WESTERN GRAPELEAF SKELETONIZER (WGLS)

Harrisina brillians

Description:

Adults:

Adults are metallic bluish or greenish black, fly during the day, and are approximately 0.6 in (15 mm).

Eggs:

Pale yellow or whitish capsule-shaped eggs laid in clusters on the underside of grape leaves.

Larvae:

After hatching, larvae line up and feed side by side on the underside of grape leaves. There are five larval instars; larvae are cream colored in the first two instars, the third instar is brownish, and the fourth and fifth instars are yellow with two purple and several black bands. Larvae have conspicuous tufts of black poisonous spines that can cause skin irritation.

Pupae:

Pupation occurs under loose bark or ground litter in a dirty, whitish cocoon.

Top Left: WGLS adults. Top Right: WGLS larvae feeding on leaf. Bottom Left: Egg mass of WGLS (source: UC IPM Management Guidelines).

Hosts:

Grapes.

Damage:

- First through early fourth instar larvae feed on the lower leaf surface leaving only the veins and upper cuticle, giving leaves a whitish paper like appearance.
- Late fourth and fifth instar larvae skeletonize leaves leaving only the larger veins. When populations are abundant, larvae can defoliate vines by July.
- When vines are severely defoliated, larvae will feed on grape clusters, which can result in bunch rot.
- Larvae have urticating hairs that can cause skin irritation to workers during harvest if brushed up against.

Left: Pale, whitish surface of a leaf with larval feeding damage. Right: scarce canopy and brown leaves of a grapevine with severe defoliation (source: UC IPM Pest Management Guidelines for Grape).

Phenology:

- There are three generations per year in the Central Valley and two generations in cooler coastal regions.
- Overwinter as pupae in silken cases under bark or debris.

Lure Type and Maintenance:

- PHEROCON® WGLS controlled release septa lure.
- Replace PHEROCON® WGLS lures every 4 weeks.

Lure Storage:

- Store in unopened factory sealed packages in a cool place (< 74° F or 24° C maximum) for short periods or refrigerate longer term.
- Refrigerate or freeze unopened packages to carry over for annual storage.

Trap Design:

- PHEROCON® VI DELTA, PHEROCON® 1C, OR PHEROCON® IIC.

Placement Time:

- Place traps just before budbreak.

Placement Pattern:

- Larvae have urticating hairs that can cause skin irritation to workers during harvest if brushed up against.
- Hang in open areas from trellis or vines, within canopy, unblocked by leaves or developing fruit.

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Trap Density:

- Minimum of 2 traps.
- One trap per 5-10 acres (2-4 hectares).

Trap Maintenance:

- Check traps a minimum of once per week.
- Remove insects and stir glue when checking.
- Replace trap liners every 4 weeks or when fouled with dust or insect debris.

Recommendations:

- Use trap counts to chart generation development and visually monitor vines for presence of larvae.
- Granulosis virus has been introduced to select areas with success.
- If larvae are found and the virus is not present, treat soon after bloom. If needed later in the season, treat when young larvae are present.
- When larvae are found and the virus is not present, treat soon after bloom. Should later season treatments be required, treat when young larvae are present.

Source: Recommendations and certain other sections were sourced from UC IPM Pest Management Guidelines for WGLS in Grape.

Note, always:

- Count and record captures as recommended.
- Change trap as needed.
- Discard lures in trash far from the area of use and remove trash afterwards.
- Follow recommendations.
- Contact local extension authorities and consultants for regional advice.

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