

### PEACH INSECT PESTS

Kacie J. Athey  
Specialty Crops Entomologist

ILLINOIS  
College of Agricultural, Consumer & Environmental Sciences

1

### Peach Insect Pests

- Oriental fruit moth
- Lesser peachtree borer
- Stink bugs
- Plum curculio
- Japanese beetle
- Spotted wing Drosophila
- San Jose scale
- Green peach aphids
- Mites (European red mite)
- Spotted lanternfly

ILLINOIS  
College of Agricultural, Consumer & Environmental Sciences

2

ILLINOIS  
College of Agricultural, Consumer & Environmental Sciences

3

#### Oriental fruit moth (OFM)



ILLINOIS  
College of Agricultural, Consumer & Environmental Sciences

4

#### Oriental fruit moth damage

- Overwinters as caterpillar in a cocoon
- Pupate in late March
- Early season OFM damages succulent terminal growth
- Attacks fruit in mid-summer
  - Caterpillar bore to center of peach and feed around the pit
  - Fruit often drops
- Can be 6-7 generations per year
  - 2<sup>nd</sup> and 3<sup>rd</sup> generations are most damaging
  - Serious damage when populations are high

ILLINOIS  
College of Agricultural, Consumer & Environmental Sciences

5



#### OFM Damage

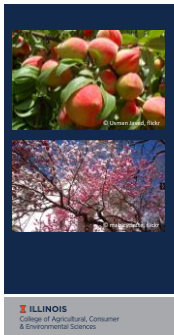


ILLINOIS  
College of Agricultural, Consumer & Environmental Sciences

6

#### Oriental fruit moth control

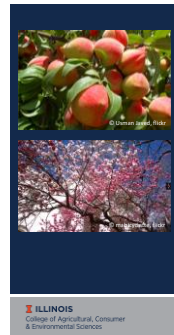
- Mating disruption at pink (400 twist ties per acre)
  - Determine need for sprays at petal fall
- Monitoring using pheromone traps
  - One trap per 10 acres
- Threshold 7 moths per trap per week
- Superior oil for eggs
- Altacor
- Pyrethroids (Asana, Baythroid, Danitol, Mustang Maxx, Pouce)
- Assail
  - Be very careful with these around bees
- Delegate
- Diamides (Altacor, Exirel, Verdepryn)
- Rimon



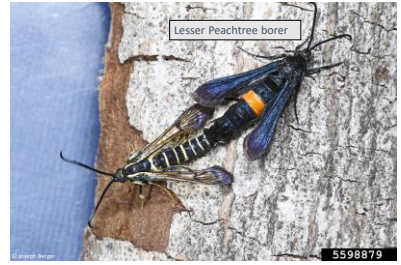
Peachtree borers



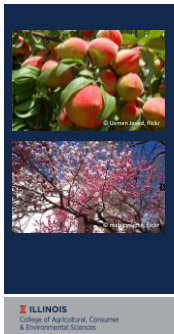
7



Peachtree borers



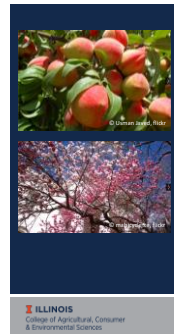
8



Peachtree borers

- Overwinters at larvae under bark
- Pupate in spring
  - 18-30 days before emerging as adults
- Eggs laid in small clusters in cracks near wounds
  - From ground to 8 feet
  - Large hatch in 8-10 days
- Two generations per year
  - Adults in May and June
  - August and September

9

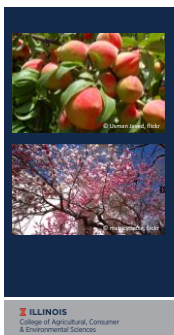


Peachtree borer damage

- Previously infested and/or young trees are very vulnerable
- Focus on lower 10-12 inches of trunk and extending underground



10

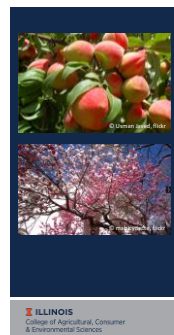


Lesser peachtree borer damage

- Older trees
- Scaffold limbs, branches, and trunk
- Under bark
- Oozing of gum

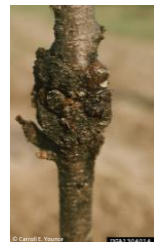


11

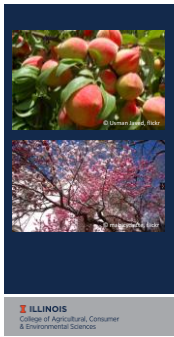


Peachtree borer control

- Key to control is killing newly hatched larvae before they bore into the tree
- Applying trunk spray at the right time of year



12

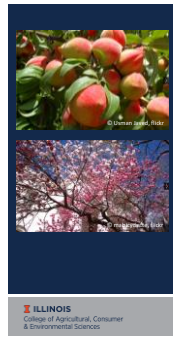


Peachtree borer control

- Pheromone traps
- Second generation moth flight peaks late August to early September for low borer activity
- High borer activity, sprays at first generation too.
- Remove larvae by hand



13

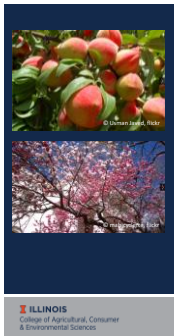


Peachtree borer control

- Pyrethroids (Asana, Baythroid, Danitol, Mustang Maxx, Permethrin, Proaxis, Warrior II)
- Venom
- Sevin
- Rimon



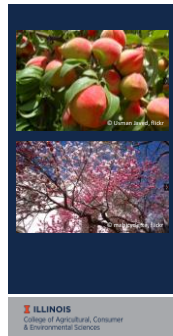
14



Stink bugs



15

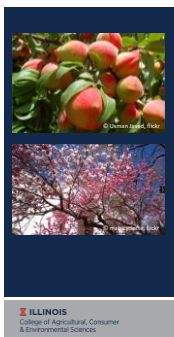


Stink bugs

- Overwinter as adults
- Emerge in April through June
- Mate multiple times
- Five nymphal stages
- One to two generation per year



16

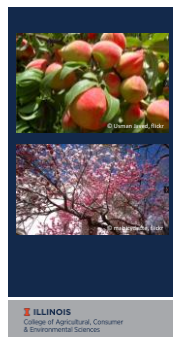


Stink bugs



- Damage to fruit
- Corky, pithy areas from feeding

17

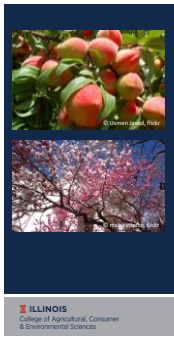


Stink bugs

- Insecticides
  - Pyrethroids (Azera, Baythroid, Brigade, Danitol, Mustang Maxx, Warrior II)
  - Neonicotinoid (Actara, Venom)
    - Be very careful with these around bees
- Attract and kill



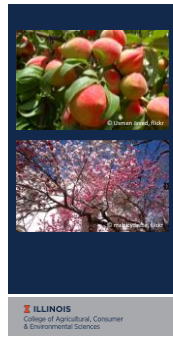
18



Plum Curculio



19

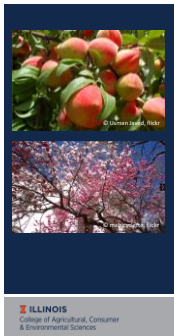


Plum curculio

- Overwinters as an adult
- Migrate into orchard in spring
- Lays eggs in fruit
- Larvae hatch 5 days
- One generation per year

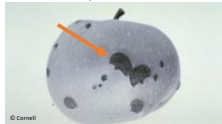


20

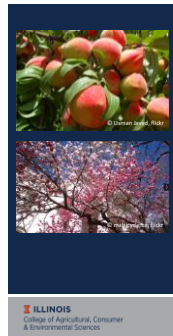


Plum curculio damage

- Adults
  - Egg laying causes crescent shaped damage
  - Surface feeding scars
- Larvae
  - Premature drop of fruit



21

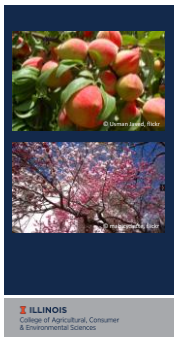


Plum curculio control

- Shake infested trees
- Clean up fallen fruit
- Insecticides at shuck-split
  - Pyrethroids (Asana, Baythroid, Danitol, Mustang Maxx, Permethrin, Proaxis, Warrior II)
  - Neonicotinoid (Actara, Assail, Belay)
    - Be very careful with these around bees
- Apta
- Avaunt
- Exirel



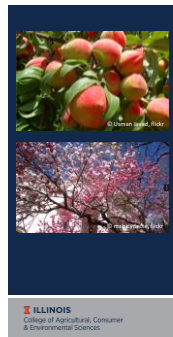
22



Japanese beetle

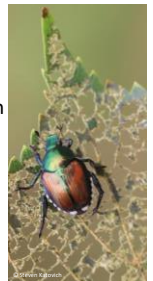


23

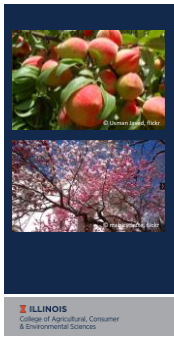


Japanese beetle

- Overwinter as grub
- Adults emerge in June
- Feeding damage beginning in late June
- Adults lay eggs in soil, 40-60
- Grubs take 10 months to develop



24

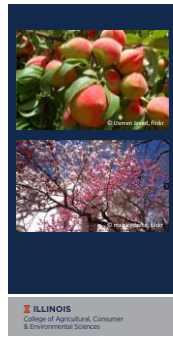


Japanese beetle damage

- Feed on leaves, flowers and overripe or wounded fruit
- Skeletonized leaves
- Beetles attract more beetles



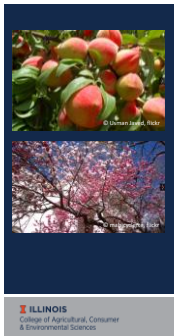
25



Japanese beetle control

- Japanese beetle traps
  - Often attract way more beetles than are caught
- Physical removal
  - Shake plants early in the morning
- Insecticides
  - Pyrethroids (Danitol, Proaxis, Warrior II)
  - Neonicotinoids (Admire Pro, Assail)
  - Sevin
  - Diamides (Exirel, Verdepryn)

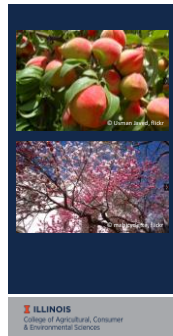
26



Spotted wing Drosophila (SWD)



27

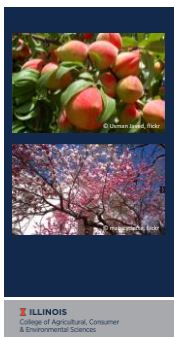


SWD

- Lay eggs in undamaged ripening fruits all season



28

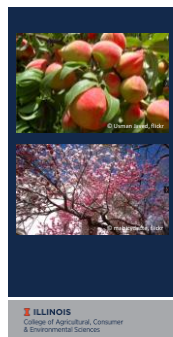


SWD

- Overwinter as adults
- Lay eggs in spring, summer, and fall
  - Up to 300 eggs
- Eggs hatch in 2 to 72 hours
- Up to 10 generations per year
- Can result in very high populations at end of season



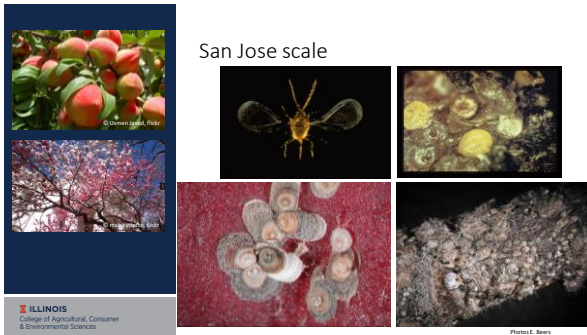
29



SWD control

- Good sanitation
- Monitoring traps to determine if you have SWD
- Control should be based on host susceptibility (peaches are starting to ripen)
- Insecticides
  - Pyrethroids (Baythroid, Danitol, Mustang Maxx)
  - Spinosyns (Delegate, Entrust)
  - Exirel

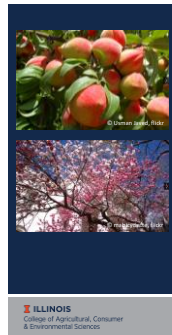
30



San Jose scale

ILLINOIS College of Agricultural, Consumer & Environmental Sciences

31

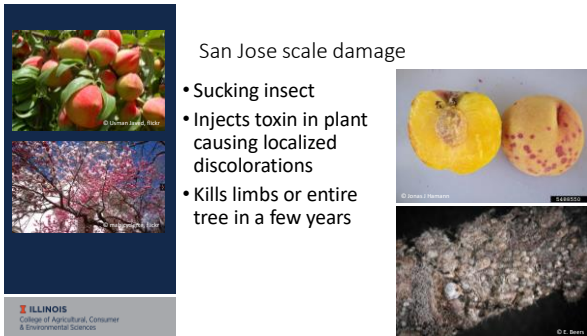


San Jose scale

- Overwinter as immature scales on tree
- In spring, adults emerge and mate
- Females give birth to crawlers, no egg stage
- Crawlers move around settle down and secrete scale covering
- Two generations per year

ILLINOIS College of Agricultural, Consumer & Environmental Sciences

32



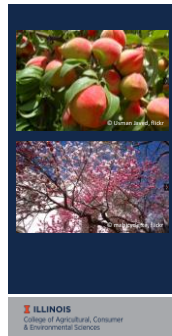
San Jose scale damage

- Sucking insect
- Injects toxin in plant causing localized discolorations
- Kills limbs or entire tree in a few years



ILLINOIS College of Agricultural, Consumer & Environmental Sciences

33

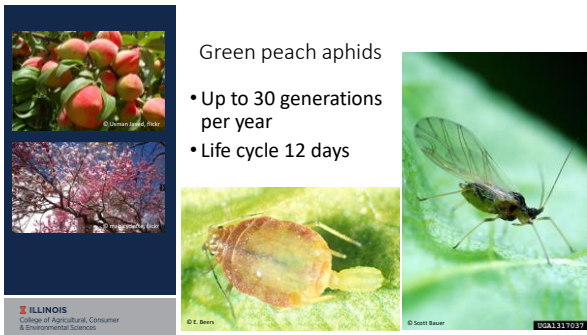


San Jose scale

- Pheromone traps prior to bloom
  - Biofix, male trap catch
- Crawlers are the only stage susceptible to insecticides
- Crawler emergence begins at 380-400 DD
- 600-700 DD best time for spraying
- Insecticides
  - Belay
  - Centaur
  - Esteem
  - Movento
  - Sivanto Prime

ILLINOIS College of Agricultural, Consumer & Environmental Sciences

34

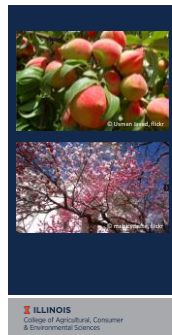


Green peach aphids

- Up to 30 generations per year
- Life cycle 12 days

ILLINOIS College of Agricultural, Consumer & Environmental Sciences

35



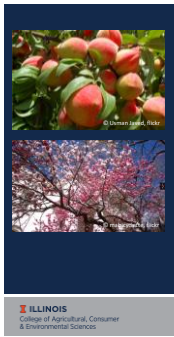
Green peach aphids

- Foliage feeder
- Honeydew
- Sooty mold
- Fruit damage

ILLINOIS College of Agricultural, Consumer & Environmental Sciences

36



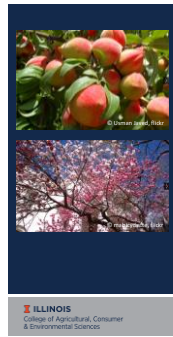


Green peach aphid control

- Conserve and introduce natural enemies
  - Commercially available predators and parasitoids
- Avoid broad-spectrum insecticide applications to conserve natural enemies
- Lady beetles
- Lacewings
- Syrphid flies
- Parasitoids



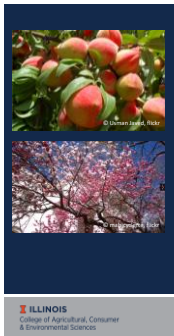
37



Green peach aphid insecticides

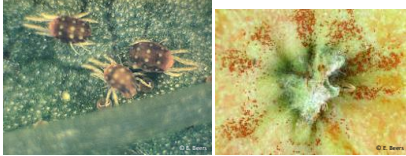
- Superior oil
- Proaxis
- Neonicotinoid (Actara, Admire Pro, Assail, Belay)
  - Be very careful with these around bees
- Apta
- Beleaf
- Closer
- Movento
- PQZ
- Sivanto Prime
- Versys Inscalis

38

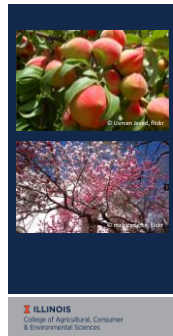


Mites (European Red Mite)

- Overwinter as eggs in bark
- 6-8 generations per year, 14 days
- Can be difficult to control

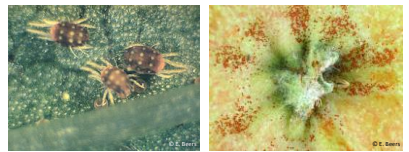


39

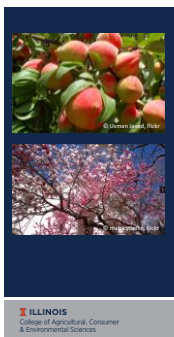


Mites (European Red Mite)

- Infest leaves and damage fruit
- Reduce tree growth, yield
- Bud formation



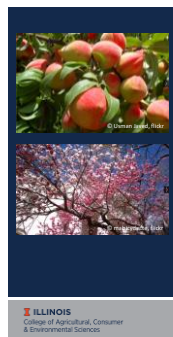
40



Mites (European Red Mite)

- Conserve and introduce natural enemies
  - Commercially available predators
- Avoid broad-spectrum insecticide applications to conserve natural enemies
  - Insecticides tend to cause secondary outbreaks
- Use horticultural oil as a delayed/dormant application
- If previous season had heavy outbreaks, apply oil just before bud break

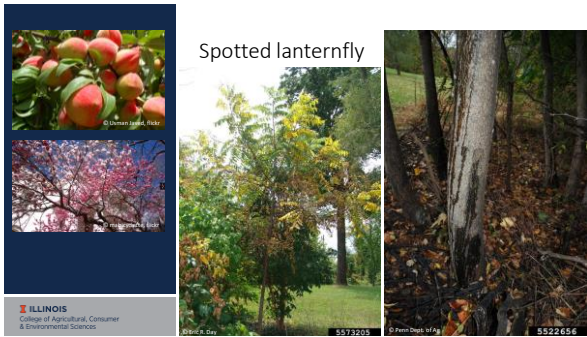
41



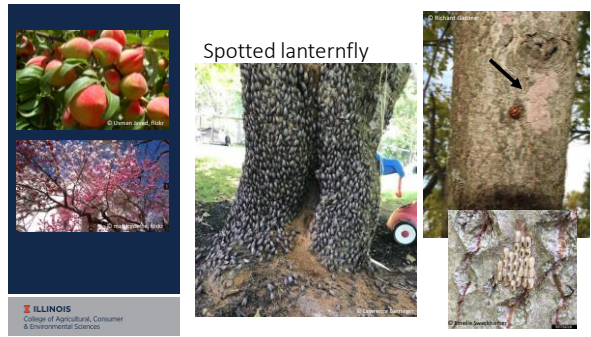
Spotted lanternfly



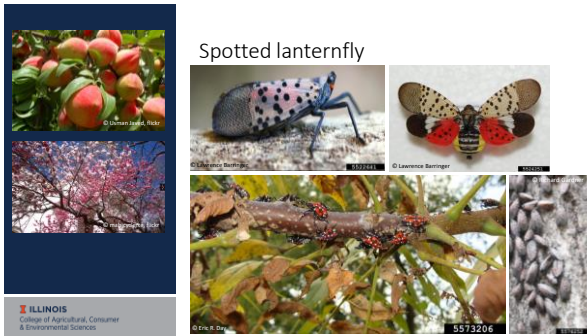
42



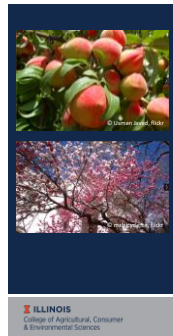
43



44



45



46

Contact Information  
 Department of Crop Sciences  
 • NSRC 266  
 1101 W Peabody Dr  
 Urbana, IL 61801  
 • [kathye@illinois.edu](mailto:kathye@illinois.edu)  
 • 859-433-8364