



# CHINCH BUG

## PREVENTION & CONTROL

### MEET THE PEST

The hairy chinch bug is a major lawn pest in many areas of Nova Scotia. It kills lawn grass by injecting toxic fluids into the plants as it feeds. Chinch bugs feed on the grass throughout the summer, but most damage takes place in August during periods of high temperature and low rainfall. Lawns that are under stress from lack of moisture or improper fertilizing practices are more susceptible to chinch bug damage.

### LIFE CYCLE

Adult chinch bugs begin to appear on lawns in mid May when they move out from their overwintering sites to lay eggs. The eggs are laid during May and June, producing red, wingless nymphs which darken to black and develop wings as they mature into adults.

### MONITORING AND IDENTIFYING CHINCH BUG DAMAGE

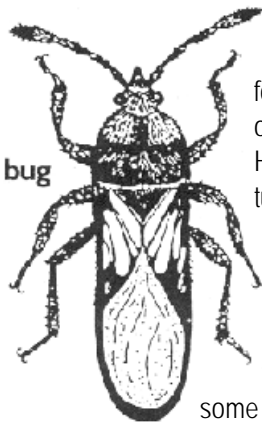
Look for chinch bugs before the hot dry weather occurs in August. If you examine your lawn regularly, you will spot chinch bug damage at an early stage and can take steps to manage the problem. Chinch bug feeding usually results in scattered patches of damage rather than a uniformly damaged lawn. Infested areas of the lawn change from green to pale yellow and eventually to brown as the grass wilts. Chinch bug damage is often overlooked because it looks similar to the damage caused by drought and it often occurs in areas where you would expect to see drought

damage (e.g., warm dry slopes, edges of pavement or walkways).

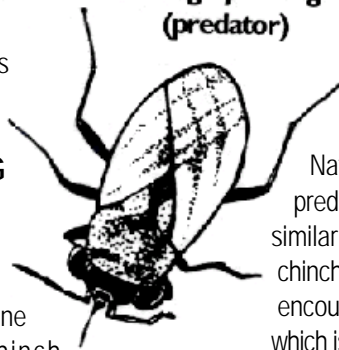
Chinch bugs are most easily detected on warm days (more than twenty degrees Celsius), when they are most active. They can sometimes be found by parting the turf and examining the base of the grass plants.

However, they usually scurry for shelter when the turf is disturbed. It is easier to find chinch bugs by using the following method: Remove the top and bottom of a large juice can, force it part way in to the soil and fill it with water. If chinch bugs are present they will float to the water's surface within ten minutes. A healthy lawn can withstand some chinch bug damage. In many cases small populations of this pest may be present even though there is no visible damage to the lawn.

Adult chinch bug



Big-eyed bug (predator)



### CONTROL

#### Biological

Naturally occurring populations of spiders and predatory insects (e.g., big eyed bugs, which look very similar to chinch bugs but have "big" eyes) help keep chinch bugs in check. As well properly watering the lawn encourages the growth of a naturally occurring fungus which is harmful to the chinch bugs but not the lawn grass.

The use of pest control products containing nematodes for the control of chinch bugs has been recently recommended on local garden related web sites and publications. It is important to note that this is not a recognized method of chinch bug control as there is no scientific evidence to document its' effectiveness. To ensure safety, and effectiveness, pest control products must only be used for the pests stated on the product label.

## Physical

Proper watering, fertilizing, mowing and de-thatching are the keys to improving your lawn's health and increasing its tolerance to chinch bug feeding. Chinch bugs thrive in hot, dry weather. Areas of the lawn that are suffering from moisture stress can be particularly susceptible to damage. Prevent moisture stress and chinch bug damage by properly watering the lawn. It's better for your lawn if you do not water it until it really needs it. You can tell that your lawn needs water when footprints stay compressed for more than a few minutes and the grass takes on a greyish-green tinge. When your lawn needs water, water deeply by applying 1 inch (2.5 cm) of water over the entire surface of the lawn. Watering in the early morning before 10:00 am will reduce the amount of water lost to evaporation.

Fertilizer replaces the nutrients used by the grass as it grows. Lawns that are not provided with enough nutrients tend to be slow growing and weak. They are often more susceptible to insect damage and invasion by weeds and are slow to recover from problems. Conversely, over fertilizing the lawn, especially with too much nitrogen, produces soft, weak plants that are more susceptible to wear and damage. When lawn fertilizer is required, it should be applied in April/May and in September when the grass is actively growing. Choose either an organic fertilizer or a synthetic "turf type" or "lawn" fertilizer which contains 40-60% of its nitrogen in a slow release form. The label on the fertilizer bag will identify the types of nitrogen present.

Thatch is the accumulation of undecomposed organic matter that develops between the grass and the soil. All lawns need some thatch. It helps to cushion the growing point of the grass and insulates the soil from high summer temperatures. However, too much thatch can reduce water movement into the soil. This promotes shallow rooting and decreases the plants tolerance to drought. Chinch bugs live in the thatch and use it as an overwintering site. Excessive thatch can also promote the build-up of chinch bug populations. Proper thatch management can decrease the potential for chinch bug problems. Applying a 1 cm (1/2 inch) layer of compost or good quality soil over the surface of the lawn once a year is a good way to slowly break down thatch. This process, called top-dressing, also helps to build up the organic matter in your soil. If the thatch in your lawn has built up to more than 1.25 cm (1/2 inch) some of it should be physically removed. Lawns can be de-thatched by vigorous fan raking or by using a mechanical

de-thatcher. De-thatching is best done in the fall when the lawn is actively growing and will quickly recover.

In Nova Scotia, a mixture of fescue, Kentucky bluegrass and perennial ryegrass is recommended for home lawns. Some ryegrass and fescue varieties contain a naturally occurring fungus that helps the grass plant resist damage from leaf feeding insects such as chinch bugs. When establishing a new lawn or re-seeding damaged areas of an existing lawn, select a grass seed mix that includes one or more of the grass varieties that contain the fungus. These types of grass seed mixes are available from many larger garden centres in Atlantic Canada. Grass varieties containing this fungus will be identified by the words "endophytically enhanced grass seed" or "endophytic grass seed". Spring or fall is the best time to re-seed or repair a lawn.

## Chemical

If the above measures are not effective to control chinch bug, consult with an expert at a garden centre to learn about the available pesticides. It is important to note that many of the pesticides used to control chinch bugs also kill the predators that naturally keep chinch bug populations in check. Other drawbacks include possible exposure to you, your family, neighbours and pets. If you decide to use a pesticide, keep in mind that only the infested areas of the lawn need to be treated to control the problem.

**Always use a registered domestic class pest control product labelled for chinch bug control and carefully follow the label directions.**

*Originally published as "It's a Chinch ! Managing Chinch Bugs On Home Lawns". Revised April, 2001.*