

U.P. Ag Connections Newsletter

October 2016

Agricultural News from MSU Extension and AgBioResearch

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MICHIGAN STATE UNIVERSITY Extension

October is Farm to School Month

Connecting kids with where their food comes from

October is nearly here and that means Farm to School Month is upon us. Many schools think they can't do farm to school because they can't source enough for their cafeteria so if they can't source everything, they choose to source nothing. In addition, schools often deal with a tightly managed budget for school meals. That said, farm to school encompasses so much more than just farm to cafeteria and there are ways to begin introducing local products into school menus that don't break the bank.

There are three primary components to farm to school: cafeteria, classroom and community. Farm to cafeteria is what most people think about when they think about farm to school. There are many great examples from Detroit to Houghton, of schools successfully sourcing local products for their school menus. Schools should start small and consider doing taste testing activities or harvest of the month features so that you begin to introduce new foods on a sample basis a few times a month before jumping in to trying to source large quantities to replace traditional sources for your menu. This is a great opportunity to bring a farmer into the school and have them talk about the product the students might be sampling. Lastly, in thinking about local products, think about not just fruits and vegetables but meat and fish and dairy as well. The Michigan Farm to School website has several great resources regarding purchasing local products or marketing local products to schools. Cultivate Michigan, a campaign help expand farm to institution and track progress, is another great resource for where to source product and recipes for the most common products being utilized in schools and institutions.

The classroom component of farm to school focuses mostly around school gardens. This is a great way for students to really understand where their food comes from and have a role in growing food and a great opportunity for teachers to have an experiential way to teach lessons they are already teaching particularly around science and math. A previous article series on school gardens can be found on <u>MSU Extension's website</u>.

Farm to School is also a great way to connect schools and the community. Whether it be volunteers from the community helping with school gardens, farmers in the classroom, field trips to a farm or a fall harvest festival, food can definitely help connect a community. A great way to introduce local products into the school in a community wide project is to participate in the <u>Michigan Apple Crunch</u> on October 13, 2016. Michigan apples are widely available across the state from local farmers as well as traditional broadline distributors. This event expects to have more than 400,000 Michiganders crunching apples together! Farm to school is so much more than just sourcing local products for school cafeterias and even small activities and occasional substitutions on the menu count so I encourage you to think about what you might be able to do in your community.

Michelle Walk MSU Extension, Community Food System Educator

North Farm Short Course focusing on Seed Saving

Short courses are an in-depth exploration of farming fundamentals and best practices for diversified vegetable growers. Each five-hour learning session has an emphasis on hands-on activities so participants can practice what they learn, and includes the cost of materials for a project. All workshops will be held on-site starting at 1 pm EST and will include a combination of experiential and classroom-based learning. Short courses qualify for education hours through the <u>MSU Extension Master Gardener program</u>. Registration is required for these events and can be accessed at <u>www.msunorthfarm.org</u>. Questions? Contact Abbey Palmer at palmerab@msu.edu or 906-439-5114.

Seed Saving – Sunday, October 9

Saving seeds gives individuals the ability to select UP-hardy plant varieties and carry them on for future generations. Consider the percentage of your budget that goes to open pollinated seeds each year – replacing even a portion of that with seed saved from the farm saves money and creates a story you can tell your buyers. Hands-on: Save seeds from a selection of open-pollinated plants using wet and dry process

Topics:

Basic plant genetics - Planning a seed-saving garden - Harvesting and storing seeds Wet process/dry process - Seed saving as a commercial enterprise



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Choosing a cover crop for potato production

By Monica Jean, MSU Delta County Field Crops Educator

Incorporating a cover crop into commercially grown potatoes could help with soil health and pest pressures. Research is being conducted in Michigan's northern Lower and Upper Peninsulas.

I recently attended the Aug. 31, 2016, Upper Peninsula Potato Day, located at TJJ Farms in Cornell, Michigan, where <u>Michigan State University Extension</u> cover crop specialist <u>Erin Hill</u> spoke about the opportunity to grow cover crops in a potato rotation. Short-season, early harvest specialty crops like potatoes are ideal for incorporating cover crops due to growing time availability.

Commercial potato production requires intensive management practices that have been proven to be degradative to soil health. For example, treatments for nematodes in the past have utilized fumigation and intensive tillage practices. This treatment can have negative impacts on the beneficial soil microbe populations, in addition to the pests being targeted, which in turn may have negative impacts on their contributions to soil health including building soil structure, soil organic matter and nitrogen cycling. Past research has suggested that some cover crop species may reduce nematode pressure in potatoes, in addition to other tactics such as sanitation and improving soil quality.

Currently, research is being conducted in Michigan's Lower and Upper Peninsulas to determine the best cover crop species to select and how to incorporate them into various potato rotations to find practical answers. In one of the trials, treatments consist of three pearl millet variates, sorghum-sudangrass, teff, annual rye grass and cereal rye no -till drilled into second year alfalfa at Kitchen Farms in Elmira, Michigan. In each trial plot, above and below ground biomass production, soil heath parameters and an evaluation of the impact on root lesion nematode populations will be measured. The subsequent potato crop grown in 2017 will be evaluated for tuber yield and quality and for the early-die syndrome. In another trial, located on Cousineau Potato Farm in Hardwood, Michigan, cover crop planting time, seeding rates and mowing times are being assessed for optimal biomass production.

Dependent on producer goals, there are many different cover crops to choose from for potatoes. In addition to clearly defining goals for cover crop use, other considerations include how it fits into your rotation (e.g., planting/harvesting times), cost, growth rate and impact on existing pest issues.



Erin Hill discussing the cover crop trials being conducted in the Upper Peninsula at the Upper Peninsula Potato Day. Photos: Monica Jean, MSU Extension.

Buckwheat is an example of a cover crop that, when paired with manure and diverse crop rotations, has been found to help reduce potato early die, which is associated with the root lesion nematode as part of this complex. However, buckwheat has also been shown to act as a food source for aphids. This is a perfect example of how a cover crop can be beneficial or detrimental, depending on the current pest pressures.

The <u>Midwest Cover Crop Council</u> has an online <u>cover crop</u> <u>selector tool</u> to assist producers with deciding which cover crop species may help meet their goals. After selecting the field location, drainage information, and up to three goals, a graphic is generated that provides species options based on their likelihood to thrive in that environment and meet the goals. Detailed information sheets are also available by clicking on the cover crop names. The selector tool is available at <u>Midwest Cover Crops Council Cover Crop</u> <u>Decision Tools</u>.

If you think you are having issues with nematodes, soil and tissue samples can be sent to <u>MSU Diagnostic Services</u> to determine the type, population density and the associated risk. Please refer to their website for information on <u>submitting samples</u>. This will allow for a more targeted approach to treatment and managing the nematodes.

For further questions and information, contact me at <u>atkinmon@anr.msu.edu</u> or Erin Hill at<u>hiller12@msu.edu</u>.

References

Integrated Weed Management: Fine Tuning the System, MSU Extension bulletin E-3065 Michigan Field Crop Pest Ecology and Management, MSU Extension bulletin E-2704

Michigan residents reminded to protect against • mosquito bites

MDHHS CONTACT: Jennifer Eisner 517-241-2112 MDARD CONTACT: Jennifer Holton 517-284-5724

LANSING, Mich. – The Michigan Departments of Agriculture and Rural Development (MDARD) and Health and Human Services (MDHHS) are reminding residents to protect themselves from mosquito bites, even with autumn officially beginning this week.

West Nile Virus activity in Michigan has increased since late August. Health officials have identified 22 confirmed and probable West Nile virus (WNV) human cases and five blood donors to date. Further, 17 corvids, 25 other avian species, and two deer have tested positive for WNV from 25 Michigan counties in both the Upper and Lower Peninsula. Positive mosquito pools have been detected from seven Michigan counties (Bay, Kent, Macomb, Oakland, Saginaw, Tuscola, Wayne).

MDHHS has also confirmed a human case of Eastern Equine Encephalitis (EEE) in an out of state resident who was likely

exposed in southwest Michigan. The individual was hospitalized, has since been released and is recovering. Eastern Equine Encephalitis is a serious zoonotic viral disease transmitted by mosquitoes. The virus mainly causes disease in horses but can also cause serious illness in people, poultry, and other animals such as deer and even dogs.

As of September 20, MDARD has identified two cases of EEE in horses. One was a four-month-old Standardbred filly in Clare County. The second case was a 12-year-old Quarter horse from Menominee County. Neither horse, nor the filly's mother, was vaccinated against EEE. Both affected horses have died.

"After a hot, dry summer, mosquitos can continue to thrive until the weather consistently drops into the lower temperatures," said Dr. Eden Wells, chief medical executive with the MDHHS. "Even in the early Fall, residents should use repellent according to label instructions and take extra care during peak mosquito-biting hours between dusk and dawn."

Mosquito management is vital in the prevention of mosquitoborne illnesses that cause illness in both humans and in horses. Residents can stay healthy by using simple, effective strategies to protect themselves and their families by reading and following all repellant label directions. The following steps are recommended to avoid mosquito bites:

• Apply insect repellents that contain the active ingredient DEET, or other U.S. Environmental Protection Agency approved product to exposed skin or clothing, and always following the manufacturer's directions for use.

• Wear long-sleeved shirts and long pants when outdoors. Apply insect repellent to clothing to help prevent bites.

• Maintain window and door screening to help keep mosquitoes outside.

• Empty water from mosquito breeding sites around the home, such as buckets, unused kiddie pools, old tires or similar sites where mosquitoes lay eggs.

• Use nets and/or fans over outdoor eating areas.

Bringing horses and pets indoors from early evening until after sunrise when mosquitoes are out in full force. Most people who become infected with WNV will not develop any symptoms of illness. However, some become sick three to 15 days after exposure. About one-in-five infected persons will have mild illness with fever, and about one in 150 infected people will become severely ill.

> Mild illness may include headache, fever, body aches, joint pain, vomiting diarrhea, or rash. Severe symptoms of WNV are associated with encephalitis or meningitis, and may include: include stiff neck, stupor, disorientation, coma, tremors, muscle weakness, convulsions and paralysis. People 50 and older are more susceptible to severe WNV disease symptoms.

People can be infected with EEE from the bite of a mosquito carrying the virus. The disease is not spread by horse-tohorse or horse-to-human contact. In humans, signs of EEE include the sudden onset of fever, chills, body and joint aches. EEE infection can develop into severe encephalitis, resulting in headache, disorientation, tremors, seizures and paralysis. Permanent brain damage, coma and death may also occur in some cases.

Signs of EEE in horses can include stumbling and the inability to stand. Vaccines for horses to protect them from EEE and other mosquito-borne diseases are available and are effective for preventing disease. Horse owners should work with their veterinarian to make sure their animals are up-to-date on all vaccinations. It's not too late to vaccinate this year for diseases like EEE.

For more information and surveillance activity about WNV, visit <u>www.michigan.gov/westnilevirus</u>.





Are booster vaccinations needed for beef calves?

By Frank Wardynski, MSU Extension Ruminant Educator

New vaccine technologies are challenging the need to booster vaccinate beef calves.

Soon beef cow-calf producers will be separating calves from cows and many will precondition those calves through a weaning and vaccination program to help ensure calves remain healthy through the sale and shipping process. <u>Precondition programs</u> are well established with protocols having been set by both marketing organizations and pharmaceutical companies.

In general, protocols are very similar between those developed by marketing organizations and those by pharmaceutical companies. Both generally recommend calves be weaned for at least 45 days before sale. Both recommend that calves be vaccinated with IBR, BVD, PI3, BRSV, 7-way clostridial vaccine, Mannheimia haemolytica, and Haemophilus somnus. One recent difference comes in the recommendation of whether to use booster vaccines for most or all of the listed diseases.

Most protocols developed by marketing organizations continue to include booster vaccinations as part of the program. However, more of today's vaccines do not offer label instructions to repeat vaccination in two to four weeks as they previously have. The technology of vaccine manufacturing continues to improve and the need to give booster vaccinations for some products isn't necessary. Michigan State University Extension Specialists and Educators continue to recommend giving booster vaccinations. Giving booster vaccinations even with today's technology advancements allows for a higher immune level and a second opportunity to develop a strong immune system if vaccine failure occurred during the first round of shots. The second round should be given three-four weeks after the first round to ensure a high level of immune response.

Producers choosing to follow pharmaceutical protocols that do not require booster vaccinations for all listed diseases are strongly encouraged to carefully read and follow label instructions. Utilizing single dose protocols requires diligence that vaccines are administered properly and according to instructions. Producers are also encouraged to purchase vaccines early to avoid problems associated with the high demand coming into the autumn months associated with weaning and vaccinating.



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Market Report

| Choice Steers | \$95—\$105 per 100 lbs. | | |
|--|--------------------------|--|--|
| Holstein Steers | \$85—\$98 per 100 lbs. | | |
| Hogs | \$50—\$55 per 100 lbs. | | |
| Lambs | \$150—\$170 per 100 lbs. | | |
| Cull cows | \$60—\$70 per 100 lbs. | | |
| Calves | \$75—\$150 per 100 lbs. | | |
| Goats | \$150—\$200 per 100 lbs. | | |
| Breeding and Feeder Animals | | | |
| Grade Holstein cows | \$1100—\$1800/head | | |
| Grade Holstein bred heifers \$1600-\$2200/head | | | |
| | | | |

Feed Prices across the U.P. - 5/16

| | Avg. \$/cwt | Avg. \$/ton | Price Range | |
|--------------------------------------|-------------|-------------|-------------|--|
| Corn | \$9.59 | \$191.75 | \$160-232 | |
| Soymeal | \$22.48 | \$449.60 | \$405-450 | |
| Oats | \$8.79 | \$175.80 | \$155-200 | |
| Barley | \$8.88 | \$177.60 | \$140-220 | |
| Average price/100 wt. for 1 ton lots | | | | |



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To stay in tuned with the latest in local food resources and events, check out The Plowshare, the formal newsletter for the U.P. Food Exchange http://upfoodexchange.com/newsletter/

Calling all Farmers!

The Apprentice Farmer Program is now accepting applications

Have you ever wanted to start farming independently, but don't feel like you're quite ready to start out on your own? Then the North Farm's Apprentice Farmer Program may be for you!

The Apprentice Farmer Program is a farm incubator program that aims to serve as the launching point for individuals interested in starting their own farming enterprise. This two-year, residential program provides farming entrepreneurs with the necessary tools and assistance needed to ensure a solid start to their farming career.

Land, equipment, tools, and mentorship are provided to qualified applicants so they can develop a business plan, establish accounts, build capital, and fine-tune skills. The apprentice farmers will grow alongside the talented North Farm staff and other apprentice farmers, sharing ideas, techniques, and labor.

Housing is provided for a small fee to all participants that desire to live on-site. It is strongly encouraged that participants take this opportunity to fully immerse in farm life!

More information about the program, including application, program fees, and the program handbook can be found at the <u>North Farm Website</u>.

http://www.msunorthfarm.org/apprentice-farmerprogram.html



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Calendar of Events October 9 Seed Saving, Short Course, The North Farm @ UPREC (1-6 pm) Image: Calendar of Events Image: Calendar of Events<