Northern Michigan FruitNet 2017
Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report – June 27, 2017

CALENDAR OF EVENTS

6/28	**Antrim IPM Updates** Jack White Farms, 10AM – 12PM
6/28	**Benzie IPM Updates** Blaine Christian Church, 2PM – 4PM
7/14	**"First Friday Meeting"** Ten Hands Vineyard, 3-5PM (held on the second Friday in July, in order to avoid the Cherry Festival)
8/24	**NWMHRC Open House and Leelanau Hort Society Annual Meeting and Dinner**

What's New?

- **Northwest Michigan fruit update – June 27, 2017**
- **Sell A Farm, Buy A Farm, Save A Farm**
- **Cherry Industry Administrative Board - CIAB – OSF CALCULATION and CROP ESTIMATE - June 22, 2017**
- **NW MI SWD Trap Counts**

NEW ARTICLES

Northwest Michigan fruit update – June 27, 2017

Fruit development is moving along quickly and growers are protecting ripening cherries from late season pests and diseases.

Emily Pochubay and Nikki Rothwell, MSU Extension

GROWING DEGREE DAY ACCUMULATIONS AS OF June 26, 2017 AT THE NWMHRC

Year	2017	2016	2015	2014	2013	2012	27 Yr. Avg.
GDD42	1242	1269	1188	1115	1179	1602	1233.6
GDD50	706	811	680	651	719	971	720.5

2017 Growth Stages as of 6/26/17

Bartlett Pear – 24 mm fruit
Potomac Pear – 27 mm fruit
Mac – 40 mm fruit
Gala – 30 mm fruit
Red Delicious – 35 mm fruit
HoneyCrisp – 32 mm fruit
Montmorency – 15 mm fruit
Balaton – 15 mm fruit
Hedelfingen – 19 mm fruit
Gold – 17 mm fruit
Napoleon – 24 mm fruit
Riesling – First bloom

Weather Report

Wet weather seems to be the norm so far this season, and there is more rain in the forecast for the remainder of the week. This wet weather has presented challenges for keeping good spray coverage—the rain is likely washing off materials, and these continued rainy conditions have prevented growers from making applications. Thankfully, the wet weather has been accompanied with cooler temperatures, which will temporarily slowdown disease progress. Yesterday's daytime high (26 June) capped out at almost 57 degrees F. Tuesday through Thursday (27-29 June) are expected to warm up into the 70s and 80s F but then cool down again over the weekend. We have accumulated 1242 GDD base 42 and 706 GDD base 50. The amounts of rainfall vary across the different regions of NW Michigan, but all stations have been recording wet conditions. At the NWMHRC, we received 0.65" of rainfall on 22 June, and just bit of moisture on 23 June. The rain started up again on 25 June and lasted into Monday, 26 June, and over these two days, the NWMRHC received 0.48".

Crop Report

Early varieties of sweet cherries are coloring up at the NWMHRC. We are testing cherries for firmness and brix for an SWD choice and no choice experiments, and our Ulsters are at 14 degrees brix as of last Friday. The birds have noticed the ripening fruit, and bird pecks are not hard find in our sweet cherry blocks at the NWMHRC. In particular, we have heard reports of bird problems with the variety Black Pearl. Cracked fruit as a result of all of this rainfall has also been a concern. Cracked fruit and fruit damaged by birds are highly susceptible to American brown rot. Additionally, we observed last season that SWD are opportunists, and they will take advantage of cracked fruit for egg laying. Lastly, our currently ongoing SWD tests in the lab have indicated that most sweet cherries are susceptible to SWD egg laying at this time. Ethephon will likely go on many blocks of sweet cherries toward the end of the week.

Tart cherries are also beginning to color. Tarts almost seem to be ripening or at least coloring faster than sweet cherries in some cases. Brix for tart cherries at the NWMHRC are at 9 degrees. The size of the tart cherry crop across northern Michigan is estimated to be 130 million pounds. Please see document from the Cherry Industry Administrative Board (CIAB) in FruitNet regarding set aside (~26% of 2017 crop).

Apples are sizing nicely. Some growers are hand thinning apples where they still had too many fruit after thinning. Strawberry harvest is ongoing.

Pest report

As mentioned previously, keeping fruit protected from pests and diseases has been a challenge in the last two weeks with few decent days to get sprays on in the orchard. Although the region hasn't been as wet in the last week compared with two weeks ago, we have had a few wet days and there is a chance for more wet weather in the coming week. Growers have been weighing options of when to put on covers and whether reapplications will be needed during this wet weather. Overall fruit development is moving quickly and some areas are fast approaching sweet cherry harvest timing; these growers are planning their late season pest and disease management programs.

Spotted wing drosophila (SWD) numbers are on the rise in our regional trapping network, and many orchards have fruit that are straw-colored or riper and susceptible to SWD egg-laying at this time. The NWMHRC's estimated tart cherry harvest date is 20 July meaning that we have ~24 days (or at least 3-4 full cover insecticide applications) that tarts will need to be protected from SWD this year. As growers are developing their late season pest management programs, pest management costs are a key consideration as well as material and program efficacy for target pests, insecticide label use restrictions and guidelines, resistance development, and concerns for possible mite outbreaks.

Data from our previous efficacy trials have shown that under high SWD population pressure, full cover applications every 7 days resulted in the fewest detectable SWD compared with full covers at 10-day intervals and alternate row applications at 7- or 10-day intervals. Although full covers every 7 days is not feasible for all growers, the data

suggest that intervals will minimize the chance of SWD infested fruit, particularly if weaker chemistries are used and/or if wet weather washes away residues. With the possibility of 3 or more sprays for SWD before harvest, we encourage growers to rotate insecticide modes to minimize the possibility of resistance development. Many of the efficacious materials for SWD are in the pyrethroid class and there is a possibility for cross-resistance among pyrethroid and organophosphate (ex. phosmet/Imidan) insecticides. Additionally, there are several generic and pre-mixes available so growers will need to carefully read labels for the maximum amount of active ingredient applied per season, number of allowable sprays, etc. The NWMHRC will be coordinating effort with the MSU Fruit Team to begin monitoring for SWD insecticide resistance this season.

Planning when to use different materials to target the mid to late season pest complex can help to maximize spray efficiency. For example, many of the pyrethroids that are efficacious for SWD are also effective against plum curculio and cherry fruit fly (CFF), but efficacy data collected in cherries has shown that imidacloprid, the traditional chemistry used against CFF, has weak activity against SWD. Therefore, we do not recommend imidacloprid as a standalone material to target both SWD and CFF. CFF have not yet been detected on traps at the station this season. Obliquebanded leafroller activity is ongoing at the station (we have accumulated 291 GDD base 42 since biofix 13 June), and some orchards in the region may have populations that warrant treatment before harvest for OBLR larvae; egg hatch typically begins 400-450 GDD base 42 after biofix. The spinosad insecticide Delegate is only rated good for SWD, but it provides excellent OBLR control; the newer diamide product, Exirel, is rated excellent for SWD and OBLR. Lastly, growers should be cautious of possible mite outbreaks in orchards where multiple applications of pyrethroids have been made. The product Danitol is a pyrethroid-miticide premix insecticide with a short PHI. As we approach harvest, we remind growers to discuss pest management options with processors.

Wet and warm weather has been optimal for disease development and growers have continued to diligently manage diseases in these conditions. Brown rot started to get a foothold in some blocks last week and this disease will continue to be a concern as fruit ripen and increase in sugar content. As mentioned above, fruit damaged by birds and cracked fruit are especially susceptible to brown rot. Cherry leaf spot has also been a concern; many growers have been optimistic about slowing the progress of cherry leaf spot lesions from early infections, but we have received reports that new lesions are showing up. Indar is an excellent material for brown rot, but we have seen reduced efficacy of Indar in recent years. Growers planning to use Indar should include a material for cherry leaf spot as Indar only provides fair control of the leaf spot fungus. Additionally, growers planning to use the increased rate of 12 fl oz/A will need to obtain the Special Local Need 24(c) label for Indar. The SDHI fungicides (ex. Merivon, Luna Sensation) are excellent materials for both brown rot and cherry leaf spot, and an SDHI is typically suggested as the last fungicide spray prior to harvest. Previous data have shown that an SDHI applied to tart cherry trees at pre-harvest timing provided the longest residual cherry leaf spot control compared with other leaf spot materials.

In apples, primary apple scab is over in the northwest region and new fire blight symptoms became more prevalent late last week. Because fire blight incidence is low, growers are pruning out infected terminals. We remind growers to sanitize pruners between cuts to minimize the spread of bacteria; a 10% bleach solution is an effective sanitizer. The fungal pathogen, nectria, has also been reported in the region.

Codling moth catches are down at the station this week (Table 1) and based on degree-day accumulations larvae should be active at this time.

Catalpa trees came into bloom over the weekend and bloom of this species has been associated with San Jose crawler activity and timing sprays for crawlers. Determining when crawlers are active has been challenging because monitoring protocols are not very successful. We will continue to monitor for the second generation of male flight that typically occurs in late August (Table 1).

Table 1. NWMHRC Insect Trapline Data, 2017.

Cherry - NWMRHC	**25-Apr**	**2-May**	**9-May**	**16-May**	**23-May**	**30-May**	**6-Jun**	**13-Jun**	**20-Jun**	**27-Jun**
GFW	14	1	6	2	14	0	0	0	0	0
APB				2	5	14	1	4	5	1
LPTB						2	9	13	10	6
GPTB								2	0	1
OBLR								0	4	21
CFF								0	0	0
Apple - NWMHRC	**25-Apr**	**2-May**	**9-May**	**16-May**	**23-May**	**30-May**	**6-Jun**	**13-Jun**	**20-Jun**	**27-Jun**
OFM	0	0	0	0	0	0	0	0	0	0
STLM				52	18	33	9	3	2	14
CM					0	1	2	4	3	0
SJS					1	0	19	1	0	1
OBLR								1	1	1

Wine Grapes
Duke Elsner

Most varieties are at 50-100 percent bloom in the Grand Traverse region. Foliage condition looks great in most sites despite the many rainy days we have experienced. I'm still expecting to see some downy mildew showing up, but I have not found any yet. Powdery mildew may actually be less of a threat this year because frequent drenching rains can actually wash the spores off of the plants before they can infect tissues.

Nonetheless, we are entering the prime window of time for protecting clusters from powdery mildew infections and spray coverage should be maintained.

No new insects have arrived since last week. Rose chafers should be done with their adult activity soon.

July "First Friday" Meeting
Duke Elsner

The next "First Friday Meeting" will he held on July 14 (the second Friday in July, in order to avoid the Cherry Festival). The location will be Ten Hands Vineyard on Old Mission Peninsula (Mission Road, just south of the Old Mission General Store) and the topic is "Foliar Fertilization Programs in the Vineyard". This discussion will be led by Craig Cunningham of Cunningham Viticulture Services, who has utilized foliar programs in vineyards for more than 10 years, including Ten Hands Vineyard (owned by Tom Petzold). We will also walk the vineyard for informal scouting, discussing issues as they come up. Tom will answer questions on his vineyard practices (composting, compost tea use, growing grass under the vines, etc.) to round out the session.

Saskatoons
Duke Elsner

The crop is large at most sites that have mature bushes. The earliest berries are beginning to color up, and harvest may begin in about a week at the most advanced sites. I'm expecting entomosporium leafspot and saskatoon-juniper rust to be troublesome this year due to the frequent wetting periods we have experienced. Growers will need to stay on top of these diseases with fungicides that have a short PHI since harvest is approaching.

Sell A Farm, Buy A Farm, Save A Farm

The Ticker, By Ross Boissoneau

"In the next 20 years, 70 percent of the privately-owned farmland in the United States will change hands. Our region has over 80,000 acres," says Sam Plotkin, farm programs manager at the Leelanau Conservancy.

Meanwhile, 20- and 30-somethings view farming as an emerging career option, as "farm to table" dining and craft wine and beer generate more visibility. The challenge is how to connect those farmers who want to sell with those looking to buy.

That's the rationale behind a new collaboration between the Leelanau Conservancy, the Grand Traverse Conservancy, Taste the Local Difference and MSU Horticulture Station.

Farmer to Farmer is a web-based platform that organizers believe will help those looking to purchase or sell farms and farmland.

Plotkin says an aging agricultural industry will inevitably lead to what he calls "a significant generational property transfer." That's where Farmer to Farmer – F2Fmi.com – comes in. The website (expected to launch next week) will include a database of farmers looking to divest themselves of land holdings and persons looking for agricultural opportunities. Tricia Phelps, operations director at Taste the Local Difference, says it is a marriage of today's tech world with the agricultural industry that helped shape the region. "It's an opportunity offered by technology…going back to our agrarian roots," she says.

Farmer to Farmer is intended to keep farmland in the hands of those who see the value of tilling the soil, rather than having property sold for development.

Agriculture is increasingly being looked upon favorably, says Phelps, because of both its economic impact and its scenic beauty. "Farms weren't looked at as part of the business community, as being important to the economy," she says.

No more. The wine, brewing and distilling industries have focused attention on growing everything from grapes to hops, rye and wheat, while restaurants clamor for fresh, local meats and vegetables.

Despite their far-reaching social networks, many younger people are stymied when looking to get into agriculture, often just communicating with their peers in the 25-to-35 age range – not the likely age of someone looking to get out of farming.

But they're hardly the only ones looking. "In the past three months, I've had 15 people call me looking to buy or lease, or sell or lease. And I only serve one county," says Plotkin. That's where the regional approach will broaden the audience; the site will list properties for sale in Grand Traverse, Leelanau, Benzie and Antrim counties. Potential buyers will be able to search by price, acreage, or location, as well as whether they are looking to buy, lease, lease to buy, or enter into partnership with the owner.

The site will also list what machinery or equipment is available, any buildings, and what kinds of farm-related jobs are available. "That's what we think is unique," Plotkin says. Think of it as a combination of Craigslist and Zillow for farming.

Both Plotkin and Phelps add that the site is in no way meant as a replacement for the real estate industry, but rather to complement it. Whether a landowner or a realtor, there will be no cost to post on the new site, they say.

Cherry Industry Administrative Board

CIAB – OSF CALCULATION and CROP ESTIMATE - June 22, 2017

This information presented below represents the crop production estimate and OSF calculation as presented and approved at the CIAB meeting on June 22, 2017. The regulation percent was approved at 26%/63 million lbs.

PRODUCTION (district)	Crop Size	Regulated	Not-regulated		
NW MICHIGAN	130	130	0	Orchard Diversion	12
WC MICHIGAN	26	26	0		
SW MICHIGAN	28	28	0	Carryover	110.5
WASHINGTON	26	28	0		
NEW YORK	8	8	0		
WISCONSIN	9	9	0	3 Yr Sales	237
UTAH	25	25	0	2016	245
OREGON	2	0	2	2015	244
PENNSYLVANIA	5	0	5	2104	223
Orchard Diversion		-12			
TOTAL ---	259	240	7	Reserve Inventory	65.3
				Target Carryout	45
AVAILBALE SUPPLY					
U.S. Crop	259			Economic Adjust.	0
CARRY IN @ 6/1	110.5			Other	0
TOTAL SUPPLY AVAILABLE	369.5			Imports	0
OPTIMUM SUPPLY FORMULA					
2 YR. SALES AVERAGE	237.3				
TARGETED CARRYOUT	45				
OPTIMUM SUPPLY	282.3				
REGULATION % DETERMINATION					
SURPLUS	87.2				
MARKET GROWTH FACTOR	(23.7)	10%			
ECONOMIC ADJUSTMENT	-	0.00%			
"ADJUSTED SURPLUS"/Regulation %	63	26%			

NW MI SWD Trap Counts

Location and # of traps out	wk of 5/15	Wk of 5/22	wk of 5/29	wk of 6/5	wk of 6/12	wk of 6/19	wk of 6/26
North Manistee - 7	trap set	0	0	0	2	Not checked	*

						due to REIs	
Benzie - 44	trap set	3	2	4	23	50	*
Yuba - 22	trap set	0	0	0	1	16	*
Central Lake - 7	trap set	0	0	1	0	1	*
Old Mission - 26	trap set	1	0	0	0	7	*
Bingham - 21	trap set	0	0	0	3	38	82*
Cedar - 8	trap set	0	0	0	1	12	0
East Leland - 7	trap set	0	0	0	0	0	*
Northport - 7	trap set	0	0	1	0	2	3

SWD Caught outside of NW MI Trap Count

	wk of 5/15	wk of 5/22	wk of 5/29	wk of 6/5	wk of 6/12	wk of 6/19	wk of 6/26
North Manistee		0	0	0	1	0	*
Bingham		0	0	0	1	0	*

*** = Trap count is not complete**

ARTICLES FEATURED IN PAST FRUITNET REPORTS

Leelanau County Household Hazardous Waste & Electronics Collection - Saturday, July 15, 2017 at Glen Lake School

Do you have leftover oil paint, fuel, pesticides, batteries, motor oils, cleaning supplies, or small electronic items in your home?

Improper storage and disposal of these materials can result in health and environmental risks. Instead of storing these materials and risking improper disposal, take them to a collection for proper disposal.

TO PARTICIPATE, you MUST make an appointment.

Call: Leelanau County Planning at (231) 256-9812, for appointments.

Costs for these collections are covered under

P.A. 69 of 2005 - a charge placed on Winter Tax Bills.

These collections are for Leelanau County HOUSEHOLDS ONLY.

For more information on HHW or other solid waste programs, visit www.leelanau.cc/solidwaste.asp **Remaining 2017 Saturday Collections:**

Next Leelanau County Household Hazardous Waste and Electronics Collections: August 19 (Peshawbestown), & October 7 (Elmwood Township). Call Leelanau County Planning at (231) 256-9812 to make an appointment.

NEW Agriculture Container Recycling Program! – Updated Version

American Waste is no longer recycling ag containers for free at their facility. But no worries! Growers will be able to recycle their containers free of charge at various locations in Northwest MI.

Where are the collection sites?

- Wilbur-Ellis Co
  8075 -31 Williamsburg, MI 49690
- Ellsworth Farmer's Exchange (Co-op) – Change in address
  11900 Byers Rd. Ellsworth, MI 49729
- CHS Inc
  6766 E Traverse Hwy Traverse City, MI 49684
- Crop Production Services (CPS)
  13343 Pleasanton Hwy, Bear Lake, MI 49614

When can I drop off my ag containers?

- June 26-29: You can drop off your materials during regular business hours at any collection site listed above during the last week of June. G. Phillips & Sons (the ACRC contractor) will pick up containers on Friday, June 30.
- Post-harvest collection: TBD (end of September/first week of October)

What do I do to prepare the containers for recycling?

- Triple rinse, remove caps, remove loose leaf labels (if possible), put in large/clear plastic bags OR string together 20-30 containers with twine – if the containers are not up to these standards, they will not be accepted.
- All non-refillable, high-density polyethylene (HDPE) plastic crop protection and specialty pesticide product containers in sizes up to and including 55 gallons are accepted.

Questions? Contact Lauren Silver (lsilver@gtcd.org) or Lizzy Freed (lfreed@gtcd.org) at the Grand Traverse Conservation District. Ph: 231-941-0960

Black Stem Borer Information Needed

The black stem borer, *Xylosandrus germanus,* is a small (2mm) ambrosia beetle that has been causing more problems in apple plantings than in past years. In fact, we have seen more issues with this pest in 2017 than other years combined. Black stem borer adults most commonly attack stressed trees, and growers may not notice these small beetles/infestations until the trees start to collapse. These beetles often attack trees on the orchard edge, commonly near woodlots; however, this spring, we have detected infested trees in the orchard middles or far from the orchard perimeter.

Signs of black stem borer infestation is initially difficult to detect, but growers can look for tiny entrance holes (1mm in diameter), sawdust "toothpicks" protruding from the holes, dark discoloration on the bark, oozing sap and dry, blistery bark. The dark bark is the most visible sign, and once this discoloration is detected, growers can examine the trees more carefully to look for the small entrance holes.

Additionally, there is a monitoring protocol that some consultants have been using to detect black stem borer emergence and activity. We remind those who are trapping for the beetles that the traps baited with ethanol or spirits are not specific to black stem borer and that many different beetles including black stem borer look-a-likes could be present in the traps. Because the beetles are so small, positive identification can be difficult. Hence, scouting orchards for symptoms such as entry holes, toothpicks, etc. as well as the beetles inside of the tree should be used in conjunction with monitoring devices to determine the level of trees infested with black stem borer.

There are many hypotheses as to why we are seeing a higher number of infested orchards this season than in past years. First, ash trees have been declining due to emerald ash borer, and once these trees die, opportunistic insects that infest stressed trees may be looking for new hosts. We have had a few hard winters in recent years, and trees may be stressed as a result of these prolonged cold temperatures. Additionally, any type of tree stress seems to increase stem borer activity: drought stress, too much water, less than optimal fertilization programs, or a combination of many of these stresses. Lastly, we are planting more high-density apple blocks today than in the past, and perhaps, we are just noticing an increased numbers of stem borer simply because there are more trees planted on dwarfing rootstocks, which are more susceptible to mortality due to their size.

We are trying to learn more about this pest and its impacts across the region. If your farm has had problems with black stem borer, please contact Nikki, Emily, and/or Jenn at the NWMHRC (231-946-1510. rothwel3@msu.edu, pochubay@msu.edu, or

goodr100@anr.msu.edu). We would like to know the age of the trees, the age when the trees became infested, the nursery, location of the block(s), rootstock, and variety. We will compile this information to see if there are areas of overlap between infested sites. Thank you for your help!

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

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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.

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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/htcmanual-oct16.pdf).

WEB SITES OF INTEREST:

Farmer to Farmer - Connecting Farmers, Cultivating Community
http://www.f2fmi.com

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://www.canr.msu.edu/nwmihort/nwmihort_northern_michigan_fruit_net

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