

Northern Michigan FruitNet 2017

Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report – May 12, 2017

CALENDAR OF EVENTS

- | | |
|--------------------|---|
| 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?

- **Apple Thinning Meeting: May 19th: Update**
- **Special Announcements Regarding May 16th and 17th IPM Updates and May 23rd and 24th IPM Updates**
- **Preparation for Fireblight**

Preparation for Fireblight

Growers should be prepared for conditions conducive to Fireblight infection the coming week. Temperatures are expected to be cool this weekend and then warm up into the

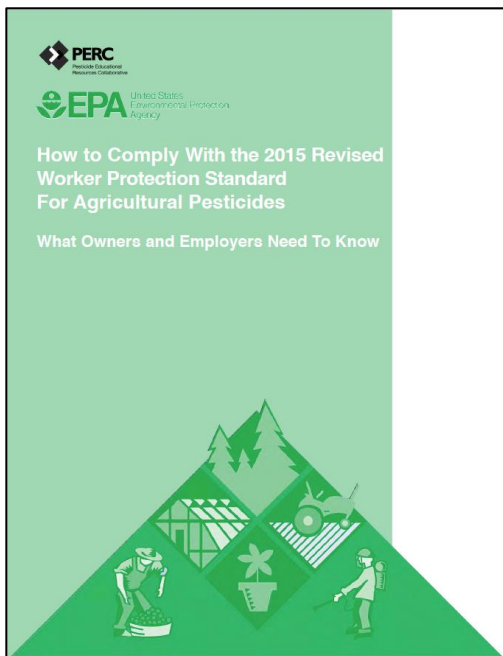
70's again on Monday. Rain is in the forecast for Tuesday, and growers should think about making applications to prevent fireblight infection.

We will include more information regarding Fireblight protection in next Tuesday's FruitNet Report.

Special Announcements Regarding May 16th and 17th IPM Updates and May 23rd and 24th IPM Updates

Emily Pochubay, MSU Extension

May 16th and 17th:



MSU Extension will host Eric McCumber of Michigan Department of Agriculture and Rural Development (MDARD) at next week's IPM Update meetings on May 16th in Leelanau and Grand Traverse counties, and in Antrim and Benzie counties on May 17th. The focus of Eric's presentation will be on Worker Protection Standards (WPS) with the focus of this discussion on respirator requirements and central posting location information. The NWMHRC and Eric will provide examples of 'central posting locations' to demonstrate how WPS required information and optional information can be displayed for farm employees. We plan to provide at least an hour of our two-hour meeting time for Eric to cover these topics and answer questions. We will also cover timely pest/disease management strategies for the week to come.

May 23rd and 24th:

The following week, Gillison' Variety Fabrication will be on hand during IPM Updates to demo their new GB-34R 500 Narrow Variable Air Orchard Sprayer. Below are the dates and locations of the demos.

May 23, 2017 – Jan and Jim Bardenhagen's Farm, 12PM – 2PM

May 24 – Jack Whites Farm, 10AM – 12PM

May 24 – Blaine Church, 2PM – 4PM

Retain Use to Increase Sweet Cherry Yields

N.L. Rothwell and E. A. Pochubay, NWMHRC

In recent years, many growers have started to use ReTain in their sweet cherry blocks to increase fruit set and ultimately increase their yields. ReTain is a plant growth regulator that has been shown to extend flower viability in cherry by reducing ethylene production in cherry flowers and delaying flower and stigmatic senescence. Due to this effect, flowers that last longer have a higher likelihood to be successfully pollinated, and increased pollination results in a higher yield. Research has shown that ReTain works best if used before poor pollinating conditions (wet, cool, windy weather or low honeybee activity) or on varieties that tend to be shy-bearing.

Recent cool weather has extended bloom time throughout the region and temperatures are predicted to warm up into the 60s as we move into this week and next. Sweet cherries are currently at 10% to full bloom at the NMWHRC and depending on variety and location sweet cherries in the region are close to that spectrum of development. Data have shown that ReTain applications are more effective when applied early and with the predicted moderate temperatures ReTain applications could help improve yields this year.

We conducted a ReTain trial at three grower farms in 2014. ReTain was applied in two Balaton blocks and one sweet cherry var. Regina block. Each block was approximately 10 acres where half of the block was treated and the other half untreated. ReTain was applied at the recommended rate of 1 pouch per acre (11.7 oz/A) at popcorn to early bloom stage at 100 gal/A. No surfactants or fungicides were tank mixed with the product. We found that ReTain significantly improved yields in the Regina orchard (Figures 1 and 2) and one of the Balaton orchards; in both of these trials, ReTain was applied at <10% bloom. In the second Balaton orchard, the ReTain application was made

at 70% bloom, and the PGR had no effect on yield. Therefore, we recommend making ReTain applications early: popcorn to first bloom.

A team from Washington State University and Oregon State University has also conducted ReTain trials. ReTain was applied at four stages during bloom: popcorn, 10 percent full bloom, 50 percent full bloom, and full bloom. The ReTain treatment at 10 percent full bloom gave as much as a 20 percent increase in fruit set compared with the control. That was a gain of almost 9 pounds per tree or 2 tons per acre. Tests with Tieton also resulted in significant increases in fruit set. However, unlike the results we observed in Michigan, the western team found that each of the application timings improved fruit set, though there was no consistent trend. They concluded that there could be a broad window when the treatment can be effective. Some of the variability in results could have been attributable to the weather at the time of or immediately after application as warm temperatures would have hastened the senescence of the ovule.

Although the results varied from our trials in Michigan, we are still recommending that ReTain be sprayed early in the season, either popcorn or first bloom. The rate of ReTain is one pouch per acre (11.7oz/acre). The more tissue on the tree, the better the response, but the key timing is early based on our results and past recommendations by the Valent Company. The spray volume is recommended at 100 gal/acre. ReTain cannot be used after petal fall, and it is not recommended if rain is expected within eight hours of application. Temperature should be monitored during application timing as the effectiveness of plant growth regulators decrease at low temperatures. Also, we recommend applying ReTain under slow drying conditions. According to the Valent representatives, they have found that treating a larger block is more effective than treating rows within a block; the overall effectiveness of the active ingredient in ReTain is improved with broad coverage.



Figure 1: ReTain-treated Regina

Spraying Promalin (Valent)/Perlan (Fine Americas) on Frost Damaged Apples, 2017

N. Rothwell, P. Schwallier, and E. Pochubay

Growers are currently assessing the frost damage from the cold overnight temperatures on 7-9 May. The Michigan State University critical temperature charts shows that apples can be damaged at 24-28 degrees F at the tight cluster stage, which is where we are in development at the NWMHRC. Some of the MSU Enviroweather station recorded temperatures lower than these critical temperatures, and as a result, there are likely variable amounts of damage in apple blocks across the region. Because we are not very far along in development, it will be difficult to determine the level of damage in each block, particularly because tops of trees fared better than lower regions of the trees at most sites. With these recent cold events, growers need to assess whether they should apply Promalin (Valent)/Perlan (Fine Americas) to frosted blocks.

Promalin (Valent)/Perlan (Fine Americas) is a mixture of naturally occurring plant growth regulators (PGR), most specifically a gibberellic acid 4 and 7 (GA4+7), which causes cells to enlarge. This PGR can impact apples in many ways depending on when it is applied. In the case of apple trees that have been frosted, these gibberellins can stimulate parthenocarpic fruit development. Parthenocarpy is the natural or artificially induced production of fruit without fertilization of ovules. Fruit that develop through this method are seedless. In laymen's terms, Promalin (Valent)/Perlan (Fine Americas) will help set fruit on frost-damaged bloom. However, growers need to keep in mind that these fruits may have reduced quality compared to unfrosted fruits.

Much of the research recommends applying Promalin (Valent)/Perlan (Fine Americas) within 24 hours of the frost event. However, Phil Schwallier has found that the application timing is longer than the 24 hours, perhaps as much as 4 days. From his observations, he has seen Promalin (Valent)/Perlan (Fine Americas) work when applied within a few days after the frost event and still increase fruitset. This product can be applied from pink to petal fall; once the fruit has been fertilized and begins to size (4-20mm), Promalin (Valent)/Perlan (Fine Americas) will provide little to no benefit. Therefore, growers must assess their crop and determine the stage of development prior to applying Promalin (Valent)/Perlan (Fine Americas). The application can be made up to four days from the 9 May frost event, so growers will have a bit of time to determine the level of damage and their stage of development for each of their blocks.

We recommend that Promalin (Valent)/Perlan (Fine Americas) be used 1 pt/acre. As with most PGRs, temperatures should be warm (65°F) before application. The weather forecast is predicting temperatures into the mid-60s for a few days then back down to the high 50s and low 60s. These temperatures might be our best shot for a Promalin (Valent)/Perlan (Fine Americas) application. We do not want the fruitlet to wither on the cool days; earlier sprays will start the setting process and late sprays in some years might allow the fruitlet to die. As with other PGR applications, temperatures on the day of application are important, but the days following are even more critical. In the case of Promalin (Valent)/Perlan (Fine Americas) this season, the sooner the application can be

made, the more optimistic we are about setting fruit. In addition to setting fruit in frosty conditions, Promalin (Valent)/Perlan (Fine Americas) will do the following: 1. Increase cell division, 2. Increase fruit weight, 3. Increase apple typeyness, 4. Increase fruitset, and 5. Start the thinning process. Lastly, growers need to consider their crop insurance policy before making Promalin (Valent)/Perlan (Fine Americas) applications.

Clarifications on Worker Protection Standards: Central Posting for Pesticide Application Information versus Decontamination Station Requirements for Agricultural Workers

Eric McCumber, MDARD

Emily Pochubay and Nikki Rothwell, MSU Extension

Both MDARD and MSU have received recent questions about the requirements to display pesticide application information at a central posting area. Growers also have questions about what should be included at designated decontamination stations. This article is intended to clarify such questions because we have heard misinformation that pesticide application information should be posted within a ¼ mile of where agricultural workers are working in a treated block—this type of posting is *not* required to meet WPS regulations. This confusion may be related to regulations for decontamination stations; according to WPS, **decontamination stations** are required with ¼ mile from where agricultural workers will be working during the REI or for 30 days thereafter of the application of a WPS-labeled pesticide. Although we will cover the key points for these two issues in this article, more detailed information can be found in the How To Comply Manual (HTCM) at www.pesticideresources.org. In the HTCM, central posting location information is on page 21 and decontamination station information can be found on page 48. The information presented below is relevant to agricultural employers of agricultural workers. Supplies needed for handlers' decontamination sites are different and we encourage employers and handlers to review this information as needed (page 74-75 of the HTCM).

Central Posting

Central posting locations serve as the hub for pesticide application information, and this central posting location is the *only* location on the farm that is required to contain the information outlined below. *According to MDARD, central posting locations* are areas where all farm employees can find any information related to pesticide applications. If a WPS-labeled pesticide has been applied, or if a restricted-entry interval (REI) has been in effect within the past 30 days, then the agricultural employer must display the required information (see below) at a central posting location whenever any agricultural worker is on the agricultural establishment. The location of the central posting is determined by the agricultural employer, but it should be placed in a location where employees

congregate such as the workshop, office, break room, or an area where they check in for work. Agricultural workers must be informed where the designated central posting location is located and must be allowed unrestricted access to the posted information during employment hours.

Agricultural producers are required to display at the central posting area the following information. Again, agricultural workers must have unimpeded access to the information during work hours.

- **Pesticide application information including:**
 - ✓ Brand name of the pesticide(s) applied.
 - ✓ Active ingredient(s).
 - ✓ EPA Reg. No.
 - ✓ REI.
 - ✓ Crop/site treated.
 - ✓ Location and description of treated area(s).
 - ✓ Date(s) and time(s) application started and ended.
- **Safety Data Sheets (SDS)** for each pesticide product.
- **Pesticide Safety Information.** Prior to the updated WPS, this information was required to be displayed in a poster format (known as pesticide safety poster). Agricultural employers are no longer required to display a poster, but must provide information about certain WPS safety concepts-about preventing pesticides from entering the body. The required 7 safety concepts include:
 - ✓ Avoid getting pesticides on your skin or into your body. Pesticides may be on plants, soil, irrigation water, equipment, or may drift from nearby applications.
 - ✓ Wash before eating, drinking, using chewing gum or tobacco, or using the toilet.
 - ✓ Wear work clothing that protects your body from pesticides, such as long-sleeved shirts, long pants, shoes, socks, and a hat or scarf.
 - ✓ Wash or shower with soap and water, shampoo hair and put on clean clothes after work.
 - ✓ Wash work clothes separately from other clothes before wearing them again.
 - ✓ If your body is contaminated by pesticides wash immediately, and as soon as possible, wash or shower with soap and water and change into clean clothing.
 - ✓ Follow directions about keeping out of treated or restricted areas.

In addition, the updated safety information that will be required in the future must include:

- ✓ Instructions for seeking medical attention as soon as possible after being poisoned, injured or made ill by pesticides.
- ✓ Name, address and telephone number of state or tribal pesticide regulatory authority. In Michigan, the agency is the Michigan Department of Agriculture and Rural Development, 525 West Allegan Street, P.O. Box 30017, Lansing, MI. The phone number is 800-292-3939.
- ✓ If pesticides are spilled or sprayed on the body use decontamination supplies to wash immediately, or rinse off in the nearest clean water, including springs, streams, lakes or other sources if more readily available than decontamination supplies, and as soon as possible, wash or shower with soap and water, shampoo hair, and change into clean clothes.
- ✓ Follow directions about keeping out of treated areas and application exclusion zones.
- ✓ The term “emergency medical facility” should be revised to “a nearby operating medical care facility.” Include name, address, and telephone number for the medical facility. This information should be clearly identified as emergency medical contact information on the display.
- ✓ The point that there are federal rules to protect workers and handlers is self-evident and is no longer required to be part of the safety information

NOTE: The updated pesticide safety information content is not required until 1/4/18, but employers can begin using the updated version immediately. Details are shown on page 23 of the How To Comply Manual. The EPA is in the process of developing a poster version of the pesticide safety information.

Agricultural producers are only required to have *one central posting area*, but must provide unrestricted access to agricultural workers during work hours. It can be impractical for farms that are many miles apart to give unrestricted access, so agricultural producers may set up different central posting areas for distinctly different farm locations at their discretion. Agricultural employers may also provide the central posting information electronically, as long as content, accessibility, display, legibility, location, and retention requirements are met. Employers would need to ensure that agricultural workers have access to the information, such as through a smart phone or dedicated computer, and are instructed in how to access the information.

Decontamination sites

Agricultural employers must make sure that decontamination supplies are provided to workers doing tasks that involved contact with anything that has been treated with the pesticide including soil, water, or plants in a pesticide-treated area where, within the last 30 days, a WPS-labeled pesticide product has been used or a REI for such pesticide has been in effect.

Decontamination supplies that must be provided include:

- ✓ Water – the employer must provide at least 1 gal of water per worker at the beginning of the work period and at a quality and temperature that will not cause injury or illness if it contacts skin or eyes, or is swallowed.
- ✓ An adequate supply of soap and single use towels. Hand sanitizers or wet towelettes *do not* meet the requirement for soap or towels.

Duration of the Decontamination Site

If the REI of an applied pesticide is greater than 4 hours, decontamination supplies must be provided until 30 days after the end of the REI expires. If the REI is less than 4 hours, decontamination supplies must be provided until 7 days after the REI expires.

Location of Decontamination Sites

All decontamination supplies for agricultural workers must be located together and be reasonably accessible to where the workers are working (generally within ¼ miles of the workers) and be outside of any treated area or an area under a REI. For worker tasks performed more than ¼ mile from the nearest point reachable by vehicles or more than ¼ mile from a non-treated area, the decontamination supplies may be at the nearest vehicular access point outside any treated area or area under REI (page 48 of the HTCM).

Remember that in addition, the Pesticide Safety Information (formerly referred to as the Pesticide Safety Poster) must be displayed at any permanent decontamination site, or any decontamination site that services 11 or more workers (page 21, HTCM).

In summary, central posting locations are the main hub for pesticide application information, and the information that must be displayed at the central posting locations is not required in other agricultural areas (i.e. ¼ mile from workers working in treated fields, or at decontamination stations). It is the responsibility of the employer to train employees on how and where to access the central posting information. Although not required, some growers may choose to provide additional pesticide application information to their workers by having additional posting sites or virtual access to this information. Potable water, and an adequate supply of soap and single use towels, and possibly pesticide safety information (if the decontamination site is a permanent location or services more than 11 workers) must be provided at decontamination

Apple Thinning Meeting: May 19th: Update

With the recent cold events, we are encouraging growers to sign up for the May 19th thinning meeting at the NMWHRC from 10AM – 1PM. Apple thinning is always a challenging time for growers, and with some potential damage in apple blocks, thinning strategies become even more critical. We will discuss these thinning strategies; products

and rates to use; timing windows of thinners; how to determine crop load; and precision crop load management. We will also focus on how to use the carbohydrate model, which is now an added feature on the MSU Enviroweather site. [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.

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Station Current - Traverse City (NWMHRS) Change station

MICHIGAN STATE UNIVERSITY | **Enviroweather**
Weather-based pest, natural resources, and production management tools

Tools for: Field crops | **Fruit** | Landscape & Nursery | Trees | Turfgrass | Vegetables | More weather

Expand All | Contract All

Resources for:
Tree fruit

- Apple
 - Crop Development
 - Apple Carbohydrate Thinning
 - Apple Maturity Model
 - Pest Management
 - Codling Moth
 - Obliquebanded Leafroller
 - Oriental Fruit Moth
 - Apple Scab
 - Fire Blight of apple blossoms
 - Sooty Blotch and Flyspeck of apple and pear
 - Fireblight Interactive Predictor
 - Fruit Fly Monitoring
 - Daily Summary of Weather and Disease Risk for Station
 - Station Disease Report: Seasonal History of Wetting Events
 - Regional Disease Report
 - Resources
 - IPM Resources
 - Apples
 - MSUE News for Fruit
- Cherry


Traverse City (NWMHRS), Michigan


Latest observations at Traverse City (NWMHRS)
04/25/2017 09:00 AM (Station online).
Measurements by 5-minute average or total unless otherwise indicated.

53.9 F	Air temperature
0.0 in.	Rainfall(04/25/2017)
62.1%	Relative Humidity
41.2 F	Dewpoint
SE	Wind Direction (hourly average)
6.5 mi./hr.	Windspeed
0%	Percent of last full hour wet - leaf wetness (tripod-mount)
0%	Percent of last full hour wet - leaf wetness (canopy)

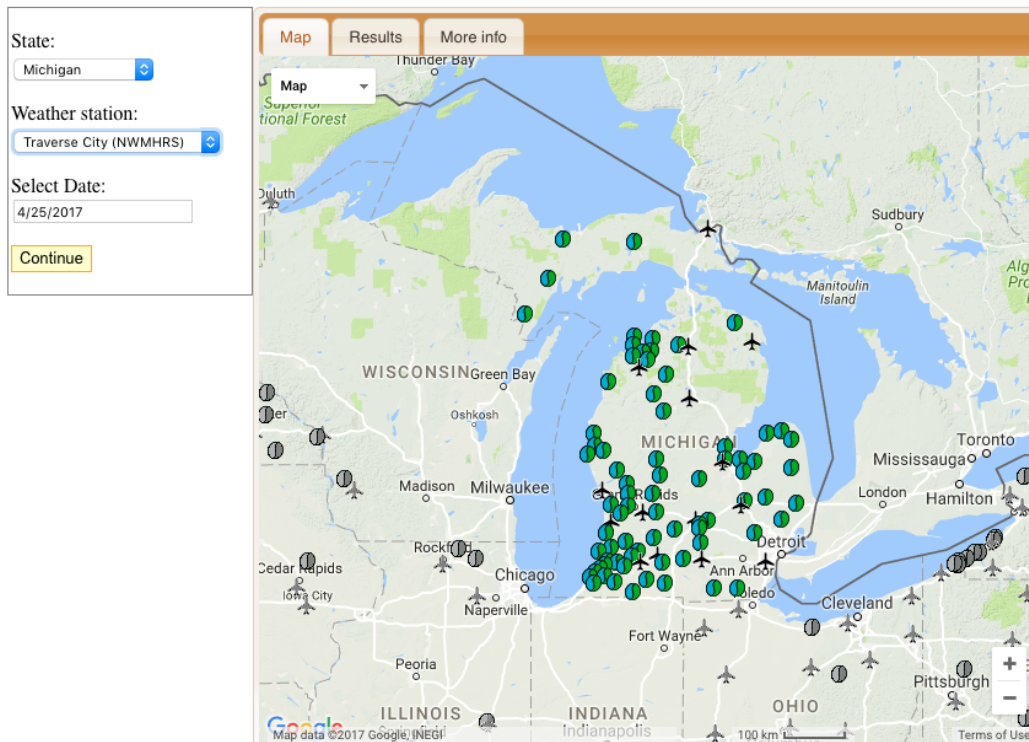
Weather observations and summaries

- [NEW Meteogram](#): Real-time observations in graphical format
- [NEW Meteogram](#): Real-time observations in graphical format
- Overnight temperatures/ [hours below freezing](#)
- Rainfall comparisons [for Region](#)
- Temperature, rainfall and degree-day [summary](#)
- Rainfall comparisons [last 5 years](#) at this station
- [Soil conditions](#)
- [More weather](#) for this station


National Weather Service [radar](#) and [local forecast](#) for Traverse City


[Weather Station at Traverse City \(NWMHRS\)](#)
Thanks to our station sponsors:
This station is hosted at Northwest Michigan Horticultural Research Station and is

Cornell Apple Carbohydrate Thinning Model



Accuracy of the weather data is the responsibility of the owners of the weather station instruments. NEWA is not responsible for accuracy of the weather data collected by instruments in the network. If you notice erroneous or missing weather data, contact [NEWA](#) and we will contact the owner of the instrument.



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 only 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/htcmmanual-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 AM – 2 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>