

Problem: Pine Needle Scale - *Chionaspis pinifoliae*



Hosts: Pine, spruce, fir, hemlock, and, occasionally, yew and cedar.

Description: Pine needle scale is a soft scale that is found across the United States but especially in the eastern half. Pine needle scale appears as conspicuous white specks on the needles. Scales feed by sucking sap from needles causing them to yellow and eventually brown. Heavy infestations can kill twigs, branches and even entire trees. Though both female and males are white, the female is larger (1/8 inch long) and wider at one end with the narrow end sporting a yellow or orange cap. Males are 1/32 inch long and narrow. Crawlers are bright red to brown.

Pine needle scale overwinters as eggs underneath female covers. Each female produces about 100 eggs. There are two generations per year in Kansas with crawlers appearing in May to early June and again in mid- to late July. The first generation coincides with full bloom of Vanhoutte Spirea and the second generation when the blooms of *Hydrangea arborescens* 'Grandiflora' turn from white to green.

Recommendations: Dormant oil treatments can be applied in early spring to kill overwintering eggs in March, or insecticides can be applied to exposed first- or second-generation crawlers.

First-generation scale hatches about the same time that Vanhoutte spirea blooms. Vanhoutte spirea is the white-flowered spirea with arching branches that most often blooms in the latter half of April. Though crawlers are a bright red to brown color, they are so small that a magnifying glass should be used to check for them. Once the scale has settled down and formed its waxy cover, insecticides are ineffective. Remember, insecticides must be applied to crawlers soon after they emerge. Check for crawler activity at seven-day intervals for the two weeks following your initial spray. If active crawlers are present, spray again.

Second generation crawlers appear when Smooth Hydrangea blossoms are turning from white to green.

Effective insecticides include acephate (Orthene), cyfluthrin (Tempo, Bayer Vegetable & Garden Insect Spray, permethrin, (Hi-Yield 38 Plus, Bonide Eight Vegetable, Fruit & Flower Concentrate) and carbaryl (Sevin).

Imidacloprid (Merit, Bonide Annual Tree and Shrub Insect Control, Bayer 12 Month Tree & Shrub Insect Control) is a systemic and therefore is effective on soft scales even after they are covered. However, it must be applied early as it takes 1 week to 3 months for the product to move from the roots to the needles. Applying imidacloprid in November will protect the plant through the next year.

References:

1. [Pine Needle Scale](#), Penn State University, Entomology Extension
2. Life Histories of Common Insects, Mites and Nematodes Infesting Ornamental Plants in Missouri, Missouri Department of Agriculture, pg D-27

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