

Ohio Fruit ICM News

Editor: Shawn R. Wright
Ohio State University South Centers
1864 Shyville Rd., Piketon, OH 45661
Phone (740) 289-2071 extension 120
E-mail: wright.705@osu.edu

<http://southcenters.osu.edu/hort/icmnews/index.htm>

<http://twitter.com/osuschort>

Volume 13 (14)

July 24, 2009

In This Issue

Comments from the Editor
Fruit Observations and Trap Reports
Pests Development
Ohio Vegetable and Small Fruit Update-July 20
Elderberry Pruning: A Research Brief
Kentucky Fruit Crop News
AG in Uncertain Times Webinar Series
Calendar
Ohio Poison Control Phone Number

Comments from the Editor

More information is posted in the calendar on the Southeast Strawberry Expo and the North American Raspberry & Blackberry Conference.

Fruit Observations and Trap Reports

Wayne, Holmes, Medina County – Ron Becker, Program Coordinator, Agriculture and Integrated Pest Management Ohio State University Extension, Wayne County

European red mites are being found at threshold numbers and causing bronzing in most blocks that did not have a previous miticide applied. Two spotted spider mites are also increasing. The fireblight damage in several blocks is starting to slow down with the dry weather. Codling moth numbers have gone down, but still not bottomed out.

June 29-July 3

Codling moth:
Wayne - 3.7
Holmes - 1.7
Medina - 4.7

July 6-10

Codling moth:
Wayne - 2.3
Holmes - .7

Medina - 1.7
July 13-17
Codling moth:
Wayne - 1.5
Holmes - .7
Medina - 1.3

North Central Ohio Tree Fruit IPM Program, prepared by Julia Woodruff, Extension Educator

Ted Gastier – West District IPM Scout (Sandusky, Ottawa, Huron & Richland Co.s) – 7/20/09

Apples

Spotted tentiform leafminer – 91.4 (up from 5.16)
Redbanded leafroller – 0 (same)
Codling Moth - 0.1 (down from .9)
Oriental Fruit Moth – 4.5 (down from 6.38)
Lesser appleworm – 2 (up from 0)
San Jose scale – 0 (same)

Peaches

Redbanded leafroller- 2 (up from 0)
Oriental Fruit Moth – 6.8 (down from 7.3)
Lesser Peachtree Borer – .5 (down from 2.3)
Peachtree Borer – 2.4 (up from 1.0)

7/13/09

Apples

Spotted tentiform leafminer – 5.16 (down from 22.63)
Redbanded leafroller – 0 (down from 8)
Codling Moth - 0.9 (down from 1.1)
Oriental Fruit Moth – 6.38 (up from 1.72)
Lesser appleworm – 0 (same)
San Jose scale – 0 (same)

Peaches

Redbanded leafroller- 0 (down from 14)
Oriental Fruit Moth – 7.3 (up from 3.3)
Lesser Peachtree Borer – 2.3 (up from 1.1)
Peachtree Borer – 1.0 (down from 2.8)

Lois McDowell – East District IPM Scout (Erie & Lorain Counties) – 7/20/09

Apples

Spotted tentiform leafminer – 201.55 (down from 337.6)
Redbanded leafroller – 1.6 (down from 3.2)
San Jose scale – 18.22 (up from 0.13)
Codling Moth – .6 (down from 1.3)
Oriental Fruit Moth – .14 (same)
Lesser Appleworm - 5.3 (up from 5.2)

Peaches

- Redbanded Leafroller- 1 (down from 2)
- Oriental Fruit Moth – 3.9 (up from 0)
- Lesser Peachtree Borer – .5 (down from 2.3)
- Peachtree Borer – 1.6 (up from .7)

7/13-14/09

Apples

- Spotted tentiform leafminer – 337.6 (down from 510.2)
- Redbanded leafroller – 3.2 (down from 3.3)
- San Jose scale – 0.13 (down from 0.5)
- Codling Moth – 1.3 (down from 2.6)
- Oriental Fruit Moth – .14 (down from .17)
- Lesser Appleworm - 5.2 (down from 5.3)

Peaches

- Redbanded Leafroller- 2 (down from 3)
- Oriental Fruit Moth – 0 (same)
- Lesser Peachtree Borer – 2.3 (down from 4.7)
- Peachtree Borer - .7 (same)

Pests Development - (Based on Scaffolds Fruit Newsletter, Coming Events (D. Kain & A. Agnello), NYSAES, Geneva) GDD range from near 1200 in northern Ohio to just over 1900 in southern Ohio.

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

Redbanded leafroller 2nd flight peak	965-1353
San Jose scale 2nd flight begins	1013-1309
American plum borer 2nd flight begins	1020-1232
American plum borer 2nd flight peak	1310-1676
Spotted tentiform leafminer 2nd flight subsides	1328-1672
Codling moth 2nd flight peak	1337-1977
Rose-of-Sharon first bloom	1347
San Jose scale 2nd flight peak	1432-1790
Apple maggot flight peak	1455-1763
Redbanded leafroller 2nd flight subsides	1469-1855
Lesser appleworm 2nd flight peak	1473-2263
Comstock mealybug 2nd gen. crawlers emerging	1505-1781
Spotted tentiform leafminer 3rd flight begins	1522-1864
Obliquebanded leafroller 2nd flight begins	1528-1836
Oriental fruit moth 3rd flight begins	1597-1893
Comstock mealybug 2nd gen. crawlers peak	1658-1737
Spotted tentiform leafminer 3rd flight peak	1775-2121
Obliquebanded leafroller 2nd flight peak	1784-2108
San Jose scale 2nd flight subsides	1785-2371
Oriental fruit moth 3rd flight peak	1821-2257
Redbanded leafroller 3rd flight peak	1881-2327

Ohio Vegetable and Small Fruit Update-July 20 2009 by Brad Bergefurd,
Extension Educator, OSU South Centers

What a wild ride we are having this summer. Many issues are being observed and reported in the fields and wanted to give everyone a heads up. Also stay tuned to the OSU VegNet for the most recent updates and recommendations from around the state <http://vegnet.osu.edu> .

*Crop diagnostics- With the diseases that are out there, time is of the essence to reduce or slow the spread and to save the crop so please at the first sign that something may be going wrong with your crop consider sending a sample to our Plant and Pest Diagnostic Clinic at Ohio State in Columbus. The staff there does a great job with quick diagnosis of the thousands of samples they receive and have the proper equipment to make precise and timely diagnosis of the problem. You can download all the necessary forms and how to package and send your samples from their web site <http://ppdc.osu.edu/>. Remember to send fresh samples early in the week not at the end of the week where they could spend the weekend in a hot post office. Better yet hand-deliver your samples to the lab directly. Also sending digital images or video of the problem to any member of the OSU Vegetable Team may also aid in an early detection and diagnosis of your problem. For Veg Team member contact information go to <http://vegnet.osu.edu/facts/vteam.htm>

Another new good web site to help you with diagnosis of vegetable disorders is the Ontario CropIPM, <http://www.omafra.gov.on.ca/IPM/english/index.html> . This can help you with diagnosing weed, insect, disease and other crop disorders for many vegetable and strawberry crops.

*Weather has been causing a lot of our crop problems and range from too much rain to drought like conditions. Some areas have had no measurable rainfall since June 3 whereas other locations 5 miles away have received 4 inch rains in 2 hours, both of these extremes bring on stressful conditions that can lead to plant disorders. The record setting cool temperatures have slowed crop maturity and harvest.

* Harvest of all vegetable and melon crops is in full swing in southern Ohio with retail and wholesale market demand and prices being high. Some nighttime heating is needed to bring on the melon and watermelon harvest. Harvest of blackberry crops has started in southern Ohio but with the cool nights ripening has been slow.

* Tomato issues- many calls are coming in daily about tomato leaves firing off from the bottom up and losing all of their leaves. There are many disorders that can be causing this so keep an eye out. These include bacterial diseases such as bacterial speck and spot and maybe canker in some cases. Fungal diseases that could be causing this leaf loss include Early Blight and Septoria Leaf Blight, depending on the weather your farm has been getting. According to Dr. Sally Miller, as of 10 days ago Late Blight on tomato was not as wide spread in Ohio as in PA and New York, however that does not mean it is not

here, so keep an eye out for it as well. With all of these issues out there consider following a fungicide program as outlined in bulletin 672 the OSU Vegetable Production Guide <http://ohioline.osu.edu/b672/pdf/Tomatoes.pdf>

*Vine crop issues- as with tomato, many calls are coming in daily about vine crops yellowing, spotting, wilting and dying. Again there are many things that could be going on depending on your farms location and the weather you have been getting. Disorders spread by insects include bacterial wilt if cucumber beetles had made their way into the field in the past month and Yellow Vine decline vectored by the stink bug. To control the spread of these diseases, the insects need to be controlled.

The fungal diseases include: Downy mildew which has been diagnosed on cucumbers in northern Ohio to track this disease go to <http://nc-climate.ncsu.edu/cucurbit/map.php>. Powdery Mildew is being found in older zucchini and summer squash fields in southern Ohio and Alternaria leaf spot has been detected around the Cincinnati area. To control these diseases a fungicide program is recommended. For the most recent fungicide recommendations see the OSU Vegetable Production Guide <http://ohioline.osu.edu/b672/>

*Sprayer calibrations- in order for the fungicides to be effective complete plant coverage is needed. Remember you have a lot more plant area to cover now than you did 4 to 6 weeks ago so you should be increasing the amount of water being used, recommendations are in the 50 gallon per acre range the more carrier used the more the spray material will be able to penetrate and cover the plant. I know it will take longer to spray and more fill ups will be needed but you want the best plant coverage possible for these chemicals to be most effective in controlling the disease or insect pests you are targeting.

* Winter injury symptoms continue to show up in blackberry crops as the canes are stressed from fruit loads or weather extremes. Continue to irrigate as needed to reduce stress to the plants.

Elderberry Pruning: A Research Brief by Cathy Heidenreich, Berry Extension Support Specialist, Department of Horticulture, Cornell University (*Source: NY Berry News Vol. 8, #7*)

A recent scientific journal article has been published on pruning American elderberries. The research brief that follows is a summary of the findings presented. For those wishing to read the article in its entirety, a full citation follows the brief that provides author names, article title, and source.

The journal article, written by Thomas, Byers, and Ellersieck (2009), discusses the effect of 4 pruning methods on productivity and characteristics of American elderberry. As noted by the authors, elderberry is increasingly being cultivated in North America for its edible fruit and flowers. It also remains relatively undeveloped as a commercial horticultural crop. Producers establishing elderberry are taking a risk due to the substantial lack of commercial production information for this crop.

Elderberry is rather a unique shrub as it produces fruit on both primary (current season) and secondary (older woody) shoots. Primary shoots arise each spring from spreading underground rhizomes. They end in a single large flower cluster (cyme) that opens a few to several days before those on the secondary shoots. Flower clusters on secondary shoots tend to be smaller and more numerous than those on primary shoots.

The authors hypothesized that the simplest and least costly method of pruning elderberries may be to prune the plants to the ground each spring, perhaps with a motorized or tractor mounted sickle-bar. Well managed plantings pruned in this manner should produce good (although slightly lower) annual yields they projected, than those managed in a more selective annual pruning system. A selective pruning system they thought would be more labor-intensive in terms of both pruning and harvest. Their study was designed to test this hypothesis.

Details of the Study - The researchers examined elderberry flowering, fruit yield, phenology, plant growth, and incidence of disease and arthropods pests in response to 4 pruning methods over a five year period. The pruning methods included in the research trial were: 1) annual removal of all shoots - all shoots cut to the ground in early spring, 2) biannual removal of all shoots – pruning to the ground every other spring, 3) annual selective pruning – removal of all unproductive or poor quality stems and tipping back of strong stems to approx. 3 ft., and 4) no pruning.

The researchers applied these pruning methods to 3 cultivars ('Adams II', 'Bob Gordon', and 'Netzer') at two sites in Missouri. Experimental plots consisted of 3 plants each, planted approximately 4 ft apart in row. Individual plots were separated by 8 ft in row. Between row spacing was 10 ft (total plants/site = 144; approx. 0.25 acres). Treatments were applied and cultivars were assigned to plots in a complete randomized block design with 4 replications for each cultivar x pruning method combination.

Sites were initially prepared by killing existing vegetation with glyphosate prior to planting; at one site shrubs were established on a 20 cm raised soil ridge; on the second site flat, undisturbed ground. Alleyways were seeded with tall fescue that was maintained and mowed at both locations.

Hardwood and softwood cuttings were used to establish plantings. Plantings were fertilized each spring with ammonium nitrate (NH_4NO_3) at a rate of 50 lb/a N. Plants were provided with approx. 1 to 1.5 inches water/week either by rainfall or drip irrigation. Weeds were managed by mulching, hand-weeding and herbicide application (glyphosate).

The study began after a 2-year establishment period; all flowers were removed during this period to encourage root and structural growth. No other pruning was done during the establishment period. All plants in the study were pruned to the ground in early spring the year the study began.

Plant data collected included fruit yield, cyme number and size, individual berry weight (50 random ripe berries per plot), and plant height. Phenology data included bloom time, fruit ripening, and harvest dates.

Disease and arthropod (insect and mite) incidence data was also collected, using a scale of 1 to 5 where 1 = severe damage and 5 = no occurrence. Eriophid mites (Eriophidae) and bacterial leaf spot (*Pseudomonas viridiflava*) were the two pest problems observed and rated.

Study Results - Both plantings survived and performed well during the course of the 5 year study; part of the 'Netzger' fruit crop was lost to birds during first year of the study at one site.

Yield - 'Bob Gordon' yielded nearly 3 times more than 'Adams II' and over 4 times more than 'Netzger'. Annually pruned plants and unpruned plants yielded significantly less than those pruned selectively or biannually. Annually pruned plants consistently produced fewer, larger cymes compared to the other 3 treatments. Berry size was unaffected by pruning method but did vary by cultivar, location, and year. 'Bob Gordon' had the largest mean berry weight. Annual and biannual pruned plants were slightly but significantly shorter than selectively pruned or unpruned plants.

Disease and arthropod pest incidence - Eriophid mites are a very common pest of elderberry; little is known about their taxonomy, life cycle, or management. It has been reported by one researcher that the mites overwinter within and beneath leaf buds in the Czech Republic. This same mite species has been shown to occur on American elderberry in North America. The authors hypothesized annual removal and destruction of stems might remove a significant source of mite buildup. This hypothesis was not substantiated by the results of the study. Mite occurrence was unaffected by pruning but varied by location, cultivar ('Adams II' more affected than the other 2 cultivars), and year. Many eriophid mites are known to be wind-disseminated; the authors speculated re-infestation by mites of annually pruned plots may have occurred either from neighboring unpruned plots or other sources.

The authors indicate it is important to note two other important elderberry insect pests not evaluated during the course of this study might also be managed through annual removal of stems: elder shoot borer (*Achatodes zae*) which overwinters as eggs on stems, and elder borer beetle (*Desmocerus palliatus*), which overwinters as pupae in the crown and lower stem areas. Because flowers and fruit may be produced reliably with annual removal of stems, this approach to elderberry pest management needs to be studied further.

Pruning method had no effect on bacterial leaf spot as reported in this study. However, the authors suggest the effect of various pruning methods on plant structure and air movement through the canopy still needs investigation in relationship to this disease and various fungal diseases attacking elderberry.

Phenology - Pruning method had a significant effect on phenology. Pruning plants to the ground delayed flowering (anthesis) and fruit ripening by several days. Delay of ripening due to pruning plants to the ground tended to reduce the number of harvests, focusing the harvest window into a narrower time frame. Greater uniformity of flowering, fruiting, and ripening was achieved with pruned-to-the-ground plants because all growth on these plants were primary shoots. This would be of particular importance for the development of mechanical harvest for elderberries.

Some producers may consider the potentially lower overall yield for pruned-to-the-ground plants a fair trade off for greatly simplified pruning and consolidated harvest. Other producers with limited labor/resources for harvest may prefer the annual selective pruning method, allowing for a more prolonged, gradual harvest. Another consideration mentioned by the authors in respect to annual selective pruning and its longer more gradual harvest is the possibility of longer exposure of ripe fruit to the effects of birds, insects, diseases, and weather (i.e. hail).

Other considerations - During the course of their study the authors observed pruning may have an effect on bird predation. Birds tended to prefer fruit born on stiff upright stems (secondary stems). Less woody and rigid primary stems with their large heavy-fruited cymes tended to bend down toward the ground where birds seemed less inclined to attack them.

Final thoughts - The authors indicate while their study provides new information on potential elderberry pruning strategies, questions on the long-term impact of such methods remain. They identified what seem to be multiple short-term benefits to annual pruning to the ground. However, they suggest some quantity of stored carbohydrates may be lost when plants are pruned in such a manner. Long-term effects of annual shoot removal on vigor, productivity, and planting longevity remain to be determined.

To read the original journal article in its entirety see: Thomas, Andre L., Byers, Patrick L., and Ellersieck, Mark R. 2009. Productivity and Characteristics of American Elderberry in Response to Various Pruning Methods. HortScience Volume 44 No. 3 June 2009, pages 671-677.

Kentucky Fruit Crop News by John Strang (Source: Kentucky Fruit Facts Jun-July 2009)

The 2009 fruit crop generally looks good. The spring strawberry harvest is completed and fruit size, quality and yield were very good. The wet weather led to slug damage and increased levels of leaf spot disease. We are well into harvesting a bumper crop of raspberries, blueberries, and thorny blackberries and are in the early stages of thornless blackberry, peach and apple harvest. Most growers report that peaches set an adequate crop. Apples and pears generally set light crops due to wet conditions during pollination, but this varies based on variety and location in the state. Apples in many cases tend to be unevenly distributed in the trees. It is best to thin whole clusters to allow remaining fruit to size up. Few growers used chemical thinners.

The wet spring weather also affected Kentucky nut crop pollination. Set on shagbark and shellbark hickory and heartnut trees is generally light, black walnuts are sparse, pecan set is variable and Persian and butternut set is good.

The weather has made good spray programs a necessity in comparison with the dry 2008 season. Fungicide spray intervals should have been tightened up this year. Scab, cedar apple rust and plum curculio are severe on unsprayed apple trees. Fire blight strikes are evident, but have not been too bad so far. Infections of black rot, anthracnose and phomopsis cane and leaf spot are evident on grapes if the spray schedule was not excellent.

AG in Uncertain Times Webinar Series

This is an interactive Extension webinar series designed to assist Ag professionals, including producers, to better understand the changing conditions in today's economy. The series is targeted towards providing information that helps producers make informed decisions and improves Ag professional's ability to work with their farm and ranch customers/clients. Each session is scheduled for 60 to 90 minutes with plenty of opportunity for the participants to interact with the presenters.

- September 9, 16, 23, 2009. Ag in Uncertain Times Webinar Series: Operating in the face of uncertain markets.
- October 7, 14, 21, 2009. Ag in Uncertain Times Webinar Series: Families facing uncertainty in agriculture.
- November 4, 11, 18, 2009. Ag in Uncertain Times Webinar Series: Operating in risky environments.
- December 2, 9, 16, 2009. Ag in Uncertain Times Webinar Series: Pulling it all together: Managing Ag Enterprises in Uncertain times.

All webinar start times are at 9AM Pacific. (10AM Mountain, 11 AM Central, and 12 noon Eastern). For more information: call John Nelson, 509-477-2176, email westrme@wsu.edu, or visit : <http://www.farmmanagement.org/aginuncertaintimes/>.

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

Aug. 1 U.K. & KVS Grape Summer Field Day, Lover's Leap Vineyards and Winery, Lawrenceburg. For more in formation contact Chris Smigell 859-257-3598.

Aug. 2-5, IFTA Annual Orchard Short Tour, Nova Scotia, Canada. For more information www.ifruittree.org.

Aug. 6-9, 46th Annual National Blueberry Festival, South Haven, MI. For more information www.blueberryfestival.com.

Aug. 11-12 NASGA 2009 Summer Strawberry Tour. Chicago, IL. For more information contact Kevin Schooley, 613-258-4587, or www.nasga.org.

Aug. 12, SW Ohio Corn Growers & Fayette Co. Agronomy Field Day. 9:30-3:30. Featured Speakers: Blairo Maggi, Gov of Mato Grosso, Brazil and worlds largest soybean farmer, and John Carter, Texas rancher and Brazilian soybean farmer. For more information contact John Yost at 740-335-1150.

August 12, Farm Pesticide Collection Clark County Fairgrounds, 4401 S. Charleston Pike, Springfield. 10:30 A.M. to 2:30 P.M. For more information, contact Ohio Department of Agriculture, Pesticide Regulation Section, at 800-282-1955, ext. 31.

Aug. 13, Horticulture Field Day, OSU South Centers, Piketon, 6-9 p.m., \$10 registration fee, (740) 289-2071.

Aug. 19, Ohio Grape and Wine Field Day, OARDC's Ashtabula County Agricultural Research Station, Kingsville, 1-4 p.m., free, (440) 224-0273.

Aug. 19, OSU Extension Grape Twilight Tour, locations and program TBD, 5 p.m., registration fee (TBD); for details call OSU Extension's Ashtabula County office, (440) 576-9008.

Aug. 20-21, Apple Crop Outlook and Marketing Conference, Ritz-Carlton Hotel, Chicago, IL. For more information www.usapple.org.

September 9, Farm Pesticide Collection Transfer Station, 2413 Townline Road 131 Williard, 10:30 A.M. to 2:30 P.M. For more information, contact Ohio Department of Agriculture, Pesticide Regulation Section, at 800-282-1955, ext. 31.

September 15, Farm Pesticide Collection Noble County Fairgrounds, Caldwell. 10:30 A.M. to 2:30 P.M. For more information, contact Ohio Department of Agriculture, Pesticide Regulation Section, at 800-282-1955, ext. 31.

Sept. 17, Growing Winegrapes Workshop, OSU South Centers, Piketon, 6-8 p.m., \$5 registration fee, (740) 289-2071.

Sept. 22-24, Farm Science Review, Molly Caren Agricultural Center, London; 8 a.m.-5 p.m., Sept. 22-23; 8 a.m.-4 p.m., Sept. 24; tickets \$5 in advance from most Ohio agribusinesses and all county offices of Ohio State University Extension, \$8 at the gate, children 5 and under free; (614) 292-4278.

October 15, Fourth Annual Raspberry and Blackberry High Tunnel Tour, Ithaca, NY. Cornell University invites you to attend the fourth annual Raspberry and Blackberry High Tunnel Open House to observe primocane-fruiting raspberries and blackberries, and the growth that can be obtained with black raspberries and thornless blackberries under a

high tunnel. For more information contact Cathy Heidenreich, mcm4@cornell.edu, 315-787-2367.

Nov. 8-10, *The Southeast Strawberry Expo*. Sheraton Imperial Hotel, Research Triangle Park, North Carolina. Sponsored by the North Carolina Strawberry Association, the Expo draws growers from as far away as Texas and Maine. This year's Expo includes two intensive workshops (one for new strawberry plasticulture growers and one focusing on the economics of strawberry production), a tour of the Vollmer Farm, educational sessions, and a trade show. For more information, contact the NC Strawberry Association, info@ncstrawberry.com, www.ncstrawberry.com, phone 919-542-4037, or write NCSA 1138 Rock Rest Rd, Pittsboro, NC 27312.

Nov. 19, Wildlife Control Workshop, OSU South Centers, Piketon, 6-8 p.m., \$5 registration fee, (740) 289-2071.

Dec. 8-10 Great Lakes Fruit Vegetable and Farm Market Expo. DeVos Place Convention Center, Grand Rapids, MI. For more information www.gleexpo.com.

2010

Jan. 3-5, 2010 Wisconsin Fresh Fruit & Vegetable Conference, Chula Vista Resort, Wisconsin Dells.

Jan. 4-5, 2010 Kentucky Fruit and Vegetable Conference and Trade Show. Embassy Suites Hotel, Lexington, KY. Contact John Strang 859-257-5685.

Jan 6-8, Illinois Specialty Crops and Agritourism Conference. Crowne Plaza Hotel and Convention Center, Springfield, Ill. For more information contact Diane Handley 309-557-2107, or handley@ilbf.org.

Jan 6-9, Southeast Regional Fruit and Vegetable Conference, Savannah International Convention Center. For more information see www.gfvga.org.

Jan18-20, OPGMA Congress, The Nia Center at the Kalahari Resort, Sandusky, OH. For more information www.opgma.org or opgma@ofa.org

January 25-27, 2010. *Empire State Fruit and vegetable EXPO*. NYS Farmer's Direct Marketing Association Annual Conference. OnCenter, Syracuse, NY. More information coming soon.

February 2-4, 2010. *Mid-Atlantic Fruit and Vegetable Convention*, Hershey Lodge, Hershey, PA. For more information visit <http://www.mafvc.org/html/>.

Feb 5-12, NAFDMA's 25th Anniversary Convention, Lancaster PA. more information to follow.

February 24-26, The North American Raspberry & Blackberry Conference. Monterey, California. Pre/post conference tours are also being planned. This is the annual meeting of the North American Raspberry & Blackberry Association (formerly called the North American Bramble Growers Association). The host hotel is the Beach Resort Monterey (www.montereybeachresort.com). For further information about sponsoring, exhibiting, or attending, contact NARBA, 1138 Rock Rest Rd., Pittsboro, NC 27312, 919-542-4037, info@raspberryblackberry.com, www.raspberryblackberry.com.

NOTE: Disclaimer - This publication may contain pesticide recommendations that are subject to change at any time. These recommendations are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. Due to constantly changing labels and product registrations, some of the recommendations given in this writing may no longer be legal by the time you read them. If any information in these recommendations disagrees with the label, the recommendation must be disregarded. No endorsement is intended for products mentioned, nor is criticism meant for products not mentioned. The author and Ohio State University Extension assume no liability resulting from the use of these recommendations.

Ohio Poison Control Number

(800) 222-1222

TDD # is (614) 228-2272