



U.P. Ag Connections Newsletter

November 2021

Agricultural News from MSU Extension and AgBioResearch

Volume 25 Issue 11

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News and Views

By Frank Wardynski, Extension Educator

This month I am featuring Pat Wehner and the Carney-Nadeau Agriscience – AFNR (Agriculture, Forestry, and Natural Resources) program and FFA Chapter. Pat taught the agriscience curriculum and supervised FFA Chapter at Stephenson schools for 25 years, one year in Wisconsin and now six years at Carney-Nadeau. Stephenson dropped the program I assume, for financial reasons. I find it a bit disturbing that they did not have the foresight to see how important and beneficial a program such as this is. On the other hand, I have served as a school board member. Budgets have become so tight and school administrations are always looking for opportunities to cut costs. I find it commendable that Carney-Nadeau saw the benefits of the agriscience program and expanded rather than looking to contract.

I talked with Pat recently to get details of her AFNR program and FFA Chapter. She directs the curriculum towards non-farm students as only 2-4% percent of the students grew up on a farm. Many of these students are two to three generations removed from the farm. In the AFNR program they get to see where their food comes from and how it is produced. The FFA programs help students develop leadership problem solving skills and self-confidence.

Through FFA they attend skills competitions in the Fall. The skills competitions include areas such as: judging, showmanship, mechanics, tractor driving, agriscience/environmental decathlon, and many more categories. Through the winter they will be competing in leadership and competitions in areas of job interviews, parliamentary procedure, public speaking and other areas at district, regional and state levels. In many years, they have not had any competition within the district of the Upper Peninsula. Hopefully that will change soon.

In addition to competitions, the students have had opportunities to travel to various other states for field trips and conventions to gain valuable experience. The leadership skills they are developing is not only critical for their own personal growth but also for agriculture. These students will be our consumers in the future, and many will be making decisions within our communities regarding policies affecting agriculture.

Many of the activities are paid for through scholarships from the National FFA. Also, the FFA alumni association conducts fund raising activities. One of their main fundraisers is a machinery auction that charges lower consignment fees than auction companies would. The alumni association functions similarly to an athletic booster association. They raise funds for the FFA chapter for many of their activities.

You can see more of their activities on Facebook, Carney-Nadeau Agriscience - AFNR & FFA. More agriculture programs in UP schools coming next month.

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Evaluation of foliar fungicide timing to manage white mold of potato in Michigan

By Drs. J.F. Willbur¹ and J. DeDecker²

Dale Johnson Farm, Sagola, MI: In 2020 and 2021, a foliar fungicide timing trial was conducted on the Dale Johnson Potato Farm in Sagola, MI, 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 Silvertop 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. Treatments of full bloom, 14-d post-bloom (2020), and full bloom + 14-d post-bloom (2021) were compared to the grower's standard treated control (chlorothalonil only). In 2020, 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. In 2021, fluazinam applications (8 fl oz/A) were made 28 Jul (full bloom) and 11 Aug (14-d post-bloom) as a tank mix with chlorothalonil. Disease data were collected 27 Aug, 2020 and 31 Aug, 2021. Fifty stems were rated (5 subsamples of 10 stems each) from the center twelve rows of each plot and assigned a disease severity rating (0-3). The severity ratings were: 0 = no disease to 3 = infection girdling main stem, 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: $DX = DI \times DS/3$. A generalized linear mixed model procedure was used to conduct the ANOVA and mean separations at $\alpha=0.05$.

In 2020, DI values 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 1). The best performing single-pass treatment at 14 days post bloom led to a 67% reduction in average disease index over the control. In 2021, DI values ranged between 1.3% and 35.3% and DX values ranged between 0.44% and 16.7%. There were significant differences among mean DI ($P = 0.016$) and mean DX ($P = 0.027$) values of the treatments (Table 2). The two-pass treatment at full bloom + 14 days post bloom led to a 97% reduction in average disease index over the control. These results suggest that later fluazinam applications and/or multiple fluazinam 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 applications were slightly early in 2020 and late in 2021 (1-2 days), and b) wind events 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. The authors thank Dale Johnson for his collaboration on these two years of on-farm research and the Michigan Potato Industry Commission for their financial support.

Table 1. White mold observations in treatments tested on-farm in Sagola, MI in 2020.

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

^z All rates, unless otherwise specified, are listed as a measure of product per acre.

^y Applications were made on the following dates: full bloom = 20 Jul and 14-d post-bloom = 3 Aug.

^x 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.

^w Treated control.

Table 2. White mold observations in treatments tested on-farm in Sagola, MI in 2021.

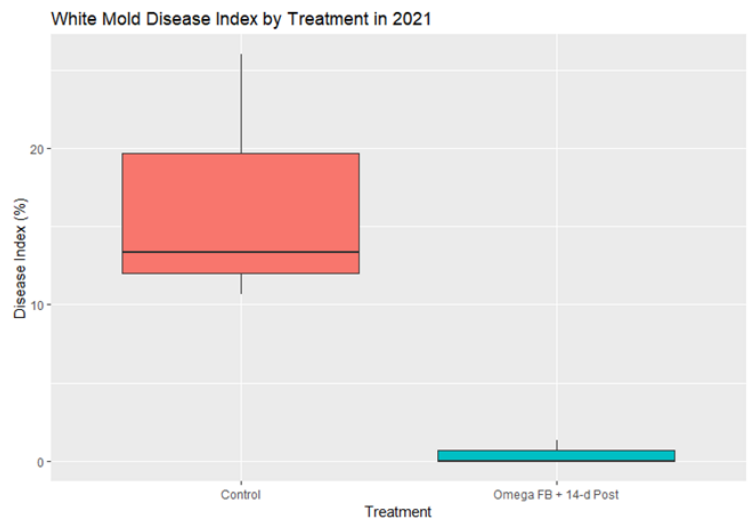
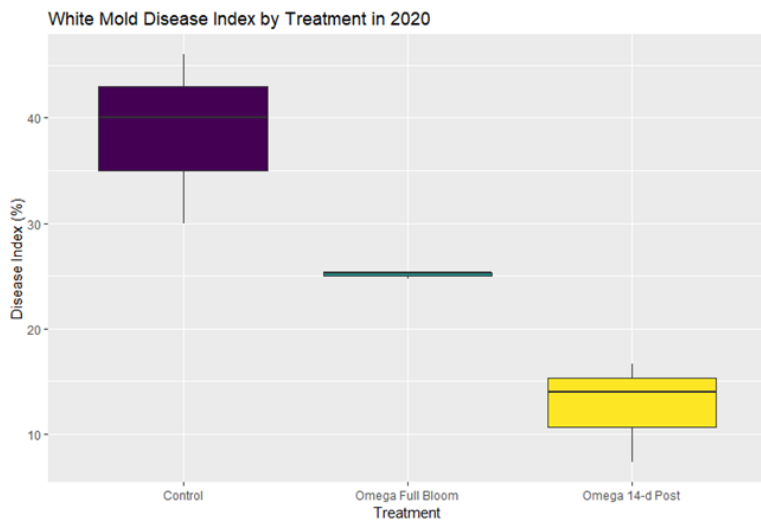
No.	Treatment, Rate ^z , and Timing ^y	DI (%) ^x	DX (%)
1 ^w	Grower standard treated control	35.3 a	16.7 a
2	Omega 500F (8 fl oz) full bloom + 14-d post-bloom	1.3 b	0.4 b

^z All rates, unless otherwise specified, are listed as a measure of product per acre.

^y Applications were made on the following dates: full bloom = 28 Jul and 14-d post-bloom = 11 Aug.

^x 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.

^w Treated control .



Classifieds

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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.

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Pesticide applicator training offered at MSU farm in Chatham

MSU Extension is offering a 4-hour review of the pesticide applicator 'core manual' for state exam preparation or educational credit for recertification on Friday, December 3, 2021

By Jim Isleib, Extension Educator

Location/Date:

MSU Upper Peninsula Research and Extension Center
E3774 University Drive, Chatham, MI 49816
Friday, December 3, 2021, 9am – 1pm eastern time

This 4-hour review is 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, 3A, and 3B. The program will consist of chapter reviews of the National Pesticide Applicator Certification Core Manual and a practice exam. **Please note! NO EXAMS WILL BE OFFERED at this program.** 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.

The Michigan Department of Agriculture has changed the exam process. Exams are now offered through the Metro Institute. The following is from the MDARD website

Computer-Based Exams: Testing centers at 18 locations across Michigan offer computer-based, in-person exams through Metro Institute, a private pesticide exam administration company authorized to conduct testing on MDARD's behalf. Applicators do not have to be computer-savvy to successfully complete these exams. Click Metro Institute Testing Center Locations to see a map of testing center locations.

Online, remotely proctored exams can be taken from your home or office if you have a computer with reliable internet service, a moveable camera (laptop or plug-in) and a microphone. These exams require a bit more computer knowledge, and you are advised to access the exam at least 30 minutes prior to your scheduled start time to ensure you can begin the exam on time. View the Click training video to see what you should expect with the online exam process.

To schedule a computer-based exam with Metro Institute, please visit www.metrosignup/Michigan or call 877-533-2900. Metro Institute charges \$55 per exam at testing centers and \$65 per exam when taken online. This fee is in addition to the application fee provided to MDARD. Please note your certification is not complete until you have provided a completed application and application fee to MDARD in addition to passing the required exam(s).

Paper-based Exams: Paper-based, in-person exams are being offered for private, registered, and commercial core and standard (fumigation and aerial) exams only. These exams will be in conjunction with a review session conducted by Michigan State University (MSU). Availability will be extremely limited due to social distancing and staffing limitations. Applicators can register for the MSU review session and subsequent exam by visiting the MSU ANR Events Management System link on the MDARD Online Pesticide Exam Scheduling website: <https://events.anr.msu.edu/MDARDPSEPCORE/>.

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 State of Michigan And Metro Institute fees).

The core manual and other study materials can be purchased on-line at <https://npsecstore.com/pages/michigan>.

For more information, contact Jim Isleib, MSU Extension, at 906-250-9609 or isleibj@msu.edu. Additional information regarding registration for State of Michigan pesticide applicator exams and additional training programs for pesticide applicators is available on the Michigan Department of Agriculture and Rural Development website under licensing/pesticides/pesticide applicator certification.

Dark red kidney bean seeding rate trial in Delta County completed

By Jim Isleib, Extension Educator

A seeding rate study comparing Red Hawk dark red kidney beans planted at 60,000 seeds per acre and 70,000 seeds per acre was conducted on the Collins Farm in Fayette in 2021. If yield from the reduced seeding rate is comparable to the higher seeding rate, the farmer may be able to save money by reducing seeding rate. The project was sponsored by the Michigan Bean Commission, Collins Farm and MSU Extension.

Method:

Six strips of 24 rows at 30" spacing were planted on June 14, 2021. The strips alternated between 70K/acre and 60K/acre target population, resulting in 3 replications of side-by-side treatments. Plant populations were counted on July 28, 2021 by measuring 17'5" of each of the rows in a 6-row planter pass in each strip, and again on September 16, 2021. An average of the two plant stand counts from each strip was used to estimate the actual plant stand in each strip.

The surrounding dark red kidney bean field was pulled and combined before trial harvest. Final dimensions of each strip was 60' (24 rows) X 801.5', or 1.104 acres. The strips were harvested using a bean puller on September 20 and combined with a Lilliston 6200 on September 22. Yield from each strip was emptied into a gravity wagon and weighed on a local gravel pit Fairbanks scale.

Results:

Stand count results (estimated plants per acre)

	Rep 1	Rep 2	Rep 3	AVG
70K/acre target	68,150	64,150	64,600	65,630
60K/acre target	59,900	57,300	57,080	58,093

Yield results (lbs per acre before milling)

	Rep 1	Rep 2	Rep 3	AVG
70K/acre target	2,301	2,210	1830	2114
60K/acre target	2,174	2,138	2101	2138

This single-year, single-location study does not show any significant difference in yield between 60K/acre and 70K/acre target seeding rates. Coefficient of variance was 8% (indicating a strong statistical result) and least significant difference was 447 lbs per acre. Yields were unusually high for this farm compared to previous years. The results of this study suggest that a reduced seeding rate of 60K/acre has the potential to provide similar yield to the original seeding rate of 70K/acre. Additional side-by side comparisons in future years are desirable to confirm this observation.

Following harvest, the host farmer indicated that he observed a slightly higher yield in his 70K seeded fields versus 60K seeded fields. At his contracted price for these beans, the yield difference made the 70K planting rate more economical.

Western UP Beef Cattle Marketing, Dinner and Program

Butch Barthel, field rep with Tri-County Stockyards in Motley, Minnesota was visiting beef producers in the Western UP. He liked the quality of cattle and would like to meet with producers to offer new marketing opportunities. They are sponsoring a meal and is inviting producers to a meeting at the Baraga Lakeside Inn on December 10. Social get together at 4:00 EST and roast beef dinner at 5:00. Please call Frank Wardynski to RSVP at 906-884-4386.

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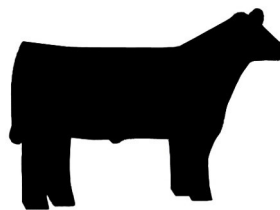
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Market Report

Choice Steers	\$118-\$132 per 100 lbs.
Holstein Steers	\$108-\$118 per 100 lbs.
Hogs	\$40-\$44 per 100 lbs.
Lambs	\$200-\$250 per 100 lbs.
Cull cows	\$50-\$63 per 100 lbs.
Calves	\$60-\$90 per 100 lbs.
Goats	\$200-\$325 per 100 lbs.

Breeding and Feeder Animals

Grade Holstein cows \$700-\$1050/head

Grade Holstein bred heifers \$1000-\$1600/head

Feed Prices across the U.P.

	Avg. \$/cwt	Avg. \$/ton	Price Range
Corn	\$15.43	\$308.65	\$260-440
Soymeal	\$24.16	\$483.25	\$439-624
Oats	\$14.49	\$289.75	\$260-340
Barley	\$12.41	\$248.25	\$200-314

Average price/100 wt. for 1 ton lots

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New information resources from MSU Extension

Jim Isleib, MSU Extension Crop Production Educator, isleibj@msu.edu

Two new and interesting resources for Michigan farmers have been introduced recently from MSU Extension:

Field Crop Insect Pest Management Guide Authored by MSU field crop entomology professor Dr. Chris DiFonzo and Ohio State entomology professor Dr. Kelley Tilmon. This comprehensive, new guide is much more than just a 'spray' book. It includes information on biology, damage, management recommendations *and* insecticides related to insect pests in field crops in Michigan and Ohio. Chapters cover field corn, soybean, wheat and other small grains, alfalfa and grass forage, dry beans and sugar beets. Each chapter stands along, focusing on a particular crop. Every effort was made to include correct information and to list most of the commonly used products for Michigan and Ohio. However, labels do change over time. Always read the labels of the products you use to reconfirm application rate, precautions, PPE, pre-harvest intervals, and other key pieces of information prior to spraying. The new guide is available free on-line. At present, no printed copies are available. You can access the guide at https://www.canr.msu.edu/field_crops/insect-guides. Or contact me and I'll email you a pdf of the guide.

The Fertilizer Cost Comparison Tool This computer-based tool for field crops and forages was developed by MSU Extension farm management educator Jon LaPorte. This on-line tool provides farm producers with an ability to consider nutrient needs and fertilizer product costs. A version for vegetables will be added soon. This decision tool does not replace soil testing or soil-based recommendations. Rather, the cost comparison tool uses this information as part of developing a fertilizer plan. Nutrient values for current or previous manure applications and previously grown legumes can be added. Standard commercial fertilizer products are available in the decision tool. Local prices for products are still needed to determine your fertilizer costs. Additional fertilizer products used by your farm can also be applied to the calculation. You can develop up to 3 printable plans for a crop, based on soil test or nutrient removal information.

More information and links to the field crops and forages tool, along with the tutorial and other resources is available at <https://www.canr.msu.edu/resources/fertilizer-cost-comparison-tool-field-crops>.