteer hours to gain Master Gardener certification is highly suggested

The last day to register online is January 17, 2020

Contact Information

For information contact Rebecca Krans, kransr@msu.edu, 906-875-0606

Michigan State University is committed to providing equal opportunity for participation in all programs, si-activities. Accommodations for persons with disabilities may be requested by contacting the event conta-port of the starf of the event. Requests received after this date will be honored whenever possible.

Fly & Pest Control in Livestock

& MAEAP Phase I Event



January 15, 2020 6pm – 8pm Bruce Twp Hall 3156 E. 12 Mile Road Dafter, Chippewa County January 16, 2020 6pm – 8pm Garfield Twp Hall N6760 M-117 Engadine, Mackinac County

Topics

What are biological/natural controls?
Use of biological/natural controls in livestock
Conventional pest controls in livestock
Avoiding resistance to pest controls

Presenters

Adam Ingrao

Agricultural Entornologist Educator, Veteran Liaison, MSU Extension Frank Wardynski

Ruminant Educator, Farm Business Educator, MSU Extension Jen Parks

MAEAP Technician, Chippewa Luce Mackinac Conservation District

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FOR SALE: Hay, Sorghum-sudan grass round silage bales, dairy quality alfalfa round silage bales, grass alfalfa mix round dry bales. Johnson's Bros. Livestock. Call Bill (906)630-4945.

FOR SALE: Hay, large square bales 3x3x7.75 Timothy grass, 4,000 to sell. Former dairy farm doing all big square bales hay. Call Dave Bell in the EUP 906-440-6455 or email Bellsdairy@yahoo.com. Also a realtor in the UP so contact me for real estate here. Dave@smith-company.com

HERD REDUCTION: Red Angus heifers and bulls. Top bloodlines. Gentle and easy to handle. (906) 238-4236.

Beautiful property in the Upper Michigan, 130 acres In Perkins for sale or pasture for rent for livestock for the 2019 season. Beautiful river running through it. Great for hunting, building or developing, or simple grazing livestock. Land is divided into 9 paddocks with high tensile electric fence and 5 stock watering ponds. Call (906) 359-4825.

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For details, see https://up.craigslist.org/reo/d/au-train-net-zero-wind-powered-home/6983991936. html.

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Market Report

 Choice Steers
 \$95—\$107 per 100 lbs.

 Holstein Steers
 \$85—\$93 per 100 lbs.

 Hogs
 \$39—\$45 per 100 lbs.

 Lambs
 \$130—\$160 per 100 lbs.

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 \$40—\$50 per 100 lbs.

 Calves
 \$20—\$80 per 100 lbs.

 Goats
 \$150—\$220 per 100 lbs.

Breeding and Feeder Animals

Grade Holstein cows \$1000—\$1200/head Grade Holstein bred heifers \$1000—\$1400/head

Feed Prices across the U.P.

	Avg. \$/cwt	Avg. \$/ton	Price Range
Corn	\$11.81	\$236.25	\$195-320
Soymeal	\$19.53	\$390.50	\$350-450
Oats	\$13.25	\$265.00	\$200-340
Barley	\$11.88	\$237.50	\$200-310
Average price/100 wt. for 1 ton lots			

Clare County Livestock Auction, LLC 2019 Fall Feeder Cattle Sales

Clare, Michigan

David Clark, Owner/Auctioneer

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Calendar of Events

Eastern UP Food Summit—Bay Mills Community College, Brimley, December 4, 1-4:30 pm MMPA Local Meeting—Jack's Restaurant, Rapid River, December 4, noon MMPA Local Meeting—Rudyard Congregational Church, Rudyard, December 5, noon Clare County Livestock Auction, Feeder Cattle—11228 S. Grant Ave., Clare, December 5, 1 pm Pesticide applicator review session—MSU UPREC, Chatham, December 6, 9am-1pm Great Lakes Fruit, Vegetable and Farm Market Expo—Grand Rapids, December 10-12 Northern MI Livestock Feeder Sale—Town Line Rd., Gaylord, December 13, noon Pesticide applicator review session—State Office Building, Escanaba, January 7, 9am-1pm Midwest iHemp Expo—Lansing, January 10-11 MSUE Beginning Farmer Webinar Series—online Wednesday evenings, January 15-April 1 Fly & Pest Control in Livestock—Bruce Twp Hall, Dafter, January 15, 6-8 pm Fly & Pest Control in Livestock—Garfield Twp Hall, Engadine, January 16, 6-8 pm Northern Michigan Small Farm Conference—Traverse City, January 24-25 MSUE Master Gardener Classes—Peter White Library, Marquette, January 25-May 9, 10am-5pm Pesticide applicator review session—MSUE Office, Hancock, January 27, 9am-1pm Great Lakes Crop Summit—Mt. Pleasant, January 29-30 MSUE Field Crops Webinar Series—online Monday evenings, February 10-March 30 Pesticide applicator review session—Marquette Co. Negaunee Service Center, Negaunee, February 11, 9am-1pm Michigan Potato Industry Commission Winter Conference—Mt. Pleasant, February 12-14

Great Lakes Hop & Barley Conference—Ann Arbor, March 5-7 UP Agriculture for Tomorrow Conference—Escanaba, March 11