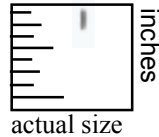


Western Grape Leafhopper



Adult

- 1/8 inch long
- Pale yellow with reddish and brown markings
- Overwinter as adults



Cast-off skin

- Fifth nymphal stage molts leaving cast-off skin on leaf
- Indication that adults are emerging



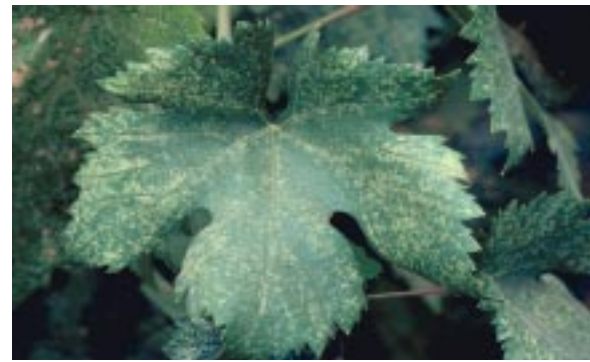
Egg Parasite

- Right: Round exit-hole from emerged parasite
- Left: unparasitized egg



Nymphs

- Five immature nymphal stages
- Small: 3/64 to 5/64 inch long
- Crab-like sideways movement



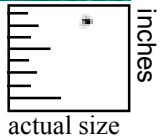
Damage

- Stippling on leaves
- As damage increases, leaf turns pale yellow
- Leaves may dry up and fall



Anystis agilis

- The predatory mite *anystis* attacks grape leafhopper nymphs



Western Grape Leafhopper

Date	Insect Stage	What to look for
Early to mid-May	<ul style="list-style-type: none"> • First nymphal stage of first brood 	<ul style="list-style-type: none"> • Divide block into sampling areas • Nymphs on lower surface of basal leaves (nodes # 1-5) • Stippling damage on basal leaves • Sample 1 basal leaf per vine that has damage • Count and record nymphs per leaf on total of 10 leaves per sampling area once a week • Record average nymphs/leaf
Early to mid-June	<ul style="list-style-type: none"> • Peak number of nymphs of first brood 	<ul style="list-style-type: none"> • Same as above • Estimate vine canopy damage • Look for parasite exit-holes in grape leafhopper eggs
Mid to late June	<ul style="list-style-type: none"> • Cast-off skins 	
July	<ul style="list-style-type: none"> • Second brood nymphs 	<ul style="list-style-type: none"> • Nymphs on lower surface of leaves at mid-shoot • Sample one mid-shoot leaf per vine that has damage • Count and record number of nymphs/leaf on mid-shoot leaves once per week • Estimate vine canopy damage
Pre-harvest	<ul style="list-style-type: none"> • Adults of second generation 	<ul style="list-style-type: none"> • Assess adult population