



Arkansas Fruit and Nut News Volume 6, Issue 6, 11 July 2016

Recommended Insecticides

- MP144 2016 Insecticide Recommendations for Arkansas ([pdf](#))
- MP467 Arkansas Small Fruit Management Schedule ([pdf](#))
- Midwest Fruit Pest Management Guide ([pdf](#))
- 2016 Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide ([pdf](#))
- 2016 Southeastern Small Fruit Spray Guides ([Link](#))

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Fruit Pest Alerts

Dr. Donn T. Johnson - Fruit Research/Extension

Green June beetle (GJB): If your area had a soil drenching rainfall recently, you may be observing GJB adults emerging from the moist soil and many males flying just above the grass in pastures looking for mates or females laying eggs in soil under decomposed manure. These flights will continue for about a week before both GJB males and females get hungry. Once hungry, these beetles search for fermenting, damaged fruit and begin to feed. Eventually groups of GJBs will be attracted to feed on sweet, ripe and overripe fruit (apples, blackberries, blueberries, grapes, peaches, etc.) (**Fig. 1**).



Figure 1. Green June beetle adult feeding on ripe fruit, adults feeding mass feeding on grape cluster and an inexpensive monitoring trap baited with 50% isopropanol (Photos: D. Johnson)

Scout: An inexpensive GJB adult trap made of a 3 liter beverage bottle with a lure made of a 3 oz plastic bottle with a ¼" diameter cotton wick to air dispense the attractant, 50% isopropanol (rubbing alcohol) (**Fig. 1**) . This trap can be used to monitor GJB adult movement to a fruit planting where diminishing trap counts indicate adults are dying (lifespan of about 1 month).

Control: We have not had much luck using multiple attractant traps as attract and kill method to reduce the local density of GJBs and minimize fruit damage. Typically, a grower can apply a recommended insecticide to protect ripening fruit but should re-apply as needed. Check above for online links to recommended compounds.

- **Spotted wing drosophila (SWD)**: This pest continues to lay eggs in unprotected, ripening blackberry and raspberry fruit but counts of flies in baited traps has dropped 3-fold from 23 June to 6 July (**Fig. 2**). On 8 and 25 July, the third and fourth generations of adult flies began or will emerge with peak egg laying on 16 July and 2 August (cumulative degree days derived from max. / min. temperature data for Fayetteville, AR run in SWD DD model – [Link](#)).

Control: See Issue 4 June 20 ([pdf](#)) for a review of recommended management practices provided by Dr. Hannah Burrack (Entomologist at NCSU).



Figure 2. Spotted wing drosophila egg just under skin of blackberry drupe (Photo: D. Johnson)

- **Plum curculio (PC)**: On 15 March (biofix date) temperatures began to exceed 70°F so that PC adults began moving from overwintered sites in adjacent woodlots to fruit plantings. By 22 June we had accumulated over 1200 degree-days (DD, base 50°F). This was the beginning of emergence from the soil of the summer generation of PC adults. Cumulative DD were derived from max. / min. temperature data for Fayetteville, AR using the online degree-day calculator at: [Link](#).

Scouting: You should make weekly inspections of 300 fruit (apple, blueberry and peach) for new PC feeding damage and egg laying (30 fruit per each of 10 fruit plants along perimeter near woodlot). For pictures of new PC damage, see News Issue 2, 10 May 2016 at: [pdf](#).

Control: If greater than 1% of inspected fruit have new feeding damage, then apply a recommended insecticide to protect fruit and re-apply as long as new feeding damage appears. Check above for online links to recommended compounds.

- **Oriental fruit moth (OFM) and Codling moth (CM)**: For the last two weeks, we captured more than 5 moths per pheromone trap of both OFM and CM at the UA Fayetteville farm.
Scout: You can inspect weekly a couple hundred apples for new **CM** larval surface entry holes with tan frass and ringed in red (**Fig. 3, middle**). For OFM, look for evidence of OFM larval feeding in terminals ([pdf](#)).

Control: Degree-day models indicate 50% egg hatch began or begins for second and third generation **CM** by 3 July (1,500 DD, base 50°F) and 5 August (2,500 DD).

Third generation **OFM** hatch will occur by 5 July.

These models alone should not be relied upon for timing insecticide applications for the third generation, because the models become less accurate over time because later generations of moths overlap. For this reason, rely on **OFM** pheromone trap captures to determine the need for control measures. Spray threshold levels of **5 CMoths** or **7 OFMoths** per trap per week have worked well to minimize damage. Where **CM** populations are extremely high and where pheromone trap catches remain high between generations, additional insecticide applications at shorter intervals may be necessary. This often occurs in orchards adjacent to abandoned orchards, orchards near bins, or in problem orchards with high populations.



Figure 3. Codling moth (A) adult, (B) new larval entry into apple with frass and (C) larva inside apple (Photos: D. Johnson)

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

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