

# HOME GROUNDS FACT SHEET



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## Spruce Gall Adelgids

### Cooley Spruce Gall Adelgid

Feeding by this adelgid causes 1-3" long green terminal galls that mature to brown. About half of adult female adelgids have wings. This adelgid is mainly a pest of ornamental planting and nursery stock, sometimes damaging Douglas fir. They overwinter on spruce or Douglas fir as partly-grown females. In the spring they develop into adults and lay eggs on twigs. The young feed at the base of the new needles forming galls on spruce. In the summer the galls open and adelgids emerge. Eggs are deposited on spruce or Douglas fir, although the presence of Douglas fir is not necessary as they can live on spruce alone. Galls are produced on Colorado blue, Sitka and Englemann spruce.

### Integrated Pest Management (IPM)

#### Considerations

IPM is a common sense approach to pest control and plant care. It employs a number of measures to prevent, control or reduce plant problems. These include using resistant plant varieties, proper plant selection and placement, good aftercare and biological and/or mechanical controls. As a last resort, after all other remedies have been explored, a pesticide\* that is least toxic to people and natural predators, can be considered. Prior to using any pesticides, plants should always be monitored for the degree of infestation and a sensible control measure considered.

\* A pesticide is a substance that kills, or attempts to kill, a particular pest, e.g. *insecticide*, *fungicide*, *herbicide*, etc.

#### Control

✓ **Spruce:** Apply horticultural oil as a dormant application in mid- to late April just before buds begin to break, 22-81 Growing Degree Days (GDD\*). Chemical pesticides may be available. If you choose to use a chemical pesticide, contact your local Cooperative Extension office for specific recommendations. Apply pesticides in late July to Mid-August after galls have opened but before adelgids move to alternate hosts - 1250-1700 GDD.

✓ **Douglas Fir:** Spray in early May- 120-190 GDD; again in late July to early August - 1500-1775 GDD.

Pick off the galls by June 30 at the latest. Do not fertilize infested trees. Cooley adelgids prefer vigorous, succulent growth.



### Eastern Spruce Gall Adelgid

This adelgid produces pineapple-shaped galls at the base of the current year's growth. The galls vary from 1/2" to 1" long and do not destroy the terminal bud. Adult females are brown, about 1/16" long and may have wings. They lay light green eggs. Abundance and damage varies from year to year. There are two broods a year, composed entirely of females. Immature adelgids overwinter at the base of needles, causing galls to form. In August they split and adult winged females emerge and lay eggs. These eggs hatch into adelgids that overwinter as partly-grown females. Norway and white spruce are the preferred host, but black spruce and Englemann spruce are also commonly attacked.

#### Control

Prune off and destroy new galls as they form in April. Apply horticultural oil as a dormant application mid-April to early May just before buds begin to break. Chemical pesticides may be available. If you choose to use a chemical pesticide, contact your local Cooperative Extension office for specific recommendations. If you are using chemicals, spray crevices of bark on tips of twigs and bases of buds on Norway and White spruce mid-April to early May, depending on the arrival of warm weather in spring (when terminal shoot begins to enlarge and break). Apply pesticides in mid- to late September when insects emerge from galls and majority of galls are open. Proper cultural care is important. Fertilize and keep trees well watered. Eastern adelgids prefer weak trees.

"This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available, and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension specialist or your regional DEC office (631) 444-0341. Read the label before applying any pesticide. Cornell Cooperative Extension and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products is made or implied."

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