



earth-wise guide to

Scale Insects



scale on stem, magnified

description

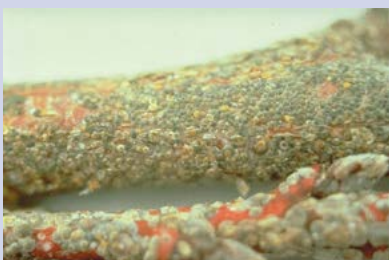
Very small, sucking insects found on leaves, twigs, stems and sometimes fruits; often mistaken for part of plant since they look like natural bumps and do not move when mature; sometimes mistaken for fungal growth

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

identify before you buy
Need help diagnosing a plant problem? Call the Texas Agrilife Extension Service @ 512-854-9600 and ask for the master gardener desk or email them at travismg@ag.tamu.edu

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% | ○ | ? | ○ | ○ | ○ | ● |
| least toxic | Green Light® Neem Concentrate | Extract of Neem Oil 70% | ○ | ? | ○ | ● | ○ | ○ |
| | Green Light® Neem II Ready-to-Use Multi-Insect Killer Concentrate | Cyfluthrin 0.75% | ○ | ● | ○ | ● | ○ | ○ |
| most toxic | 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% | ○ | ? | ● | ● | ? | ? |

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

Think least toxic!

The City of Austin and the Texas AgriLife Extension Service provide this information as a comparative reference only. Listing of specific product trade names does not constitute endorsement of its use. Many other pesticides and pesticide products are available and may be suitable for use other than those listed in these tables. **Check labels carefully as trade names and active ingredients may change.**

Products rated by Grady J. Glenn, Ph.D., B.C.E., of the Pesticide Safety Education Program, Texas AgriLife Extension Service. 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 512-974-2550 or 512-854-9600 for more information or visit our website at www.growgreen.org.

