Managing stink bugs through cultural practices

Rachael Long, Farm Advisor, UC Cooperative Extension
Yolo, Solano, Sacramento Counties, http://ceyolo.ucanr.edu
"I hate playing stinkbugs! Every time we press them on defense, they just let 'er rip!"
Stink bug Pests

Common stink bugs (Southern green: Africa, 1986; Others native)

Brown marmorated stink bug, NEW, 2013

Bagrada bug, NEW 2008 (2014 in Yolo)
Stink bugs

• Don’t sting or bite, but stink!

• Alarm pheromones

• Aggregation/attraction pheromones: Lures in traps for monitoring

• Adults live for 6-8 months

• 2-3 generations per year
• Needle like mouthparts: inject digestive enzymes
• Most have wide host range
Bagrada bug
• Primarily brassicas
• Can also damage growing point (apical meristem)
Counts

Dr. Grasswitz, NM State University, 2012
Stink bugs generally overwinter outside fields as adults in a dormant state (except bagrada bug)

Diapause=Hibernation
Overwintering sites: Consperser, red shouldered and southern green blackberry deergrass.

Number of stinkbugs per ft²

- Blackberry
- Deergrass
- Coyote brush
- Elderberry
- Native bunch grasses

Blackberry
Ladybugs
Brown marmorated sink bug

Behind tree bark and in buildings
Life cycle: Consperse, red shouldered, southern green stink bug
Control weeds around fields (blackberries, mustard, radish, *Malva*) (especially brassica weeds for bagrada bug management).

- Herbicides
- Mowing
- Discing
- Replace vegetation with native California plants that are non-hosts
Hedgerow

Control

Hedgerow Weeds

Avg number pest insects

Numbers of pest insects

Lygus bug
Flea beetle
Cucumber beetle
Stink bug

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Biocontrol: Stink bug predators and parasitoid wasps

Collops beetles

Encyrtid wasps, egg parasitoid

Scelionid wasps, egg parasitoid

Collops beetle

Encyrtid wasps, egg parasitoid
Hedgerows have 50% more parasitoid wasps and export 10% more parasitoid wasps into adjacent crops than weedy control field edges.
Stink bug parasitism in tomato fields 10% higher with hedgerows.
Cultural practices for stink bug management

- Control weedy vegetation around fields that are hosts of stink bug (mustard, radish, *Malva*, blackberry).
- Conserve and enhance beneficial insects (via hedgerow plantings and selective use of pesticides).
- Bagrada bug: Varietal selection, row covers, and avoid back to back brassica plantings.
- Trap crops?
Questions?

http://ceyolo.ucanr.edu
rflong@ucanr.edu