



Arkansas Fruit and Nut News Volume 3, Issue 3, 17 June 2013

Online Fruit Information

Dr. Donn T. Johnson - Fruit Research/Extension

Click any [blue underlined](#) link below and bookmark if useful to you

- [Fruit and Pecan Pest Management](#) - Home page with menu linking to all web pages listed below:
- [Fruit Blogs](#)
 - [Commercial Fruit and Nuts](#)
 - [Arkansas Sustainable Agriculture Research and Education Program](#)
- [Scouting Supplies](#)
- [Management and Spray Guidelines](#)
- [Fruit Spray Efficacy Tables](#)
- [IRAC \(Insecticide Resistance Action Committee\) Mode of Action](#)
- [Fruit and Pecan Degree Day Accumulation Data and Information](#) – you can use your own site specific biofix dates for pests of fruit (codling moth; grape berry moth; grape phylloxera; grape scale, Oriental fruit moth; plum curculio; San Jose scale) and the pecan nut casebearer, calculate cumulative degree days and predict hatch periods of fruit and pecan pests.

In this Issue:	
Online Fruit Information	1
Update	1
• Spotted wing drosophila (SWD)	1
• SWD trap capture by county	2
• New SWD trap design	2
Fruit Pests	3
• Stink bugs	3
• Plum curculio	3
• Oriental fruit moth	3
• Lesser peachtree borer	3
• Greater peachtree borer	3
• Grape leafhopper	3
• Grape berry moth	3
• Table of hatch periods	3

UPDATE

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- **Spotted wing drosophila (SWD)** is a new invasive pest of ripening, soft skinned fruits (caneberries, blueberries, cherries, strawberries, late season peaches). **Control:** Growers have been spraying caneberries and blueberries weekly for SWD in several Arkansas counties: Izard, Johnson, Nevada, Pope, and Washington (Fig. 2)
[See online information about spotted wing drosophila at:](#)
 - ❖ [Spotted Wing Drosophila Fact Sheet \(pdf\)](#)
 - ❖ [Picture Sheet of Spotted Wing Drosophila: ID, Trap, Bait, Management \(pdf\)](#)
 - ❖ [Workshop Talk on Detecting and Managing Spotted Wing Drosophila \(pdf\)](#)



Figure 1. Spotted wing drosophila male.

Fruit Pests

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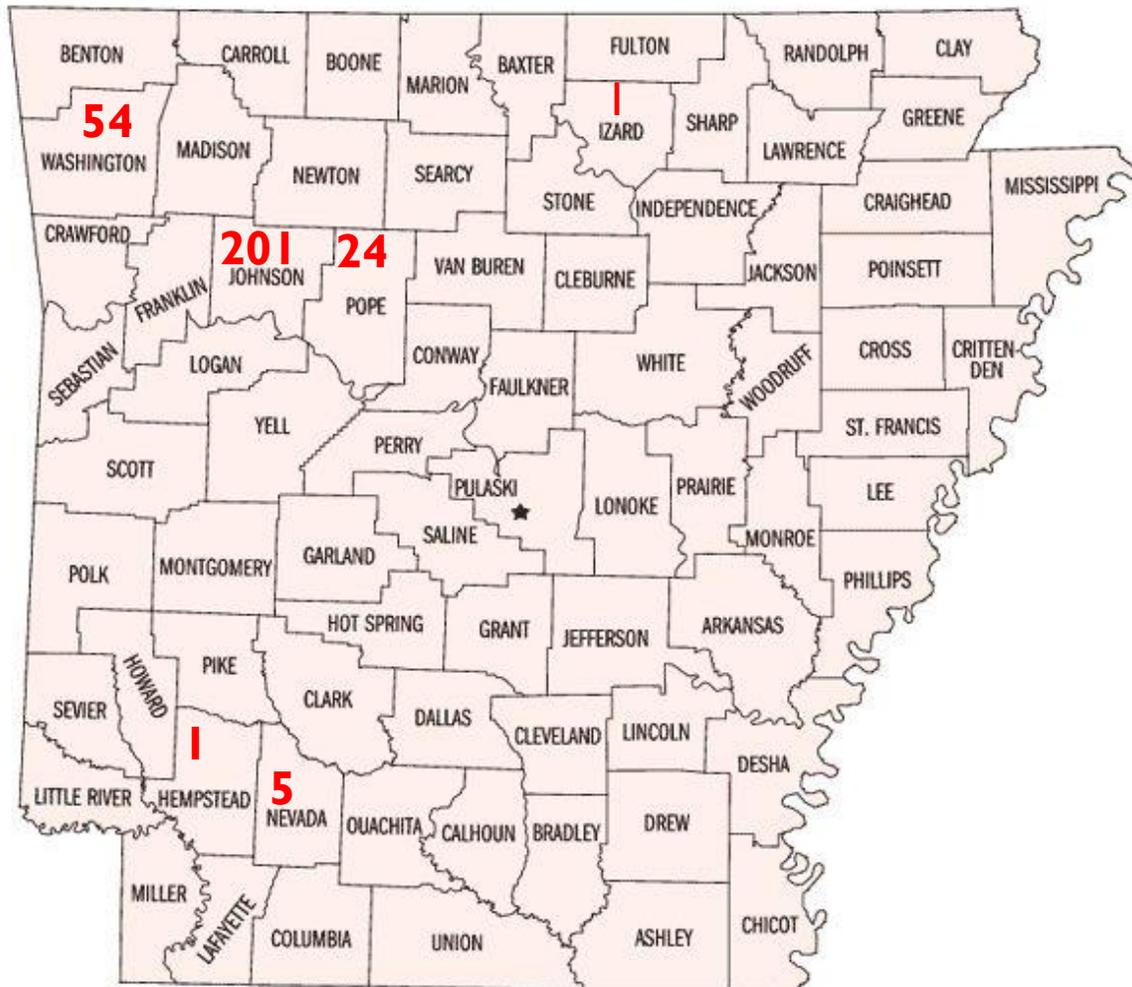


Figure 2. Confirmed total trap captures of spotted wing drosophila flies by Arkansas County for May and June 2013.

New trap design (Fig. 3): 1 qt food container with lid (no holes in lid)

Drowning solution: pour into big container 8 oz of apple cider vinegar + 2 drops unscented dish soap.

Fermenting bait: pour into second smaller cup – ½ cup yeast lure mixture (1 cup flour + 1 teaspoon yeast + 8 tsp sugar + 16 oz water), cut hole in cup lid, cover hole with cloth and hang small cup with bait inside big container.

Scouting/Trapping: See Arkansas Newsletter Issue 2 for details ([pdf](#)).

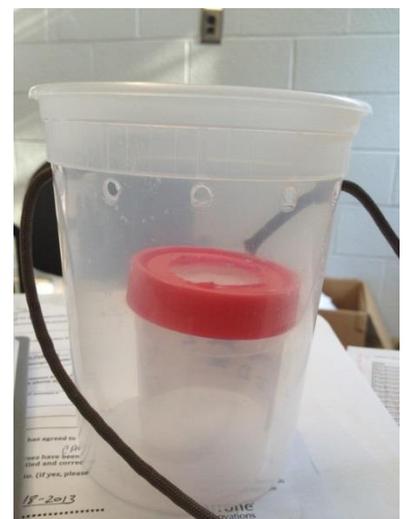


Figure 3. Spotted wing drosophila trap with fermentation bait cup hung inside big cup. (Photo: H. Burrack)

Most Fruits:

- **Stink bugs:** continue to puncture and damage blackberries, raspberries and peaches. Stink bugs (Fig. 4) often leave a bad taste or smell of released defense odor on damaged berries.

Scouting: Weekly until harvest, check for stink bugs on fruit or note new clear threads of ooze on fruit (Fig. 4).

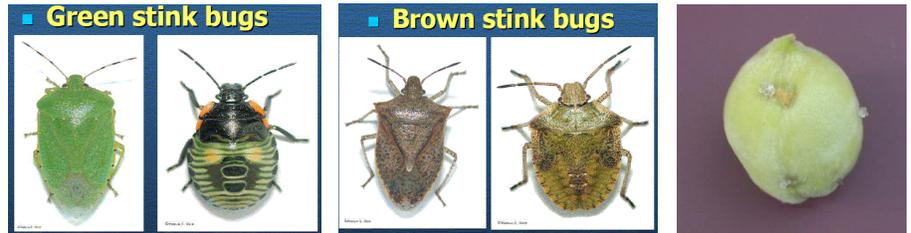


Figure 4. Green (left) and brown stink bug (middle) adults and nymphs and new feeding damage (clear threads of ooze) by stink bugs.

Apple, Peach

- **Plum curculio (PC):** summer generation adults will begin to emerge sometime this week (Table 1).
Scouting: Weekly until harvest, you should be checking 300 fruit along the orchard perimeter for new plum curculio damage.
- **Oriental fruit moths (OFM):** The second generation of larvae should begin hatching (time to apply insecticide sprays) by 12 June (Hope) or 17 June (Clarksville) or 20 June (Fayetteville).
- **Lesser peachtree borer:** Moths have been captured in pheromone trap since 15 April.
Control: This pest is usually killed from insecticide sprays applied to control plum curculio and oriental fruit moth in peach and plum in May.
- **Peachtree borer:** Moths have begun to emerge.
Control: Late May and June are the usual times to drench the lower peach and plum trunks with Lorsban to control the hatching larvae before they tunnel into the trunk below the soil line.

Grape

- **Grape leafhopper:** We are detecting white stippling of leaves and counts exceeding the spray threshold of 5 nymphs per leaf which justify sprays (Fig. 5).



Figure 5. Grape leafhopper nymph. (Photo: MSU)

- **Grape berry moth**

Scouting: Once berries exceed 3/8 inch diameter (pea size), start

on each of 30 vines in perimeter vines by a wooded edge for presence of discolored berries grape berry moth larvae damaged (Fig. 6). If more than 2% of the clusters have one or more damaged berries, then you may need to spray the whole vineyard when the second generation larvae hatch begins.



Figure 6. Grape berry moth damage.



Figure 7. Rednecked cane borer adult. checking 10 clusters

Bramble

- **Rednecked cane borers** (Fig. 7) will lay eggs on primocanes most of June.

Scouting: Twice a week between 10am and 4pm, look for adults flying or landing on leaves of primocanes.

Updated chart of egg hatch for several fruit pests.

We monitor pheromone trap catches of several fruit pests at three Agricultural Experiment Stations: SWREC in Hope, Fruit Research Station in Clarksville and AAREC in Fayetteville. The corresponding predicted hatch periods (spray periods) are noted in **Table 1**.

Table 1. First trap catches (biofix dates) with updated predicted hatch periods for each generation of several fruit pests using cumulative degree days (DD) for three locations in Arkansas in 2013.

Location (AR)	Generation, Pest	Biofix Date	LDT (°F)*	Hatch periods	Cumulative DD**
Hope (SWREC)	1 st , Oriental fruit moth	16 Apr.	45	12 May	400
	2 nd , Oriental fruit moth			12 June	1300
	3 rd , Oriental fruit moth			8 July	2200
	1 st , Plum curculio	16 Apr.	50	6 May-31 May	200-700
	2 nd , Plum curculio			18 June-5 July	1200-1700
	Clarksville	1 st , Oriental fruit moth	20 Apr	45	16 May
	2 nd , Oriental fruit moth			17 June	1300
	3 rd , Oriental fruit moth			13 July	2200
	1 st , Plum curculio	9 Apr.	50	29 Apr.-29 May	200-700
	2 nd , Plum curculio			23 June-10 July	1200-1700
	1 st , Grape berry moth	17 Apr.	47.3	16 May-31 May	400-800
	2 nd , Grape berry moth			22 June-8 July	1300-1800
Fayetteville	1 st , Oriental fruit moth	24 Apr	45	17 May	400
	2 nd , Oriental fruit moth			20 June	1300
	3 rd , Oriental fruit moth			17 July	2200
	1 st , Plum curculio	9 Apr.	50	29 Apr.-30 May	200-700
	2 nd , Plum curculio			21 June-10 July	1200-1700
	1 st , Grape berry moth	27 Apr.	47.3	19 May-7 June	400-800
	2 nd , Grape berry moth	(no traps, guess)		24 June-11 July	1300-1800
	3 rd , Grape berry moth	(no traps, guess)		26 July-11 Aug.	2300-2800

* LDT = lower developmental temperature used to calculate degree days accumulated after the biofix date

** Cumulative degree-days calculated using the online degree-day calculator, click [here](#)

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