April 20, 2010 | Volume 14 | Issue 6

Ohio Fruit ICM News

I assume much of the fruit crops escaped freeze damage even though we had low's in central Ohio as low as 27 degrees F this week. Dry weather has aided disease control efforts. Let's keep our fingers crossed that we do not get a surprise freeze over the next three weeks.

Inside This Issue

From Ohio Crop Weather Summary

PERCENT PROGRESS OF CROPS FOR THE WEEK ENDING SUNDAY, APRIL 18

Crop	2010	2009	2005-2009 Average	Previous Week Ohio	Previous Week U.S.
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Apples in Green Tip or Beyond	78	53	59	50	NA
Apples in Full Bloom	35	0	7	7	NA
Peaches in Green Tip or Beyond	75	48	58	44	NA
Peaches in Full Bloom	45	0	15	17	NA

WEATHER SUMMARY FOR THE WEEK ENDING SUNDAY, APRIL 18

Region	Temperature		Precipitation				Growing Degree Days [1]			
	Last Week	Dev.	Last Week	Dev.	Since Apr.1	Dev.	Last Week	Dev.	Since Apr.1	Dev.
	Degrees	*Degrees*	*Inches*	*Inches*	*Inches*	*Inches*	*Days*	*Days*	*Days*	*Days*
Northwest	54.0	4.9	0.08	-0.65	1.59	-0.40	52	12	175	96
North Central	53.8	4.8	0.19	-0.58	1.05	-1.01	51	12	186	110
Northeast	51.7	3.9	0.36	-0.48	0.69	-1.54	49	11	184	110
West Central	55.8	5.2	0.03	-0.82	1.19	-1.05	64	19	196	103
Central	55.3	4.1	0.14	-0.69	0.80	-1.45	66	17	205	103
Central Hills	53.7	4.2	0.22	-0.59	0.58	-1.68	53	10	194	106
Northeast Hills	51.8	2.1	0.35	-0.44	0.61	-1.60	51	6	191	98
Southwest	58.4	6.1	0.09	-0.81	1.11	-1.32	81	28	226	114
South Central	57.9	4.9	0.26	-0.48	0.74	-1.25	79	19	238	107
Southeast	54.4	2.9	0.22	-0.56	0.54	-1.61	66	13	218	105
STATE	**54.8**	**4.3**	**0.18**	**-0.62**	**0.91**	**-1.28**	**62**	**15**	**202**	**105**

[1] Modified Growing degree days, base 50 - ceiling 86

If you have articles for the newsletter that you would like to have considered to be included in upcoming issues, please submit to either Howard Siegrist at siegrist.1@cfaes.osu.edu or Melissa Swearingen at swearingen.34@cfaes.osu.edu

THE OHIO STATE UNIVERSITY EXTENSION

EMPOWERMENT THROUGH EDUCATION

Blueberry Insect Management Overview for 2010

Rufus Isaacs, Entomology
Michigan State University Extension

As blueberry growers prepare for pollination and for keeping their berries free of insect pests during the 2010 growing season, it is a good time to review the available insect management options, consider integrating some new tools into your integrated pest management (IPM) program, and make plans for the coming season.

If you missed the various MSU Extension talks this winter at the Great Lakes Expo or Southwest Michigan Horticulture Days, or even if you attended these programs, you should make plans to attend one of the four in-season blueberry meetings organized by MSU Extension this year. These meetings are a chance to update growers on the new developments in blueberry culture, report on our research trials, and provide timely updates on recent crop scouting. The meetings are free and open to all who want to attend.

This article is a chance to provide some food for thought about your 2010 insect management program based on our research projects, demonstration trials at farms, and discussions with growers and extension colleagues.

Scouting

This is an essential component of blueberry production, so you know what is in your field during the period from now until harvest. Investing in a knowledgeable pair of eyes who can visit your fields each week to look for various potential problem issues (insect, diseases, and weeds) makes good business sense to protect your investment. Whether you do it yourself, or have a scout from a cooperative visit your farm, hire an independent scout, or work with a consultant, this is time or money well spent. To help with scouting, MSU has developed a Pocket Blueberry Scouting Guide that is available in both English (E2928) and Spanish (E2928SP), and we have the same information posted online at www.blueberries.msu.edu. We will be scouting blueberry fields this summer in a few locations in southwest Michigan and will report the findings in this newsletter each week. But, there's no substitute for your own information from your own fields.

Spotted wing drosophila

If you haven't heard about spotted wing drosophila yet, you'll be hearing about it this summer because we want to be vigilant against this invasive pest. This small fly infests many fruit crops (including blueberries), and it is now in west coast fruit production regions from California to British Columbia. It has also recently been detected in Florida. The fly is different from our typical vinegar flies because it can lay eggs in intact fruit. We have not seen it in Michigan yet, but there has not been focused monitoring. That will change this month with the establishment of a multi-agency group focused on early detection. If this fly is detected, an industry-wide effort will be needed to ensure its impact is minimized.

Guthion update

The EPA's phaseout plan for Guthion continues to reduce the availability of this highly effective pest management tool. Aerial application of Guthion is now banned in blueberry. Growers can apply up to a seasonal maximum of 1.5 pounds of product/acre for the next three seasons, but Guthion will be banned completely by the end of September 2012. This rate restriction effectively means that growers have one application of Guthion remaining in their toolbox, because rates lower than 1 pound/acre do not provide the longevity of residual activity growers expect in their fruitworm program. The REI remains at seven days, with the PHI of seven days in commercial farms and up to 30 days re-entry interval for U-pick fields.

If Guthion is still a cornerstone of your insect IPM program, there are effective alternatives available that should be considered for 2010. The next Fruit CAT Alert will contain a fruitworm management article to cover this topic in detail.

Insecticides – many options to fit into your IPM program

The blueberry industry has a number of established and effective broad-spectrum insecticides for use against key pests including Guthion, Imidan, Lannate, Sevin, etc. Grower's IPM programs should also include rotating to new chemical classes, using selective insecticides to reduce impacts on natural enemies, and minimizing impacts on pollinators. With the blueberry industry receiving many new insecticides in recent years, including Intrepid, Delegate, Assail, Asana, Danitol, Mustang Max, Provado, and Actara, growers now have a range of insecticides with different pest spectrums and properties that can provide effective insect control. Each of these has a fit for components of the pest spectrum in Michigan blueberries, and a grower's decision of which of these to use will be guided by efficacy, spectrum of activity, price, and resistance management considerations.

Continued on Page 3

Continued from page 2 : Blueberry Insect Management Overview for 2010

Addressing the recently-registered insecticides in turn…

Intrepid is an insect growth regulator that has proved to be a highly-effective insecticide for fruitworm control. Growers who applied Intrepid in 2009 using the MSU degree day model for fruitworms (available through www.enviroweather.msu.edu) reported very low levels of fruitworm infestation. Intrepid is safe to bees allowing application during bloom when fruitworm egglaying starts, plus it is soft on beneficials. We have been testing programs with commercial growers who apply Intrepid during bloom then switch to Delegate after bloom for the next fruitworm spray (also controls maggot), or switch to Assail for control of fruitworms, maggot, and aphids. These programs are providing equivalent control to an Intrepid-Guthion program, or an Intrepid-Asana program. Asana has provided excellent control of fruitworms and Japanese beetle, and gives good control of blueberry maggot. The 14-day PHI for this product can make it challenging to fit in the postbloom timing for fruitworm control, especially in early harvested cultivars. Growers now have two other pyrethroids available: Danitol and Mustang Max. These both provide high levels of control of key insect pests similar to Asana, but with much shorter PHIs. Pyrethroids are toxic to natural enemies and will not provide long-term control because aphid populations can rebound in the absence of biological control. Aphid control, if needed, is best achieved using members of the neonicotinoid chemical class such as Assail, Provado, and Actara. Each of these products is highly effective on aphids, with a broader spectrum of control that can help control other pests at the same time. Assail also provides fruitworm and maggot control, and Provado also controls maggot and Japanese beetle. The Actara label has aphids and Japanese beetle listed.

A new registration for 2010 is Avaunt 30WDG insecticide now labeled for fruitworm and plum curculio control in blueberry. This provides a new chemical class, the oxadiazines, with activity at the sodium channel that leads to insect paralysis and death. It is considered "reduced-risk" by the EPA, with a 12-hour REI and seven-day PHI. Rates are up to 6 oz/acre. Do not apply during bloom.

Blueberry gall wasp

In the past few years, grower reports of problems with blueberry gall wasp have increased. Some Jersey fields were hit hard by gall wasp in 2009, and this was even in fields where growers applied Assail immediately pre-bloom to try and stop the wasps infecting the shoots. Clearly, we need a new approach and my lab will be working this summer on some examination of the biology and control of gall wasp. We hope to have some clearer answers for you later this year.

Preparing for pollination

Make sure you are getting strong hives for your pollination rental fee by checking colonies with the beekeeper. This is an important part of the pollination puzzle because bees from weak hives do not work hard and this may reduce the level of yield you can achieve if you are stocking fields based only on the number of hives. Bumble bees are another option or can be used in combination with honey bees, but large orders for those need to be placed in January and February to guarantee bloom-time delivery. Still, you may consider calling Koppert Biologicals near Detroit to enquire about availability.

If you are interested in learning more about beekeeping and about inspecting bee hives for their strength, the Kalamazoo Bee Club will host a meeting this week on Thursday (April 15) titled "How to Inspect Your Hives." This will be held from 7:00 to 9:00 PM at the Comstock Community Center. The program will be taught by Dr. Larry Conner, a highly knowledgeable "bee-guy". The meeting is free and you can learn more about it at www.michiganbeekeepers.com/ .

Best wishes for a productive, profitable, and pest-free season!

Upcoming Events:

May 10-12: Ohio Wine Competition. Contact Todd Steiner at Steiner.4@osu.edu or 330-263-3881**.**
Source: Ohio Grape-Wine Electronic Newsletter, March 29, 2010 Issue

December 7-9, 2010. *Great Lakes Fruit Vegetable and Farm Market EXPO*, DeVos Place Convention Center, Grand Rapids, Michigan. For more information: http://www.glexpo.com .
Source: New York Berry News: Currant Events (Cornell University

Bacterial Spot Rating of Peach Cultivars at UKREC, Princeton, KY

Dwight Wolfe, Agriculture Research Specialist, Horticulture
University of Kentucky Cooperative Extension Service

Bacterial spot can be a big problem on susceptible peach cultivars, especially during years with wet rainy growing seasons like the one we have had this year. The main symptom is the "shot hole" appearance of the leaves that then turn yellow and fall prematurely. Many of the newer cultivars have varying degrees of resistance to this disease. Cultivars being grown at UKREC, Princeton, KY, were rated this past July, on a scale from 1 to 5, with 1 representing none or just a few leaves infected to 5 representing 50% or greater of the leaves infected. The majority of these cultivars showed a fair amount of resistance to bacterial spot in our orchard. The cultivars and their ratings are listed below in Table 1. More information of this and other peach fruit disease can be found in, Peach Fruit Diseases, by John Hartman, Plant Pathology Fact Sheet: PPFS-FR-T-09 .

Table 1. Bacterial Spot Rating of Peach Cultivars Currently Being Grown at UKREC, Princeton, KY.

Cultivar	Flesh Color	Bacterial Spot Rating[1]
Allstar ® (FA80 CV) PP#10549	Yellow	1.0
Blushingstar ® (FA18 CV) PP#10554	White	1.0
Contender	Yellow	1.0
Crimson Rocket PP#15216	Yellow	1.0
Encore ® NJ 260 PP#4572	Yellow	1.0
Glowingstar ® (FA17 CV) PP#10556	Yellow	1.0
Klondike White PP#10872	White	1.0
PF 24C-Cold Hardy PP#15659	Yellow	1.0
PF 25 Flamin' Fury ® PP#9940	Yellow	1.0
PF 27A Flamin' Fury ® PP#9939	Yellow	1.0
Sweet-N-Up PP#15063	Yellow	1.0
Cresthaven	Yellow	1.5
John Boy II TM (R1T2 Ctv.) PP#11591	Yellow	1.5
John Boy TM (Clendening Strain) PP#6827	Yellow	1.5
PF 1 Flamin' Fury(R) PP#9129	White	1.5
Coralstar ® (FA59 CV) PP#10547	Yellow	2.0
Ernie's Choice NJ 275	Yellow	2.0
Flat Wonderful `H28-52-96270` PP#16836	White	2.0
Laurol PP#8558	Yellow	2.0
PF 15A Flamin' Fury ® PP#8978	Yellow	2.0
PF 17 Flamin' Fury ® PP#8169	Yellow	2.0
PF 20-007 Flamin' Fury ® PP#12331	Yellow	2.0
PF 35-007 Flamin' Fury ® PP#14368	Yellow	2.0
PF 5 B Flamin' Fury(R) PP#9850	Yellow	2.0
PF 7 Flamin' Fury ® PP#10490	Yellow	2.0
PF Lucky 13 PP#14384	Yellow	2.0
PF Lucky 21 Flamin' Fury ® PP#15497	Yellow	2.0
Redhaven	Yellow	2.0
RedStar® TM PP10546*	Yellow	2.0
Summer Breeze TM (HB110 Cltv.) PP#10749	Yellow	2.0
White Lady PP#5821	White	2.0
Spring Snow PP#9883	White	2.5
Galaxy	White	3.0
Reliance Yellow	3.0	
TruGold PVP#200400055	Yellow	3.0
Snow Giant PP#8085	White	3.0
Snowbrite PP#8195	White	3.0
Sugar May PP#8034	White	3.0
Sugar Giant PP#8442	White	3.0

[1] Rating is from 1 to 5 with 1=none to a few leaves showing systems, 5=more than half of the leaves showing symptoms of bacterial spot.

Black Knot on Plums

Dave Rosenberger, Plant Pathology
Cornell University and Cornell Cooperative Extension

Plum growers should remember that black knot can quickly devastate plum trees that are not protected with fungicides during the critical period between white bud and the second cover spray. The most effective fungicide is chlorothalonil (Bravo and generics), but fungicides alone will not provide adequate control if black knots from previous years are left in the trees. Thus, the first step in controlling black knot is to remove all visible knots during winter pruning. Knots that are pruned out of trees should be burned or composted well away from the orchard. Knots left on the ground or in orchard perimeters can still discharge spores that will be blown into orchards.

The danger posed by leaving pruned-out black knots near an orchard became painfully evident in our own research plots last year. We had severely infected plum trees left from a recent fungicide trial, but we dutifully pruned out all of the knots before the start of the growing season. We dumped these knots in the corner of a woodlot about 50 feet away from an open field where we were planting new plum trees later that spring. Because we had removed the knots and presumably had no significant source of inoculum, I ignored early-season fungicide sprays in my new planting. My errors became apparent by September of last year when black knots started appearing in the new growth of the trees we had just planted. I erred twice, first by failing to burn the black knots and then by failing to protect my newly planted trees with chlorothalonil. Many of those trees had to be pruned back severely to get rid of the black knots, and the affected trees will now take an extra year to come into production.

Figure 1. Black knot on a Stanley plum

Some wild *Prunus* species can harbor black knots and produce spores that can blow into adjacent orchards. Chokecherry bushes (*Prunus virginianae*) are particularly susceptible. Hedgerows in the vicinity of new plantings should be scouted in late winter or spring, and any black knots in the hedgerows should also be removed and burned before the new planting is established.

Black knot is caused by the fungus *Apiosporina morbosa*, known also as *Dibotryon morbosum*. Ascospores from the shiny black knots on trees (Fig. 1) are released during rain periods in spring and infect new growth on trees. Growing spurs can become infected, but most infections occur on growing terminal shoots. Some ascospores may be released soon after plum trees reach bud break, but most are released between white bud and one week after petal fall. There is no known secondary cycle for black knot, so the disease cannot spread after the supply of ascospores is exhausted in late spring or early summer.

Figure 2. Twig swellings and immature black knots as they often appear the first autumn following infection.

Although infections occur during spring, they do not become evident until many weeks later. Sometimes infections develop into knots that can be recognized as such by September (Fig. 2). Those knots will turn black and produce ascospores the following year. In many cases, however, the only evidence of infection in autumn is a slight swelling of the twigs. Those swellings turn into recognizable knots the following growing season and then produce ascospores two years after the initial infections occurred. Individual knots produce spores for only one season, but tissue just below existing knots can erupt with new extensions of the original black knots, and that new tissue can produce knots the following year.

Plum cultivars vary in susceptibility to black knot. Most European plum varieties are quite susceptible, whereas Asian plums tend to be more resistant.

As noted earlier, chlorothalonil is far more effective against black knot than any other fungicide. Some chlorothalonil labels specify that sprays can be applied no closer than 10 days apart, but sprays applied at that interval will probably be adequate for protecting trees from black knot. Chlorothalonil cannot be used after shuck split, so it is important to utilize the shuck split application so as to provide extended protection against any black knot spores that might be released shortly after shuck split. In a recent study, we found that both Indar and Pristine, when applied during bloom to control brown rot, also suppressed black knot. However, these products were less effective than chlorothalonil.

Farmers Can Get Loans for Cold Storage

Article from Kentucky Fruit Facts Newsletter
University of Kentucky Cooperative Extension Service

The USDA's Farm Storage Facility Loan (FSFL) program has been amended to allow producers to build cold storage facilities to store their fresh fruits and vegetables.

To be eligible, cold storage facilities must have a useful life of 15 years and include:

- •New structures suitable for a cold storage facility
- •New walk-in prefabricated permanently installed coolers suitable for storing fresh fruits and vegetables
- •New permanently affixed cooling, circulating and monitoring equipment;
- •Electrical equipment integral to the proper operation of a cold storage facility; and must be
- •An addition or modification to an existing storage facility

USDA will not make cold storage facility loans for portable structures, portable handling and cooling equipment, used or pre-owned structures or cooling equipment, or structures not suitable for fresh fruits and vegetables cold storage.

The maximum loan amount for a Farm Storage Facility loan is $500,000 per loan. One partial disbursement of up to half the anticipated total cost is available when that portion of the structure has been completed. The final disbursement will be made when the entire structure has been completed and inspected by a USDA representative.

All loans require a down payment of at least 15 percent. Applications must be approved before construction can begin. Loan terms of seven, 10 or 12 years are available depending on the amount of the loan. Loan applications should be submitted to the local county office that maintains the records of the farm or farms to which the application applies.

For more information on this program, contact you local Farm Service Agency office or http://www.fsa.usda.gov .

Get the Latest Strawberry Production Techniques at May 20 Workshop

Brad Bergefurd, Horticulturalist
Ohio State University Extension

As Ohio consumers turn to fresh, locally grown fruits, like strawberries, more farmers are interested in learning what it takes to meet growing demand.

Ohio State University South Centers at Piketon will be offering a Strawberry Production Workshop, May 20, from 6 p.m. until 8 p.m. to provide the latest in production management techniques. Registration is $5 per person.

Ohio State University Extension Educator, Brad Bergefurd, will compare various production methods such as high tunnel, plasticulture and matted row, and how these methods can help to extend the growing season. Attendees will also learn disease and insect management practices, drip irrigation solutions, and the importance of pollination.

The workshop is designed not only for the backyard fruit grower, but also the commercial grower. Last year, Ohio producers harvested 710 acres of strawberries, valued at $5.7 million, according to the U.S. Department of Agriculture.

The workshop is part of OSU South Center's Horticulture Business Training Series. For more information on the workshop or to register, contact Julie Strawser-Moose at (740) 289-2071, ext. 223, or e-mail strawser.35@cfaes.osu.edu. Walk-ins are welcome.

Editor: Howard J. Siegrist, Extension Educator, Ohio State University – Licking County
771 E. Main Street, Suite 103, Newark, OH 43055. Phone: 740-670-5315
Email address: siegrist.1@cfaes.osu.edu

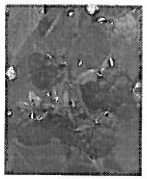
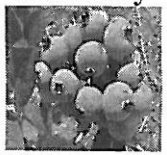
We gratefully acknowledge the continued help and financial support of our local county commissioners. We appreciate their input and participation in our programming efforts.

Central Ohio Poison Control Number

(800) 222-1222
TTY # is (614) 228-2272

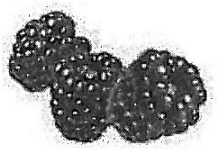
Commercial Berry Production Harvest Dates

In a "normal" year, dates below are for southern Ohio, 7-10 days later for central Ohio, 10-17 days later for northern Ohio

	Plasticulture	Early	Early/Middle	Middle	Middle/Late	Late
Strawberry  *Southern Ohio Mid-May - June*	Camarosa Chandler Sweet Charlie Starting Mid-May	Earliglow Annapolis Cavendish Memorial Day weekend	Honeoye Mira Delmarvel Mesabi Northeaster 1st week of June	Darselect Allstar Marmalada 10-14 days after early varieties	Jewel Winona 14-17 days after early varieties	Idea Lateglow 17-20 days after early varieties
Black Raspberry  *Mid-June – Mid-July*		Bristol Jewel Starting mid-June		Mac Black Cumberland 10-14 days after early varieties		Lowden 14-17 days after early varieties
Summer Red Raspberry  *Late June-July*		Reveille Boyne Prelude Starting late June	Titan Lauren 5-10 days after early varieties	Latham Nova K-81-6 10-15 days after early varieties	Encore 15-20 days after early varieties	
Purple Raspberry  *Last week June-July*				Brandywine Starting late June		Royalty 7-14 days after Brandywine
Blueberry  *Mid-June - August*		Duke Patriot Starting late June		Bluejay Blueray Bluecrop 5-10 days after early varieties		Jersey Elliott 7-14 days after early varieties

Commercial Berry Production Harvest Dates

In a "normal" year, dates below are for southern Ohio, 7-10 days later for central Ohio, 10-17 days later for northern Ohio

	Plasticulture	Early	Early/Middle	Middle	Middle/Late	Late
Blackberry  *Mid-July – Early September*	**Thorny**	Kiowa Shawnee Starting mid-July		Illini Hardy 7-10 days after early varieties		Darrow Prime Ark-45 10-14 days after early varieties
	Thornless	Triple Crown Arapaho Starting mid-late July		Chester 7-14 days after early varieties		
Fall/Everbearing Red Raspberry  *Mid-August – 1st Frost*		Polana Starting mid-August	Autumn Britten Caroline 4-10 days after early varieties	Heritage 14-21 days after early varieties		Josephine 21-28 days after early varieties
Yellow Raspberry  *Mid-August – 1st Frost*			Fall Gold Starting mid-August	Anne Kiwigold 7-14 days after Fall Gold		