

Agricultural News from MSU Extension and AgBioResearch

#### March 2021

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#### 2020 Research Reports (and more) Available on New UPREC Website

In November 2020, UPREC launched our redesigned website as an updated and improved tool for communicating with the public. This project was inspired by UPREC's 2019 strategic planning process, which identified "communications and branding" as potentially the most impactful priority area for UPREC to focus on in the next five years. Many stakeholders shared, at that time, their view that UPREC needed more consistent and innovative branding, as well as improved methods of communicating timely research results to farmers and the community at large.

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Back then (18 months ago, I know...), our team agreed that communications and branding were areas with room for additional investment and growth. UPREC has continuously evolved since 1899, and changed in particularly significant ways over the last decade. These changes reflect the dynamics of UP agriculture and communities, as well as the state of science, technology, funding, etc. Therefore, effectively telling the story of UPREC and UP Ag requires a constant reassessment of our audience(s) and their needs relative to our research and education capacity, whether they are elder cattle producers or millennial market vegetable growers. It also means meeting these diverse audiences where they are at with both the mode and format used to deliver critical information (in-person, newsletter, email, website, social media, etc.).

In the digital age of academia, a solid logo, website and social media presence are foundational to organizational success. Updating our website based on the strategic planning input we received made good sense in 2019; the North Farm needed better representation as a newer enterprise on the farm; research reports needed an organized 'home' on the website for easy archiving and retrieval. Little did we know, when our website project began in early 2020, that digital information delivery would be rapidly elevated as one of our *only* options for reaching stakeholders in 2020 and beyond. As the pandemic stretched on over the last twelve months, our website renovation became increasingly weighty as an overhaul of the primary tool in our communications arsenal.

The <u>new UPREC website</u> was successfully launched three months ago with a clean, consistent look and easy-to-navigate structure that emphasizes research and education activities at the "State Farm". It is organized into eight main pages including Home, Research, Education, Farm Business Incubator, Malting Barley Lab, Newsletters, Staff and Contact Us. The homepage includes narrative and video introductions, as well as a feed of pertinent MSU news articles. The Research page is further divided into sub-pages for Cattle & Forage, Field Crops, Specialty Crops, and Land-based Learning research. PDFs of research reports are embedded on the appropriate subpages, organized under individual crop/topic headings (alfalfa, hemp, soil health, etc.). Information on special programs and services offered by UPREC can be found on their unique pages, such as the Farm Business Incubator and Malting Barley Lab. The Newsletters page is an archive of our UP Ag Connections newsletter. The Staff and Contact Us pages are self-explanatory.

I encourage everyone to visit the updated UPREC website to take-in its fresh design and content. New 2020 reports on corn, soybean, oat, barley, potato, cucumber, onion, tomato, sweet pepper, carrot, lettuce, hemp, and forage research projects are available there for download. Many thanks to Abbey Palmer and Justin Whitmore (MSU ANR Communications) for their assistance with updating the UPREC website. Please send your comments on the website to me at <u>dedecke5@msu.edu</u>. Follow <u>UPREC on Facebook</u> for regular updates on our work, in addition to checking the website.

## Evaluation of foliar fungicide timing to manage white mold of potato in Michigan, 2020.

Montcalm Research Center (MRC): A foliar fungicide timing trial was established at MRC in Lakeview, MI and managed by the Potato and Sugar Beet Pathology program (Bloomingdale and Willbur). The trial objective was to determine the most effective timing of fungicide applications for managing white mold in potato. A randomized complete block design, with four replicates, was used. Potato seed were cut from US#1 'Lamoka' tubers and treated with Cruiser Maxx Potato Extreme (0.31 fl oz/100 lb seed), then allowed to suberize before planting. The trial was hand-planted 12 Jun. Plots were four rows wide (34in. row spacing) by 20 ft long and a 10-in seed spacing was used. Standard grower practices were followed to manage nontarget pests. Fluazinam applications (8 fl oz/A) were made 30 Jul (full bloom) and 13 Aug (14-d post-bloom); treatments of full bloom, post-bloom, and full followed by post-bloom applications were compared to a grower standard control. A CO<sub>2</sub> powered backpack sprayer, equipped with two TJ 8004XR flat fan nozzles and operating at a boom pressure of 38 psi, was used to apply fungicides at 20 gal/A. To control for late blight, weekly chlorothalonil applications (1.5 pt/A) were initiated 22 Jul and applied until vine kill 31 Aug. Apothecia and disease data were collected 20 Jul and 13 Aug. Ten stems were arbitrarily rated from the center two rows of plots and assigned a disease severity (0-3). The severity ratings were: 0 = no disease to 3 = noinfection girdling mainstem, resulting in wilting and/or death. The ratings were used to calculate a percent disease incidence (DI) and average disease severity of symptomatic plants (DS; 0-3). Disease index (DX) was calculated from the following equation: DX = DI x DS/3. The center two rows of plots were harvested 24 Sep, potatoes were washed then specific gravity and internal defects determined. Due to a technical failure, tuber size and yield data were lost and were not available for these analyses. A generalized linear mixed model procedure was used to conduct the ANOVA and mean separations at α=0.05.

Mean DI values from the final rating ranged between 32.5 and 43.8% and DX values ranged between 10.8 and 17.1%. There were no differences among mean DI (P > 0.05) or mean DX (P > 0.05) values of various timings (Table 1). Specific gravities ranged from 1.080 to 1.082 and were also not different among tested fungicide programs (P > 0.05). As a result of the low white mold pressure observed in this location, no differences among the fluazinam timings were detected. Nutrient management programs to promote canopy and disease development, as well as alternate locations with naturally elevated levels of white mold pressure, will be considered for future trials.

Table 1. White mold and specific gravity observations in treatments tested in small-plot research at the Montcalm Research Center in Lakeview, MI in 2020.

No.	Treatment, Rate <sup>z</sup> , and Timing <sup>y</sup>	DI (%) <sup>x</sup>	DX (%)	Specific Gravity
1 <sup>w</sup>	Grower standard treated control	35.0	12.5	1.082
2	Omega 500F (8 fl oz) full bloom	43.8	17.1	1.080
3	Omega 500F (8 fl oz) 14-d post-bloom	33.8	11.3	1.081
4	Omega 500F (8 fl oz) full bloom + 14-d post-bloom	32.5	10.8	1.081

<sup>2</sup> All rates, unless otherwise specified, are listed as a measure of product per acre, and all tank mixes contained MasterLock at a rate of 0.25 % v/v.

<sup>9</sup> Applications were made on the following dates: full bloom = 30 Jul and 14-d post-bloom = 13 Aug.

<sup>\*</sup> Column values followed by the same letter were not significantly different based on Fisher's Protected LSD ( $\alpha$ =0.05); if no letter, then the effect was not significant.

<sup>w</sup> Treated control.

**Dale Johnson Farm, Sagola, MI:** A foliar fungicide timing trial was established on the Dale Johnson Potato Farm in Sagola, MI and managed by the grower with guidance from MSU Extension (DeDecker). The trial objective was to determine the most effective timing of fungicide applications for managing white mold in potato. A completely randomized design with three replicates was used. A commercial potato field with a history of white mold was selected for the trial and planted to the variety Silverton using standard grower practices. Plots were thirty-six rows wide (34-in. row spacing), running the length of the field, to accommodate the grower's self-propelled sprayer. Standard grower practices were followed to manage non-target pests. A John Deere R4038 sprayer, equipped with air-induction flat fan nozzles, was used to apply fungicides at 40 gal/A. To control for late blight, weekly chlorothalonil applications (Bravo Ultrex at 1.25 lbs/A) were made until vine kill. Fluazinam applications (8 fl oz/A) were made 20 Jul (full bloom) and 3 Aug (14-d post-bloom) as a tank mix with

chlorothalonil. Treatments of full bloom and 14-d post-bloom were compared to the grower's standard treated control (chlorothalonil only). Apothecia and disease data were collected 20 Jul and 27 Aug, respectively. No apothecia were observed at the full bloom timing. Fifty stems were later rated (5 subsamples of 10 stems each) from the center twelve rows of each plot and assigned a disease severity (0-3). The severity ratings were: 0 = no disease to 3 = infection girdling mainstem, resulting in wilting and/or death. The ratings were used to calculate a percent disease incidence (DI) and average disease severity of symptomatic plants (DS; 0-3). Disease index (DX) was calculated from the following equation: DX = DI x DS/3. A generalized linear mixed model procedure was used to conduct the ANOVA and mean separations at  $\alpha$ =0.05.

DI values from the final rating ranged between 30.0 and 72.0% and DX values ranged between 12.7 and 38.7%. There were significant differences among mean DI (P = 0.0006) and mean DX (P = 0.01) values of the treatments (Table 2). These results suggest that later fungicide applications may be helpful in managing potato white mold, particularly in longer flowering varieties. Possible confounding factors in this study included a) that our full bloom application was slightly early (1-2 days), and b) a wind event that removed many blossoms between the full bloom and post bloom applications. Additional research is needed to confirm our results, and to demonstrate the relationship between white mold control and potato yield and/or quality.

Treatment, Rate<sup>z</sup>, and Timing<sup>y</sup>  $DI(\%)^{x}$ No. DX (%)  $1^{w}$ 72.0 a Grower standard treated control 38.7 a 2 50.0 b Omega 500F (8 fl oz) full bloom 25.1 b 3 Omega 500F (8 fl oz) 14-d post-bloom 30.0 c 12.7 c

Table 2. White mold observations in treatments tested on-farm in Sagola, MI in 2020.

<sup>2</sup> All rates, unless otherwise specified, are listed as a measure of product per acre.

<sup>9</sup> Applications were made on the following dates: full bloom = 20 Jul and 14-d post-bloom = 3 Aug.

<sup>x</sup> Column values followed by the same letter were not significantly different based on Student–Newman–Keuls multiple comparisons test ( $\alpha$ =0.05); if no letter, then the effect was not significant.

<sup>w</sup> Treated control.



## **Growing U.P. Agricultural Association**

Are you interested in promoting and supporting agriculture in the Upper Peninsula? If so, the Growing U.P. Agricultural Association (GUPAA) is a way for you to become involved. GUPAA was formed in 1978 to address concerns about agricultural research in the Upper Peninsula. Through the years, the organization has continued to provide leadership for U.P. agriculture. In the early 90's, it received tax-exempt status under section 501(c)3 of the Internal Revenue Code. This has allowed the organization to receive funds and act as the fiscal agent for grants from MDARD and other organizations that require the 501(c)3 designation. It is the goal of the Growing U.P. Agricultural Association to continue providing leadership and serve as an umbrella organization for all phases of agriculture in the Upper Peninsula. It currently establishes research and education priorities in crops and livestock which are utilized by MSU AgBioResearch and MSU Extension to develop research and educational programing for the UP. Every year GUPAA also recognizes an individual or organization that has provided exemplary dedication to UP agriculture and presents them with the annual "Distinguished Service to UP Agriculture" award. The first award was presented to John Kronemeyer in 1984.

GUPAA has an annual membership meeting every spring and, due to Covid-19, this year's membership meeting will be virtual. The virtual meeting will be held on Tuesday, March 23<sup>rd</sup>, 7:00 pm ET. People can access the meeting by logging on at <u>https://msu.zoom.us/j/93418878037</u> or by phone at 1-312-626-6799 - meeting ID - 934 1887 8037. The agenda will include updates from MSU AgBioResearch and Extension, current research projects in the UP, a review of the research priorities, and a discussion on how GUPAA can serve UP agriculture going forward. Membership is open to anyone and those wishing to address issues and concerns facing UP agriculture are encouraged to join the virtual meeting. For more information call Paul or Michelle at 906-439-5114.

## MSU Extension agricultural programs continue in "on-line" format

Jim Isleib, U.P Crop Production Educator, 906-250-9609 isleibj@msu.edu

Thanks to all of you for your patience with MSU Extension during the COVID-19 pandemic. Our U.P. agricultural extension people are still under tight restrictions on travel and person-to-person contact. Unless approved through a rigorous, campusbased process, we are not yet able to do farm visits, in-person meetings, conferences, even go to our own offices! Yes, we're all 'working from home'. The office work really isn't much different when 'working from home', other than all the distractions of home life. At my stage of life, my home is very quiet...just me and wife Diane here. Not even a dog anymore. But the lack of personal contact with the farmers and others we serve is very frustrating. So feel free to call any of us, email or text with any ideas, farming issues, requests for information, or just to say 'hi'.

The way we can still do extension outreach work, now and into the next months, is through the internet. Here is an updated, partial listing of on-line resources currently available from MSU Extension. I am including things related mostly to my role in farm crop production. There are many more offerings in all kinds of things:

## MSU Extension main web page: https://www.canr.msu.edu/outreach/

MSU Extension Field Crops web page: https://www.canr.msu.edu/field\_crops/index

(includes details on the free 2020 Field Crops Virtual Breakfast, (7-7:30 every Thursday, April 16-Sept 10) and recordings from previous years, the Field Crops Webinar series (archived recordings), "In the Weeds" podcasts, upcoming events, and a listing of MSUE educators and specialists statewide)

Hay Production 101 on-line series (registration and fee required): https://www.canr.msu.edu/events/hay-production-101

Beginning Farmer Webinar Series (free, archived recordings): <u>https://www.canr.msu.edu/beginning\_farmer\_webinar\_series/index</u>

<u>"What's U.P. @ UPREC?</u> video series (Youtube channel with 35 short video segments from MSU farm at Chatham, May 5, 2020 - present): <u>https://www.youtube.com/playlist?list=PLHjpwE1PjQIufc5yvYgp-7kgjM-ASa0L8</u>

Wheat Wisdom webinar series (free): https://www.canr.msu.edu/news/msu-and-michigan-wheat-program-announce-wheatwebinar-series

<u>MSU Extension agriculture program info, classes and events</u> (click through categories of interest): <u>https://www.canr.msu.edu/agriculture/index</u>

Pesticide applicator training (registration and fee required): https://www.canr.msu.edu/courses/pesticide-applicator-training

Interested in recent oat variety comparisons? Check out these sites for 2020 oat variety trials:

- MSU U.P. Research and Extension Center 2020 MCIA oat and barley variety trial <u>https://www.canr.msu.edu/uprc/uploads/files/MSU%20MCIA%20Report%202020.pdf</u>
- (or google: MSU UPREC, then click 'research' and look for oat/barley trial.)
- University of Wisconsin 2020 barley, oat and wheat variety trials: <u>https://bit.ly/2I3bBP0</u>
- University of Minnesota 2020 oat trials: <u>https://www.maes.umn.edu/publications/field-crop-trials/oat</u>

## **JOB POSTING:**

North Farm Coordinator (Horticulture Aide) at MSU UPREC in Chatham, Full Time

To assist in the conduct of organic horticultural research and outreach by managing and maintaining facilities, equipment and crops at the UPREC North Farm.

Probationary Rate: \$20.36 Job Rate: \$21.43

Benefits: Health insurance, paid leave and retirement

Term: Annual term, renewable based on job performance and available funding

To Apply: Send a resume, cover letter and contact information for three references to Dr. James DeDecker, UPREC Director, at dedecke5@msu.edu with the subject line "North Farm Coordinator"

## 2021 Michigan Beef Expo and Virtual Trade Show presented by Great Lakes Sire Service Michigan's Premier Cattle Exhibition to Include Online Cattle Sales & Virtual Trade Show

The Michigan Cattlemen's Association and affiliated breeds are excited to welcome you to the 2021 Michigan Beef Expo and Virtual Trade Show! For over 30 years, the Michigan Beef Expo has been Michigan's marketplace for premier beef cattle seedstock. The tradition continues in 2021 with five online cattle sales and a month-long virtual trade show brought to you by Great Lakes Sire Service.

Cattle breeders across the region will be offering their best genetics in several online sales hosted by Breeders Word. The 2021 Sales include:

- All Breed Bull Sale
- Simmental Female Sale
- All Breed Female Sale

Catalogs featuring detailed descriptions, photos and video of each bull and female will be posted to the Breeders World website on March 15, 2021. Sales will be live for two weeks and will close on March 28, 2021. Direct links to all the sales can be found at <u>www.MICattlemen.org/Michigan-Beef-Expo</u>

"Last year, the Michigan Beef Expo hosted by Breeders World grossed over \$167,000" said committee Chairman Brian Decker. "While we are unable to hold a traditional in-person Expo, we know this format offers a reliable marketing opportunity that delivers value to Michigan's seedstock breeders and commercial cattlemen."

The all-new Michigan Beef Expo Virtual Trade Show also begins on March 15 and runs through April 17, 2021. This online trade show is a chance for cattlemen and women to interact with companies that provide products and services to the industry year after year. Find them at <u>www.MICattlemen.org/Michigan-Beef-Expo</u> and within each of the five cattle sale pages. By clicking on the vendor's ad, viewers can get the latest offers and information from our trusted vendors and agribusinesses.

Just visit the event landing for links to all the cattle sales and trade show vendors. Contact the Michigan Cattlemen's Association at <u>info@MICattlemen.org</u> or 517-347-8117 for more details.

# Classifieds

**FOR SALE: 2nd and 3rd crop alfalfa,** small square bales. Marenger Potato Farm, Flat Rock. (906)384-6587.

**FOR SALE: Alfalfa Balage**, 2nd and 3rd crop alfalfa. \$60/ bale. (906) 630-4945.

**FOR SALE: Koyker 565 Loader** with 7 ft bucket. Also has skid steer adapter. Fits JD 3000-5000 series tractors. \$2500. Call Tolfree Farms (908) 884-2351 or email countryj@jamadots.com.

**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@smithcompany.com

**Beautiful property** in the Upper Michigan, 130 acres In Perkins for sale or pasture for rent for livestock for the 2021 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.

FARM FOR SALE: Upper Peninsula Farm with over 1,100 acres, water access, maple syrup production, and much more! Shady Lane Farms http://shadyInfarms.wixsite.com/shadyInfarms Henry DeGroot (906) 238-4251 hjdegroot@alphacomm.net

**FOR SALE: John Deere B**. Clean, less than 50 hrs on rebuild. **Allis-Chalmers C**. New paint, runs good. **Hay Hauler**. Hauls up to 10—4x6 round bales, use spear on back, don't have to unhook. Call Terry (906)644-2777.

FOR SALE: 7512 Kverneland individual bale, selfloading, round bale wrapper. Proved performer, always stored inside, new tires, updated tenson rollers, have owners and parts book, tractor fender controls and auto counter. Asking \$5,000. Call (906) 439-5210 or email <u>bartle18@msu.edu</u> for more information and pictures. Make round bale silage one of your harvest options.

## Reh-Morr For Sale- Eben Jct. MI, N5057 Benson Rd. Rock River Twp. Alger Co.

Acreage includes field, maple forest, loamy, sand soil, high ground, conifer wind breaks. Zoned agriculture. Blackberries, raspberries, cherry trees (sour), asparagus, rhubarb, currants. High tunnel hoop houses. 3-30 X 72, 1-20 X 27 Barn with lean-to. 30 X 55 Sauna-outdoor, wood heat. Garage new-30 X 40 2 story, lower level 2 car garage, large workshop, upper level partially finished and storage. House 3 BR, 1 Bath, 2000 sq. ft., wood heat, electric baseboard, small walk-out basement. Well water. On Gravel Road. Owned since 1989. Pesticides not used. Contact: Dan or Mary (906) 439-5558 evenings

dbrabine@yahoo.com





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If you do not wish to receive this publication, please contact Michelle at colema98@msu.edu or (906) 439-5114

## 2021 Michigan Cattlemen's Association-Michigan State University Bull Evaluation Open House and Sale

The Michigan Cattlemen's Association and Michigan State University Extension are eager to invite you to the 2021 Bull Evaluation Open House and Sale! The MCA/MSU Bull Evaluation Program is the region's premier central bull appraisal program and facility, aiming to aid producers in selecting and obtaining superior bulls. This year is the 33<sup>rd</sup> annual evaluation and, no doubt, the deepest set of bulls we have offered thus far.

One hundred 6-13 month old bulls were intensely selected by regional seedstock breeders and placed in a common environment to be evaluated on rate of gain, soundness, and body composition. All bulls have genomically enhanced EPD's, are subjected to a rigid health and vaccination protocol, and are verified free of lethal genetic defects. Each bull also has ultrasound data for percent of intramuscular fat, ribeye area and external fat. Performance reports are posted online at www.MIBulls.com. All sale bulls must pass rigorous tests including:

• Surpassed minimum 2.8 lb/day gain during 112-day growth trial.

• Determined to be docile with excellent temperament during 5 months at the station - zero tolerance policy for flightiness or aggressiveness.

• Deemed to have acceptable structure and passed foot angle & claw set score requirements.

• Passed breeding soundness exam, including physical exam, scrotal circumference requirements, & semen evaluation. We also measure important traits that affect profitability such as carcass traits (intramuscular fat, ribeye area, & rib fat), frame score, and pelvic area.

A catalog featuring the sale bulls with detailed descriptions is available upon request and is posted along with videos of each sale bull at <u>www.MIBulls.com</u> An open house will be held on March 6<sup>th</sup> 10:00 am to 1:00 pm at the bull evaluation facility, 375 Mt. Hope Road, Crystal, MI 48818 or call ahead and schedule a time at your convenience. The bull sale will be held March 20<sup>th</sup> beginning at 12:30 pm at the bull evaluation facility and will be broadcast live through the DVAuction website.

