Arkansas Fruit, Vegetable & Nut Update

(Blog Link)

Pecan Pests
Dr. Donn T. Johnson - Fruit Research/Extension

- **Fall webworm** has generations in late-June and in August. **Hosts**: They lay eggs and feed as a group on pecan, apple, walnut, persimmon, birch and other trees. **Biology**: Each generation begins with a white egg mass laid on the underside of leaves. Newly hatched larvae skeletonize the underside of leaf with egg mass. This group of larvae spin a silk nest over adjacent leaves and then skeletonize those leaves inside the nest. The web encloses more skeletonized leaves as larvae grow in size. The mature larvae leave the web and pupate elsewhere. Adult moths emerge in August, lay eggs and more limbs are webbed and skeletonized. Whole trees can be skeletonized.

Scouting: Weekly starting in late-June, look for first signs of fall webworm in silk webbed terminals on susceptible trees, especially persimmon and walnut. **Control**: In shorter trees, prune out and destroy nests of fall webworm when they first appear. In taller trees, apply recommended insecticide to webbed terminals when caterpillars are still small.

Arkansas Fruit and Nut News Volume 7, Issue 1, 23 June 2017

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**Walnut caterpillar** also has two generations.

**Hosts:** These caterpillars feed as a group on pecan, black walnut, butternut, hickory, oak, willow, birch, honey locust and apple. The group chews up (defoliate) many leaves, then move to a new branch. Larvae go through two color phases as they mature. Smaller caterpillars are red with white lines along body and a black head whereas larger caterpillars are black with white lines along body, fuzzy white hair and a black head.

**Scouting:** In early-July, start looking for egg masses and groups of newly hatched walnut caterpillars on the underside of leaves.

**Control:** In shorter trees, remove caterpillar-infested leaves and destroy when they first appear. Apply recommended insecticide to large, caterpillar-infested trees.
Fruit Pests
Dr. Donn T. Johnson - Fruit Research/Extension

- **Plum curculio (PC):** Summer generation plum curculio adults should be emerging and start laying eggs in pome and stone fruits and blueberries from mid-June through July.  
*Control:* See recommended compounds in MP144, MP 467 or the Midwest Fruit Pest Management Guide (Link).

Egg hatch or insecticide protection periods in NW Arkansas for:  
Oriental fruit moth (OFM), Codling moth (CM) and Grape berry moth (GBM)

<table>
<thead>
<tr>
<th>Generation</th>
<th>OFM</th>
<th>CM</th>
<th>GBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>1 to 18 May</td>
<td>27 May to 11 June</td>
<td>21 May to 5 June</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>13 to 26 June</td>
<td>7 to 19 July</td>
<td>27 June to 10 July</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; and 4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>10 July on</td>
<td>2 to 17 Aug.</td>
<td>29 July on</td>
</tr>
</tbody>
</table>

What each moth pest looks like in sticky pheromone trap.

Larva or entry
**Peachtree borer:**
From late-May through September, peachtree borer lays eggs near stone fruit trunk base and larva bores in trunk below the soil line.

**Scouting:** The pheromone trap for peachtree borer should be in place in early-May to detect the first emergence of the single generation of this pest.

**Control:** The correct recommendation is to make a single spray of insecticide to a peach trunk at the time of peak moth emergence (usually in July or early-August). To spread out this one spray of Lorsban to trunks, growers can apply Lorsban to trunks immediately after harvesting a block. You can't apply Lorsban to peach trunks more than once per season (correction: page 70 of Midwest Fruit Pest Management Guide).

- **Japanese beetle:**
  **Hosts:** Since early- to mid-June, we have been seeing Japanese beetle adults on fruit crops and ornamental plants including: apple, blackberry, blueberry, grape crepe myrtle, rose, etc. These adults will skeletonize leaves and flowers from late-June through early-August.
  **Scouting:** Daily, look for presence of adults on foliage, flowers or chewing skin off fruits near top of susceptible plants.
  **Control:** Typically, a grower can apply a recommended insecticide or whitewash plants with Surround WP kaolin clay (especially the upper third of plants where feeding occurs) and re-apply insecticide weekly or as needed to maintain whitewash with Surround. Check recommended compounds in either Arkansas spray guides MP144, MP467, or the Midwest Fruit Pest Management Guide (Link).

- **Green June beetle:**
  **Hosts:** Adults feed on ripe and damaged fruits of: apple, blackberry, blueberry, grape and peach from early-July through early-August.
  **Biology:** After 23 June, green June beetle adults should emerge from soil after the next soil moistening rainfall event in your area. For the first week, adults mate and lay eggs in soil in grass pasture areas where livestock have grazed or other grass areas where composted manure has been applied. After a week, adults get hungry, disperse to fruit plantings and feed on ripe and/or damaged fruit.
  **Scouting:** From early to mid-July, look for adults flying low over pastures adjacent to fruit planting or when adults disperse into fruit planting to feed.
Control: A grower can apply a recommended insecticide to the fruiting plants and re-apply weekly or as needed. Check recommended compounds in either Arkansas spray guides MP144, MP467, or the Midwest Fruit Pest Management Guide (Link).

**Spotted wing drosophila (SWD)**

Hosts: This introduced pest lays eggs under the skin and larvae feed inside soft-skinned fruit. In Arkansas, blackberry seems to be the preferred fruit attacked by SWD. Other states get SWD infesting blueberry, cherry, elderberry, grape and strawberry.

Scouting: Since early-May in Washington Co. and Johnson Co., we have been capturing SWD flies in deli cup traps baited with one of two commercial lures (Scentry or Trece SWD lures; available at several supplies: Link). Since late-May, there have been increasing percentages of spotted wing drosophila eggs and larvae observed in mulberry and blackberry fruit samples.

Control: If SWD flies are captured in baited traps and fruit is beginning to ripen or being harvested, then use one or both of these practices to minimize fruit infestation:

1) **Pick daily, refrigerate** fruit immediately and keep cold until processed or eaten (2-3 days at 34°F kills SWD eggs and larvae).

2) **Spray insecticide weekly** and reapply after rain. Rotate insecticides with different IRAC # (modes of action) to delay development of SWD resistance to insecticides. See recommended compounds in MP144, MP 467 or the Midwest Fruit Pest Management Guide (Link).

Table 1. Spotted wing drosophila (SWD) fly counts per baited trap in Johnson and Washington Co. and percentage unsprayed blackberry fruit infested with SWD eggs in Washington Co., AR (2017)

<table>
<thead>
<tr>
<th>Date</th>
<th>Johnson Co.</th>
<th>Washington Co.</th>
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<tbody>
<tr>
<td></td>
<td># SWD flies/ trap</td>
<td># SWD flies/ trap</td>
<td>% SWD-infested blackberry fruit (@ 30 fruit sample)</td>
</tr>
<tr>
<td>23-25 May</td>
<td>35.3</td>
<td>8</td>
<td>8</td>
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<tr>
<td>31 May - 1 June</td>
<td>70.0</td>
<td>17.5</td>
<td>62.4</td>
</tr>
<tr>
<td>7-9 June</td>
<td>112.3</td>
<td></td>
<td>100</td>
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<tr>
<td>15 June</td>
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Much of the information obtained for this newsletter was gathered by the authors at the University of Arkansas-Fayetteville. All chemical information is given with the understanding that no endorsement of named products is intended nor is criticism implied of similar products that are not mentioned. Before purchasing or using any pesticide, always read and carefully follow the directions on the container label. Compiled by: Donn T. Johnson, University of Arkansas, Department of Entomology, E-mail: dtjohnso@uark.edu and Jackie Lee, Department of Horticulture, E-mail: jalee@uaex.edu. Photographs by Donn T. Johnson.

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