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Calendar

September 21-23: Farm Science Review, Molly Caren Agricultural Center, London, Ohio, 8 a.m-5 p.m. Tuesday and Wednesday; 8 a.m.-4 p.m. Thursday.

September 27: Annual Pumpkin Twilight Meeting, Hillsboro Research Site, Southern State Community College, Rte. 62 North, Hillsboro, 6:00 p.m. to 9:00 p.m. For more information contact Brad Bergefurd (800) 860-7232.

Cumulative Trap Report on the Web

Thanks to Bruce Eisley, Research Associate, Extension Entomology, you can access the cumulative trap reports for three areas of Ohio for the 1999 growing season.

http://www.ag.ohio-state.edu/~ipm/fruit/frpest.htm

Drought Conditions Persist as of Aug. 14th

<table>
<thead>
<tr>
<th>Region</th>
<th>Category of Drought</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW Ohio</td>
<td>Near Normal</td>
</tr>
<tr>
<td>WCentral Ohio</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
More Details on 'Confirm 2F'

Source: Dr. Celeste Welty, OSU Extension Entomologist

Details are now available about the use of the new insecticide Confirm on pome fruit. Confirm, made by Rohm & Haas Company, is an insect growth regulator that interferes with the normal molting process in caterpillars. Caterpillars that feed on treated leaves stop feeding within several hours but take several days to die. On apples and other pome fruit, Confirm is used at a rate of 20 fl oz. Per acre to control codling moth, obliquebanded leafroller, Pandemis leafroller, eyespotted budmoth, fruittree leafroller, redbanded leafroller, variegated leafroller, lesser appleworm, and green fruitworm. At a rate of 12 to 20 fl oz per acre, it controls tufted apple budmoth. It has a 14-day preharvest interval. There is a limit of 120 oz per acre per season. The label details the optimal timing for application to control each pest, based on temperatures following the start of the moth flight.

Entanglements

Source: Art Agnello, Entomology, Cornell University, Geneva, NY

The appearance of some unsightly webbing in a few trees here and there reminds us of the perennial activities of the fall webworm, *Hyphantria cunea*, a tiger moth (Arctiidae) whose larva feeds on almost all shade, fruit, and ornamental trees except conifers. This is a widespread defoliator that exhibits a preference for American elm, maples, and hickory in this region, but a season with sparse OP sprays for apple maggot can bring the local populations into full view on apples and cherries.

Adult females, white moths with a few dark spots and a 1-inch wingspan, deposit eggs in early spring, and the yellowish tan larvae pass through many instars (10-11), feeding within a large, compact web they produce that often encloses a whole limb of foliage. When disturbed, all the larvae in the web make jerky movements in perfect rhythm, possibly as a defense mechanism.

According to Warren Johnson (*Insects that Feed on Trees and Shrubs*), nests of the fall webworm may be cut out of small trees and destroyed; alternatively, an application of a Bt material can be effective. Although foliage is the most common food of the webworms, they have been known to do significant
damage to apple fruits through surface feeding. Normally, however, this insect is detrimental mainly to the beauty of the host and is thus more a nuisance than a true threat to the tree’s health.

HACCP Rule

*Source: Peter Hirst, Department of Horticulture, Facts for Fancy Fruits, Purdue University*

The FDA is currently drafting the final version of the HACCP rule. The key people involved in the drafting of this regulation were on a panel at the cider workshop in Washington, but would not speak about what was going to be in the new rule. Apparently, once they start drafting it, it is illegal for them to disclose what is in the rule. I expressed my frustration to them, and said that if they were going to pass a rule that was going to affect cider makers this coming season, we needed to know about it as soon as possible. They would not comment on when the rule was likely to be completed or when it would take effect from. However, they did explain the process the rule must go through.

My understanding is that once the rule has been written, it needs to go to the President and then to Congress for 30 days, not so much for approval as for them to view it. Reading between the lines, I'd be very surprised to see this being implemented for the coming season. Also, it seems likely that there will be a phase-in period depending on the size of the producer.

**Fruit Observations**

<table>
<thead>
<tr>
<th>Insect Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM:</td>
<td>Apple maggot</td>
</tr>
<tr>
<td>CM:</td>
<td>Codling moth</td>
</tr>
<tr>
<td>DWB:</td>
<td>Dogwood borer</td>
</tr>
<tr>
<td>LPTB:</td>
<td>Lesser peachtree borer</td>
</tr>
<tr>
<td>OBLR:</td>
<td>Oblique banded leafroller</td>
</tr>
<tr>
<td>OFM:</td>
<td>Oriental fruit moth</td>
</tr>
<tr>
<td>PC:</td>
<td>Plum curculio</td>
</tr>
<tr>
<td>PTB:</td>
<td>Peachtree borer</td>
</tr>
<tr>
<td>RBLR:</td>
<td>Redbanded leafroller</td>
</tr>
<tr>
<td>SJS:</td>
<td>San Jose scale</td>
</tr>
<tr>
<td>STLM:</td>
<td>Spotted tentiform leafminer</td>
</tr>
<tr>
<td>TABM:</td>
<td>Tufted apple budmoth</td>
</tr>
<tr>
<td>VLR:</td>
<td>Variegated leafroller</td>
</tr>
</tbody>
</table>

**Site:** Waterman Farm, Columbus  
*Source: Dr. Celeste Welty, OSU Extension Entomologist*  
*Traps Used:* AM = red balls, SJS = tent traps, Others = wing traps

**Apple:** 8/11 - 8/18

RBLR: 7 (down from 10)
STLM: 845 (up from 222)
SJS: 1033 (up from 659)  
CM (mean of 3 traps): 5.7 (up from 2.7)  
AM (mean of 3 traps): 0 (down from 0.3)  
TABM: 3 (up from 2)  
VLR: 7 (down from 9)  
OBLR: 0 (unchanged)  

Peaches:  
OFM: 5 (up from 1)  
LPTB: 10 (up from 3)  
PTB: 4 (down from 8)  

Site: East District; Erie & Lorain Counties  
*Source: Jim Mutchler, IPM Scout*  
*Traps: AM = red balls, SJS = tent traps, STLM = wing traps, Others = Multipher traps*

Apple: 8/11 - 8/17  
RBLR: 12.9 (up from 6.3)  
SJS: 3.7 (up from 1.1)  
CM (mean of 3 traps): 2.2 (up from 2.0)  
OBLR: 7.0 (up from 2.5)  
VLR: 2.5 (down from 2.0)  
AM (sum of 3 traps): 1.27 (up from 1.2)  
TABM: 41 (down from 42)  

Peach:  
OFM: 11.3 (down from 13.3)  
RBLR: 9.5 (up from 6.0)  
LPTB: 30.0 (down from 32.3)  
PTB: 0.8 (down from 2.5)  

Other pest activity: green apple aphid, OFM strikes  

Beneficials at work: Lacewings everywhere, Stethorus punctum and other lady beetles, predator mites, orange maggot  

Site: West District; Huron, Ottawa, & Sandusky Counties  
*Source: Gene Horner, IPM Scout*  
*Traps Used: AM = red balls, SJS = tent traps, STLM = wing traps, Others = Multipher traps*

Apple: 8/11 - 8/17  
RBLR: 29.7 (up from 19.9)  
SJS: 1.0 (down from 2.3)  
CM (mean of 3 traps): 1.0 (up from 0.8)  
OBLR: 0.0 (down from 2.0)  
VLR: 22.5 (up from 12)
AM (sum of 3 traps) 0.4 (unchanged)
FTLR: 0 (unchanged)

**Peach:**

OFM: 1.5 (down from 0)
RBLR: 34.5 (up from 11.5)
LPTB: 21.0 (up from 14.5)
PTB: 1.0 (unchanged)

**Other pest activity:** two-spotted spider mite, apple rust mite, Japanese beetle, white apple leafhopper

**Beneficials at work:** Lacewing eggs, predator mites, banded thrips, Stethorus punctum and other lady beetles

**Site:** Wayne County
**Source:** Ron Becker, Program Assistant, Agriculture and IPM, Ohio State University Extension

**Apple:** 8/12 - 8/18

STLM: 71 (down from 99)
CM (mean of 3 traps) 6.1 (Unchanged)
RBLR: 7.4 (up from 2.5)
OBLR: 0.5 (down from 1)
AM (mean of 3 traps) 0.2 (down from 0.6)

**Peach:** 8/12 - 8/18

OFM: 28 (up from 25)
LPTB: 26 (up from 5)
PTB: 6 (up from 2)

Codling moth damage found on Macs and Jonathans. ERM still present, mostly below threshold. AM flies are being found on red ball traps, but below threshold levels. Two-spotted and ERM are still active in below threshold numbers in peaches. A few fruit found with Oriental fruit moth damage.

**Ohio Apple Scab, Fire Blight, and Sooty Blotch Activity - SkyBit Products**

**Central District**

**Apple Scab:**
August 1, 8, 11, 13-17 possible infection & damage
August 2-7, 9, 10, 12, 18 active but no infection
Based on Forecasts; August 19, 20, 23-25 active but no infection
August 21, 22 possible infection and damage

**Fire Blight:**
August 1, 4, 7, 8, 10-15, 17 possible infection and damage; August 2, 5, 18 not active
August 3, 6, 9, 16 active but no infection
Based on Forecasts; August 19, 21, 22, 25 possible infection and damage
August 20, 23, 24 not active

Sooty Blotch:
August 1-18 possible infection and damage
Based on Forecasts; August 19-25 possible infection and damage

Eastern Highlands

Apple Scab:
August 1, 5, 7, 8, 10, 11, 13-15, 18 possible infection & damage
August 2-4, 6, 9, 12, 16, 17 active but no infection
Based on Forecasts; August 19-22 possible infection and damage
August 23-25 active but no infection

Fire Blight:
August 1, 4, 5, 7, 8, 10, 11, 13, 14, 17, 18 possible infection and damage
August 2, 9, 12 not active
August 3, 6, 15, 16 active but no infection
Based on Forecasts; August 19-22 possible infection and damage
August 23-25 not active

Sooty Blotch:
August 1-10 active but no infection; August 11-18 Possible infection and damage
Based on Forecasts; August 19-25 possible infection and damage

Northeast District

Apple Scab:
August 1, 4, 5, 7, 8, 13-15 possible infection & damage
August 2, 3, 6, 9-12, 16-18 active but no infection
Based on Forecasts; August 19, 22 possible infection and damage
August 20, 21, 23-25 active but no infection

Fire Blight:
August 1, 4 -8, 10, 11, 13-15 possible infection and damage;
August 2, 3, 9, 12, 16-18 not active
Based on Forecasts; August 19, 21, 22, 24, 25 possible infection and damage
August 20, 23 Not active

Sooty Blotch: August 1-18 possible infection and damage
Based on Forecasts; August 19-25 possible infection and damage

North Central District

Apple Scab:
August 1, 4 -8, 11, 13, 14 possible infection & damage
August 2, 3, 9, 10, 12, 15-18 active but no infection
Based on Forecasts; August 19-21, 23-25 active but no infection
August 22 possible infection and damage

Fire Blight:
  August 1, 4-8, 10-14 possible infection and damage; August 2, 3, 9, 16-18 not active
  Based on Forecasts; August 19, 20 Not active
  August 21-25 possible infection and damage

Sooty Blotch:
  August 1-10 active but no infection; August 11-18 possible infection and damage
  Based on Forecasts; August 19-25 possible infection and damage

West District

Apple Scab:
  August 1, 4-8, 10, 11, 13, 14 possible infection & damage
  August 2, 3, 9, 12, 15-18 active but no infection
  Based on Forecasts; August 19, 22 possible infection and damage
  August 20, 21, 23-25 active but no infection

Fire Blight:
  August 1, 4-8, 10, 11, 13, 14 possible infection and damage
  August 2, 3, 912, 15-18 not active
  Based on Forecasts; August 19, 21, 22, 24 possible infection and damage
  August 20, 23, 25 not active

Sooty Blotch:
  August 1-18 possible infection and damage
  Based on Forecasts; August 19-25 possible infection and damage

Degree Day Accumulations for Selected Ohio Sites January 1, 1999 to date indicated

<table>
<thead>
<tr>
<th>Location</th>
<th>Actual DD Accumulations August 18, 1999</th>
<th>Forecasted Degree Day Accumulations August 25, 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base 43° F</td>
<td>Base 50° F</td>
</tr>
<tr>
<td>Akron - Canton</td>
<td>3172</td>
<td>2201</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>3718</td>
<td>2650</td>
</tr>
<tr>
<td>Cleveland</td>
<td>3190</td>
<td>2229</td>
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<tr>
<td>Columbus</td>
<td>3820</td>
<td>2782</td>
</tr>
<tr>
<td>Dayton</td>
<td>3659</td>
<td>2646</td>
</tr>
<tr>
<td>Elyria</td>
<td>3336</td>
<td>2377</td>
</tr>
<tr>
<td>Fremont</td>
<td>3021</td>
<td>2097</td>
</tr>
</tbody>
</table>
### Phenology

<table>
<thead>
<tr>
<th>Coming Events</th>
<th>Range of Degree Day Accumulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spotted tentiform leafminer 3rd flight peak</td>
<td>Base 43° F: 2415-3142</td>
</tr>
<tr>
<td></td>
<td>Base 50° F: 1728-2231</td>
</tr>
<tr>
<td>San Jose scale 2nd flight subsides</td>
<td>Base 43° F: 2494-3257</td>
</tr>
<tr>
<td></td>
<td>Base 50° F: 1662-2303</td>
</tr>
<tr>
<td>Redbanded leafroller 3rd flight peak</td>
<td>Base 43° F: 2514-3225</td>
</tr>
<tr>
<td></td>
<td>Base 50° F: 1818-2625</td>
</tr>
<tr>
<td>Obliquebanded leafroller 2nd flight peak</td>
<td>Base 43° F: 2634-3267</td>
</tr>
<tr>
<td></td>
<td>Base 50° F: 1789-2231</td>
</tr>
<tr>
<td>Apple maggot flight subsides</td>
<td>Base 43° F: 2764-3656</td>
</tr>
<tr>
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<td>Base 50° F: 1904-2573</td>
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<tr>
<td>Lesser peachtree borer flight subsiding</td>
<td>Base 43° F: 2782-3474</td>
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<tr>
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<td>Base 50° F: 1796-2513</td>
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<tr>
<td>Codling moth 2nd flight subsides</td>
<td>Base 43° F: 2782-3693</td>
</tr>
<tr>
<td></td>
<td>Base 50° F: 1796-2635</td>
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<tr>
<td>Oriental fruit moth 3rd flight subsides</td>
<td>Base 43° F: 2987-3522</td>
</tr>
<tr>
<td></td>
<td>Base 50° F: 2018-2377</td>
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<tr>
<td>Redbanded leafroller 3rd flight subsides</td>
<td>Base 43° F: 3103-3433</td>
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<tr>
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<td>Base 50° F: 2013-2359</td>
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<tr>
<td>Spotted tentiform leafminer 3rd flight subsides</td>
<td>Base 43° F: 3235-3471</td>
</tr>
<tr>
<td></td>
<td>Base 50° F: 2228-2472</td>
</tr>
</tbody>
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**Thanks to Scaffolds Fruit Journal (Art Agnello)**

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