



Newsletter Extension

Fruit ICM News

Volume 6, No. 19
June 19, 2002

In This Issue:

[Calendar](#)

[Summer Heading for Black Brambles](#)

[Apple Maggot Efficacy Trial](#)

[Dwindling Fresh Apple Supplies](#)

[Blueberry Twig Blight](#)

[Pinching Apple Shoots for Growth Control](#)

[Periodical Cicadas](#)

[Pest Phenology](#)

[SkyBit® Apple Scab Prediction for NC Ohio](#)

[Degree Day Accumulations for Ohio Locations](#)

[SkyBit® Sooty Blotch Prediction Prediction for NC Ohio](#)

[Fruit Observations & Trap Reports](#)

Calendar

July 10: Ohio Fruit Growers Society Summer Tour, Hirsch Fruit Farm, Chillicothe, OH. Registration for the Summer Tour begins at 8:00 a.m. Member fees are \$15 per family & \$10 per individual; nonmember fees are \$20 & \$15. Orchard tours will begin as soon as the first tour wagon is full. Registrants will be able to purchase morning refreshments and a noontime meal. As an extension of the Summer Tour, OSU's Piketon Research & Extension Center has scheduled an afternoon tour of their facilities. Beginning at 3 p.m., there will be tours of horticulture & soil & water demonstration plots, aquaculture research, and business & learning center facilities. More information about the centers at Piketon is available at <http://www.ag.ohio-state.edu/~prec/>. For more info about the summer tour, call Tom Sachs at 614-249-2424.

July 23: Licking County Twilight Fruit School, Branstool Orchards. Contact Howard Siegrist at 740-349-6900 for more information.

Black, Purple Raspberries, and Blackberries: Summer Heading (Tipping)

Source: Ohio State University Bulletin 782-99 Brambles - Production Management and Marketing

If shoots of these plants are allowed to grow unchecked, they get long and are very difficult to manage without support of some kind. To prevent this, the tips of new canes should be pinched off (headed) when the canes have reached a certain height. This induces growth of side branches and results in plants that are stocky and self-supporting and have a large amount of bearing wood.

Black raspberry shoots should be tipped when canes reach about 28 to 30 inches. Brandywine purple raspberries are usually tipped at about 36 inches. Erect blackberries are permitted to grow to a height of about three feet before tipping. Generally, plant height will be less than two feet for the planting year. Therefore, heading is done every year from the second season. Royalty purple raspberries do not require heading, because their growth is similar to red raspberries. In heading, the usual practice is to remove four inches off the top. It is necessary to go over the planting several times, because all shoots do not reach the same height at the same time. If shoots are permitted to grow much above the desired height and then headed, the extra shoot growth is wasted, and the side branches will not be as strong as if heading had been done at the proper time. The laterals should not be shortened until the following spring. In most cases, the laterals mature sufficiently well and are not winter-killed to an extent that yields are lowered. Canes that do not reach the height for tipping by the time harvesting is started are usually not tipped. These weak canes will not grow much higher, and late tipping results in weak, immature laterals.

Apple Maggot Efficacy Trials

Source: Art Agnello & Harvey Reissig, Entomology, Geneva, Scaffolds Fruit Journal, June 17, 2002

A number of new materials were evaluated during the 2001 season for the control of severe apple maggot populations. A western NY apple orchard that has been in organic production for several years was selected for use in this trial because high levels of apple maggot and internal Lepidoptera damage were observed in fruit harvested during the previous season. Sprays were applied dilute to runoff with a hand gun sprayer (450 psi) on either a weekly or bi-weekly basis depending on the material used; the exception was a Spintor-volatile bait mixture that was applied with a MeterJet spray gun connected to a CO₂ backpack sprayer at 40 psi.

All applications were started several days after the first flies were captured on monitoring traps in the orchard on July 6 and continued on July 12, July 19, July 26, August 1, August 9, August 18, and August 21. Treatments were replicated four times and included an untreated check on single 'Cortland' trees and were arranged in a RCB design. Treatments were separated by unsprayed buffer trees within each row. Red volatile-baited sphere traps were hung in each of the check treatments, as well as in one tree, two rows to the west of the test rows. Traps were checked on a weekly basis, and cumulative counts were recorded throughout the season. Fruit was harvested on August 29. Damage from AM as well as internal Lepidoptera was taken upon fruit inspection.

Guthion 50WP (1.5 lb. formulation/A), Actara 25WP (1.4 oz form/A), Calypso 4F (3.0 oz form/A) and Avaunt 30WG (5.8 oz form/A) were applied on a bi-weekly schedule. Surround WP (50 lbs form/A), Aza-Direct EC (32.0 oz form/A), Spintor 2SC (7.5 oz form/A) and Spinosad Volatile Bait (32 ml form/tree) were applied each week throughout the season. The Spinosad Volatile Bait was applied with the metered sprayer in 8.0 ml aliquots. One aliquot was applied to each of the 4 directional quadrants of the outside of the tree canopy.

AM and internal Lepidoptera pressure in the test orchard was extremely high as indicated by the damage levels found in the untreated check plots (35.1 and 20.1%, respectively) and by high trap catches of flies throughout the season. The grower standard of Guthion gave excellent control of both pests with 0.4% AM and internal Lepidoptera damage. The weekly application of Surround also provided excellent control of AM damage (0.0%). The exact mode of action of this material against AM is not known. However, the coverage of kaolin reduces visual stimuli, and may affect the ability of the flies to recognize and orient to apples. Also, the buildup of clay on the apple may act as a deterrent to females attempting to oviposit. Surround was also quite effective in controlling damage from internal Lepidoptera (3.5%). The other organically approved material in this test, Aza-Direct, was not effective in reducing AM damage (42.0%), but did significantly reduce damage from internal Lepidoptera (6.9%). Avaunt, Actara, Spintor, and the Spintor bait all were relatively ineffective in preventing apple maggot damage (18-40%). However, Avaunt and Spintor were quite effective against internal Lepidoptera (2.9 and 1.1%, respectively). Actara also significantly reduced damage from internal Lepidoptera (6.9%), although it was not as effective as Avaunt and Spintor. Calypso was the only non-OP material that controlled both AM (2.5%) and internal Lepidoptera (2.0%), although it was not as effective against leps as the Guthion standard.

Fresh Apple Supplies Dwindle

Source: <http://www.fruitgrowersnews.com>

U.S. fresh-market apple movement slowed in May 2002 to reflect the nation's dwindling supplies, according to a June 1 U.S. Apple Association (USApple) survey of apple storage facilities. Nationally, movement of U.S. fresh and processing apples from storage during the month of May was 15% less than movement during May 2001 and 16% less than the five-year average for May movement.

"As we enter the homestretch of marketing this season's crop, our industry is in excellent shape with continued movement and decreasing supplies," said USApple Interim President James (Jim) R. Cranney, Jr., who oversees USApple's monthly apple movement and storage reports. "In fact, last month's movement outpaced movement during May 2001, and we are looking at approaching the new crop with the lightest supply we've had in years."

Total apple movement of 12.3 million bushels during May 2002 was 8% less than May 2001, and 9% below the five-year average of 13.6 million bushels. Regionally, May 2002 movement of fresh-market apples in the Northeast was equal to movement in May 2001, and 2% below the five-year average for May movement. May 2002 movement in the Southeast was 26% less than during May 2001, and 16% greater than the five-year average.

May 2002 movement in the Midwest was 22% less than during May 2001, and 19% less than the five-year average for the month. Movement of fresh-market apples from the Northwest was down 16% from May 2001, and 17% lower than the five-year average for the month.

Total U.S. holdings of fresh and processing apples on June 1, 2002, were 24.9 million bushels, 21% less than holdings the previous June, and 15% less than the five-year average of 29.4 million bushels for holdings on that date.

Twig Blight Common Sight in Michigan Blueberries

Source: http://www.msue.msu.edu/ipm/CAT02_frt/F06-18-02.htm#8A

Phomopsis twig blight infections are a common sight now in Michigan blueberries. Jersey is especially susceptible. The disease is caused by *Phomopsis vaccinii*, a fungus that overwinters in infected canes. In the spring, the spores are rain-splash dispersed from cankers and old twigs to the new twigs. Prolonged wet periods and wounding predispose plants to infection. The symptoms consist of dead flower and fruit clusters and a dark brown, spreading discoloration of the twig tissue. This dark brown lesion can spread an inch per week and will kill any fruit clusters along the length of the lesion. Eventually, the fungus can grow down the twig into cane tissues.

Phomopsis twig blight symptoms are sometimes confused with botrytis blight. Botrytis infections are often characterized by a gray, fuzzy mold on the affected plant part, and there is no dark brown discoloration of the twig. Botrytis can also blight leaves.

Botrytis is favored by cool, wet conditions. This year, phomopsis lesions were seen developing in healthy-looking twigs that were collected from various blueberry fields around the Holland area in March. The twigs were placed in a jar with water on the lab bench. Up to 10 percent of the twigs started to show symptoms after a week. The infections seemed to be originating from fruit buds, which subsequently died, and then spread throughout the entire twig. Eventually the whole twig died. Since similar symptoms appeared in the field in April and early May, much earlier than typical spring infections show up (May/June), it appears that these infections took place last year, possibly during August or September when the new fruit buds formed. Previous research showed that phomopsis can release spores all season, from April to September. The bud infections probably remained dormant in the buds until spring temperatures were conducive to growth of the fungus.

Phomopsis twig blight incidence can be reduced by pruning out and destroying infected canes and twigs, which act as inoculum sources. Captan + Benlate or Ziram + Topsin M are the best fungicide choices for controlling phomopsis twig blight. Other fungicides, such as Bravo and Indar, also provide some control. The critical period for control is between green tip and petal fall. The above observations suggest that protection of blueberry bushes may be needed after harvest as well, especially if there is a lot of rain in late summer. More research is needed to understand this aspect of the disease.

Pinch Apple Shoots to Control Growth

Source: Jon Clements, Extension Fruit Specialist, Win Cowgill, Area Fruit Agent, *Healthy Fruit: Issue 12 - June 18, 2002*

"Pinching" shoots is a young tree training technique used on mostly first-, and second -leaf apple trees to promote fruiting and manage growth in the top of the trees of vertical-axis, slender-spindle, or super-spindle orchards. Rapidly growing shoots that are six to eight inches long, that are in the top one-fourth of the tree, and that originate from the leader, are candidates for pinching. Pinch back the shoot two inches using your thumb and finger(s) or pruners. To see pictures or view a short web video of the technique, go to the Umass Fruit Advisor, <http://www.umass.edu/fruitadvisor/>. Pinching will do two things: weaken the growth of the developing shoot so it is not as likely to compete with the leader; and promote the development of a fruit bud in the vicinity of the pinch if done now into early July. This

technique will also prevent the tree from becoming top-heavy, which would eventually mandate a less desirable dormant pruning cut.

After 17 Years Underground, Who Wouldn't Want to Sing?

Source: OSU Home, Yard, and Garden Fact Sheet, No. 2137; Insects that Feed on Trees and Shrubs by Warren Johnson and Howard Lyon.

The periodical cicada is scheduled to be emerging in most of Trumbull, Mahoning, and Columbiana Counties as well as part of Jefferson County this year. Adult periodical cicadas are sucking insects, about 1.5 inches in length, that appear from May to July. They are black and have reddish-orange eyes and legs. Adults have clear wings with orange veins that are held roof-like over their bodies. They emerge in certain locations once every 17 years in the northern part of their range, and once every 13 years in the southern part. Different groups called "broods" emerge somewhere in the eastern United States almost every spring. Male cicadas are capable of making a loud buzzing noise and squawk when disturbed. It is believed that such droning and squawking may be effective in deterring predators.

"Dog-day" cicadas or harvestflies appear during the long, summer days of July and August. These cicadas have two- to five-year cycles, but their broods overlap and some appear every summer. Dog-day cicadas are larger than periodical cicadas and have brown-black bodies with a whitish bloom and green wing margins. Annual cicadas do not ordinarily cause much damage.

Periodical cicadas damage trees above and below ground. The most obvious damage is that caused by egg laying in small twigs. This damage causes twigs to split, wither, and die, causing a symptom called "flagging." Flagging is especially serious in small trees (four years or younger) because more of the branches are of the preferred size for oviposition. More than 270 species of plants serve as hosts. Some of the more favored plants include maple, hickory, hawthorn, apple, peach, cherry, and pear. Damage is also done by the nymphs that suck sap from roots. Prolonged feeding by nymphs on a tree's root system may reduce plant growth and fruit production.

Control Tactics:

- Trees in small orchards and brambles can be protected with nylon netting or cheesecloth during the egg laying period. The netting should have a mesh of no less than 1/4 inch and should be placed over the trees when the first male songs are heard. The netting should be tied to the trunk beneath the lower branches, and can be removed after adult activity has ended.
- Prune out and destroy young twigs that have been damaged by egg laying within a four to six week period after eggs are laid. This will prevent newly emerged nymphs from reaching the ground.
- Orchards near woods should be scouted every two to three days during the egg laying period to detect migrating females. Sprays may be necessary if egg laying activity is apparent or continues after spraying. Insecticides labeled for use on cicadas include carbaryl (Sevin) and esfenvalerate (Asana). Orchards using methomyl (Lannate), oxamyl (Vydate) or permethrin (Pounce, Ambush) in a cover spray need not add a special cicada insecticide. Applications of Sevin or Vydate within 21 days after apple full bloom may cause thinning. The use of pyrethroids or Sevin is cautioned in orchards with older trees because of the subsequent problems with increased mite densities.

Dave Ferree remembers the last emergence of periodical cicadas at Wooster in 1982, when they literally

"boiled out of the ground" and immediately went to young trees. He recalls the damage being quite severe in some cases.

Some American Indian tribes thought that the appearance of these insects had an evil significance, and in many rural areas people still view their appearance superstitiously. Many tribes collected them as food, and some of the Onondaga Indians of central New York fry them in butter and eat them like popcorn.

Pest Phenology

Coming Events	Degree Day Accum. Base 50° F
Obliquebanded leafroller 1 st flight peak catch	506- 987
Peachtree borer flight peaks	506-1494
San Jose scale 1 st generation crawlers present	569- 784
Apple maggot adult 1 st catch	629- 1297
Redbanded leafroller 2 nd flight begins	656-1381
Codling moth 1 st flight subsides	673-1412
Spotted tentiform leafminer 2 nd flight peak	701-1355
Oriental fruit moth 2 nd flight begins	772-1215

Thanks to *Scaffolds Fruit Journal* (Art Agnello)

SkyBit® Fire Blight Prediction for North-Central Ohio

Observed:

June 1-2, 9-10, 19: not active

June 3-4, 6-8, 13, 16, 18: active, but not infection

June 5, 11-12, 14-15, 17: possible infection & damage

Predictions based on weather forecasts:

June 20-21: not active

June 22-29: possible infection & damage

Degree Day Accumulations for Ohio Sites June 19, 2002

Location	Degree Day Accumulations Base 50F	
	Actual	Normal
Akron-Canton	689	756
Cincinnati	999	1103
Cleveland	694	724
Columbus	961	894
Dayton	895	930
Kingsville Grape Branch	595	634
Mansfield	692	742
Norwalk	657	706
Piketon	1012	1067
Toledo	765	698
Wooster	764	671
Youngstown	681	653

SkyBit® Sooty Blotch Prediction for North-Central Ohio

Observed:

June 1-19: active, but no infection

Predictions based on weather forecasts:

June 20-29: active, but no infection

Fruit Observations & Trap Reports

Insect Key

AM: apple maggot
CM: codling moth
ESBM: eye-spotted budmoth
LAW: lesser apple worm
LPTB: lesser peachtree borer
OBLR: obliquebanded leafroller
OFM: oriental fruit moth
PTB: peachtree borer
RBLR: redbanded leafroller
SJS: San Jose scale
STLM: spotted tentiform leafminer
TABM: tufted apple budmoth
VLR: variegated leafroller

Site: Waterman Lab, Columbus
Dr. Celeste Welty, OSU Extension Entomologist

Apple: 6/12 to 6/19/02

RBLR: 38 (down from 41)
STLM: 41 (down from 63)
CM (mean of 3 traps): 11.7 (down from 15.3)
TABM: 2 (down from 8)
SJS: 0 (same as last week)
VLR: 3 (up from 1)
OBLR: 1 (down from 8)
AM (sum of 3 traps): 10 (first report)

Peach: 6/12 to 6/19/02

OFM: 3 (down from 12)
LPTB: 4 (down from 10)
PTB: 2 (up from 0)

Site: East District: Erie & Lorain Counties
Source: Jim Mutchler, IPM Scout

Special Weather Note: Erie County fruit growers have experienced two hail storms this spring. The second was not as serious as the first, which caused up to 60% loss in some blocks.

Apple: 6/11 to 6/18/02

CM (mean of 3 traps): 6.0 (down from 9.2)
STLM: 342 (up from 6.0)
SJS: 0 (same as last week)
OFM: 0.7 (up from 0)
RBLR: 0.0 (same as last week)
ERM (infested leaves per 20 leaf sample): 0

Peach: 6/11 to 6/18/02

OFM: 0 (same as last week)
RBLR: 0 (same as last week)

LPTP: 33.0 (up from 28.7)
PTB: 0 (down from 0.3)

Beneficials present - native lady beetles, green lacewing eggs and adults

Site: West District: Huron, Ottawa, Sandusky Co
Source: Gene Horner, IPM Scout

Apple: 6/11 to 6/18/02

CM (mean of 3 traps): 6.3 (up from 3.2)
STLM: 14.6 (up from 4.0)
OFM: 3.0 (down from 4.3)
RBLR: 1.6 (up from 0.2)
SJS: 0 (same as last week)
ERM (infested leaves per 20 leaf sample): 0

Peach: 6/11 to 6/18/02

OFM: 0.4 (down from 1.6)
RBLR: 0.6 (up from 0)
LPTB: 8.4 (up from 6.4)
PTB: 2.0 (up from 1.2)

Beneficials present - native lady beetles, green lacewing eggs and adults, banded thrips

The Ohio Fruit ICM News is edited by:

Ted W. Gastier
Extension Agent, Agriculture
Tree Fruit Team Coordinator
Ohio State University Extension Huron County
180 Milan Avenue
Norwalk, OH 44857
Phone: (419)668-8210
FAX: (419)663-4233
E-mail: gastier.1@osu.edu

Information presented above and where trade names are used, they are supplied with the understanding that no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions.

Copyright © The Ohio State University 2002

All educational programs conducted by Ohio State University Extension are available to clientele on a nondiscriminatory basis without regard to race, color, creed, religion, sexual orientation, national origin, gender, age, disability or Vietnam-era veteran status.

Keith L. Smith, Associate Vice President for Ag. Adm. and Director, OSU Extension.

TDD No. 800-589-8292 (Ohio only) or 614-292-1868

| [Back](#) |