



earth-wise guide to

Scale Insects



scale on stem, magnified

description

Very small, sucking insects found on leaves, twigs, stems and sometimes fruits; often mistaken for part of plant since they look like natural bumps and do not move when mature; sometimes mistaken for fungal growth

infestation

Insects suck plant's fluids; in large numbers, can cause yellowing of leaves, leaf drop and dieback of twigs and limbs; may kill plant; scale excrete "honeydew," a sticky substance that attracts ants and often causes black "sooty mold"

attack

- Many landscape trees and shrubs as well as fruit and nut trees



heavy scale can look like bumps on the bark, but can easily be scraped off with a thumbnail

Least Toxic Solutions

- Monitor plants regularly for honeydew, sooty mold, yellowing or wilting
- Use sticky barriers to control ants in the garden – this can help control scale
- For small infestations, rub off by hand using garden gloves, a toothbrush or cotton swab dipped in alcohol
- For severe infestations, sections of plants can be pruned and discarded
- Use dormant oil during late winter, or highly refined horticultural oil during spring and summer
- Repeat applications over the course of the season; several applications will probably be necessary
- When possible, discard heavily infested ornamental plants and replant with native and adapted plant species



scale on leaf, magnified

If You Must Use a Pesticide...

- Treat scales when in the "crawler" stage for best results
- Systemic pesticides are taken up by the plant and make its tissues and fluids toxic to the feeding scale insects. Non-systemic pesticides must be applied to all infested plant surfaces for best results, because they must come into direct contact with the insects. Never use systemic pesticides on food crops
- Avoid applying a broad spectrum pesticide – they destroy beneficial insects as well as pests
- Apply only to plants specified on the label – some formulations injure tender ornamental plants and new growth
- Mix and use according to product label and apply only recommended dosage
- Avoid overuse of chemicals – many pests have become resistant to certain pesticides

If you must use a pesticide...

- Use the least toxic pesticide first
- Read and follow label directions



product toxicity comparisons

Evaluation of active ingredients only; does not include toxicity information on inert or "other" ingredients.

Toxicity/Threat:

○ low ◐ low to moderate ◑ high ● highest NA not applicable
 ? unknown toxicity 🌍 earth-wise

Hazards:



note	Product Name	active ingredient(s) / concentrations	human acute	human chronic	aquatic life	birds, bees, pets	soil mobility	environmental persistence
🌍	Lily Miller Vegol Year Round Pesticidal Oil	Canola oil 96%	?	N/A	N/A	N/A	N/A	N/A
🌍	Bonide® Hot Pepper Wax Ready-to-Use	Capsaicin and related capsaicinoids 0.184%	◐	?	◐	○	?	?
🌍	Safer® Insecticidal Soap Multi-purpose Insect Killer w/Seaweed	Fatty acid soap 2%	◐	?	◐	○	○	○
	Concern® Insect Killing Soap	Potassium salts of fatty acid 1%	◐	?	◐	○	○	○
	Fertilome® Dormant Oil	Petroleum Distillate %98.8%	◐	?	◐	○	○	◐
	Green Light® Neem Concentrate	Extract of Neem Oil 70%	◐	?	◐	◑	○	○
	Green Light® Neem II Ready-to-Use Multi-Insect Killer Concentrate	Cyfluthrin 0.75%	◐	●	◐	◑	○	○
	Bayer Advanced™ PowerForce®	Pyrethrin .02% PBO .20% Extract of Neem Oil 0.90%	◐	?	●	◑	○	◐
	Concern® Multi-Purpose Insect Killer	Pyrethrins 0.24% PBO 0.20%	◐	●	◑	◑	○	○
	Bayer Advanced™ Tree & Shrub Insect Control	Imidacloprid 1.47%	◐	?	●	◑	◑	◑
	Bayer Advanced™ 3 in 1 Insect, Disease & Mite Control	Tebuconazole 0.65% Imidaproclid 0.47% Tau-fulvalinate 0.61%	◐	◐	●	●	◑	◑
	Bonide® All Seasons® Horticultural Spray Oil	Petroleum oil 98%	◐	?	●	●	?	?
	Ortho® Volck® Oil Spray	Petroleum oil 97%	◐	?	●	●	?	?

most toxic

The City of Austin and the Texas AgriLife Extension provide this information as a comparative reference only. Listing of a specific product trade name does not constitute an endorsement of its use. Many other pesticides and pesticide products, other than those listed in these tables are available and may be suitable for use.

Products rated by Grady J. Glenn, Ph.D., B.C.E., of the Pesticide Safety Education Program, Texas AgriLife Extension Service who can be reached for questions at (979) 862-1035. The rating system was developed by Philip Dickey of the Washington Toxics Coalition.

why grow green?

The Grow Green program is based on Integrated Pest Management (IPM) principles that encourage the LEAST TOXIC approach to pesticide and fertilizer use. The goal is to reduce the amount of landscape chemicals that degrade water quality when they run off into waterways or leach into our groundwater.

Grow Green is a partnership between the City of Austin Watershed Protection Department and Texas AgriLife Extension Service. Call 974-2550 or 854-9600 for more information or visit our website at

www.growgreen.org

Think least toxic!

If you have unwanted or banned chemicals (Dursban or Diazinon) in your garage, please take them for safe disposal to a household hazardous waste facility. In Austin call (512)974-4343 for information.

www.growgreen.org

City of Austin
WATERSHED PROTECTION

974-2550

AgriLIFE EXTENSION
 854-9600 Texas A&M System