2003 Tree Borer Survey

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2003 Tree Borer Survey

- Status of trunk borer pests
  - Current Utah situation
- 2003 tree borer survey data
  - Beetle borers
  - Moth borers
- Observations on root borers
- Orchard management strategies
Apple Flatheaded Borer
*(Chrysobothris femorata)*
Moth Borers

Clearwing Moth: Greater Peachtree Borer

Snout Moth: American Plum Borer
Shothole Borers

Bark Beetles
Why are borers more troublesome?

- 5 years of drought/heat – tree stress
- Sources of borers
  - Sanitation!!
  - Wood piles – get rid of cut wood before May
- 2-3 yr old trees susceptible
- Sunscald, winter injury, pruning wounds
  - Paint trunks
- Keep vegetation away from trunks
2003 Trunk Borer Survey

- Apple, Peach, Cherry
- Panel Traps
  - Ethanol Lure
  - Flatheaded borer
  - Shothole borers
- Pheromone Traps
  - Species specific pheromones
  - Moth borers
Beetle Borers Collected

Apple Flatheaded Borer
(*Chrysobothris femorata*)
1/4 - 1/2 inch

Bark Beetles:
Ambrosia beetle
(*Xyleborus saxeseni*)
Shothole borer
(*Scolytus rugulosus*)
European Elm BB
(*Scolytus multistriatus*)
Ips (*Ips integer*)
<1/4 inch

Ten-lined June Beetle
(*Polyphylla decemlineata*)
1 – 1 1/2 inch
Root borer
Beetle Borers Collected in Panel Traps with Ethanol Lures

*10 traps at 10 sites (Box Elder, Davis & Utah Counties)
Management of Flatheaded Borers

Sanitation, remove infested wood, paint/protect trunks, prevent stresses

Apple Flatheaded Borer
Peak adult flight: May-Jul
Protective trunk spray about Jun 1 and repeat 3-4 wk later if needed

Lorsban, Thiodan, Guthion, Malathion

Bar graph showing the number of borers in traps over time.
Management of Bark Beetles

Sanitation, remove infested wood, paint/protect trunks, prevent stresses

Ambrosia/Shothole Borers
Summer flights
Treat late May/early Jun and late Aug/Sep (unprotected)

Lorsban, Thiodan, Guthion, Asana, Malathion
Management of June Beetles

Sanitation, remove infested wood, paint/protect trunks, prevent stresses
Prevent in new plantings

Ten-lined June Beetle
Root borer
2-4 yr life cycle
Peak adult flight: Jul & Aug
Protect new orchard sites

*No. in 10 traps*
Moth Borers Collected

Clearwing Moths

Greater Peachtree Borer / Peach Crown Borer

Poplar Clearwing Moth / Cottonwood Crown Borer

Snout Moth

American Plum Borer

Ash Borer
Moth Borers Collected in Pheromone Traps

*11 traps at 11 sites (Box Elder, Davis & Utah Counties)
Management of Greater Peachtree Borer

Utah: peach, nectarine, apricot
Very effective mating disruption
Isomate-P
not limited by small orchards
place dispensers at biofix (late Jun)
Protective trunk sprays
Jul 1st, Aug 1st
Lorsban – one application
Thiodan – two applications
Observations of Other Borers

Leaf-notching / Root-feeding Weevils

*Otiorhynchus meridionalis*

Lilac weevil
Strawberry root weevil

Pest of ornamentals
Insecticide application in May when notching first appears
Observations of Other Borers

Larvae bore into roots and crown

Large beetle *Prionus californicus*

Adults fly at night

Older sweet cherry roots with extensive damage

No success with insect-parasitic nematodes
Orchard Management Strategies for Borers

- Sanitation!!! (get rid of cut wood by May)
- Maintain tree vigor!!!
- Prevent trunk injury
  - White paint
  - Remove vegetation
- Avoid planting new orchards near sources
Orchard Management Strategies for Borers

➢ Preventive Trunk Sprays
  • Flatheaded Borer: Jun 1st, repeat if needed
  • Ambrosia beetles/Shothole borers: late May/early Jun (already insecticides going on) & late Aug/Sep (trees unprotected)
  • Greater Peachtree Borer: Isomate-P, Jul 1st, Aug 1st

➢ Root Borers
  • New sites; Imidacloprid (Admire) – soil application – not registered yet
Future Plans for Tree Borer Research

- More survey (expand, more intensive to define flight periods, different traps, lures)
  - Seeking funding through USDA APHIS pest survey program (Homeland Security)
- Validate, refine timing of sprays & insecticides
  - Grower cooperators