

Comparison of Scale Pest Species in Foothill Citrus

Citricola scale	California red scale	Brown Soft scale
ONE generation per year; only females	Usually 4 generations per year, males & females	3-5 overlapping generations per year, mixed populations
Underside of leaves, primarily	Infests wood, fruit & leaves	Infests leaves & twigs.
Excrete lots of honeydew; which is colonized by sooty mold => sticky black residue on leaves & fruit	No honeydew, pale brown scale	Some honeydew.
MONITOR: Twigs in April, backs of leaves in August	MONITOR: inspect fruit 1x/month in August, September, & October on 20 trees. Calculate % of fruit with >10 scale.	MONITOR: June - October; check level of parasitism
Crawlers usu. out in June		Eggs laid & crawlers out in summer.
NATURAL ENEMIES: native parasitoids not very effective in severe infestations; see Brown soft scale	Augmentative wasp releases <i>Aphytis melinus</i> : 100,000 wasps per acre per year.	Alternate host for Citricola parasitoids, so low populations can help control Citricola
Citricola populations in in San Joaquin Valley resistant to Lorsban (chlorpyrifos) - also in foothills	5,000 to 10,000 wasps per acre every 2 weeks March - mid-June, & in fall. After 2-4 years, reduce to 50,000 per year	Rarely needs management in citrus: preserve natural enemies & control ants; use abamectin or Delegate for thrips to avoid killing natural enemies
Populations grow rapidly after cool, wet spring; survive mild summers better	If using Aphytis wasps to control, avoid use of Assail, Danitol, and Baythroid	
Light to moderate infestation: narrow range oil in July OR Applaud (IGR) after crawlers emerge, settle, & form white caps. Toxic to Vedalia beetles.	If treatment needed, narrow range oil applied in July/August is most selective treatment.	
Moderate to heavy infestation: treat w/Lorsban (chlorpyrifos) pre-bloom or late summer <u>if not resistant</u> ; soil applied Admire (imidacloprid) May-July - toxic to Vedalia beetles & bees	Control ants in trees.	Control ants in trees.

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United States Department of Agriculture, University of California, Placer and Nevada Counties cooperating.

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