

Northern Michigan FruitNet 2014

Northwest Michigan Horticultural Research Center

Weekly Update

March 4, 2014

CALENDAR OF EVENTS

3/5 Strip Cultivation for Weed Management – Apples
Webinar

3/11 Michigan Spring Peach Update Meeting
SW Michigan Research & Extension Center

3/12 Northwest MI Irrigation Workshop
NWMHRC

3/14 Managing Solitary Bees for Pollination Workshop
NWMHRC

3/17 Conference for Small, Emerging Cooperatives
NWMHRC

3/18 Labor Meeting
NWMHRC

3/19 Farm Safety
Wexford Co. MSU Extension Office
Cadillac

3/20-21 Advances In Berry Production Workshop
Guelph, Ontario

4/10 IPM Fruit Tree Kick-off
NWMHRC

4/10 Tractor Safety Class #1
Leelanau Co. Government Center's Community Room

4/11 MDARD Specialty Crop Grant Deadline

4/12 Healthy Forests – Caring for our Trees
GT Conservation District

- 4/17 **Tractor Safety Class #2**
 NWMHRC
- 4/22 **Responding to an S.O.S. from the Commercial Bee Industry – Webinar**
- 4/24 **Tractor Safety Class #3**
 NWMHRC
- 5/1 **Tractor Safety Class #4**
 NWMHRC
- 5/3 **Tractor Safety Test**
 NWMHRC

DEADLINE EXTENDED FOR POLLINATION SURVEY

Dear Growers and Landowners,

We are interested in understanding pollination management practices in Michigan growers. Please take a few minutes to respond to the online survey on "Integrated Crop Pollination." The survey will be open through **March 10, 2014** and respondents can enter to *win an iPad* in a raffle drawing.

This survey will be used to improve outreach, extension, and research on pollination management for growers in Michigan.

Please click on the following link to start the survey:

https://www.surveymonkey.com/s/MI_growers

We value your participation, so thank you for your help and support of our program.

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MICHIGAN SPRING PEACH UPDATE MEETING

Date: March 11, 2014

Time: 8 a.m.-4 p.m.

Location: 1791 Hillandale Road, Benton Harbor, MI 49022

Contact: Dr. Bill Shane, 269-944-1477 ext. 205; cell: 269-208-1652; shane@msu.edu

Peach growers are always looking for ways to improve their profitability. The Michigan Spring Peach Update is the best annual meeting in Michigan to learn about this crop.

The meeting will focus on fresh market peaches including new peach varieties, insect management strategies, disease control, marketing strategies, rootstocks, farm marketing, and mechanical peach thinning.

Attendees will be eligible for credits toward recertification of their Michigan pesticide applicators license.

Deadline for early registration is Monday, March 3, 2014. Registration is \$30 per person or \$25 for current Michigan Peach Sponsor members, with catered lunch included. Registrations mailed after March 3 or at the door are \$5 more per person.

The meeting will take place at the Southwest Michigan Research and Extension Center, 1791 Hillandale Road, Benton Harbor, Mich, which is 2.5 miles east of I-94 exit 30 to Hillandale Road. Registration begins at 8 a.m. with programs starting at 9 a.m.

To pay in advance by check or money order, a registration form can be downloaded from the website Michiganpeach.org and mailed with payment by March 3. After this time, register at the door with check, money order, or cash. Credit cards will not be accepted. For additional meeting information, registration forms, or assistance, contact the conference coordinator Dr. Bill Shane at 269-944-1477 ext. 205, 269-208-1652 cell.

NORTHWEST MICHIGAN IRRIGATION WORKSHOP

Join MSU Extension on March 12 to learn more about irrigation and water management. This day-long program will emphasize the design, use and maintenance of irrigation systems.

Spend the morning learning about water rights; the responsibilities and requirements of large volume water users; the important relationship between soil and water; Irrigation GAAMPs, and the basics of drip irrigation. Presentations will highlight how and why to schedule irrigation, in addition to the various tools available to growers to help them make irrigation decisions.

After lunch, hear the best management strategies for irrigating apples and cherries, managing fertilizer injections with various irrigation applications and a strategies approach to fertigating apples and cherries. Close out the day gaining knowledge directly from a panel of growers with irrigation and fertigation experiences and have time to visit with irrigation manufacturers and distributors.

The northwest Michigan irrigation workshop is pleased to host Dr. Denise Neilsen, a researcher from Summerland, British Columbia. Dr. Neilsen is a world-renowned expert on precision management of water and nutrients for woody perennial crops. She and her team have researched the climatic effects on the demand for irrigation water in the plant as well as the climate limitations to crop suitability and quality. She has helped growers optimize management practices to decrease environmental risk and improve nutrient use efficiency within various tree fruit production systems. Dr. Neilsen has also developed and utilized Beneficial Management Practices (BMPs) that improve/optimize water quality and quantity.

This workshop will be held at the Northwest Michigan Horticulture Research Center in Traverse City. The program will start at 8:30 a.m. The program will conclude at 5:00 p.m. and will include lunch. Registration is \$30 per person payable at the door. The northwest Michigan irrigation workshop is co-sponsored by Michigan State University Extension, AgBioResearch, and the Northwest Michigan Think Tank.

To learn more about this irrigation workshop or to register, please contact Jackie Baase at baase@msu.edu or 231-946-1510. Registration deadline is **March 7**.

Northwest Michigan Irrigation Workshop
Northwest Michigan Horticultural Research Center
March 12, 2014

- | | |
|-------------|--|
| 8:30-9:15 | Large Volume Water User-rights, Responsibilities and Requirements <i>Lyndon Kelley, Irrigation Educator, MSU/Purdue Extension</i> |
| 9:15-10:00 | Soil and Water Relationship Important to Irrigation and BMPs <i>Steve Miller, Irrigation Specialist, MSU Extension</i> |
| 10:00-10:20 | Updates on Irrigation GAAMPs <i>Dan Busby, MAEAP Verification, MI Dept. of Agriculture</i> <i>Jessica Rasch and Garrett Coggon, MAEAP Technicians, Grand Traverse Conservation District</i> |
| 10:20-11:05 | Understanding the Basics of Drip Irrigation and Water Application <i>Dr. Ron Goldy, Vegetable Production Senior Educator, MSU Extension</i> |
| 11:05-11:15 | BREAK |

- 11:15-11:35 **What is an ‘Acre Inch’ of Irrigation on Tree Fruit Systems? Hints on Scheduling to Achieve Adequate Water Supply to Your Trees**
Beau Shacklette, Irrigation Technician, Trickle-Eez/White Water Irrigation
- 11:35-12:15 **Introduction Into Irrigating and Fertigating High-Density Apples**
Phil Schwallier, District Fruit Educator, MSU Extension
- 12:15-1:00 **LUNCH**
- 1:00-1:45 **Best Management Strategies for Irrigating Apples and Cherries**
Dr. Denise Neilsen, Pacific Agri-food Research Center, British Columbia
- 1:45-2:15 **Managing Fertilizer Injections with Irrigation Applications**
Tom Anderson, Trickle-Eez Co.
- 2:15-3:15 **Strategies Approach to Fertigating Apples and Cherries**
Dr. Denise Neilsen, Pacific Agri-food Research Center, British Columbia
- 3:15-3:30 **BREAK**
- 3:30-4:15 **Panel of Growers with Irrigation and Fertigation Experiences**
TBD
- 4:15-5:00 **Social Time with Irrigation Manufacturers and Distributors**

WORKSHOP ON MANAGING SOLITARY BEES FOR POLLINATION TO BE HELD AT MSU’S NWMHRC

On Friday, **March 14, 2014**, we will host Dr. Theresa Pitts-Singer from the USDA’s Logan Bee Lab to hold an intensive workshop on pollination of tree crops using *Osmia* bees. Dr. Pitts-Singer has experience with many aspects of pollination, particularly in managing alternative pollinators, with a primary focus on *Osmia*, which includes the blue orchard bee and the Japanese horn-faced bee. Many growers in northwest Michigan have been using the horn-faced bee for pollinating cherries, and Dr. Pitts-Singer has worked extensively with the blue orchard bee in almonds and stone fruit in the west. She will be here to talk about best management practices, propagating the colony, and using these pollinators successfully in orchards. Dr. Pitts-Singer is part of a large USDA-SCRI funded pollination project, so she will be able to address many questions regarding the importance of pollination in cropping systems.

In addition, Dr. Rufus Isaacs will be in attendance and will describe how the project aims to develop integrated crop pollination tactics for growers.

This meeting will begin with a formal presentation, and will be followed by informal, round table discussions and hands-on demonstrations of the bees in their winter stage. We invite interested growers, NRCS employees, crop consultants, conservation groups, and all others to attend this informative session.

We will meet at the Northwest Michigan Horticultural Research Center on March 14 at 9:00 a.m., and the session will end by noon. If you are interested in participating, please contact Jackie Baase at 231-946-1510. There will be *no charge* for this event, as it is supported by the Michigan SARE program, and by the integrated Crop Pollination project.

THE MICHIGAN SMALL COOPERATIVE CONFERENCE – 2014

Date: March 17, 2014

Time: 8:30 a.m.

Location: Traverse City - Northwest Michigan Horticultural Research Center

Contact: Tom Kalchik: 517-432-8751 or kalchikt@msu.edu

The Michigan Small Cooperative Conference is for directors and members of small and recently organized cooperatives and people who are contemplating starting a cooperative or other group organization. We will provide information about basic cooperative operation including types of cooperatives; the role of directors, managers, and members, and basics for starting and sustaining a cooperative. We will allow plenty of time for networking and input from the participants into issues and opportunities for cooperatives in Michigan.

The Conference will be at three separate locations. **Please register for one session in the location that is most convenient for you.**

- March 17 at the Northwest Michigan Horticultural Research Center ([click here](#) for map and directions)
- March 18 at Cabela's in Dundee, Michigan ([click here](#) for map and directions)
- March 19 at the Southwest Michigan Research and Extension Center ([click here](#) for map and directions)

Registration at each site will be at 8:30 AM. The Conference will convene at 9:00 AM with lunch at noon as part of the program. Morning and afternoon breaks will also be included. Below is the tentative agenda (click on the registration page link).

There is no registration fee thanks to strong support from our sponsors: CoBank, Michigan State University Product Center, Mid America Cooperative Council, and various support organizations.

Please register by **March 10** to allow us to adequately plan for the Conference.

Visit [The Michigan Small Cooperative Conference 2014 registration page](#) for more information.

MARCH LABOR MEETING PLANNED

"Labor has become an increasingly pressing problem for growers across Michigan. Too often, we have left crops in the field or orchard due to a shortage of workers. This meeting will help address some of the current challenges growers are facing as well as solutions on how we can better retain quality workers on the farm. We will bring in experts from the following organizations to help answer important questions or concerns about labor issues: Michigan Farm Bureau, the Telamon Corporation, ICE, Michigan Dept. of Agriculture, Office of Migrant Affairs and Michigan State University Extension. The NW meeting will discuss the H2A program and how it can be used on the farm, and we will host a panel of growers that have had recent experiences with on-farm audits and their associated paperwork: 'how do we get it all done and still farm?'. The program will end with a talk on how good communication can improve worker retention on the farm.

The meeting will be held at the Northwest Michigan Horticultural Research Center on **March 18, 2014** from 9:00 a.m. - 4:15 p.m. The cost of this meeting is \$25 payable at the door and includes lunch and breaks. If you are interested in attending this important meeting, please contact Jackie Baase at 231-946-1510 **before March 14th**. We hope to see many of you there!"

MSUE Labor Meeting

Northwest Michigan Horticultural Research Center

March 18, 2014

- | | |
|-------------|--|
| 9:00-9:45 | H2A—Is it Working? Can This Program Work for Multiple Farms? <i>Craig Anderson, Michigan Farm Bureau</i> |
| 9:45-10:00 | Grower Perspective on How H2A Has Worked on the Farm <i>Mark Miezio, Cherry Bay Orchards</i> |
| 10:00-10:15 | Q and A About the H2A Program: With M. Miezio and C. Anderson |

- 10:15-10:45 **Michigan’s Farmworker Families: Healthy Families, Cultivating Hope**
Audra Fuentes, Office of Migrant Affairs, MI Dept. of Human Services
- 10:45-11:00 BREAK
- 11:00-11:45 **How Can Growers Better Support the Migrant Community?**
Carla Wojtal, Telamon Corporation
Kevin Benson, Workforce Development Agency, State of Michigan
- 11:45-12:20 **What is Happening on the National Front in Immigration Reform?**
Ryan Findlay, Michigan Farm Bureau
- 12:20-1:00 **LUNCH**
- 1:00-1:45 **I-9 Update and IMAGE Presentation**
Blair Babcock & Cory Howe, Agents, ICE, Homeland Security Investigations
- 1:45-2:30 **I Need Migrant Housing, Where Do I Start? What are the BMP’s For the Housing I Have?**
Ginger Bardenhagen, Michigan Dept. of Agriculture
- 2:30-3:45 **Grower Panel on Paperwork: How to Get it all Done When Your Farm has to Follow All the ‘audit-potential’ Regulations?**
TBD
- 3:45-4:15 **Communicating to Retain Good Workers on the Farm**
Barb Dartt, GROW, The Family Business Advisors

2014 AGRICULTURE LABOR AND FARM SAFETY MEETINGS

Three upcoming Agriculture Labor and Farm Safety Meetings will be held in Bad Axe, Shepherd and Cadillac.

Posted on **February 28, 2014, MSUE News**, by [Stan Moore](#), Michigan State University Extension

Rules, regulations and record keeping requirements are continually being updated in the agriculture labor area. [Michigan State University Extension](#) has partnered with several State, Federal, and local partners to bring a series of [agriculture labor](#) meetings to Michigan. A total of

eight meetings are being held across the State. Three of these meetings are being held in Bad Axe (March 12), Shepherd (March 13), and Cadillac (March 19) and are can be [registered for online](#). A brochure for each program is also available at the registration site. The registration fee for each of these three programs is \$35 per person and includes lunch.

Each of the programs will have refreshments available at 8:30 a.m. with the program starting promptly at 9:00 a.m. The morning session will include guest speakers from ICE (Homeland Security Investigations), State of Michigan, MSU Extension, MSU and Farm Bureau. Topics will include I-9 Updates and Image, Workforce Development Agency and Migrant Resource Council Services, Recruiting and Retaining Labor, Ag Labor Law Updates, Employee Handbooks, and How the Affordable Care Act Effects Agriculture. After lunch, there will be a Farm Safety session by Farm Bureau and MSU. There will be three RUP credits available to those participating in the afternoon session. The program will adjourn at 4 p.m.

Managing your workforce and complying with labor laws requires you to keep up to date on many fronts. Keeping yourself and your workforce safe will impact productivity, profitability, and most importantly save lives. Plan to attend one of these meetings to improve this area of your farm business management.

Other MSUE labor programs offered in Michigan this year include meetings in [Adrian](#) (March 14) and Traverse City (March 18). To register for the Adrian program go to <http://events.anr.msu.edu/SEAgLabor>. To register for the TC program call the NW Horticulture Research Station at 231-946-1510. Program agendas are unique to these two locations based on local grower input.

For information on any of these programs contact me at moorest@msu.edu .

This article was published by [Michigan State University Extension](#). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

HOW COLD IS TOO COLD FOR MICHIGAN FRUIT CROPS?

Extremely cold temperatures in January have the potential to damage Michigan fruit crops during winter dormancy. Peaches, blueberries and wine grapes are the most cold tender.

Posted on **January 21, 2014**, MSUE News, by [Mark Longstroth](#), Michigan State University Extension

It is not unusual to have plants damaged by winter cold. Winter injury normally occurs from three possible causes.

1. It got too cold early, before the plants were sufficiently hardened to handle the cold.

2. It got cold late in the winter after growth began and plants had lost the ability to acclimate to increasing cold.
3. Severe winter cold – these events are usually the result of a mid-winter warming event followed by severe cold.

Most of the perennial plants grown in Michigan can easily handle a Michigan winter. When the days began to shorten in August and September, the plants began preparing for winter. As we got the first frosts of the winter, these plants got their second cue that winter was coming (see the [Michigan State University Extension](#) article, "[Fall color show and winter dormancy in woody plants](#)"). In the winter many, plants enter a form of dormancy called endo-dormancy, meaning that something inside the plant inhibits its growth. The plant monitors the time the temperatures are above freezing to monitor the passage of the winter.

Most Michigan plants need about 1,000 hours of chilling. The best temperatures are those between 35 and 45 degrees Fahrenheit. Once chilling is complete, the plant can grow when warm temperatures return. This chilling requirement prevents the plant from growing during winter warm spells (see the MSU Extension article "[Winter dormancy and chilling in woody plants](#)").

During dormancy we often talk about cold hardiness. Cold hardiness is the plant's ability to withstand subfreezing temperatures. The plant does this by controlling when and where the water freezes in the plant. I think of a plant cell as a soggy cardboard box with a balloon inside. The wet cardboard box is the cell wall made of cellulose that gives the cell and the plant its shape. The balloon inside the box is the living cell. The constituents in the cell changed during the fall and early winter to lower the freezing point. Increased sugars and salts in the cell solution lower the freezing point. Proteins and membranes are changed to withstand colder temperatures.

As the temperature falls below freezing, water begins to freeze between the cells. As the temperature continues to fall, more and more water will migrate outside the cell and freeze. This ice outside the cell causes no harm and as temperatures continue to fall, more water moves outside the cell and freezes. This concentrates the solution inside the cell and lowers the freezing point even more. If the cell freezes, it will be killed. If enough cells freeze, we will see damage in the plant as growth begins in the spring or collapse of the plant in the summer when it is stressed.

When the plants are dormant in the winter, they gain and lose cold hardiness depending on the weather. If the temperatures are below freezing, plants can actually acclimate to the cold and gain cold hardiness (see the MSU Extension article "[Winter cold hardiness in Michigan fruit crops](#)"). My rule of thumb is that most of our fruit crops can handle 0 F during the winter as their minimal cold hardiness. With colder temperatures I expect our plants to handle more cold. Our cold tender plants such as peaches, blueberries and wine grapes can withstand temperatures

down to -10 F before we see injury to the fruit buds and the stems can handle temperature down to -25 F in peaches.

There is a lot of variation between grape varieties. Many of the European wine grapes suffer injury as the temperatures fall to zero and below -10 F, but the hardiest grapes can withstand -30 F. This -10 F threshold is only for cold tender – a relative term – plants such as peaches, wine grapes and blueberries.

More cold hardy are cherries and European plums that can withstand -20 to -25 F. Apples and pears should be able to go to -25 F with little damage and I would expect damage when temperature fell below -30 to -35 F.

If the high or low temperatures drop more than 50 F, I worry, 70 F I really worry. This means we had a lot of free water in the plant, or as the growers would say the sap is up. All this water can freeze quickly and this prevents the orderly controlled freezing, which allows the plant to withstand real cold temperatures. These temperatures are for healthy plants that are acclimated to the cold.

If the weather has been cold – below freezing – for several days, I don't worry unless the temperatures drop to -10 F, then I start to worry about peaches, blueberries and wine grapes. If the temperature has been above freezing recently, the plants have lost cold hardiness. The plants will have lost all their acclimation to cold weather and will be back to the 0 F damage threshold.

There is actually a fourth cause of winter injury and that is when the plants were weakened going into the winter. It takes a lot of metabolic energy to change the constituents of the cell to get ready for winter. Plants that have been stressed by insect or disease pests, heavy crops or poor growing conditions such as drought do not have the ability to harden off to withstand cold levels as low as healthy plants. Work done by MSU's Stan Howell here in Michigan over 40 years ago indicated that weak plants were slower to develop cold hardiness, did not acclimate to as low a level as healthy plants and developed later in the spring. This means that stressed plants will be much more susceptible to winter cold injury than healthy plants in the fall and winter.

2013 was a stressful year for many Michigan fruit crops. After the disastrous spring of 2012, most fruit crops had little if any crop in 2012 (see the MSU Extension article "[With a backward spring, Mother Nature pitches a change-up after a fastball](#)"). These rested trees, vines and bushes entered 2013 with a lot of vigor and many fruit buds. Many Michigan fruits had bumper crops in 2013. Plants that were stressed by heavy crops in 2013 along with drought or other problems will be much more likely to suffer from the cold in January 2014.

There is no quick way to assess winter injury during the depths of winter. You need to collect shoots and carefully dissect the buds and look for damage. Later in the year after the plant's chilling requirements have been met, you can collect shoots and force them looking for injured buds. See the MSU Extension article "[Forcing cuttings to determine the end of dormancy in fruits and other plants.](#)"

For more information, see the related MSU Extension articles

- [Wind chill doesn't really matter to a plant](#)
- [Extent of cold injury to landscape plants from the "Polar Vortex"](#)
- [Winter cold hardiness in Michigan fruit crops](#)
- [Forcing cuttings to determine the end of dormancy in fruits and other plants](#)
- [Winter dormancy and chilling in woody plants](#)
- [Fall color show and winter dormancy in woody plants](#)
- [Freeze damage depends on tree fruit stage of development](#)
- [With a backward spring, Mother Nature pitches a change-up after a fastball](#)

This article was published by [Michigan State University Extension](#). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

RESPONDING TO AN S.O.S. FROM THE COMMERCIAL BEEKEEPING INDUSTRY

Date: April 22, 2014

Time: 1 p.m.

Location: Webinar

Contact: Rosa Soliz, soliz@msu.edu

Webinar URL: <http://connect.msu.edu/newtech>

Mala Spivak (University of Minnesota) - Given the chronic health problems facing honey bees and the increasing demand for pollination services from almond, blueberry, cranberry, apple, vine crops and many other growers, commercial beekeepers and breeders have requested assistance in maintaining healthy colonies. To this end, we began a novel "Bee Tech Transfer Team" program through the Bee Informed Partnership, a 5-year grant funded by USDA-NIFA. These teams consist of independent beekeepers that provide on-the-ground services to commercial beekeepers to assess and record colony health information; survey beekeepers about management; test for bee diseases and parasites and assist in breeding bees that are more resistant to diseases and parasites.

There is demand for this program nationwide and we are exploring ways to ensure that the Tech Team services are economically sustainable after the funding ends in 2016. As bees are directly or indirectly responsible for 35% of our diet through their pollination services, it is critical to increase effort to keep bees healthy and to provide hands-on assistance to the beleaguered beekeeping industry throughout the U.S. Marla Spivak is a MacArthur Fellow and McKnight Distinguished Professor in Entomology at the University of Minnesota. She has bred a line of honey bees, the Minnesota Hygienic line, to defend themselves against diseases and parasitic mites. Current studies include the benefits of propolis to honey bees, and the effects of agricultural landscapes and pesticides on honey bee and native bee health.

UTILITY REBATES COMPLEMENT NEW FARM BILL ENERGY CONSERVATION FUNDING FOR FARMERS

The new Farm Bill increases funding for energy conservation practice implementation. Complementary funding can be obtained through utility rebates and technical assistance programs.

Posted on **February 28, 2014, MSUE News**, by [Charles Gould](#), and Al Go, Michigan State University Extension

On-farm energy conservation emerged a clear winner in the new Farm Bill. Congress appropriated more grant and low interest loan dollars than the previous Farm Bill to assist farmers and ranchers in [implementing energy conservation measures](#). Another source of funding to assist farmers in implementing energy conservation practices are utility rebate and technical assistance programs. According to [Michigan State University Extension](#), all utility rebate and technical assistance programs are similar to each other. The following individuals can provide further information about rebates and technical assistance programs:

Consumers Energy

Craig Gravelin, Agricultural Program Advisor - Consumers Energy Business Solutions/Franklin Energy
600 Three Mile Road NW, Suite 200
Grand Rapids, MI 49544
Office: 877-607-0737 x 2008 | Cell: 616-340-7866
Email: cgravelin@franklinenergy.com

Michigan Electric Cooperative Association (Alger Delta Cooperative Electric Association, Cherryland Electric Cooperative, Cloverland Electric Cooperative, Great Lakes Energy Cooperative, HomeWorks Tri-County Electric Cooperative; Midwest Energy Cooperative; Ontonagon County REA; Presque Isle Electric & Gas Co-op; Thumb Electric Cooperative; Wolverine Power Supply Cooperative)

Bob Tinker, Energy Advisor - Energy Optimization
Wisconsin Energy Conservation Corporation
403 Spring St., Saline, MI 48176
Office: 734-429-2925 | Cell: 734-353-5018
Email: bob@kelly-tinker.com

Efficiency United (Alpena Power Company; Baraga Electric Utility; Bayfield Electric Cooperative; The City of Crystal Falls; Daggett Electric; The City of Dowagiac; The City of Gladstone Department of Power & Light; City of Harbor Springs Electric Department; Hillsdale Board of Public Utilities; L'Anse Electric Utility; Indiana Michigan Power; Michigan Gas Utilities; The City of Negaunee Electric Department; The City of Norway Department of Power & Light; SEMCO ENERGY Gas Company; City of South Haven; Upper Peninsula Power Company; We Energies; Wisconsin Public Services; Xcel Energy)

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Access to utility rebates and Federal grants and loans starts with a completed Tier II energy audit. In Michigan, Tier II energy audits must be done by a certified auditor. A list of certified auditors can be found on the [Michigan Farm Energy Audit Program](#) web site.

A series of [statewide workshops](#) on March 11-13 will explain what agricultural energy conservation means and how to access rebates, grants and loans to pay for recommended energy conservation practices. To learn more about the workshops, including registration information, go to the [Energy Conservation: Impact on the Bottom Line registration page](#). MSU studies have shown that, on average, agricultural operations can realize a 40 percent reduction in energy expenses over a 3.8 year payback period when recommended energy conservation practices are implemented. Implementing these practices will result in a cleaner, less expensive energy future. Improved efficiency should be the option of first choice for Michigan farms.

For more information about the energy conservation workshops contact Charles Gould at 616-994-4547 or gouldm@msu.edu . For more information on energy conservation programs contact Al Go at 517-353-0643 or goaluel@egr.msu.edu .

This article was published by [Michigan State University Extension](#). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

4-H TRACTOR SAFETY PROGRAM BEGINS IN APRIL

MSU Extension is once again hosting tractor safety training for fourteen and fifteen-year-old youth. Youth must be 14 by June 1st, 2014. Sixteen to nineteen-year-old youth are also encouraged to participate, but priority will be given to 14-15 year-olds. Classes will be held on Thursdays beginning **April 10** and ending **May 1** and will be held at the NW Michigan Horticultural Research Center from 6:00-9:00 p.m., except for the first class to be held at the Leelanau County Government Center's Community Room. To become certified, participants must attend all five sessions, pass a written, and a tractor driving test, which will be held Saturday, May 3, 8:30 a.m. to 2:30 p.m.

Cost is \$75 per person and includes: classes, handouts and manual. Some scholarships are available if finances are an issue.

To register, call the Leelanau County MSU Extension office at 231-256-9888 for a registration and medical form or go to www.msue.edu/leelanau. Registration deadline is **April 4**. Checks should be made payable to *4-H Youth Association*.

WEBSITES OF INTEREST

Insect and disease predictive information is available at:

<http://enviroweather.msu.edu/homeMap.php>

This issue and past issues of the weekly FruitNet report are posted on our website

<http://agbioresearch.msu.edu/nwmihort/faxnet.htm>

60 Hour Forecast

<http://www.agweather.geo.msu.edu/agwx/forecasts/fcst.asp?fileid=fous46ktvc>

Information on cherries is available at the new cherry website:

<http://www.cherries.msu.edu/>

Fruit CAT Alert Reports has moved to MSU News

<http://news.msue.msu.edu>



4-H TRACTOR SAFETY PROGRAM

For 14 and 15 Year Old Youth

Teens can improve their chances of employment this summer by completing a tractor safety training course!

— — — — —
Successful completion of a tractor operation safety course is required for all youth under the age of 16 who perform farm jobs classified as hazardous, under the U.S. Department of Labor's Hazardous Occupation Order.

— — — — —
To become certified, participants must attend all five course sessions, pass a written test and a tractor driving test.

Who: MSU Extension will host this training for 14 & 15 Year Old Youth. Youth must be age 14 by June 1st, 2014. **Space is limited!** (16–19 Year olds are encouraged to participate, but priority is given to 14-15 year olds).

Where: *April 10th* at the Government Center's Community Room in Suttons Bay, *remainder of classes* at the NW Michigan Research Station, 6686 S. Center hwy., T.C. (County Road 633 between Suttons Bay & Traverse City)

When: Thursday, April 10, 17, 24, & May 1, from 6-9 p.m. A written test will be given on Saturday, May 3rd from 8:30 a.m. to 2:30 p.m.

Cost: \$75 per person– includes: classes, handouts and manual. Some scholarships are available if finances are an issue.



MSU EXT. 7/07

The registration deadline is April 4th. To register, call the MSU Extension Office at 231-256-9888 for a registration & medical form or go online at www.msue.msu.edu/leelanau.

Make checks payable to 4-H Youth Association.

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