Northern Michigan FruitNet 2017 Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report – April 28, 2017

CALENDAR OF EVENTS

5/5	Wine Grape Spring Kick-Off NWMHRC, 9 am – 5 pm Pre-registration required; information will be posted at Parallel 45 Vines & Wines web site soon. http://www.p45michigan.com/
5/19	Save the Date: Apple Thinning Meeting NWMHRC, 10 – 1 PM, RSVP by May 17 More information to come!
5/9 – 6/27	Leelanau IPM Updates Jim and Jan Bardenhagen's Farm, 12PM – 2PM
5/9 – 6/27	Grand Traverse IPM Updates Wunsch Farms Packing Shed, 3PM – 5PM
5/10 – 6/28	Antrim IPM Updates Jack White Farms, 10AM – 12PM
5/10 – 6/28	Benzie IPM Updates Blaine Christian Church, 2PM – 4PM

What's New?

- MDARD Awards Grants for Rural Communities
- Mark your calendars to attend the NW Michigan Winegrape
 Spring Kick-off meeting

• Miticides options for controlling mites in fruit

MDARD Awards Grants for Rural Communities

For Immediate Release: April 27, 2017

LANSING, Mich. – Today, the Michigan Department of Agriculture & Rural Development awarded Rural Development Fund Grants aimed to promote the sustainability of land-based industries and support infrastructure that benefits rural communities.

"MDARD is proud to help support these important projects," said Director Jamie Clover Adams. "This is a great opportunity for us to give Michigan businesses a boost, improve local infrastructure around the state, and ultimately open the door for the creation of more good-paying jobs."

The department received 73 proposals with requests totaling more than \$12.9 million. Of those, MDARD awarded the following 17 projects:

- **City of Munising** \$150,000. Infrastructure Resurface 2,700 feet of Highway H-58 serving as primary access to the Neenah Paper Mill.
- Copper Peak Inc., of Ironwood \$125,000. Rural Capacity Engineer the facility's landing hill to install a permanent summer jumping surface to increase tourism opportunities year-round.
- **Grand Traverse Distillery, LLC, of Traverse City** \$123,800. Business Development Purchase equipment to double production of their craft whiskey.
- Grand Traverse Pasta Co., LLC, of Traverse City \$75,250. Business Development –
 Improve processing equipment to increase efficiency and capacity for value-added
 wheat products.
- **Houghton County** \$80,000. Infrastructure Implement needed sewer repairs in the Houghton County Airpark, impacting more than 24 existing businesses.
- Human Development Commission, of Caro \$61,600. Infrastructure –
 Improvements to their commodity food warehouse, strengthening their Commodity Distribution Program.
- Iron County Economic Chamber Alliance, of Iron River \$22,140. Rural Capacity Implement a four-part project: economic summit, website, tourism economic plan, and professional development, aimed to boost tourism and crucial resources for existing businesses.
- Mason County Growth Alliance, of Ludington \$35,000. Rural Capacity Plan and develop conceptual designs and an implementation strategy for non-motorized trails in Lake, Mason, Newaygo and Oceana counties.
- **Michigamme Township** \$26,500. Infrastructure Certifying of an operator for the Township's wastewater treatment facility.

- Newaygo County Regional Educational Service Agency, of Fremont \$176,753. Talent Development Develop avenues of entrance into skilled trades,
 and create partnerships that allow for coordination, education/training, and
 communication with key stakeholders in advanced manufacturing/food processing,
 robotics, and drone technology in the context of agri-science.
- Northern Economic Initiatives Corporation, of Marquette \$50,000. Rural Capacity Access and create strategies for 20 Central UP small businesses, particularly manufacturing, to improve their processes and profitability.
- Northern Michigan Geological Repository Association, of Marquette -\$226,700. Rural Capacity – Purchase of a building to house a diamond drill core library and geological data for research.
- Northwest Michigan Horticultural Research Foundation, of Traverse City \$170,000. Rural Capacity Secure 37 acres adjacent to the Northwest Michigan Horticultural Research Center to improve tree fruit research, particularly for spotted wing drosophila.
- Slagles Family Farm, of Felch \$84,110. Business Development Creation of a commercial kitchen, including needed equipment, cooler and cold storage.
- Superior Watershed Partnership, of Marquette \$75,200. Rural Capacity Improved public access, hiking/biking trail systems, restoration of degraded natural areas and other related community-based tourism projects benefitting rural communities in Marquette, Alger and Delta counties.
- **Village of Ellsworth** \$32,000. Infrastructure Conduct a preliminary study to determine the cost and scope to construct a sanitary sewer system.
- Western Upper Peninsula Planning & Development Region Commission, of Houghton - \$27,230. Rural Capacity - Conduct a feasibility study for a community photovoltaic solar generation system for the Village of L'Anse's municipal electric utility.

The grant funds were available for projects that address expansion and sustainability of land-based industries; worker training; and energy, transportation, communications, water and wastewater infrastructure to benefit rural communities and Micropolitan statistical areas.

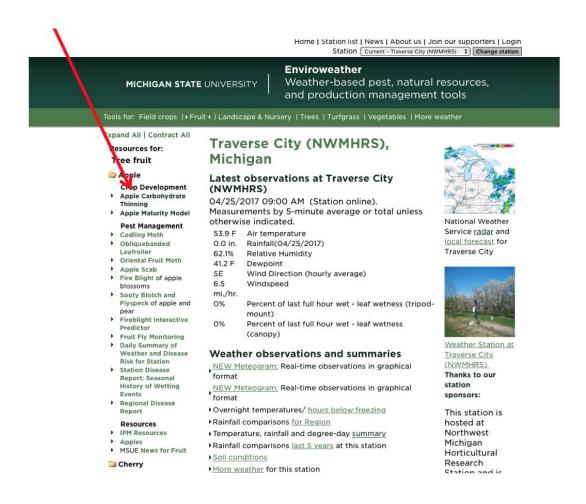
Land-based industries included food and agriculture; forestry; mining, oil and gas production; and tourism. Eligible counties include those with a population no greater than 60,000 residents or micropolitian statistical areas. Preference was given to projects in the following counties: Marquette; Alger; Delta; Menominee; Dickinson; Iron; and Baraga.

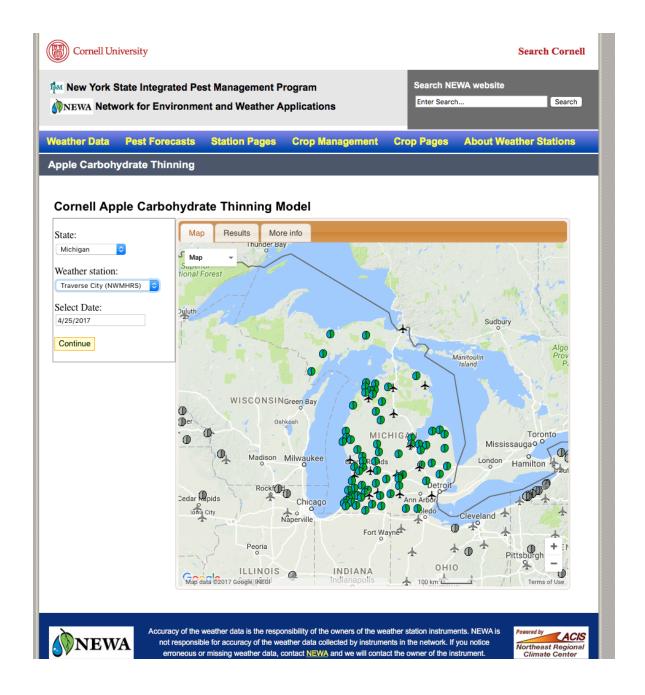
The proposals were evaluated through a competitive process. Those interested in additional information on this grant program or a complete list of eligible counties should visit www.michigan.gov/mdardgrants.

Save the Date: Apple Thinning Meeting

The NWMHRC and MSU Extension will be holding an apple thinning meeting at the NW Station on May 19, 2017 from 10AM – 1PM. We will be talking about when to start thinning, products and rates to use; timing windows of thinners; how to determine crop load; and precision crop load management strategies. We will also focus on how to use the carbohydrate model, which is now an added feature on the MSU Enviroweather site (please see pictures below). Michigan State University Extension educators Phil Schwallier and Amy Irish-Brown will be our featured speakers.

Lunch will be provided and sponsored by Crop Production Services. Please RSVP by 5PM on May 17, 2017 to guarantee a lunch: Jenn Zelinski 231-946-1510 or goodr100@anr.msu.edu.





Mark your calendars to attend the NW Michigan Winegrape Spring Kick-off meeting

Mark your calendars to attend the NW Michigan Winegrape Spring Kick-off meeting on Friday, May 5 at the Northwest Michigan Horticultural Research Center near Traverse City. This year's Kick-off is a full-day program with a lunch provided on site.

These are the scheduled topics and speakers:

Morning 9:00 – 9:15	Registration
9:15 – 10:15	Vineyard visit- "What's Next for the Research Vineyard"
10:15 – 10:30	Break
10:30 – 10:45	Kerm Campbell from Campbell-Milarch Vines- "Going Commercial"
10:45 – 11:00	Jodi Lundgren from Tecknisk Environmental Engineering & Consulting-"Waste Not the Water Frivolously"
11:00 – noon	Wendy McFadden-Smith, PhD., Brock University, Ont., Canada- "Dealing with Sour Rot in the Vineyard"
Noon – 1:00	Lunch by Ethnic Garden Catering
1:00 2:00	Rufus Isaacs & Keith Mason MSU entomology- "Insect Trapping in the Vineyard"
2:00 – 5:00	Wine tasting Riesling styles from around the world

This meeting is jointly sponsored by Michigan State University Extension and Parallel 45 Vines & Wines, Inc. The registration fee is \$25 for Parallel 45 members or \$35 for non-members; payment will be accepted on-site. *Pre-registration is required by May 3* so appropriate accommodations for lunch and wine tasting can be made. To pre-register, please send an email with the number of attendees to elsner@msu.edu or leave a message at 231-922-4822.

Updated Bud Chart

Montmorency	March 30	April 3	April 6	April 10	April 12	April 17	April 20	April 24
Mortality	Average Phenology Stage Per Sampling Date							
	First swell	First swell	Side green	Side green	Side green	Green tip	Green tip	Green tip
10%	n.d.	23° F	24° F	24° F	24° F	26° F	26° F	26° F
50%	8° F	21° F	21° F	20° F	23° F	24° F	24° F	24° F
90%	-4° F	11° F	13° F	16° F	19° F	21° F	21° F	21° F
March 30		April 6		Ar	oril 12		April 20	
A CO	73				(4	
April 3		April 10	,	Ap	oril 17		April 24	MICHIGAN STA

Quick reminders for planting apple trees

Be sure to consider graft union height to avoid problems in the future.

Posted by Amy Irish-Brown, and Phil Schwallier, Michigan State University Extension, MSUE News

There is a rush in west Michigan to get trees in the ground before we get doused by rain again later this week. Here are a few reminders about apple tree planting.

- Keep the graft union at least 6 inches above the soil level.
- Six inches above the soil allows for the 2 inches or so of "sinking" that is commonly seen as soil settles after planting.
- Graft unions end up near or below the soil level, resulting in too much vigor that you will fight for the life of an orchard.
- A shallow planted tree can be easily corrected later in tree life compared to the task of trying to correct a deep planted tree.
- Be sure you check the work of your planting crew often to be sure planting is done correctly.
- Use a 20-inch by 6-inch board on its edge adjacent to the planted tree (perpendicular to the row) to check the depth.
- While the soil is still loose, pull trees up that are too deep and push those down that are too shallow.

More information can be found in a detailed <u>Michigan State University Extension</u> article by Ron Perry, "<u>Planting fruit trees</u>." This article contains information on planting stone fruits as well as apples and pears.

Miticides options for controlling mites in fruit

Many options are available for mite control in fruit crops.

Posted by <u>John Wise</u>, Rufus Isaacs and Larry Gut, Michigan State University Extension, Department of Entomology, MSUE News

Mites can be significant pests of fruit crops. There are many miticides available for control of European red mites (ERM), twospotted spider mites (TSSM), cyclamen mites (CM) and rust mites (RM), as well as apple and pear rust mites, pear blister mites, plum nursery mites and blueberry bud mites. However, according to Michigan State University Extension, their performance characteristics are not all alike.

The following table is designed to summarize several key variables that can help you determine which miticides are optimal for your <u>integrated pest management</u> program.

Miticides to use on fruit crops to target certain mite pests.					
Compound	Fruit crop	Mites	Life stage target	Seasonal timing	Residual control
Superior, Stylet Oils	All fruit crops	ERM, RM	Egg/larvae	Early (pre-bloom)	2-6 weeks
Lime-Sulfur	Pome, stone, blueberry	RM ²	Motiles <u>*</u>	Early (delayed- dormant)	2-6 weeks
Dimilin	Pear	RM	Motiles*	Early (pre-bloom)	2-6 weeks
	Pome, stone	ERM	Egg/larvae	Early <u>***</u>	8-12 weeks
Savey	Pone, stone, caneberry, strawberry	TSSM	Egg/larvae	Mid (or threshold) <u>**</u>	6-8 weeks)
Onager	Stone fruits	TSSM	Egg/larvae	Mid (or threshold)**	6-8 weeks
Apollo	Pome, cherry, peach	ERM	Egg/larvae	Early***	8-12 weeks
		TSSM	Egg/larvae	Mid (or threshold)	6-8 weeks
Agri-Mek, ABBA	Pome, stone, grape	ERM, RM	Motiles*	Early****	8-12 weeks
	Pome, stone, strawberry, grape	TSSM	Motiles*	Mid (or threshold)	6-8 weeks
ABBA	Pome, plum, grape, strawberry	ERM, RM	Motiles*	Early****	8-12 weeks
		TSSM	Motiles*	Mid (or threshold)	6-8 weeks
Agri-Flex	Pome, grape	ERM, RM	Motiles*	Early****	8-12 weeks
Gladiator	Pome, stone, grape	ERM, RM	Motiles*	Early****	8-12 weeks
		TSSM	Motiles*	Mid (or threshold)	6-8 weeks
Zeal	Pome, stone fruits	ERM	Egg/larvae	Early (or threshold)**	8-10 weeks
	Pome, stone, strawberry, grape	TSSM	Egg/larvae	Mid (or threshold)**	6-8 weeks
Envidor	Pome, plum, grape	ERM	Egg, motiles*	Early (or	8-10 weeks

	liticides to use on fruit c	<u> </u>	Life stage	•	Residual
Compound	Fruit crop	Mites	target	Seasonal timing	control
				threshold)**	
	Stone fruits	TSSM	Egg, motiles*	Mid (or threshold)	6-8 weeks
Nexter	Dome stonel grane	ERM, RM	Motiles*	Mid (or threshold)**	6-8 weeks
	Pome, stone ¹ , grape	TSSM	Motiles*	Mid (or threshold)**	6-8 weeks
Portal	Pome	ERM, RM	Motiles*	Mid (or threshold)**	6-8 weeks
		TSSM	Motiles*	Mid (or threshold)	6-8 weeks
Nealta	Pome, grape	ERM	Motiles*	Mid (or threshold)**	6-8 weeks
		TSSM	Motiles*	Mid (or threshold)	6-8 weeks
Magister	Cherries	TSSM	Eggs, motiles*	Mid (or threshold)	3-5 weeks
Kanemite	Pome	ERM	Motiles*	Mid (or threshold)**	6-8 weeks
	Pome, strawberry	TSSM	Motiles*	Mid (or threshold)	6-8 weeks
Acramite, Banter	Pome, peach, plum	ERM	Motiles*	Mid (or threshold)**	6-8 weeks
	Pome, peach, plum, grape, strawberry	TSSM	Motiles*	Mid (or threshold)	6-8 weeks
Danitol	Apple, grape	ERM	Motiles*	Mid (or threshold)**	4-6 weeks
	Apple, grape, strawberry	TSSM	Motiles*	Mid (or threshold)	4-6 weeks
Brigade	Pear	ERM	Motiles*	Mid (or threshold)**	4-6 weeks
	Pear, grape, strawberry, caneberry	TSSM	Motiles*	Mid (or threshold)	4-6 weeks
Hero	Blueberry, caneberry, strawberry	TSSM	Motiles*	Mid (or threshold)**	4-6 weeks
Oberon	Strawberry	TSSM	Eggs, motiles*	Mid (or threshold)	4-6 weeks
Vendex	Pome, stone	ERM	Motiles*	Mid (or threshold)**	4-6 weeks
	Pome, stone, grape, caneberry, strawberry	TSSM	Motiles*	Mid (or threshold)	4-6 weeks
Endosulfan	Strawberry	СМ	Motiles*	Mid (or threshold)**	2-6 weeks
Sulforix	Pear, blueberry	RM ²	Motiles*	Late (post-harvest)	2-6 weeks

^{*} Motile forms include mite larvae, nymph and adult stages.

^{**} Optimally used petal fall through August when mites reach threshold.

^{***} Optimally used pre-bloom through first cover.

^{****} Optimally used petal fall through second cover.

¹ 300 day pre-harvest interval (PHI) for cherry.

² Including pear blister mite.

2017 IPM Update Schedule

Emily Pochubay and Nikki Rothwell Michigan State University Extension

Tree Fruit IPM Updates beginning the second week of May through June will highlight management of the seasons current potential pest challenges dictated by weather and pest biology. Attendees are encouraged to bring examples of pests and damage found on the farm to these workshops for identification and discussion. Additionally, we are planning to revisit some of the new Worker Protection Standards as well as host invited speakers from local organizations and MSU at this year's meetings. Workshops will be held weekly in Leelanau, Grand Traverse, Antrim, and Benzie counties. Tree fruit growers and consultants are welcome to attend meetings at any of the locations and times that are most convenient (see below). These workshops are free and do not require registration. Restricted use pesticide applicator recertification credits (2 credits per meeting) and Certified Crop Advisor credits will be available. We are looking forward to seeing you in a few weeks! For more information, please contact Emily Pochubay (pochubay@msu.edu), 231-946-1510.

Leelanau County

Location: Jim and Jan Bardenhagen, 7881 Pertner Road, Suttons Bay

Dates: May 9, 16, 23; June 6 (tentative), 13, 20, 27

Time: 12PM – 2PM

Grand Traverse County

Location: Wunsch Farms, Phelps Road Packing Shed, Old Mission

Dates: May 9, 16, 23; June 6 (tentative), 13, 20, 27

Time: 3PM - 5PM

Antrim County

Location: Jack White Farms, 10877 US-31, Williamsburg (south of Elk Rapids on the

southeast side of US-31)

Dates: May 10, 17, 24; June 7 (tentative), 14, 21, 28

Time: 10AM – 12PM

Benzie County

Location: Blaine Christian Church, 7018 Putney Rd, Arcadia, MI 49613

Dates: May 10, 17, 24; June 7 (tentative), 14, 21, 28

Time: 2PM - 4PM

Respirator Guidelines to Meet New Worker Protection Standards

Growers will need a medical evaluation and respirator fit test to handle and apply some pesticides this season.

Emily Pochubay and Amy Irish-Brown, MSU Extension

Requirements for a medical evaluation, fit testing, and specific training for use of respirators and the associated record keeping became effective on January 2, 2017. At this time, most growers are aware of this revision to the Worker Protection Standard (WPS) regulation that requires pesticide handlers and applicators to wear a respirator during mixing/handling, spray applications, and potential other uses as outlined on pesticide labels. Additionally, those who use pesticides with respirator requirements must receive documentation from a physician or licensed health care professional (PLHCP) that has 'respirator evaluation' as part of his/her license to ensure that the pesticide handler is medically able to use a respirator. Not all PLHCPs are qualified to provide the respirator evaluation, but primary care physicians should be able to refer patients to appropriate medical personnel. Alternatively, growers can contact local occupation and environmental health professionals who are more likely to have the credentials needed to provide the appropriate respirator medical evaluation and documentation. Please review the following guidelines to help address some of the recent questions we have received from growers.

Who needs to receive a medical evaluation and how often?

Employees that could be exposed to hazardous airborne contaminants may be required to wear a respirator; respirators and respirator use requirements will be outlined on individual pesticide labels. Some pesticides may require respirators for employees that mix spray material and/or require applicators to wear a respirator during applications of certain pesticides. Employers are responsible for ensuring that employees receive the appropriate equipment, evaluation, respirator fit test, training, and record keeping that conforms to OSHA standards.

According to the EPA, the medical evaluation is required one time per employee unless another evaluation is required due to one of the following reasons:

- The medical determination is only good for a specified length of time.
- The employee reports medical signs or symptoms related to respirator use.
- The PLHCP, supervisor, or program administrator recommends a re-evaluation.
- Fit-test or other program information indicates a need for re-evaluation.
- When changes in the workplace increase respirator stress on an employee.
- The initial medical examination demonstrates the need for a follow-up medical examination.

Who provides the evaluation? What kind of evaluation and documentation are needed?

A physician or licensed health care professional (PLHCP) with respirator evaluation as part of their license will provide the appropriate evaluation using a medical questionnaire or exam that conforms to the OSHA standard. Contact the PLHCP to determine whether a questionnaire or exam will be used and to receive appropriate paperwork. Prior to completing the questionnaire or exam, employers must provide employees with:

- The type and weight of the respirator that the handler will use.
- How long and how frequently the handler will use the respirator.
- How much physical work the handler will do while using the respirator.
- Other PPE the handler will use.
- The temperature and humidity extremes of the working environment.

Contact a primary care physician to receive a referral for a licensed professional, if necessary. Another low-cost (~\$25) and fast alternative for a medical evaluation is OshaMedCert (http://www.oshamedcert.com/Default.aspx), an online service that involves filling out a form and sending it for approval or denial by a PLHCP; individual's health information remains confidential throughout the process. A respirator fit test (see below) will be needed after receiving the medical determination from OshaMedCert.

A written medical determination of the respirator evaluation for each employee is required before the employee can use the respirator. The employer must keep the medical determination documentation for two years. According to the EPA, the required written information to be provided by the PLCHP to the employer must <u>only</u> include:

- Whether or not the employee is medically able to use a respirator.
- Any limitations on respirator use in relation to the medical conditions (if any) of the employee or workplace conditions.
- Need for any follow-up medical evaluations.
- A statement that PLCHP provided the employee with written recommendation; in some cases, this recommendations may simply state that the applicator/person that will use the respirator is capable of wearing a respirator.

Again, the information outlined above is the *only* information that should be provided in the PLHCP's recommendation to the employer to protect the employee's private medical information and avoid violation of HIPAA laws.

What's Next? Respirator Fit Tests.

After receiving a medical evaluation, a fit test is needed to ensure that the respirator forms an adequate seal with an employee's face to provide appropriate inhalation exposure protection. A new fit test is required annually or whenever there is a change to the respirator or a physiological change to the employee that could affect the seal between the respirator and the user's face. Furthermore, fit tests are required for each

type of respirator that will be used as indicated by pesticide labels. Finally, employees must undergo the fit test using a respirator with the exact specifications of the respirator that will be used on the job.

Fit tests must follow OSHA protocols, and there are two methods for fit testing. The quantitative fit test (QNFT) requires special equipment and a trained person to conduct the testing. Fit test kits are also available to perform qualitative fit tests (QLFT) by a person that can accurately prepare test solutions, calibrate equipment, perform the test properly, recognize invalid tests and ensure test equipment is working properly. Sources for fit tests include pesticide suppliers or companies such as Gempler's or Grainger.

A primary care physician may be able to provide additional options and referrals for fit test providers in the area. We confirmed that Munson Medical Center's Occupational Health and Medicine Clinic (550 Munson Ave. Traverse City, MI 49686; Ph: 231-935-8590) is equipped to perform the appropriate respirator exam (~\$80.00) and the fit test (~\$25.00) in one visit by appointment only. Spectrum Health Services in other areas of Michigan provide similar services. Patients that wish to only receive a fit test need to provide appropriate respirator exam result documentation prior to the test.

Additional information regarding respirator requirements and other WPS revisions can be found in the EPA's *How to Comply with the 2015 Revised Worker Protection Standards for Agricultural Pesticides* (https://www.epa.gov/sites/production/files/2016-10/documents/htcmanual-oct16.pdf).

Leelanau County HOUSEHOLD HAZARDOUS WASTE & ELECTRONICS COLLECTIONS

NOW ACCEPTING A MAXIMUM OF 10 - ONE GALLON CONTAINERS OF LATEX PAINT

The collections are for Leelanau County Households and covered as part of the \$29 recycling fee on winter taxes. The collections are held from $8 \, \text{AM} - 2 \, \text{PM}$ and registration is required. Please call the Planning Dept. at 231-256-9812 to register.

2017 Saturday Collections

5/20 - Leelanau County Government Center

7/15 - Glen Lake School

8/19 - Peshawbestown

10/7- Elmwood Twp., Cherry Bend Park off Avondale Lane

We are always looking for volunteers to help with the collections, please let us know if you are interested.

Thanks,

Leelanau Planning Department

MSU Extension programs and material are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status, or veteran status. Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities.

WEB SITES 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:

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

Information on apples:

http://apples.msu.edu/

Information on grapes:

http://grapes.msu.edu

Fruit CAT Alert Reports:

http://news.msue.msu.edu