

**2008**  
**COMMON CHRISTMAS TREE PESTS AND THEIR CONTROL**  
**A Quick Guide for Vermont Growers**  
**Insects**

<u>PESTS</u> PRINCIPLE HOST	<u>GDD</u>	<u>PPI</u>	<u>Calendar</u>	<u>RECOMMENDED CONTROL**</u>
Balsam Gall Midge ( <i>Paradiplosis tumifex</i> ) Balsam Fir	120-299	new shoots average 1.5 – 2” Japanese quince is in bloom	mid-late May	carbaryl, chlorpyrifos
Balsam Twig Aphid ( <i>Mindarus abietinus</i> ) Balsam Fir	30-100	just before bud break boxelder, star magnolia	early-mid May	chlorpyrifos, esfenvalerate, fluvalinate, acephate, bifenthrin imidacloprid (soil late fall, early spring)
Cinera aphid	7-120	shadbush	early-mid May	acephate, bifenthrin, horticultural oil, chlorpyrifos, or imidacloprid when seen in large numbers
Cooley Spruce Gall Adelgid ( <i>Adelges cooleyi</i> ) Spruce	22-81 and 1850-1950	just before bud break Japanese quince <i>Hydrangea paniculata</i>	mid-late April  late September (best)	carbaryl, imidacloprid, chlorpyrifos horticultural oil
Douglas Fir	120-190 1500-1775		early May late July- early August	carbaryl, imidacloprid, chlorpyrifos
Mound Ants All species				Break open mound and apply permethrin, bifenthrin or chlorpyrifos

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Pales Weevil ( <i>Hylobius pales</i> ) Pine, spruce, fir, Douglas-fir	7-121	silver maple star magnolia	apply to stumps April- June  mid-August/early Sept.	esfenvalerate, chlorpyrifos or cover with 4-mil black plastic and secure remove pine stumps To prevent feeding injury, chlorpyrifos Sanitation is best.
Sawflies (various)			when larvae are seen	carbaryl, chlorpyrifos, esfenvalerate, imidacloprid, acephate or bifenthrin
Spruce Spider Mite	192-363  2375-2806	redbud  witch hazel (if necessary)	mid-June to July when evident	bifenthrin, dicofol, propargite, dienochlor, hexythiazox*, bifenazate, abamectin or chlorpyrifos with second treatment about 10 days after first. Early treatment most effective
Spruce Gall Adelgids Red/White spruce	22-170	boxelder (for eastern)	April before budbreak or September – early Oct.	carbaryl, chlorpyrifos or imidacloprid
White Pine Weevil ( <i>Pissodes strobi</i> ) Pine, spruce, hemlock and Douglas-fir	7-58	silver maple	late April – early May	chlorpyrifos, diflubenzuron plus dormant oil, bifenthrin, oxydemeton-methyl, Terminals only. Cut out wilted “shepherd’s crook” leader and destroy by the early July

GDD = Growing Degree Days

PPI = Plant Phenology Index

\*compatibility problems, check labels

\*\*ALWAYS CHECK LABEL BEFORE PURCHASE/APPLICATION

## DISEASES

### PEST PRINCIPLE HOST

Rhabdocline  
Douglas Fir

Swiss Needlecast  
Douglas Fir

Rhizosphaera Needlecast/blight  
Blue spruce, White Spruce  
Balsam Fir

Shoestring (Armillaria Root Rot)  
All species

Dothistroma Needle Blight  
Austrian and other hard pines

Brown Spot Needle Blight  
Hard (2 and 3 needle) pines

### RECOMMENDED CONTROL

Apply chlorothalonil (Bravo, Daconil) just after budbreak and at 1 week intervals until buds fully opened and needles fully formed.

Apply chlorothalonil when new shoots are 1 ½ “ long, with a second treatment 2-3 weeks later. Again if especially wet weather.

Apply chlorothalonil to spruce when new growth averages ¾ to 1 ¼ “ long and again three weeks later. Do not leave branches on cut stumps. Treat fir with chlorothalonil, copper sulfate compounds or mancozeb after complete budbreak and again 2 weeks later. Do not shear in wet weather. May require 2 years of treatment.

Avoid cutover sites (especially hardwood) or remove stumps. Use vigorous planting stock and maintain healthy trees.

Copper fungicides (Bordeaux mixture) and chlorothalonil applied initially at shoot emergence and once again in late June/early July.

Avoid shearing in wet weather, apply chlorothalonil, Bordeaux mixture, mancozeb or thiophanate starting at initial shoot elongation and every 10 to 30 days throughout the growing season

**PEST  
PRINCIPLE HOST**

**RECOMMENDED CONTROL**

Sphaeropsis (Diplodia) Shoot Blight

Rogue infected trees. Prune and remove infected shoots during the dormant season. Apply thiophanate-methyl (3336), azoxystrobin (Heritage) or chlorothalonil at budbreak and again 3 weeks later or every 10-15 days during elongation. Don't shear in wet weather. Control insect vectors.

White Pine Blister Rust

Prune infected branches from pines. Destroy all currants and gooseberries within 900' of pines. Pull in early spring or treat with glyphosate (Roundup). Examine trees in May for orange rust and flagging.

Chrysomyxa Rust  
Spruces

Chlorothalonil applied when needles first emerge and continue on a weekly basis until needles have matured.

Delphinella Shoot Blight  
Balsam Fir, Concolor Fir

Chlorothalonil, mancozeb, Bordeaux mixture just after budbreak, with a second application 10 days later.

Fir/Fern Rust  
Balsam Fir, Fraser Fir

Remove sensitive and bracken ferns in plantation and around periphery. Avoid planting in low/wet sites. Triadimefon (Bayleton) at budbreak and at 10 day intervals for 2-3 additional applications.

These recommendations were developed by Ron Kelly, Forest Protection Specialist – VT Department of Forests, Parks and Recreation; Timothy Schmalz, Plant Pathologist: Jon P. Turmel, State Entomologist – Vermont Agency of Agriculture, Plant Industry Section.

Dates of application are averages for Vermont and may vary somewhat by locality or year. Contact your local pest specialist for details about pest identification, evaluation and control. Always check the label for current information. Trade names of pesticides are use solely for identification assistance and no endorsement is implied nor is discrimination intended against similar materials. We make no warranty or guarantee of any kind, expressed or implied, concerning the use of these products.