

# Ohio Fruit News

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The Ohio State University

## Greetings from Gary

Dear Ohio Fruit Growers,

Happy May to you all!

The weather has been so wacky this year and it is hard to know which month we are in on a given day! Spring frosts have caused major damage to our cherry, peach, and pear crops.

Many of the fruits on peach trees are falling off since they were not properly set.



*Dr. Gary Gao, Editor*

Continued on page 2

## Plasticulture strawberries ready for harvest at OSU South Centers

*By Dr. Gary Gao*

The strawberries in the plasticulture plots in Piketon are ready for harvest. This picture was taken on Friday, April 27.



As you can tell, there are still many green fruits yet.

One "guard row" was not covered with row covers. The berries from that row definitely look misshapen. The berries in the protected rows look quite good so far.

Brad Bergefurd is leading this project. He and research assistant, Thom Harker, will publish results this fall.

### Inside this issue:

Greetings from Gary	1-2
Plasticulture strawberries ready for harvest	1
Cold injury to blackberry flower buds	3
Gooseberries set fruit at OSU South Centers	4
Disease management suggestions for damaged orchards	5-7
OSU Contacts	8-10



## Greetings from Gary

*(continued from page 1)*

The severity of damage to the apple crop varies from one part of the state to the next.

I stopped by the Waterman Farm on the OSU Main Campus on May 1, 2012. Everything looked surprisingly good.

There is an excellent fruit set, and fruits will actually need to be thinned for optimum size and quality. This could be because the farm is in a protected area. According to the OARDC weather data, the daily minimum temperatures only dipped below freezing on April 7<sup>th</sup> (29.7F), 11<sup>th</sup> (30.1F) and 12<sup>th</sup> (30.0F) this year.

At OSU South Centers in Piketon, the fruit crops had some damage. On winegrapes, approximately 5 to 15% of the shoots from the primary buds were killed. These young shoots turned brown initially and are now black. Fortunately, many shoots came out later and are looking good.

The blueberries are still blooming with a lot of blueberries already on the plants. The blueberry cultivar we have is Blueray. Our planting is 16 years old. Only a very small percentage of the blueberry flowers were damaged at the OSU South Centers in Piketon. The center of these flowers turned purplish brown.

Our thornless blackberries look pretty good. I cut a few flowers open and did not see any damage. One blackberry grower reported a 5% flower bud kill. Blackberries are quite sensitive to cold injuries. Those flowers damaged by frosts might look normal outside. However, the center of the unopened flowers turned black.

I get email updates from my friend Mark Longstroth with Michigan State University. Widespread freeze damages have been reported in Michigan. One more freeze occurred on Friday, April 27 after multiple freezes that they experienced early this month. I certainly feel for them!

Below are links to some great videos on evaluating fruit damage thanks to John Obermeyer in the Department of Entomology at Purdue.

If you have information to share with other fruit growers, please email Julie Moose at moose.14@osu.edu

Hope things will be easier from here.

Sincerely,

*Gary Gao*

Small Fruit Extension Specialist and Associate Professor, OSU Extension

### Assessing Spring Freeze Damage Videos

Apples

[http://youtu.be/YcSRg74Hb\\_A](http://youtu.be/YcSRg74Hb_A)

Peaches

<http://youtu.be/DcS2XGAqoFk>

Grapes

<http://youtu.be/INUZu5Bx08M>

Strawberries

[http://youtu.be/F-QoX1C4\\_S0](http://youtu.be/F-QoX1C4_S0)

Blackberries

<http://youtu.be/EyIhvfY2apM>

## Cold injuries to blackberry flower buds

By Dr. Gary Gao

Blackberry flowers can be quite sensitive to cold injuries. The leaves and exterior of the flower buds may look fine. However, the center of the flowers might turn black and die. The damaged stem also exhibits browning in the vascular tissue.

According to Dr. Bruce Bordelon of Purdue University in the April 25, 2012 (Volume 12, Issue 3) issue of Facts for Fancy Fruit, "brambles blackberry and raspberry foliage looks normal following the freeze. However, any flowers that were exposed appear to be dead."

He continues, "Apache, Ouachita, and Choctaw floricanes fruiting blackberries all had flowers exposed and there appears to be a complete loss. Triple Crown and Doyle flowers have not developed yet and may be okay.



*Blackberry shoots with dead vascular tissue from cold injuries*



*Blackberry flowers with dead center*

Heritage and Nova red raspberries only have a few floricanes flowers exposed so they may also have a partial summer crop. Primocane fruiting blackberries and raspberries should not have been affected by these freezes."

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## Gooseberries set fruit at OSU South Centers

*By Dr. Gary Gao*

Gooseberries from our 2010 planting in the research plot at Piketon have set fruit. There was still pretty good pollination despite this "wild ride" of weather conditions in March and April.

Ripe gooseberries can be eaten fresh by themselves, in pies, salads, jams and wine. Although I've never tasted gooseberry pie, I hear it is quite good. If you have a good recipe, please send it to me or Julie. Hopefully we will have enough harvest for a pie or two. Julie and I will do some "serious" taste tests of gooseberry pies and report our findings to you.

If you have significant acreage of gooseberries or currants, I would like to hear from you. Gooseberry fruits tend to sunscald very badly. I think gooseberries will do much better in partial shade or northern exposure. We will cover our gooseberries with shade

cloth this year to see if the fruits will look better since ours are planted in full sun. We'll keep you posted on the results.



*Young gooseberry fruits*



*Young gooseberry fruits with bees*

For more information on  
gooseberry production  
and the trials at OSU  
South Centers, go to  
<http://go.osu.edu/ribes>

## Disease management suggestions for frost-damaged orchards

By Dave Rosenberger, Plant Pathology, Highland; dar22@cornell.edu

*The following is part of an article reprinted from the April 30, 2012 issue of Scaffolds Fruit Journal from Cornell.*

Unfortunately, apple, pear, and some stone fruit trees are still at risk for most of our spring diseases and therefore must be protected with fungicides, even if there is little hope for harvesting a crop this year. Failure to maintain disease control for at least a few more weeks could result in trees with so much foliar disease that they defoliate early, fail to develop fruit buds for next year, are more prone to winter damage next fall, and/or have so much inoculum as to make disease control very difficult during the 2013 season. Here is a quick look at options for various crops.

**Apples:** It is important to maintain fungicide coverage through at least second cover so as to control scab, mildew, and rust diseases and prevent severe leaf damage and defoliation. However, one can afford to take a few more chances on "marginal" fungicide programs in blocks where there is little hope for having a harvestable crop.

Where DMI fungicides are still working, they probably provide the best control option for the full disease complex. If combined with a mancozeb fungicide application at 3 lb/A, two more DMI applications at 10–14-day intervals may suffice where orchards are already at or near petal fall.

Alternatively, applications of mancozeb alone at 3 lb/A or Captan-80 alone at 2

lb/A on a 10-day interval may suffice to keep scab in check. Add sulfur at 3–5 lb/A to the mancozeb, or alternate captan and sulfur (with sulfur 10–20 lb/A) in blocks where mildew is a problem.

Sulfur alone at 10–20 lb/A can be used to control scab and mildew if the sulfur sprays are applied often enough. However, sulfur will not control rust diseases, and sulfur is very prone to wash off during rains. Copper, as described below, has much better residual activity than sulfur.

I suggest that apple growers avoid using Flint, Sovran, Cabrio, or Pristine in orchards where there is no crop and where spray intervals will therefore be extended. Many orchards already have a scab population that is already shifted toward stroby resistance, and using any of these stroby fungicides on an extended interval may push the scab population into full-blown stroby resistance. We really need to preserve activity of the strobies as long as possible, so it will be safer to focus on other chemistries (DMIs, mancozeb, captan, ziram, sulfur, or copper) for disease management in frozen-out blocks.

Where there is an absolute certainty that the crop is totally lost, copper fungicides that are labeled for scab control could be used at 10–14-day intervals, with shorter intervals during

Continued on page 6

## Disease management suggestions

*Continued from page 5*

periods of rapid shoot growth. Copper applied at petal fall and first cover will almost certainly damage fruit, so do not consider applying copper if there is any chance that a harvestable crop may still develop on frost-damaged trees.

The copper fungicides may prove less expensive than either mancozeb or captan, and copper should suppress all of the major diseases. However, copper will act only as a protectant, so the fungicide must be present ahead of infection periods. Copper will cause the least amount of phytotoxicity to fruit and foliage if it is applied under rapid drying conditions and with relatively low volumes of water per acre (i.e., less than 50% of the water per acre that would constitute a full dilute application).

Unfortunately, labels for copper products vary tremendously in their listing of when the product can be applied and the diseases for which the product is labeled. For example, the Kocide labels specify low-rate copper applications for scab and fire blight can be made only between green tip and first cover. The Cuprofix Ultra40 label specifies that sprays for summer diseases should not be initiated before third cover. Some other products make no allowances for sprays after bloom.

Where copper is applied to control scab, be certain that the rate applied is the lower rate that is specified for in-season sprays, because the high rates that are used for delayed dormant sprays may cause a lot of leaf burn.

Where Apogee is available, applying Apogee ASAP on trees that have lost their crop will help to keep trees from outgrowing their spaces while also shortening the period of peak susceptibility to those fungal diseases and insects that require new leaves for their continued development.

**Pears:** Where *Fabraea* leaf spot has been a problem in the past, a full program of fungicides will be needed to keep trees from defoliating in midsummer. If *Fabraea* is allowed to get started, it is almost impossible to arrest the epidemic. Thus, weekly applications of mancozeb should be continued until the season maximum of mancozeb has been applied.

Alternatively, mancozeb sprays can be applied just ahead of predicted rains, thereby preserving some mancozeb applications for later in summer on trees that have no crop.

**Stone fruits:** Plum trees and tart cherry trees are still near peak susceptibility for black knot, and cherry trees will need continued protection against cherry leaf spot. Normally, chlorothalonil (Bravo and generics) cannot be used after shuck split, but the label limitations become fuzzy for trees that have no fruit (and therefore no shuck split).

Bravo has better retention/redistribution characteristics than any of the other

Continued on page 7

## Disease management suggestions

Continued from page 6

brown rot fungicides, so this product is by far the best choice for stone fruit orchards that have not yet passed shuck split. Note that even on non-cropping trees, label limits on the total number of applications per year and/or amount of product per acre per year will still apply. Indar is the only other product that has provided reasonable suppression of black knot.

Except for those growers who are experienced in using low rates of copper during summer to suppress bacterial spot, copper should not be applied to peaches because it can cause severe shot-holing and leaf drop. Cherries and other stone fruits can also be damaged by copper, although tart cherries are more tolerant than most other stone fruits.

Brown rot should not be an issue for trees with no viable flowers or fruitlets, but maintain brown rot coverage if there is any possibility that part of the crop will survive. In southeastern NY, growers should also be applying a fungicide that will control peach scab on peaches, apricots, and plums if trees have a viable crop. Peach cultivars that are susceptible to rusty spot must also be protected with a mildewcide for several weeks after shuck split. In orchards where no fruit will be harvested, no fungicide should be needed on peaches for the rest of the season with the exception of a leaf curl spray next fall.

Oxytetracycline sprays (Fire Line or Mycoshield) should be initiated at shuck split on peaches and nectarines where bacterial spot is a concern and where trees still have a crop. Our mild winter favored survival of this pathogen in regions where colder winters may have limited its survival in the past, so I anticipate that bacterial spot could be more severe this year than in the recent past. It is difficult if not impossible to arrest bacterial spot later in the season if the shuck split and first cover sprays have been omitted.

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is available online at  
[http://  
www.scaffolds.entom  
ology.cornell.edu/  
index.html](http://www.scaffolds.entomology.cornell.edu/index.html)

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David Marrison, County Director, Assistant Professor & Extension Educator for Agriculture & Natural Resources OSU Extension – Ashtabula County, 39 Wall Street, Jefferson, OH 44047	Phone: 440-576-9008 Email: <a href="mailto:marrison.2@osu.edu">marrison.2@osu.edu</a> Website: <a href="http://ashtabula.osu.edu/">http://ashtabula.osu.edu/</a>	Grape production in northeast Ohio.



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David Scurlock Viticulture Outreach Specialist 118 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	Phone: 330-263-3825 Email: scurlock.2@osu.edu Website: oardc.osu.edu/grapeweb/	Evaluation of site suitability for vineyard establishment and all aspects of grape production practices in northern Ohio. David is the primary extension contact of the viticulture program.
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If you have articles or events for possible inclusion in upcoming issues of this newsletter, submit them to:  
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