Biology and Management of Stink Bugs in Orchards

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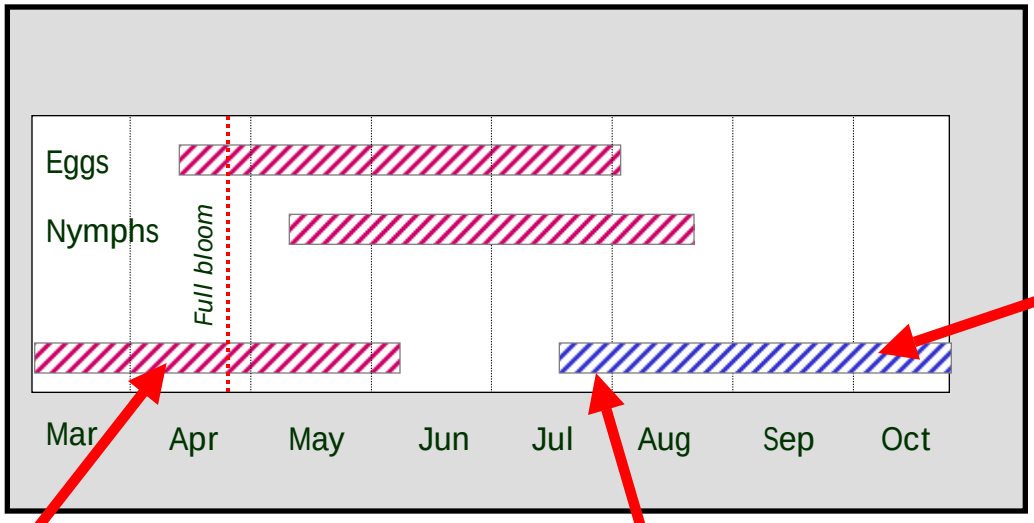
Stink bug species complex

Two primary stink bug species :

Euschistus conspersus

Chlorochroa ligata

The vast majority of SB life cycle is spent *outside* orchards!



Spend winter in protected areas in/around orchard

Adults mating/laying eggs in border vegetation

Begin immigration into orchards (as adults only!)

Stink bug native hosts near orchards promote invasion

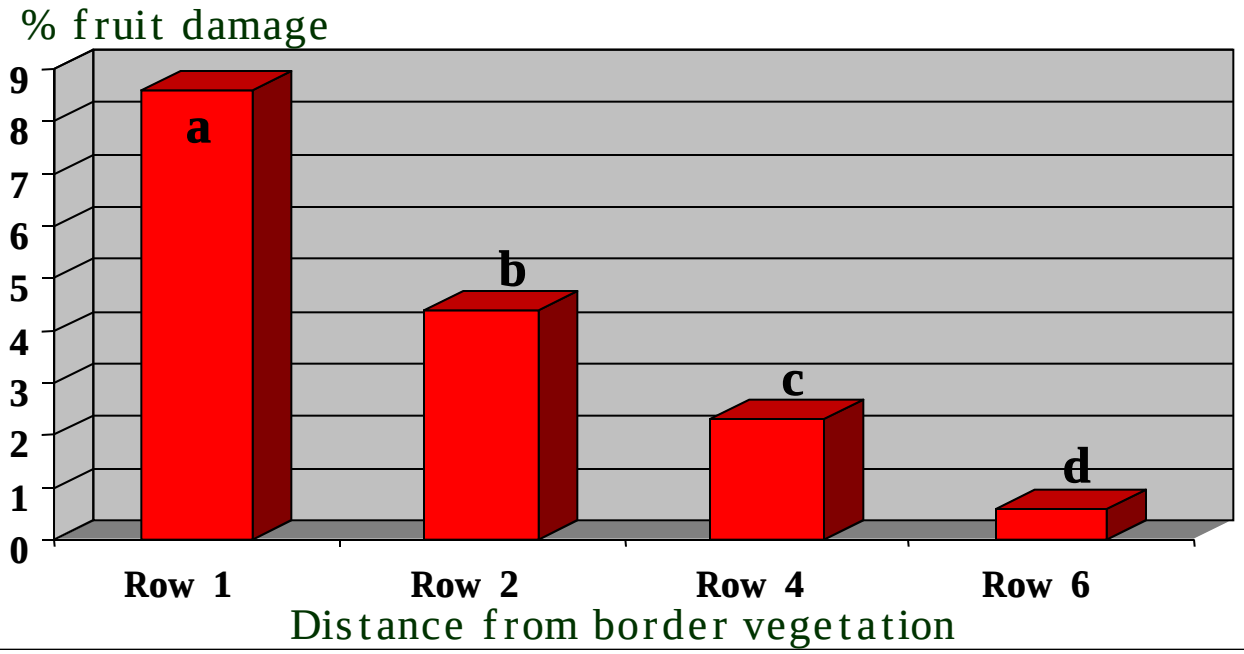
Bitterbrush

Preferred SB hosts

Mullein

Stink bug damage - Row effect

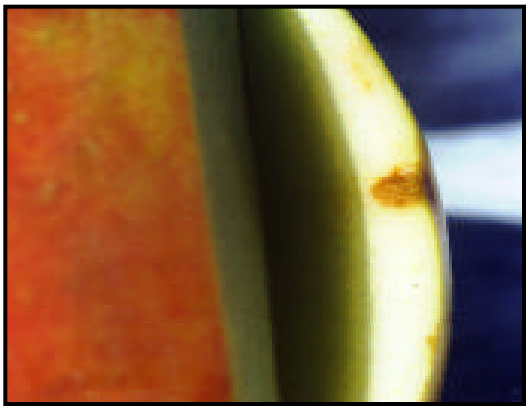
(results pooled from 8 Orondo/Manson orchards)



Stink bug vs. bitter pit

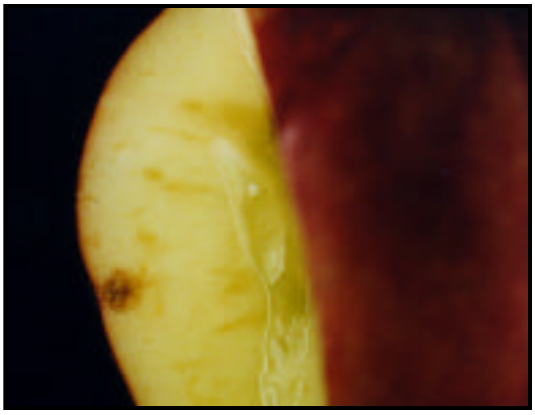
Stink bug

- stink bug damage usually higher on fruit
- usually conical or rectangular
- ranges very light tan to dark brown in color



Bitter pit

- damage distributed on sides and near calyx
- spherical damage
- dark brown to black in color



Stink bugs as Orchard pests

- Lack of satisfactory, reliable management strategies
- Lack of adequate monitoring tools are *major* barrier to better understanding/management

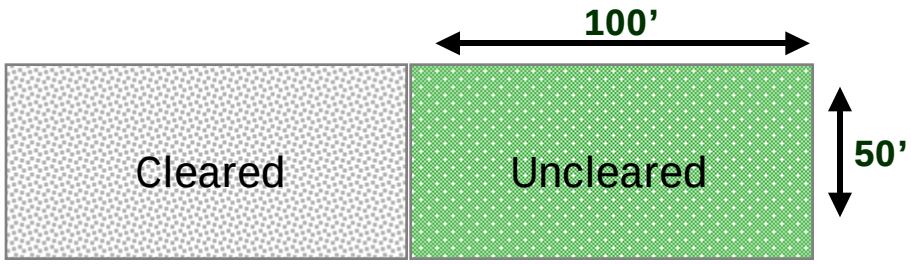
- **Poorly understood behavior/damage relationships!**

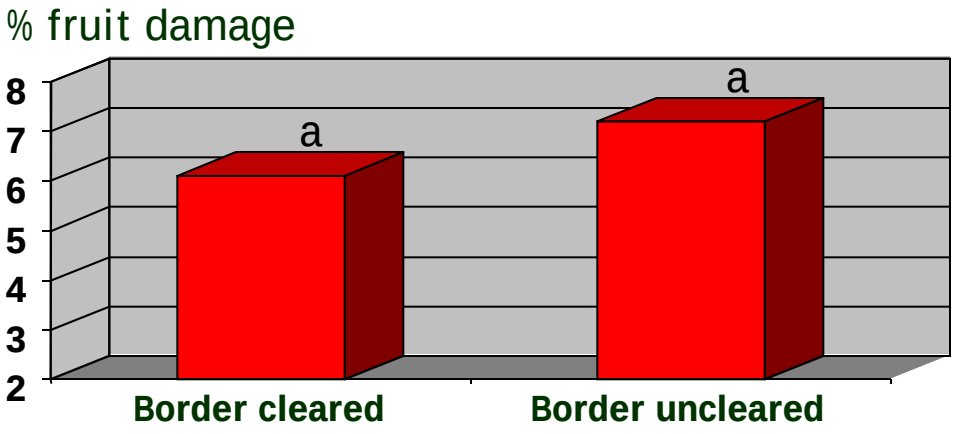
Aggregation pheromone

- produced by male adult stink bug
- primary component is attractive to adult males, females, and nymphs
- NOT a sex pheromone - responders will approach, but not necessarily contact, pheromone sources

Makes trapping difficult!

Border clearing - Results

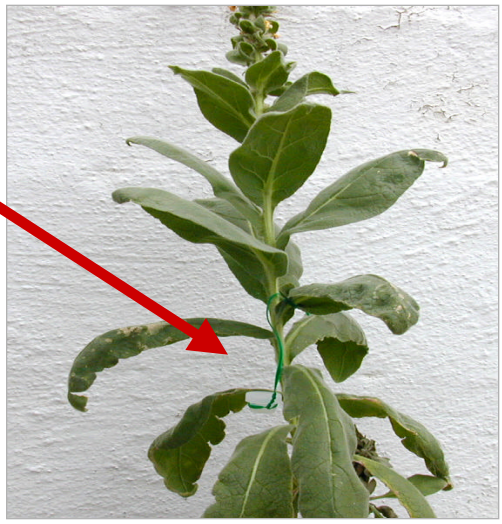




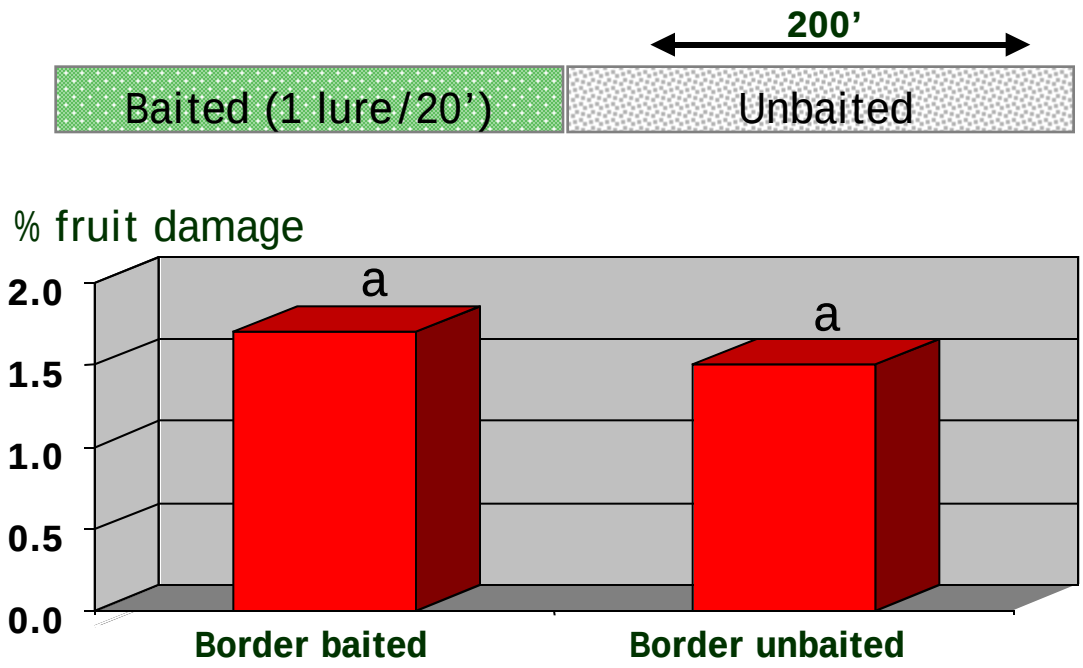
Pheromone release devices: Methods

- Lures affixed to mullein plants bordering orchards with history of SB damage

- Plants baited with lure may serve as ‘kill stations’ for future management options.



Border baiting - Results



Border spraying II - Results

Handgun spray of baited host plants ONLY at 200 gpa