Ohio Fruit ICM News

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In This Issue

Comments from the Editor

The big story this week was the heavy rains in parts of southern Ohio. Here in Piketon we only received just over two inches, but parts of Ross County received over 4 inches between June 3rd-4th.

We are done picking strawberries from our high tunnel. Field grown plasticulture berries in southern Ohio should last for another two weeks dependent on the weather. We have begun picking matted row strawberries as well. Our bird net is over the blueberries with the berries coloring up well. We had first flowering in our primocane blackberries as well.

Dr. Ellis reminds us that high temperatures near and during harvest are ideal for the development of anthracnose fruit rot on strawberry. He says “in a year like this, I feel it would be wise to make sprays during harvest for anthracnose, especially if it stays hot and we have rain” and has included an article on fungicide use.

Lastly, Ron Becker has sent us his trap reports for Wayne, Holmes and Medina Counties.

Fruit Observations and Trap Reports

Ron Becker - Wayne, Holmes, Medina Counties - Very light aphid activity in tree fruit. Both apple and pear scab have been noted for two weeks. Light fruit damage by plum curculio and tarnished plant bug. Biofix date for codling moth in the Wayne County area was set on 5/16. As of 6/5, we've accumulated 216 modified GDD from Biofix date.

Wayne- (5/30)
- Coddling Moth - 21.6
- Oriental Fruit Moth- 4.0
- Peachtree Borer - 0
- Lesser Peachtree Borer - 1

Holmes-(5/28)
- Coddling Moth - 4.1
- Oriental Fruit Moth - 1.3

Medina-(6/5)
- Coddling Moth - 3.1
- Oriental Fruit Moth -0
- Peachtree Borer -0
- Lesser Peachtree Borer -0

Waterman Lab Apple Orchards, Columbus 5/29/08 to 6/4/08

Redbanded leafroller:	0 (same as last week)
Spotted tentiform leafminer:	12 (up from 1 last week)
San Jose Scale (mean of 2):	0 (same as last week)
Codling moth (mean of 3):	1.3 (down from 3 last week)
Codling moth DA/combo:	1 (down from 8 last week)
Lesser appleworm (mean of 2):	6.5 (up from 1 last week)
Tufted apple budmoth:	0 (down from 1 last week)
Variegated leafroller:	4 (up from 0 last week)
Oblique-banded leafroller:	56 (up from 0 last week)

North Central Ohio Tree Fruit IPM Program, prepared by Cindy Crawford

Ted Gastier – West District IPM Scout (Sandusky, Ottawa, Huron and Richland Counties) 5/26/08

Apples
- Spotted tentiform leafminer – 8.6 (down from 56.2)
- Redbanded leafroller – 1 (down from 4)
- Oriental Fruit Moth – 11.6 (down from 26.2)
- San Jose Scale – .1 (up from 0)
- Codling Moth – 5.9 (up from 0.5)
- Lesser Apple Worms – 0 (first report)

Peaches
- Redbanded leafroller- 1 (same)
- Oriental Fruit Moth – 3.9 (up from 3.5)
- Lesser Peach Tree Borer – 12 (first report)
- Peach Tree Borer – 0 (first report)

Lois McDowell – East District IPM Scout (Erie and Lorain Counties), 5/27/08 and 5/28/08

Apples
- Spotted tentiform leafminer – 29.8 (down from 122.9)
- Redbanded leafroller – 0.3 (down from 2.1)
- San Jose scale – 0 (same as last week)

Oriental Fruit Moth – 0 (same)
Codling Moth – 17.3 (up from 1.5)

Peaches

Redbanded leafroller- 0 (down from 1.0)
Oriental Fruit Moth – 0 (down from 3.3)
Lesser Peach Tree Borer – 0 (first report)
Peach Tree Borer – 0 (first report)

Pest Development - (Based on Scaffolds Fruit Newsletter, Coming Events (D. Kain & A. Agnello), NYSAES, Geneva)

GDD accumulations in Ohio range from the mid 400's in the northern Ohio to low 800's's in southern Ohio as of June 5.

Growing Degree Day Ranges Base Temp.50F (Normal +/- Std Dev)

Redbanded leafroller 1st flight subsides	321-561
Codling moth 1st flight peak	325-581
Obliquebanded leafroller pupae present	328-482
Spotted tentiform leafminer 1st flight subsides	353-565
Rose leafhopper adults on multiflora rose	366-498
Lesser peach tree borer adult emergence	372
Black cherry fruit fly 1st catch	380-576
Pandemis leafroller first catch	420-508
European red mite summer egg hatch	424-572
Peachtree borer 1st catch	439-841
Obliquebanded leafroller 1st catch	479-605
Multiflora rose first bloom	548
Spotted tentiform leafminer 2nd flight begins	560-740
Obliquebanded leafroller 1st flight peak	565-827
Lesser appleworm 1st flight subsides	570-920
Pear psylla 2nd brood nymphs hatch	584-750
San Jose scale 1st generation crawlers present	619-757
Arrowwood viburnum full bloom	621
Obliquebanded leafroller summer larvae hatch	625-957
American plum borer 1st flight subsides	698-1032
Apple maggot first catch	750-1034
Redbanded leafroller 2nd flight begins	770-1070
Greater Peach tree borer adult emergence	775
Oriental fruit moth 2nd flight begins	784-1020
Codling moth 1st flight subsides	808-1252
Pandemis leafroller flight subsides	861-1053

10 Tips to Get the Most out of Your Sprayer by Dr. Erdal Ozkan, Extension Agricultural Engineer, Ohio State University

Paying attention to certain things will help you improve the accuracy and performance of your sprayer and save you money. Applying chemicals with a sprayer that is not calibrated and operated accurately could cause insufficient weed, insect or disease control which can lead to reduced yields. The following "Top Ten" list will help you improve the performance of your sprayer and keep it from failing you:

1. Check the gallon per acre application rate of the sprayer. This can only be determined by a thorough calibration of the sprayer. Use clean water while calibrating to reduce the risk of contact with chemicals. Read OSU Extension Publication AEX-520 for an easy calibration method (http://ohioline.osu.edu/aex-fact/0520.html).

2. How the chemical is deposited on the target is as important as the amount applied. Know what kind of nozzles are on your sprayer and whether or not their patterns need to be overlapped for complete coverage. Make sure the nozzles are not partially clogged. Clogging will not only change the flow rate, it also changes the spray pattern. Never use a pin, knife or any other metal object to unclog nozzles.

3. In addition to clogging, other things such as nozzle tips with different fan angles on the boom, and uneven boom height are the most common causes of non-uniform spray patterns. They can all cause streaks of untreated areas that result in insufficient pest control and economic loss.

4. Setting the proper boom height for a given nozzle spacing is extremely important in achieving proper overlapping. Conventional flat-fan nozzles require 30 to 50% overlapping of adjacent spray patterns. Flood-type nozzles require 50% overlapping. Check nozzle catalogs for specific recommendations for different nozzles.

5. Know your actual travel speed, and keep it steady as possible. Increasing the speed by 20% may let you cover the field quicker, but it also cuts the application rate by 20%. Similarly, a reduction of speed by 20% causes an over application of pesticide by 20%; an unnecessary waste of pesticides and money.

6. Pay attention to spray pressure. Variations in pressure will cause changes in application rate, droplet size and spray pattern. At very low pressures, the spray angle will be noticeably narrowed, causing insufficient overlap between nozzle patterns and streaks of untreated areas.

7. Don't waste your chemical. After all, you have paid for it. Spray drift wastes more chemicals than anything else. Don't spray when the wind speed is likely to cause drift. Don't take the risk of getting sued by your neighbors because of the drift damage to their fields. Keep the spray pressure low if it is practical to do so, or replace conventional nozzles with low-drift nozzles. Use other drift reduction strategies: keep the boom close to the target, use drift retardant adjuvants, and spray in early morning and late afternoon when drift potential is less.

8. Carry extra nozzles, washers, other spare parts, and tools to repair simple problems quickly in the field.

9. Calibrate your sprayer periodically during spraying season to keep it at peak performance. One calibration per season is never enough. For example, when switching fields, ground conditions (tilled, firm, grassy) will affect travel speed which directly affects gallon per acre application rate.

10. Be safe. Wear the protective equipment listed on the label. Be sure you have the proper type of gloves and respirator if required.

Shoppers Are Willing to Pay a Premium for Locally Produced Food by Emily Caldwell, News and Media Relations (Source: Marvin Batte, CFAES, OARDC)

New research suggests that the average supermarket shopper is willing to pay a premium price for locally produced foods, providing some farmers an attractive option to enter a niche market that could boost their revenues. The study also showed that shoppers at farm markets are willing to pay almost twice as much extra as retail grocery shoppers for the same locally produced foods. Both kinds of shoppers also will pay more for guaranteed fresh produce and tend to favor buying food produced by small farms over what they perceive as corporate operations, according to the study.

"Our conclusion is that if a farmer wants to consider producing food for local distribution and marketing it locally, there are people who are willing to pay more for it," said Marvin Batte, a co-author of the study and the Fred N. VanBuren professor of agricultural, environmental and development economics at Ohio State University. "We are not saying that we should be producing all of our foods locally, just that this may be a viable, profitable activity for farmers." And what's good for farmers also benefits consumers in this case, said Batte, director of the research project. "This is an indication that certain groups out there value locally produced food and if farmers deliver that, it makes these consumers happier, so it's good for them, too," he said.

Most of the survey was conducted in late 2005. Batte said the findings – and his contention that not all food should be produced locally – still apply today, even in the face of rising fuel and food prices. Many food crops that thrive in specific types of climates cannot be efficiently and affordably produced for local distribution elsewhere. And, he said, those who buy local food to support nearby growers likely would be even more motivated to lend that support in a flagging economy.

The study is published in the May issue of the American Journal of Agricultural Economics.

The researchers surveyed shoppers at 17 Midwestern locations, including seven retail grocery stores, six on-site farm markets and four farmers' markets hosting sellers from multiple farms. The researchers used data from 477 surveys. The survey presented shoppers with two product options. Both were baskets of strawberries, but they were

presented under 80 combinations of price, farm location and farm type. Some scenarios also included a freshness guarantee. After presenting the options, the researchers asked shoppers which basket of strawberries they would buy. “Statistically, we sorted out what explains each person choosing one basket over the other. We were able to determine how important price was, how important where the strawberries were produced was and whether the freshness guarantee was a factor,” Batte said, who also holds an appointment with the Ohio Agricultural Research and Development Center. “Basically what made the biggest difference was local production.”

In the study, local production meant the berries were grown within Ohio. The average retail shopper was willing to pay 48 cents more for strawberries produced locally, and shoppers at farm markets were willing to pay 92 cents extra. With the base price for a quart of berries set at $3, farm market shoppers were willing to pay almost a third more for the local produce. The freshness guarantee also held meaning for shoppers. If shoppers were promised fresh produce that was recently harvested, farm market shoppers were willing to pay 73 cents extra and retail shoppers indicated they would pay 54 cents more.

The researchers also tried to test shopper interest in supporting small vs. large farms by naming one fictional berry producer “Fred’s” and the other “Berries Inc.” Shoppers in grocery stores were willing to pay 17 cents extra for a quart of berries from Fred’s, and farm market shoppers were willing to pay 42 cents more for the perceived small-farm produce. “We suspected people who go to farmers’ markets go there for a reason, because they are willing to pay more, hunt it down and travel there. But we also found that the typical shopper in a retail grocery store is willing to pay more, as well. And in fact, we’re seeing that grocery stores are figuring this out by prominently labeling locally produced food,” Batte said. “So we were trying to see if that group of people who shop at retail groceries are willing to pay X amount, and determine what that amount is.”

Though the study was conducted in Ohio, Batte said the findings could easily extend to the rest of the country. However, the definition of local would be likely to differ in California, a large state with multiple growing regions, and New England, where several small states are clustered closely together. “The shoppers are expected to be there in each kind of shopping venue nationally, but ‘local’ would need to be defined more precisely for various regions,” Batte said.

Though not all farmers would be able to set up a niche operation to grow and sell their produce to nearby consumers, Batte said some smaller farm owners could consider adding hand-harvested local production with the expectation that they can charge a premium for that produce. “Farmers could actually be a little less efficient on the production side and still be more profitable on the revenue side if they can capture that premium price,” he said.

This work was supported by the National Research Initiative of the U.S. Department of Agriculture, the Fred N. VanBuren Program in Farm Management at Ohio State, and the Ohio Agricultural Research and Development Center. Co-authors of the study were

graduate student Kim Darby, outreach program leader Stan Ernst and professor Brian Roe of Ohio State's Department of Agricultural, Environmental and Development Economics.

Using Fungicides to Control Strawberry Fruit Rots in Matted Row Production in Ohio 2008 by Michael A. Ellis, Dept. of Plant Pathology, OSU/OARDC

The most common fruit rots on strawberry in Ohio are: Botrytis fruit rot (gray mold), caused by *Botrytis cinerea*; anthracnose fruit rot, caused by *Colletotrichum acutatum*; and leather rot caused by *Phytophthora cactorum*. Especially in wet growing seasons, successful strawberry production may depend on the simultaneous control of all of these diseases. Generally, all three diseases do not occur simultaneously in the same planting, but this can occur. Botrytis fruit rot or gray mold is the most common disease and generally requires some level of fungicide for control each year. Anthracnose is a problem in years with warm to hot temperatures combined with prolonged rainfall prior to and during harvest. Anthracnose is generally not a problem in most plantings; however, when it does develop, it can be devastating. New fungicide chemistry with good to excellent activity against anthracnose has recently been registered for use on strawberry and should be helpful in providing effective control. Leather rot is a problem in years with excessive rainfall or in fields with poor drainage that have standing water (all of these diseases are a problem in situations such as this). Many growers do a good job of controlling leather rot by planting on sites with good soil drainage and maintaining a layer of straw mulch to prevent contact of berries with soil. In years with excessively wet weather or on sites with problem soil drainage, fungicides may be beneficial for leather rot control.

As previously mentioned, Botrytis or gray mold is the most common disease and is probably the easiest to control with effective fungicide use. Most fruit infections by Botrytis occur only during bloom. Therefore, most growers that apply fungicide during bloom generally do a good job of controlling Botrytis and do not need to apply fungicides pre-bloom or during harvest. If anthracnose and leather rot **are not a problem**, fungicide sprays during bloom only are generally all that is required. Obviously this is an ideal situation in relation to reducing costs and overall fungicide use.

In plantings and in growing seasons (warm and wet) where anthracnose or leather rot are problems, the need for a more intensive fungicide program is greatly increased. The following information provides guidelines for developing an effective fungicide program for control of the major fruit rots in matted row production systems in Ohio.

Prebloom

In most years, there is generally little or no need for fungicides prior to bloom for control of Botrytis. If weather is exceptionally wet from rain or overhead irrigation from frost protection, some early season fungicide may be required prior to bloom. If anthacnose is a concern, especially in plastic culture berries, prebloom applications of

fungicide may be beneficial in reducing the buildup of inoculum in the planting. This is especially true if prebloom temperatures are abnormally warm and conditions are wet. Applications of Captan or Thiram alone at the highest rate (Captan 50WP, 6 lb/A; Captan 80WDG, 3.75 lb/A; Captec 4L, 3 qts/A, Thiram 75WDG, 4.4 lb/A) should be effective in reducing inoculum buildup of all three diseases. A seven day application interval should be sufficient.

During Bloom

This is the critical period for control of Botrytis. In addition, in fields infested with Colletotrichum (anthracnose), the fungus may be able to build up inoculum on symptomless (apparently healthy) foliage during warm, wet weather. Increased inoculum could result in increased fruit infections if weather remains favorable for disease development. The main fungicides for control of Botrytis are Topsin-M 70WSB, Elevate 50WG, Captivate 68WDG, Switch 62.5WG, Scala SC and Pristine 38WG. Captivate is a package mix of Captan and Elevate. All of these materials have excellent efficacy for control of Botrytis, but only Switch and Pritine have efficacy against anthracnose. This is an important point to remember if anthracnose is a problem in the planting. I also recommend that all of these materials be tank-mixed with Captan or Thiram during bloom. Captan and Thiram are protectant fungicides that provide some additional control against Botrytis (gray mold), anthracnose fruit rot, and leather rot. In addition, mixing the materials should also aid in reducing the risk of fungicide resistance development.

Topsin, Elevate, Scala, Switch, and Pristine are all at high risk for development of fungicide resistance in Botrytis. None of these fungicides should be used alone in a season long program for Botrytis control. They all have different chemistry so they can be alternated with each other as a fungicide resistance management strategy. It is wise not to apply any of these fungicides in more than two sequential sprays without alternating to a different fungicide.

For successful Botrytis control, it is important to provide fungicide protection throughout bloom. Remember that early blooms (king bloom) may be your largest and best quality fruit, so protection needs to be started early (at least 10% bloom). The number of bloom sprays required depends upon the weather. If it is hot and dry, no fungicides are required. All of the fruit rot diseases discussed here require water on the flowers and fruit in order to infect. If it is very dry and overhead irrigation is used for supplemental water, irrigation can be applied in early morning so that plants dry as fast as possible. Keeping plants dry reduces the need for fungicide application. Fortunately, most years are not this dry and fungicides are generally applied on at least a 7-day schedule through bloom. If it is extremely wet, a shorter interval (4-5 days) may be required in order to protect new flowers as they open. Although Botrytis is the primary pathogen we are trying to control during bloom, the selection of the proper fungicides should also aid in reducing the buildup of anthracnose as well. This is important to remember in plantings where anthracnose is a problem or threat.

Post Bloom Through Harvest

As bloom ends and green fruit are present, the threat from Botrytis infection is generally over. Green fruit are resistant to Botrytis. If you got fruit infection by Botrytis during bloom, the symptoms (fruit rot) will not show up until harvest as fruit start to mature. At this point, it is too late to control it.

As new fruit form through harvest, the threat of anthracnose fruit infection increases. In many plantings, anthracnose is not present or is not a problem. In these plantings no additional fungicide should be required after bloom through harvest. Unfortunately, you cannot determine if anthracnose is a problem until you see it. Often, this is too late to control it. In plantings with a history of anthracnose fruit rot, or if the disease is identified in the planting, fungicides with efficacy for anthracnose control may be required from the end of bloom through harvest. Remember, anthracnose is favored by warm to hot wet weather. In addition, anthracnose appears to be a greater problem in plastic culture plantings.

Abound 2.08F, Cabrio 20EG, and Pristine 38WG are strobilurin fungicides and are the most effective fungicides currently registered on strawberry for control of anthracnose fruit rot. These fungicides are also registered for control of powdery mildew and leaf spots and they also provide good suppression of Botrytis fruit rot (gray mold).Pristine provides excellent control of Botrytis. All of these fungicides are at high risk for fungicide resistance development in the anthracnose fungus. In addition, they are all in the same class of chemistry; therefore, they cannot be alternated with each other as a fungicide resistance management strategy. In order to delay the development of fungicide resistance, the label states that no more than four applications of Abound or five applications of Cabrio or Pristine can be made per season. In addition, the label states that no more than two sequential sprays of each fungicide can be made without switching to a fungicide with a different type of chemistry. For anthracnose control, the only fungicides that currently can be used in such a rotation with these fungicides are Captan, Thiram, or Switch. Switch 62.5 WG has been reported to provide good to excellent control of anthracnose fruit rot, and would be the fungicide of choice in an alternating program with Abound, Cabrio or Pristine.

The following are suggestions for developing a fungicide program for simultaneous control of strawberry fruit rots.

Fungicide and (rate/A)	**Comments**
<u>Prebloom</u> Captan 50 WP (6 lb) or Captan 80WDG (3.75 lb) or Captec 4L, 3 qt or Thiram 75WDG (4.4 lb)	Prebloom applications should be required only if excessive water from rain or irrigation is a problem early in the season. Fungicides here could help reduce build-up of Botrytis and Colletotrichum inoculum. In dry or more “normal” seasons, fungicide is probably not required until bloom starts.

<u>During bloom</u> Switch 62.5WG (11-14 oz) or Scala SC (18 fl. oz) or Elevate 50WG (1-1.5 lb) or Topsin-M 70WSB (1 lb) **PLUS** Captan 50WP (4-6 lb) or Captan 80WDG (3.75 lb) or Captec 4L (2-3 qt) or Thiram 75WDG (4.4 lb) **OR** Captevate 68WDG (3.5-5.25 lb) **OR** Pristine (18.5 - 23 oz)	This is the main time to control Botrytis and if temperatures are high, Colletotrichum could build up in the planting. Pristine is highly effective for both Botrytis, Anthracnose and leather rot. Switch is excellent for control of Botrytis and has been reported to have some activity for control of anthracnose. Obviously, this is ideal. The addition of Captan or Thiram provides additional protection against all the fruit rot diseases and may aid in reducing fungicide resistance development. Topsin-M , Scala and Elevate are all excellent for control of Botrytis, but have no activity against anthracnose. Where anthracnose is not a threat, these fungicides will provide excellent Botrytis control. When Elevate, Scala or Topsin-M are combined with the high rate of Captan or Thiram, the combination should provide some level of anthracnose control. Captevate is a package-mix combination of Elevate plus Captan. If anthracnose is a concern, Pristine or Switch would be the fungicide of choice. None of the fungicides (Pristine, Switch, Scala,Elevate or Topsin-M) should be applied more than twice before alternating with a fungicide of different chemistry. This is to aid in reducing fungicide resistance development. Abound, Cabrio, and Pristine are the fungicides of choice for anthracnose control, and all of them provide some control of Botrytis. Although they could be used during bloom, I prefer to use them after bloom when the threat of anthracnose fruit infection is greatest.

Post bloom Through Harvest Abound 2.08F (6.2-15.4 fl oz) or Cabrio 20EG (12-14 oz) or Pristine 38WG (18.5 - 23 oz) or Switch 62.5WG (11-14 oz) tank-mixed or alternated with Captan 50WP (3-6 lb) or Captan 80WDG (3.75 lb) or Captec 4L (1.5-3 qt) If more than two applications of Abound, Cabrio, or Pristine are required, Switch can be considered as an alternating fungicide.	As green fruit develop the threat of anthracnose infection increases, especially under warm, wet conditions. Abound, Cabrio, or Pristine are the most effective materials for anthracnose control. If anthracnose is a problem, the highest label rate should be used. This may be the best time to use Abound, Cabrio, or Pristine. Switch also has some activity for control of anthracnose. If the risk of anthracnose is high or the disease has been observed in the planting, Quadris, Cabrio, or Pristine plus Captan should be applied 7 days after the last bloom spray for Botrytis. If anthracnose remains a threat, sprays should probably be repeated on a 7 day interval through harvest. As harvest approaches, Captan should be removed from the program. Captan applied close to harvest could result in visible residues on fruit and this can be a big problem. Abound, Cabrio, Pristine or Switch applied alone should result in minimal visible residues on fruit and can be applied on the day of harvest (0-day PHI). Remember, **these preharvest sprays are required only if anthracnose is a threat or problem.**

The extensive use of Captan in this program could result in problems with visible residues on fruit. This needs to be considered, but under heavy disease pressure for anthracnose a high level of Captan usage may be required. The Captec 4L (flowable) should result in less visible residue than the Captan 50W (wettable powder) or Captan 80WDG formulation. The use of Abound, Cabrio, Pristine or Switch alone in the last spray or two before harvest should aid greatly in reducing visible residues.

Leather Rot

As mentioned previously, leather rot should be controlled by good soil drainage (no standing water) and a good layer of straw mulch to prevent berries from soil contact. If leather rot is a threat or a problem, fungicides may be required. Abound, Cabrio, and Pristine have excellent activity against Phytophthora diseases on other crops. Although leather rot is not on the label, studies in Ohio have shown that Abound, Cabrio, and Pristine all have very good activity for control of leather rot in addition to anthracnose and Botrytis gray mold. Pristine would be the fungicide of choice because it provides excellent control of all the major fruit rot diseases (Botrytis gray mold, anthracnose, and leather rot). If applied at the time suggested above (green fruit through harvest) for anthracnose, Abound, Cabrio, and Pristine should be beneficial for control of leather rot

as well. Recent research at Ohio State indicated that these materials have good to excellent activity against leather rot.

Fungicides for Leather Rot Control

As previously mentioned, emphasis for leather rot control should be placed on the use of cultural practices such as planting on well drained sites or improving water drainage in the planting and a good layer of straw mulch to prevent berry contact with the soil. When needed, the following fungicides are labeled specifically for control of leather rot.

Ridomil Gold is labeled for control of Red Stele (caused by *Phytophthora fragarieae*) and Leather Rot (caused by *Phytophthora cactorum*). The label for perennial strawberries reads as follows: "Established Plantings: Apply Ridomil Gold EC at 1 pt. per treated acre in sufficient water to move the fungicide into the root zone of the plants. Make one application in the spring after the ground thaws and before first bloom. A second application may be applied after harvest in the fall. **Note:** Although not labeled for leather rot control, the early spring application for red stele control should provide some control of leather rot. **For supplemental control of leather rot**, an application may be made during the growing season at fruit set. This application at fruit set (as green fruit are present) has been very effective for leather rot control.

Aliette 80WDG is labeled for control of Red Stele and Leather Rot. For Leather Rot, apply 2.5 to 5 lb/A. Apply as a foliar spray between 10% bloom and early fruit set, and continue on a 7-14 day interval as long as conditions are favorable for disease development. Applications can be made the same day as harvest (PHI=0 days). Do no exceed 30 lb product per acre per season.

Phosphorous Acid (Agri-Fos) is labeled for control a Red Stele and Leather Rot on strawberries. This material has essentially the same active ingredient as Aliette and the use recommendations for red stele and leather rot are very similar to those of Aliette; however, Aliette is a wettable powder and Agri-Fos is a liquid. Agri-Fos is recommended at the rate of 1.25 quarts per acre in 90 gallons of water or 2.5 gallons per acre in 200 gallons of water. For leather rot, apply at 10% bloom and early fruit set, then at 1 to 2 week intervals as needed. Several Phosphorous acid fungicides are currently being registered for use on several crops in the U.S. and others will probably be registered for use on strawberry in the near future.

Remember these are only suggested guidelines for a fruit rot control program. It is always the growers responsibility to read and understand the label. For the most current pesticide recommendations in Ohio, growers are referred to Bulletin 506-B "Ohio Commercial Small Fruit and Grape Spray Guide".

If growers have questions regarding the information covered here, they should contact: Mike Ellis; PH: 330-263-3849 and e-mail: ellis.7@osu.edu.

Calendar - Newly added in ***Bold***

June 12, Illinois Summer Horticulture Field Day, Tanner's Orchard, Speer, Ill. For more information, illsthortsoc@yahoo.com

June 18, Grape and Wine Clinic, Rainbow Hills Vineyards, Newcomerstown. 5:30 - 8 p.m Registration: $20 (includes dinner at Rainbow Hills and resource materials). Space is limited. Visit coshocton.osu.edu to download a registration form or call Marissa Mullett, Extension Educator at 740-622-2265.

June 20-21, Ohio State Beekeepers Association Summer Meeting, Athens High School, Athens, Ohio. Registration is $10.00 for members, $20.00 for non-members - $20.00. Lunch is an additional $8.00.

June 22-25, International Fruit Tree Association summer tour. South Carolina and North Carolina. For more information: http://www.ifruittree.org/

June 25, OPGMA Summer Tour and Field Day, Wooster. The June 18 pre-registration price is $25 for the first company attendee; $10 for each additional attendee. Lunch is an additional $9.For additional information about the tour or registering, visit www.opgma.org, e-mail opgma@ofa.org, or call 614-487-1117

August 20-21, NASGA Summer Tour. Based out of Columbus, Ohio. For more information contact Kevin Schooley kconsult@allstream.net Telephone (Canada) 613 258-4587. The hotel will be the Drury Inn and Convention Center http://www.druryhotels.com/properties/columbuscvc.cfm

August 21-22, Apple Crop Outlook and Marketing Conference, Chicago. In addition to the annual crop projections (from both USDA and USApple), the conference will feature presentations from several consumer marketing experts, roundtable discussions, networking opportunities and awards presentations. Online registration at www.usapple.org <http://www.usapple.org> begins May 15.

Oct. 5-9, High Tunnel Tour of England. A 5-day bus tour of high tunnel culture in England for growers, Extension folks, or any other interested people. Cost is $800 per person ($700 double), which includes most meals and all lodging (flight to London not included). We will tour cherries, raspberries, and strawberries and possibly other crops under tunnels. Deadline for registration is August 22. Full details and registration forms are posted at: http://www.hrt.msu.edu/TUNNELTOUR/. Contact Eric Hanson at MSU (517-355-5191 x1386, hansone@msu.edu) with any questions.

Nov. 6-8, Southeast Strawberry Expo, Hilton Charlotte University Place, Charlotte, NC. Includes Strawberry Plasticulture Workshop for New Growers, farm tour, educational sessions, and trade show. For more information, email info@ncstrawberry.com

Dec 8-10, North American Raspberry & Blackberry Conference. DeVos Place Convention Center, Grand Rapids, MI, as part of the Great Lakes Expo. For more information, email info@raspberryblackberry.com.

Dec. 9-11, Great Lakes Fruit, Vegetable and Farm Market Expo, DeVos Place Convention Center, Grand Rapids, http://www.glexpo.com/.

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Jan. 5-6, Kentucky Fruit & Vegetable Conference & Trade Show, Embassy Suites Hotel, Lexington, KY. For more information contact John Strang at phone 859-257-5685 or email: jstrang@uky.edu

January 12-14, OPGMA Congress, The Nia Center at the Kalahari Resort Sandusky, Ohio

Jan 19-21, Indiana Horticultural Congress, Adam's Mark Hotel, Indianapolis.

Ohio Poison Control Number

(800) 222-1222
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