

IMPACT OF LYGUS ON CROPS – PEARS AND APPLES

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HOW ARE POPULATIONS OF LYGUS SAMPLED OR MONITORED?

1. Know the surrounding environs
2. After the fruit has formed in the spring sample groundcovers. Use sweep net for most efficient evaluation
3. Sweep orchard perimeters
4. Be especially vigilant during protracted heat waves
5. 100 fruit samples after fruit formation. Initially sample along orchard borders or adjacent to known hot spots
6. 25-100 sweeps of ground covers
 - i. internal
 - ii. perimeter
 - iii. adjacent environs

WHAT ARE THE ECONOMIC THRESHOLDS?

1. Economic thresholds are not clearly defined in western pome fruit
2. In 100 fruit sample, 1 or more damaged fruit may require treatment (UC IPM Guidelines)
3. 1 lygus per sweep in 25 to 100 sweep samples (WH&A, Inc. practice)

HOW IMPORTANT ARE EXTERNAL LYGUS POPULATIONS TO THE CROP?

1. External populations are the primary source of infestation, thus, are extremely important

WHAT INSECTICIDES ARE IMPORTANT?

1. **Dimethoate** is most widely used for both residual and knockdown control. Disruptive to natural enemies
2. **Carzol** (formetanate hydrochloride) is a good knockdown material. Highly disruptive to natural enemies
3. **Thiodan** (endosulfan) is effective but highly restricted in CA

Other registered pesticides not commonly used:

- A. **diazinon** – This insecticide is not used for true bug control as more effective materials are available.

¹ Weddle, Hansen & Associates, Inc.

- B. **oxamyl** – This carbamate has not been extensively tested against true bug pests in the orchard.
- C. **esfenvalerate and permethrin** – These pyrethroid insecticides are effective against true bugs but are not used in western pears or apples since they are highly toxic to predatory mites and their use may result in outbreaks of spider mites.
- D. **imidacloprid** – This neo-nicotinoid insecticide may have significant activity against the true bug complex but further testing is needed.

WHAT OTHER BIOLOGICAL OR CULTURAL OPTIONS ARE AVAILABLE?

1. Border treatments
2. Vegetation management
3. Trap crops