



BALSAM TWIG APHID
Mindarus abietinus (Koch)

Insect and Disease Laboratory • 168 State House Station • 50 Hospital Street • Augusta, Maine • 04333-0168

Symptoms and Damage

Sticky, curled and twisted new shoots in May and June on balsam fir usually indicate the presence of the balsam twig aphid. Feeding by this aphid may result in stunted shoot growth, and the curling or twisting of the needles makes the foliage unattractive for high quality Christmas trees. Damage to trees is primarily aesthetic and control is not normally recommended except on Christmas tree and wreath stock.

Hosts

Primarily balsam fir but also Fraser fir, white fir and spruces. Twisting and curling effects are not normally as evident on spruce.

Life Cycle and Habits

The insect overwinters in the egg stage on balsam fir twigs. The nymphs emerge in the spring and feed primarily on the old growth causing little damage at first. As the bud cap begins to break open, the aphids enter the buds to feed and start the next generation. After the buds open the second and third generations feed on the new needles, causing curling and permanent deformity of these needles as well as stunting new growth. At this time the aphids are covered with a white waxy wool and sticky honey dew which is quite noticeable on branch tips in heavy infestations. A fourth generation does little feeding but produces eggs which overwinter to repeat the cycle the next year.

Control*

Control may be necessary especially in wreath brush sites and as the fir approach harvest age for Christmas tree purposes. The aphid can be controlled by spraying with diazinon** (various formulations including 50 WP, 4 EC, AG500), or chlorpyrifos, or esfenvalerate**, or permethrin**, or fluvalinate. The spraying should be undertaken in early May before bud caps open when 20% of the buds are beginning to show green. Refer to the insecticide label for specific use instructions, dosages, and timing. The pesticide formulation you select must have specific use instructions for the intended site (i.e., "balsam fir"; "ornamentals" followed by "conifers" or "evergreens"; "conifer plantations" etc.).

NOTE: Some formulations of emulsifiable concentrate pesticides, including diazinon (AG500) and chlorpyrifos (Lorsban 4E) have been observed to cause plant injury when applied with mist blower equipment after budbreak on developing foliage. Be cautious; risk of injury is lowered by careful attention to application timing, correct dilution of the spray mixture (use more water per acre) and selection of the proper application equipment. When in doubt, spray small areas on a trial basis before treating the entire field or planting.

For further information about controlling this pest you should contact the Insect and Disease Laboratory, 50 Hospital Street, Augusta, ME 04330-6514, Tel. (207) 287-2431 - Fax (207) 287-2432.

*NOTE: These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide. Pesticide recommendations are contingent on continued EPA and Maine Board of Pesticides Control registration and are subject to change.

**Restricted-use pesticide; may be purchased and used only by certified applicators.

Caution

For your own protection and that of the environment, apply the pesticide only in strict accordance with label directions and precautions.