

Northern Michigan FruitNet 2015

Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report - May 26, 2015

CALENDAR OF EVENTS

2015

- 5/5-7/14 Leelanau County IPM Updates**
Bardenhagen Farm
- 5/5-7/14 Grand Traverse County IPM Updates**
Wunsch Farm
- 5/6-7/15 Antrim County IPM Updates**
Jack White Farms
- 5/6-7/15 Benzie County IPM Updates**
Blaine Christian Church
- 5/28 Hazardous Waste and Pesticide Collection for Grand Traverse County**
- 5/30 Hazardous Waste and Pesticide Collection for Leelanau County**
- 6/1 Producers Need to Certify Conservation Compliance by June 1**

GROWING DEGREE DAY ACCUMULATIONS AS OF MAY 25, 2015 AT THE NWMHRC

Year	2015	2014	2013	2012	2011	2010	25 Yr. Avg.
GDD42	522	371	485	848	428	750	529.7
GDD50	261	160	268	463	191	383	258.6

Growth Stages at NWMHRC (May 26, 2015, 11 a.m.)

Apple: Red Delicious – Petal fall
Gala – Petal fall
Yellow Delicious – Petal Fall
Pear: Bartlett: 8 mm fruit
Sweet Cherry: Hedelfingen – 10 mm fruit
Napoleon – 9 mm fruit
Gold – 9 mm fruit
Tart Cherry: In the shuck
Balaton: Ear. Shuck split
Apricot: 15 mm fruit
Grapes: Chardonay – 1"-3" shoots

Northwest Michigan Fruit Regional Report – May 26, 2015

Growers are assessing the damage from last week's freezing temperatures; thinning decisions will be challenging with the frost damage.

Emily Pochubay and Nikki Rothwell

Weather Report

The biggest news from the past week was the cold temperatures that we had during the evening of 20-21 May. The overnight temperatures were colder than most forecasts were predicting. The East Leland and Bear Lake Enviro-weather stations were the coldest in the region, and temperatures dipped into the mid-20s. We have heard reports of local farms hitting the mid to low 20s that evening. We are still assessing the damage from these cold temperatures, as the damage is variable across the region. Our growing degree accumulations remain spot on with our 25-year average: 522 GDD base 42 and 261 GDD base 50. We also had substantial rain over the weekend. At the station, we received 0.5" of rain on Sunday (24 May) and just over an inch of rain on Memorial Day.

Crop Report

As mentioned above, we are currently determining the damage from the cold overnight temperatures last week. The more southerly areas appear to be hit harder as these orchards were furthest along—most of these orchards were at full bloom in early varieties of apples. Overall, sweet cherries have the most damage, and many fruit that were facing 'up' on the branch were frosted. Cherries under leaves appear healthy. Orchards to the north seemed to have fared the best as they were not as far along in development. In the Omena area, tart cherries were in full bloom on Friday, and these orchards look healthy. Tart cherries were the least impacted by the cold temperatures. Additionally, apples that came into bloom after the frost also look good. We will have a better handle on the overall damage this week.

In addition to assessing damage, growers are starting to thin apples. Growers should wait until fruitlets are 6-10mm before applying any thinners, particularly in orchards that have been impacted by the frost. Growers have been hedging tart cherries this past week, and most orchards were covered prior to the rain events this weekend. If growers have high density apples that they do not want to set a crop this season (i.e. trees need to grow more), a spray of NAA and Sevin at petal fall will thin off those blossoms; a second spray may be needed at the 6mm fruitlet stage.

Pest Report

Cold nights, warm days, and dry conditions for most of last week were not favorable for apple scab, fire blight, or cherry leaf spot (CLS) disease infections. However, many growers were covering unprotected foliage and open blossoms over the weekend in anticipation of the rain that came on Sunday (24 May) and Monday (25 May). As mentioned previously, the northwest region received over an inch of rain and up to two inches or more in some areas; these rains triggered apple scab and CLS infection periods. According to the apple scab model on Enviro-weather, the NWMHRC (biofix=20 April) is over halfway through primary apple scab, and 92% of ascospores are mature and 57% have discharged. Hence, maintaining protection from possible scab infection is critical with the predicted wet conditions this week. We have not found apple scab or CLS lesions from previous infection periods at this time, but apple scab symptoms from infection periods on 10-15 May could appear this week, if infection occurred.

Many sweet cherries are out of the shuck, and tarts are at shuck-split at this time, and leaves will need to be protected prior to rainy conditions this week. We would like to remind growers that chlorothalonil applications are not permitted post shuck-split, unless the application is Bravo Weather Stik made under the 24c Special Local Needs (SLN) label. Growers planning to apply chlorothalonil post shuck-split in 2015 will need to conduct the online training program through the Michigan Department of Agricultural and Rural Development (http://www.michigan.gov/mdard/0,4610,7-125-2390_45088-275564--,00.html) and receive and sign the training affidavit. Growers will need to keep a copy of the training affidavit as well as a copy of the 24c SLN label to apply chlorothalonil post shuck split on hand while applications are made under this label. The 24c label is an indemnified label on www.farmassist.com. For more information on how to navigate the www.farmassist.com to obtain the label, please read the article, "*Where can growers find the special 24c label for using Bravo Weather Stik past shuck-split,*" below or online at http://msue.anr.msu.edu/news/where_can_growers_find_the_special_24_c_label_for_using_bravo_weather_stik_p

On Monday 25 May the epiphytic infection potential (EIP) values on the Maryblyt fire blight model on Enviro-weather were under 100 for most of the region and EIP values are predicted to be well above 100 for the remainder of the week which is predicted to be very warm and wet. Many growers protected open blossoms prior to Sunday's rain, and growers have also used or are planning to use Apogee to slow shoot growth and prevent the spread of fire blight bacteria into woody tissue. Although full bloom has passed in many apple varieties, some tag blossoms will open in the coming days and these flowers are also susceptible to possible fire blight infection in optimal conditions. Apogee will help to prevent the spread of fire blight in trees that had blossom infections and/or if tag blossoms become infected.

American brown rot (ABR) development will be favored by warm and wet conditions this week. ABR may be a challenge for cherries that were damaged by freeze. We had a similar situation a few years ago where frost damaged fruit were infected by the ABR fungus, even when the cherries were green and had no sugars in them. Succinate dehydrogenase inhibitor (SDHI) fungicides such as Merivon have excellent efficacy against ABR, CLS, and powdery mildew, and would be a good option for growers at the 1st cover timing when disease pressure for all three of these diseases could be high.

Cool conditions slowed insect activity last week and although wet conditions are predicted, we will likely see more insect activity as temperatures warm up this week. We are continuing to see a few small obliquebanded leafroller larvae in unsprayed orchard blocks. American plum borer (APB) and lesser peach tree borer (LPTB) moths are active in low densities (~3 APB/trap, and 5 LPTB/trap) in cherries at the research station this week. We have passed peak spotted tentiform leaf miner flight at this time. We

have not found oriental fruit moth or codling moth at the research station, but we have received reports that codling moth was detected in Antrim county last week. We could see codling moth flight during warm nights this week. Plum curculio adults were active in Benzie-Manistee county areas last week, and egg-laying scars were observed in sweet cherries. Both PC and CM activity will increase if we have warm overnight temperatures.

American Brown Rot in Frost-Damaged Sweet Cherries

N. Rothwell and E. Pochubay

Most sweet cherries orchards across the region have some damage as a result of last week's overnight freezing temperatures. Unfortunately, many of these damaged fruits remain on the tree, and as we have seen in past years, American brown rot (ABR) can infect green fruit with frost scars. In most years, ABR infects fruit as we approach harvest as this fungus feeds on the sugars that are developing in ripening fruit. However, we have seen ABR use the frost scars and frost damage to infect cherries with no sugars. This disease will be a concern in the coming days as warm and wet conditions are predicted. Growers will need to protect fruit from ABR, and the SDHIs are a good choice for the next fungicide application. The SDHI fungicides provide good control of ABR, but they are also rated excellent against cherry leaf spot and powdery mildew; hence, the optimal time for these fungicides is now. Merivon and Luna Sensation are two SDHIs that will provide good control of all three of these key cherry diseases. Once these applications have been applied, and if growers do not see any ABR development, they can back off of the SDHI fungicides for their next sprays.

Grapes

The freeze event of last Wednesday was devastating to many *vinifera* vineyards in the Grand Traverse area. The winter cold took away our buds above the snow line, and this freeze killed many of the shoots in the lower portion of the vines. A day after the freeze many of the *vinifera* varieties in the research vineyard showed no live shoots at all. Some of the hybrid varieties were also injured, even up high on the trellis. The worst injury occurred on LaCrescent and Frontenac, as these had the most advanced shoots.

We are going to have to count on some of the remaining secondary and tertiary buds to take over to provide shoots for our vines. Hopefully some latent buds under the bark of older wood will also respond and begin development



Picture of Cab Franc on May 21st.



Picture of Frontenac on May 21st

Saskatoons

Saskatoons appear to have come through the freeze in good condition, although it will take some time before we know if there was any injury to the tiny developing fruits. The period of rainy weather we are currently in will favor the development of entomosporium leafspot and rust disease. Keep a cover of a protectant fungicide on if the weather allows for spraying conditions. If you do not have a copy of the

2015 pesticide recommendations for Michigan saskatoon production, just send an email request to me at elsner@msu.edu.

Upcoming event – June 5, 2015

Parallel 45/MSU Extension First Friday Meeting

Dr. Annemiek Schilder will be on hand to discuss the compost tea project and early –season vineyard disease management on Friday, June 5, 3-5 pm, at the Northwest Michigan Horticultural Research Center, 6686 South Center Hwy, in Leelanau County.

Growers should postpone apple thinning at petal fall timing due to last week's frost

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

This year, several apple growers in northwest Michigan were intending to try precision crop load management with its nibble thinning strategies. In light of last week's freeze event, we are recommending that growers should hold off on thinning at the petal fall timing until they have a better estimate of crop load. Additionally, many growers applied Promalin last week to help increase fruitset, and fruit that do set following Promalin applications will likely be weaker and easier to thin. Because of these factors, we recommend that growers wait until fruit are at the 6-10 mm stage to better assess the crop load, and at that time growers can proceed with thinning, if necessary. Temperatures are predicted to cool down over the weekend, and thinners will not be as effective in cooler conditions.

Some growers have young trees that need blossoms removed to better grow small trees. The northwest part of the state is currently in a period of stress that should support good thinning conditions. An application of Sevin (1 pt per 100 gal) + Maxcel (54 oz per 100 gal) at petal fall and again at 10 mm during warm conditions is recommended to remove all flowers and fruit. Sevin + NAA is also an option, however, NAA can temporarily stunt trees and should not be used on weak trees.

Fireblight conditions predicted throughout the week

N. Rothwell and E. Pochubay

As the temperature climbs throughout the day today (we are predicted to hit 79 degrees F), the epiphytic infection (EIP) potential for fireblight is also rising. The fireblight model for the Northwest Station (please see Figure 1), is predicting the EIP will be well over 100 degrees—112-161. Additionally, the forecast is also predicting a potentially severe thunderstorm this afternoon, and rain and this warm weather are conducive for a fireblight infection. There are still lots of open flowers in apple orchards

across the region, and they must be covered prior to a rain event. Streptomycin is the best antibiotic for fireblight control, so if growers are sure they do not have strep-resistance fireblight bacteria, this antibiotic is recommended for fireblight control. However, if strep-resistance is known, Kasumin is the recommended antibiotic.

Tomorrow's high is only predicted to be 67 degrees F, so the EIP will be lower, but the chance of rain is 100%. Bacteria that grow in today's heat will still be present by the rain tomorrow, and flowers should be protected prior to the rain, if possible. Later in the week, we are back into the high 70s and low 80s with more rain in the forecast. Again, the potential for fireblight will be high throughout the week. Growers should remember that the fireblight model on Enviroweather is an hourly accumulation rather than a daily accumulation; as a result, the model can change rapidly. Additionally, if temperatures are particularly high (80s), the model output can show the EIP up and over 100 in one day, but our research shows that we can get two days of activity out of our antibiotics. Therefore, growers should monitor the fireblight model closely, but be aware that they will have two days of activity from their fireblight spray before they will need reapplication.

2015		Temperature(F)			Rain		EIP for Biofix Date: (Bloom or spray date)												
Day	Date	Max	Min	Avg	in.	Chance of rain	5/20	5/21	5/22	5/23	5/24	5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1
Thursday	5/21	64.2	40.5	52.3	0	--	0	0											
Friday	5/22	56.9	35.1	46	0	--	0	0	0										
Saturday	5/23	73.1	39.8	56.5	0	--	23	23	23	23									
Sunday	5/24	77.5	55.8	66.6	0.54	--	49	49	49	49	26								
Monday	5/25	74.2	55.7	64.9	1.06	--	87	87	87	87	64	38							
Today's data:																			
Note: Last time reported by station is (1:30-1:35PM)																			
Tuesday	5/26	Forecast: 79	Actual (2:35-2:40AM): 61.2	70.1	0.06	100%	161	161	161	161	138	112	74						
Forecast Data																			
Wednesday	5/27	66	63	64.5	--	59%	138	138	138	138	138	112	74	0					
Thursday	5/28	80	51	65.5	--	17%	135	135	135	135	135	135	135	62	62				
Friday	5/29	80	62	71	--	61%	148	148	148	148	148	148	148	148	86				
Saturday	5/30	54	46	50	--	89%	98	98	98	98	98	98	98	98	98	57	0		
Sunday	5/31	65	39	52	--	11%	98	98	98	98	98	98	98	98	98	57	0	0	
Monday	6/1	75	44	59.5	--	13%	123	123	123	123	123	123	123	123	123	82	25	25	25

Effectively Controlling Plum Curculio in Stone and Pome Fruits

Growers have many options for plum curculio control but all have different modes of action

John Wise, Nikki Rothwell, Mark Whalon, and Emily Pochubay

The plum curculio is a key early season pest on pome and stone fruits. There are many insecticides available for control of the plum curculio, but their performance characteristics vary greatly compared to our traditional broad-spectrum chemistries. These conventional insecticides, such as organophosphates and pyrethroids, work primarily as lethal contact

poisons on plum curculio adults in the tree canopy. Avaunt also works primarily by lethal activity, but ingestion is the important means for delivering the poison. Neonicotinoids are highly lethal to plum curculio via contact for the first several days after application, but as these systemic compounds move into plant tissue, they protect fruit from plum curculio injury via their oviposition (egg-laying) deterrence and anti-feedant modes of activity. Neonicotinoids and OP's can also be used as rescue treatments because they have a curative action that can kill eggs and larvae that are already present in the fruit.

Voliam flexi can be used for plum curculio control, but only the neonicotinoid (Actara) component will be effective against PC. Also, growers should remember that 4.5 to 5.5 oz of Actara is the recommended rate for plum curculio control, and Voliam flexi is labeled at 4-7oz; growers should be sure to apply an adequate amount of Voliam flexi to meet these recommended rates. Leverage (imidacloprid + cyfluthrin) and Voliam Xpress (Chlorantraniliprole + Lambda-cyhalothrin) are other pre-mix materials labeled for PC control. For organic growers, Surround WP can reduce plum curculio injury to fruit if applied to attain a heavy coating on the tree canopy; this kaolin clay product works as a plum curculio repellent. Building up and maintaining several coats of the clay on fruit as the fruit continues to grow is key to successful use of this product.

The following table is designed to summarize several key variables that can help growers determine how to optimize the performance of various insecticides for Integrated Pest Management (IPM) programs. Several other compounds, like Rimon, Esteem and Delegate, are commonly used in tree fruit pest management programs and have limited activity on plum curculio worth noting. Rimon, when targeted to control obliquebanded leafroller or codling moth at petal fall, will effectively sterilize plum curculio eggs when adults are exposed to residues in the tree canopy. These sub-lethal effects will not prevent injury to fruit from adults, but will result in nonviable plum curculio eggs, thus no live larvae. Delegate, when ingested by plum curculio adults will cause moderate levels of mortality. Esteem, when used approximately two weeks post-harvest in cherries (San Jose scale crawler timing) will reduce female plum curculio overwintering viability. However, Rimon, Esteem and Delegate are NOT labeled for stand-alone plum curculio control, but when used in pest management programs may contribute to overall plum curculio population management.

Optimal timing and order selection of insecticides for plum curculio management is based on matching the performance characteristics of each chemistry with plum curculio life-cycle development and tree phenology (Table 1). Because organophosphates and pyrethroid insecticides are contact poisons, they can be used as early as petal fall to knock beetles out of the tree canopy. However, we do caution the use of pyrethroids as they are toxic to mite predators. Plum curculio adults feed on tree parts during bloom and petal fall, so Avaunt can be used at this petal fall timing. The performance of neonicotinoids is optimized when sprays are made after fruit set (pome fruits) or shuck-split (stone fruits), so that fruit and foliage are both covered. Surround will not work unless the tree and fruit are completely covered, so multiple sprays are needed on the tree prior to plum curculio oviposition activity. If plum curculio infestation occurs and a rescue treatment is needed, organophosphates and

neonicotinoids can provide curative action up to two weeks after plum curculio infestation, although in some cases dead cadavers can still be found in fruit.

Control Materials for Plum Curculio

Compounds ²	Chemical Class / Activity	Crop	Rate	Crop Stage and Initial Control Timing (DD ₅₀)
Imidan 70W**	Organophosphate	Pome fruit	3 lb	Petal fall (approx. 250 DD)
	Lethal via contact	Stone fruit	2.125 lb	Petal fall (approx. 175 DD)
Actara 25WG**	Neonicotinoid	Pome fruit	4½ oz	Petal fall + 3-5 days (approx. 300 DD)
	Lethal, Antifeedant and Curative	Stone fruit	4½ oz	Shuck-off (approx. 250 DD)
Calypso 480SC**	Neonicotinoid	Pome fruit	4 oz	Petal fall + 3-5 days (approx. 300 DD)
	Lethal, Antifeedant and Curative	Stone fruit	4 oz	Shuck-off (approx. 250 DD)
Assail 30SG**	Neonicotinoid	Pome fruit	6 oz	Petal fall + 3-5 days (approx. 300 DD)
	Lethal, Antifeedant and Curative	Stone fruit		Shuck-off (approx. 250 DD)
Belay 2.13SC**	Neonicotinoid	Pome fruit	6 oz	Petal fall + 3-5 days (approx. 300 DD)
	Lethal, Antifeedant and Curative	Peach		Shuck-off (approx. 250 DD)
Delegate 25WG*	Spinosyn	Pome fruit ¹	6 oz	Petal fall (approx. 250 DD)
	Lethal via ingestion	Stone fruit ¹		Petal fall (approx. 175 DD)
Avaunt 30WG	Oxadiazine	Pome fruit ¹	5 oz	Petal fall (approx. 250 DD)
	Lethal via ingestion	Stone fruit ¹		Petal fall (approx. 175 DD)
Surround WP	Particle film Repellent	Pome & Stone Fruits	Usually 16 lb by First Cover	Multiple applications starting before bloom to achieve complete coverage
Pyrethroids	Asana, Warrior, Baythroid	Pome fruit	Variable	Petal fall (approx. 250 DD)
	Lethal, repellent	Stone fruit		Petal fall (approx. 175 DD)
Rimon* (targeting codling moth, OBLR)	IGR Egg sterilization	Pome fruit Stone fruit	20-40 oz	Petal fall (approx. 250 DD)
Esteem* (targeting	IGR	Pome fruit	5 oz	Post-harvest

scale)	Adult sterilization	Stone fruit		
Leverage 2.7F	Pyrethroid + Neonicitinoid	Pome fruit	4.4-5.1 oz	Petal fall (approx. 250 DD)
	Lethal, Repellent, Curative	Stone fruit	4.5-5.1 oz	Shuck-off (approx. 250 DD)
Voliam Xpress	Pyrethroid + Diamide	Pome fruit	6-12 oz	Petal fall (approx. 250 DD)
	Lethal, Repellent	Stone fruit	6-12 oz	Petal fall (approx. 175 DD)
Voliam flexi	Neonicotinoid + Diamide	Pome fruit	6-7 oz	Petal fall (approx. 250 DD)
	Lethal, Antifeedant, Curative	Stone fruit	6-7 oz	Shuck-off (approx. 250 DD)

*Not labeled for plum curculio (or just for PC suppression)

**Have curative properties that can kill eggs and larvae that are already present in the fruit.

Modified from John Wise, Nikki Rothwell, David Epstein, Larry Gut, and Mark Whalon, 2009.

¹Avaunt should be used first when in a program combination with a neonicotinoid. Avaunt's lethal activity on PC is enhanced with adult ingestion. Neonicotinoids are antifeedants, which if applied first may reduce Avaunt's primary mode of activity. For a complete list of insecticides registered and/or recommended for PC control, see the 2015 MSU Fruit Management Guide (MSUE bulletin E-154).

Spraying Promalin on Frost Damaged Apples

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

Growers are currently assessing the frost damage from the cold overnight temperatures on 20-21 May. As of now, there appears to be damage in many apple blocks, but the damage depends on the stage of development in each block. The freezing temperatures impacted many open blossoms, and the reproductive parts appear black. On the other hand, some of the reproductive parts on other open flowers have a brown tip but the tissue is still green inside the blossom. Flowers that opened on 21 May or after appear to have healthy reproductive parts. In this situation, growers will be challenged to assess whether they should apply Promalin to frosted blocks.

Promalin[®] is a mixture of naturally occurring plant growth regulators (PGR), most specifically a gibberellic acid 4 and 7 (GA4+7), which cause cell enlargement. 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 will help set fruit on frost-damaged bloom.

Much of the research recommends applying Promalin within 24 hours of the frost event. However, our fine colleague 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 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 will provide little to no benefit. Therefore, growers must assess their crop and determine the stage of development prior to applying Promalin. The application can be made up to four days from the 21 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 be used 1 pt/acre. As with most PGRs, temperatures should be warm (65+F) before application. However, if temperatures never warm, then the Promalin needs to be applied within the 4 days even under cold temperatures. Growers should not wait until the fourth day, even if this day is the warmest day. For example, growers should spray soon even if the 2nd and third days are in the 60s and the 4th day is 80s. 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 this season, the sooner the application can be made, the more optimistic we are about setting fruit. We are moving into a period of warmer weather this weekend, which will be the most optimal time to apply Promalin. In addition to setting fruit in frosty conditions, Promalin 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.

As this time is critical time to apply various PGR's for different purposes i.e. Apogee for vegetative growth control and fire blight suppression and various PGR thinners and also Promalin for fruitlet growth. There are label warnings against combining these PGRs together. Now is the time to apply these PGRs, and it is recommended to apply 2 to 4 days before or after the thinner. Additionally, the daytime temperatures are predicted to be warm in the next five days, so we may catch a break for applying all of these PGRs. Once a grower confirms the level of frost damage in an orchard, Promalin should be the first application, again which should go on as soon as possible. Apogee should be applied at least two days after the Promalin application; Apogee will be especially important if we have a light crop, as we will have increased vegetative growth in the absence of a big fruit load. The rate of the first Apogee spray may need to be increased if the crop is particularly light or a second option would be to apply the 2nd spray at a greater rate. Lastly, thinning sprays should be made after the Apogee application, and thinners work much better under warm conditions, whereas Apogee can be applied under cold temperatures. As we have been encouraging growers to use precision thinning techniques and 'nibbling' away at the crop, we should wait and better determine the crop load before thinning. Unfortunately, the weather may have thinned our crop for us, so we should be cautious with our thinning approach. In most cases, orchards are easier to thin where Promalin has been applied. Promalin increases fruitset and makes all fruitlets competitive for energy, thus greater response to thinners or stress. Frost damaged trees may also have a greater set in the tops of trees.

Honey Bee Losses

Total Losses of Managed Honey Bee Colonies in the U.S. were "... 23.1 percent for the 2014-2015 winter but summer losses exceeded winter numbers for the first time, making annual losses for the year 42.1 percent, ... up from 34.2 percent for 2013-2014 ...", according to preliminary results of the annual survey

conducted by the Bee Informed Partnership, USDA, and the Apiary Inspectors of America which notes that "... this represents the second highest annual loss recorded to date ... As in previous years, colony losses were not consistent across the country, with annual losses exceeding 60 percent in several states, while Hawaii reported the lowest total annual colony loss of about 14 percent ... About two-thirds of the beekeepers responding to the survey reported losses greater than the 18.7 percent level that beekeepers reported is economically acceptable ..."

Document Title: The title of the May 13, 2015 USDA ARS News Release is "Bee Survey: Lower Winter Losses, Higher Summer Losses, Increased Total Annual Losses"

Organization: USDA Agricultural Research Service Information Staff
Bee Informed Partnership

Source: May 13, 2015 USDA ARS News Release
May 13, 2015 Bee Informed Partnership annual survey, titled "Colony Loss 2014-2015: Preliminary Results"

Web site: The May 13, 2015 USDA ARS News Release is posted at
<http://www.ars.usda.gov/is/pr/2015/150513.htm>

Important Crop Insurance Deadline Near for Illinois, Indiana, Michigan, and Ohio Producers

Producers Need to Certify Conservation Compliance by June 1

The 2014 Farm Bill requires insureds to comply with highly erodible land conservation (HELC) and wetland conservation (WC) provisions to be eligible for crop insurance premium subsidies beginning with the 2016 reinsurance year. In 2014, FCIC paid approximately 62% of the producers premium cost. Producers that are not in compliance with WC and HELC provisions could see their premium cost double. **Simply stated, by June 1, 2015, insureds must have an AD-1026 [Highly Erodible Land Conservation and Wetland Conservation Certification Form](#) on file with FSA in the same name and taxpayer identification number you use when you purchase your crop insurance policy to retain the premium subsidy.** To accommodate growers with only orchard, bush and vine crops, the new AD-1026 doesn't require the establishment of detailed farm records with FSA, only the full tax identification number to establish and record compliance is met. To ensure producers are aware of the change, the Risk Management Agency sent letters in November and again in April to producers that have crop insurance, but FSA records indicate no AD-1026 is on file.

It is also important to note that **insureds with catastrophic coverage (CAT) are still required to sign an AD-1026 to be eligible for the premium subsidy.** Even though they only pay an administrative fee, there is a premium associated with CAT coverage and the producer will be responsible for the full premium if they don't comply with Conservation Compliance.

To continue to be eligible for premium subsidy on any Federal crop insurance policy, including specialty crops, livestock, and pasture, a form AD-1026 must be filed with FSA by June 1, 2015. If you do not have form AD-1026 on file with FSA by June 1, 2015, or are not in compliance with the requirements as

outlined on the form, you will not be eligible for premium subsidy on any Federal crop insurance policy that has a sales closing date on or after July 1, 2015. This means you may still be eligible for insurance but you will have to pay the full premium.

You can find your local FSA office at <http://offices.sc.egov.usda.gov/locator/app>. Additional information about Federal crop insurance and the HELC and WC provisions is available at the RMA website at www.rma.usda.gov and NRCS's [Conservation Compliance webpage](#)

HOUSEHOLD HAZARDOUS WASTE AND PESTICIDE COLLECTIONS:

[Leelanau County](#) : upcoming collection on May 30

Grand Traverse County : upcoming collection May 28, 2015

**Reservations are required; every county has different requirements for materials they will take back.

Information on Grand Traverse County Hazardous Waste and Pesticide Collection:

GRAND TRAVERSE COUNTY RESOURCE RECOVERY DEPARTMENT (RecycleSmart) will conduct a Household Hazardous Waste (HHW) & Pesticide collection on Thursday, May 28, 2015.

The online scheduling system is a convenient and the recommended tool to secure an appointment. An appointment is required and can be made at www.RecycleSmart.info or by calling the RecycleSmart Hotline at 941.5555.

This service is provided to Grand Traverse County residents at no cost, (up to 150 lbs., \$1.30 lb. thereafter). Accepted material includes cleaning products, pesticides, mercury, moth balls, motor oil, pool chemicals, oil based paint, latex paint, CFL bulbs and more...

Latex paint is accepted.

For more information visit www.RecycleSmart.info or call the RecycleSmart Hotline at 941.5555

2015 Tree Fruit IPM Update Series

Emily Pochubay and Nikki Rothwell
Michigan State University Extension

Tree Fruit IPM Updates beginning the first week of May through mid-July (as needed) will highlight management of the season's 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. Workshops will be held weekly in Leelanau and Grand Traverse counties and bi-weekly in Antrim and Benzie Counties. Tree fruit growers 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. Certified crop advisor continued education credits (two per meeting) and pesticide recertification credits (two per meeting) 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.

IPM Update Dates, Times, and Locations

Leelanau County

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

Dates: May: 26; June: 2, 9, 16, 23, 30; July: 14

Time: 12PM – 2PM

Grand Traverse County

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

Dates: May: 26; June: 2, 9, 16, 23, 30; July: 14

Time: 3PM – 5PM

Antrim County

Location: Jack White Farms, 10877 US-31, Williamsburg (is not correct in Google Maps) *North of Camelot Inn and South of Elk Rapids on the southeast side of US-31*

May: June: 3, 17; July: 1, 15

Time: 10AM – 12PM

Benzie County

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

May: June: 3, 17; July: 1, 15

Time: 2PM – 4PM

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 is available at the new cherry website:

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

Information on apples:

<http://apples.msu.edu/>

Fruit CAT Alert Reports has moved to MSU News
<http://news.msue.msu.edu>