

insect answers



SPRUCE APHID

The spruce aphid, *Elatobium abietinum*, is a destructive insect on many kinds of spruce, especially Sitka spruce. Some Sitka spruce forests in Washington have been severely damaged by this insect, and plantings of various kinds of spruce are damaged almost every spring. The spruce aphid is present in western Washington, and also in British Columbia, Oregon, and California. The aphid had not been found in other parts of the country until recently when it was reported in North Carolina.

The small green aphids ($1/16$ inch long) increase in numbers on the spruce needles in February and March, but little damage is apparent at this time and close observation is required to see them. Damage to the needles becomes apparent in April, May, or June. When damage becomes severe enough to demand attention of home gardeners, or other plant handlers, aphid numbers are much lower than they were during the early

season and most of the damage has been done. Exact reasons for aphid decline in late spring are not known. However, cold winter temperatures (about 15°F), especially sudden drops in temperature and/or spring frosts, can reduce aphid numbers in late winter or early spring before damage occurs, thereby lessening the amount of spring damage to trees.

This is a light intolerant aphid and it does most of its damage to the lower shaded portion of the tree. However, when numbers are high, the entire tree may be affected.

Aphid feeding on spruce trees results in yellowish blotches on the needles. Needles later become entirely yellow or brownish and drop. Many times a shiny, sticky substance produced by the aphids is evident on the affected needles. The substance is called honeydew. The aphids usually do their damage and decline in numbers



Adult spruce aphid on spruce needle.



Spruce aphid damage. Note defoliation on older twigs.

before the new growth occurs, so the current year's needles are usually undamaged. Consequently, many spruce trees which are frequently damaged by spruce aphids have needles only at the outer ends of the branches.

If needle drop occurs year after year, the trees are gradually weakened and may die, especially if they are further stressed by adverse weather conditions.

Control

The spruce aphid is easily controlled by several types of insecticidal sprays. Sprays may be applied as soon as the aphids appear on the needles which may be from late fall to March. Mild winters may dictate earlier sprays. This means that the needles must be closely inspected during this period of time (and sometimes into April) for the presence of aphids.

If spruce aphid has been a problem in your area, begin sampling every week or two to detect aphid presence. White placards (1 foot square) may be used. "Thump" tips of branches against placards

at several locations around tree. If the small green aphids are seen, treatment is advised unless temperatures are extremely low.

If the trees are not sprayed until the damage is obvious, the sprays will be of little or no value. Insecticides which can be used and their rates of application follow.

Insecticide	Amount Per 1 Gal. of Water	Amount Per 100 Gal. Of Water
Diazinon, 48%	2 teaspoons	1 pint
endosulfan (Thiodan), 9.7% EC	1 ² / ₃ tablespoons	For homeowner use only.
Talstar	Follow label instructions. For commercial use only.	
acephate (Orthene), 9.4% EC	2 tablespoons	

*EC = emulsifiable concentrate.



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Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

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