

Problem: European Pine Sawfly (EPS) - *Neodiprion sertifer*



Hosts: Primarily Scots and Mugho Pines

Description: European Pine Sawfly overwinter as eggs inserted into the needles of host plants during August and September. Warm temperatures during early spring stimulate egg hatch in late March and early April. The gray-green larvae have a shiny, black head capsule and a dark longitudinal stripe down each side of the body. When these worms are small, they cannot consume a complete needle, so they rasp off the top layer of cells. This leaves individual needles brown and twisted. Look for this damage to pinpoint where sawfly larvae are feeding. The larvae are gregarious, so a number of larvae will be found close together. As the larvae mature, they will consume whole needles and can virtually strip a tree. This happens before new needles expand, so the tree is rarely killed.

Recommendations: European pine sawfly can be controlled with a number of products that contain "natural" insecticidal materials. Azadirachtin, a bioinsecticide derived from neem trees, works as an insect growth regulator. Horticultural oils and horticultural soaps effectively control the soft-bodied sawfly larvae. But with oils and soaps, what you spray is what you get. That is, once dried, oils and soaps do not provide residual control. So if initial spray treatment coverage was not thorough, an additional treatment might be necessary to "clean up" larvae that were untouched and have continued feeding. The rotenone and pyrethrin plant derivatives have very brief residual properties.

Insecticides with the active ingredients acephate (Orthene, Bonide Systemic Insect Control), esfenvalerate (Asana, Monterey Bug Buster II), permethrin (38 Plus Turf, Termite & Ornamental Insect Spray; Hi-Yield Garden & Farm Insect Spray; Eight Yard & Garden RTS) and spinosad (Captain Jack's Deadbug Brew, Monterey Garden Insect Spray, Natural Guard Spinosad) have longer residual properties, providing some extended control against European pine sawfly larvae. A possible drawback to most of these materials is that they are wide spectrum, meaning they kill not

only the targeted pests, but also nontarget organisms including beneficial predator and parasite insect species. Spinosad is an exception and is of low risk to predatory mites and beneficial insects if used according to good horticultural practices.

References:

1. [European Pine Sawfly](#), Kansas State University, K-State Research & Extension Pub MF-2545
2. *Insects That Feed on Trees and Shrubs*, Cornell University Press, pg 16-19
3. [Pine Sawflies](#), University of Kentucky Entfact-410

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