

# CHINCH BUGS: PREVENTION AND CONTROL

## What are they?

**Hairy chinch bugs are lawn pests in many areas of Nova Scotia.** They kill grass by injecting toxic fluids into plants as they feed. Chinch bugs feed throughout the summer, but cause the most damage in August when the weather is hot and dry. They can damage lawns more if the grass is in rough shape from lack of moisture or poor fertilizing practices.

## Lifecycle of the chinch bug

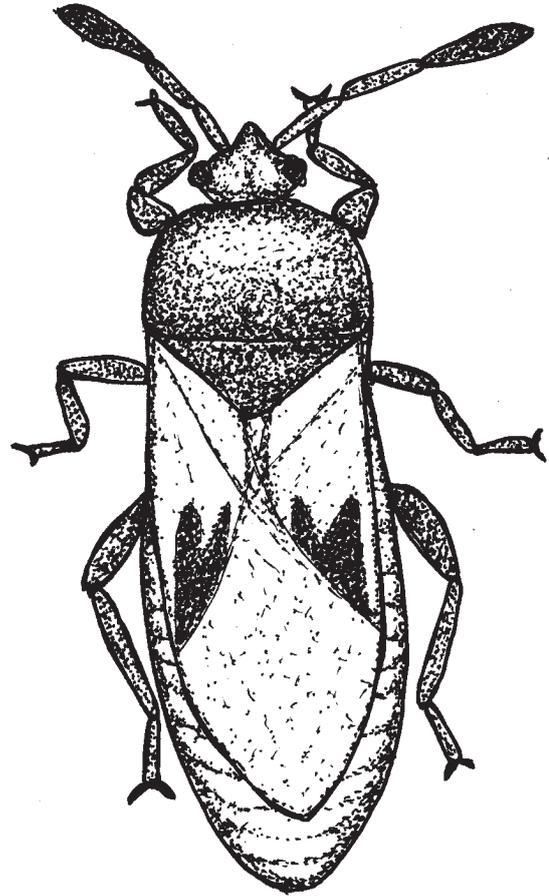
Adult chinch bugs begin to appear on lawns in mid-May when they move from their winter homes to lay eggs. The eggs are laid during May and June and produce red, wingless nymphs. The nymphs darken to black and develop wings as they mature into adults.

## Identifying chinch bug problems

A healthy lawn can withstand some chinch bug damage. In many cases, small populations of the pest can be present even though the lawn shows no visible damage.

## Physical lawn damage

If you examine your lawn regularly, you can spot chinch bug damage at an early stage and manage the problem. Chinch bug feeding usually results in scattered patches of wilted grass rather than widespread damage. As grass dies, infested areas of the lawn change from green to pale yellow and eventually to brown. Chinch bug damage is often overlooked because it looks similar to drought conditions, appearing on warm, dry slopes or near pavement and walkway edges.



## Make sure chinch bugs are the problem

Look for chinch bugs before the hot, dry weather occurs in August. You can see them most easily on days warmer than 20°C when they are most active. Try parting the grass and looking at the base of the grass plants. You might see them as they scurry for shelter.

Here's an easier method. Remove the top and bottom of a large juice can, force it partway into the soil, and fill it with water. If chinch bugs are present, they will float to the water's surface within ten minutes.

# How do you control them?

## Physical methods

Keep up with lawn maintenance. Proper watering, fertilizing, mowing, and de-thatching are the keys to improving your lawn's health and increasing its tolerance to chinch bug feeding.

## Water your lawn properly

Chinch bugs love hot, dry weather. Lawn areas that are too dry are particularly prone to damage from the pests. But how much and how often should you water? It's better for your lawn if you water only when needed. You can tell when that is if footprints stay compressed for more than a few minutes and the grass takes on a greyish-green tinge.

Water just enough that 25 millimetres (1 inch) of water covers the entire surface of the lawn. You'll know how much that is if you set up a small rain gauge before you water for the first time. Check your watch to time how long it takes to fill the gauge to 25 mm, then water for that length each time. Water before 10:00 am to reduce the amount lost to evaporation.

## Use natural or slow-acting fertilizer but not too much

Fertilizer replaces the nutrients used by the grass as it grows. Lawns that don't have enough nutrients tend to be slow-growing, weak, and more prone to invasion by insects and weeds. The grass is also slow to recover from problems.

Over-fertilizing the lawn, especially with too much nitrogen, produces soft, weak plants that are more prone to wear and damage.

When lawn fertilizer is required, you should apply it in April or May and in September when the grass is actively growing. Grass doesn't grow as much in the summer. Choose either an organic fertilizer or a synthetic lawn fertilizer containing 40–60 per cent of its nitrogen in a slow-release form. Check the bag's label for that type of nitrogen.

## Keep the right amount of thatch on your lawn

Thatch is the layer of dead leaves, grass, and roots that collects between living grass and the soil surface. Chinch bugs live in the thatch and use it as a winter home. If your lawn has too much, then chinch bug populations can increase.

All lawns need some thatch to cushion the grass plant's growing point and to insulate the soil from high summer temperatures. But if the layer becomes too thick, it reduces the amount of water and nutrients moving down to the roots and gives chinch bugs a great place to live.

Keeping the right amount of thatch on your lawn lowers the possibility of chinch bug problems.

Top-dressing and hard raking are two ways to manage thatch. To top-dress, spread a 1 cm layer of compost or good quality soil over the entire lawn surface once a year. This slowly breaks down the thatch and also builds up good organic matter in your soil. If the thatch has built up to more than 1 cm, you will need to remove some physically. Use a fan rake or a mechanical de-thatcher. De-thatching is best done in the fall when the lawn is actively growing and will quickly recover.

## Mix your grass varieties

In Nova Scotia, we recommend a mixture of fescue, Kentucky bluegrass, and perennial ryegrass for home lawns. Some ryegrass and fescue varieties contain a naturally occurring fungus that helps resist damage from chinch bugs.

When establishing a new lawn or re-seeding damaged areas, choose a seed mix that includes one or more of the grass varieties that contain the fungus, called an endophyte. These types of grass seed mixes are available from many larger garden centres in Atlantic Canada. Grass seed packages that contain this fungus will show the words "endophytically enhanced grass seed" or "endophytic grass seed." Spring or fall is the best time to re-seed or repair a lawn.

# Biological methods

## Spiders, predatory insects, and fungi

Some types of spiders and predatory insects that live in lawns help keep chinch bugs in check. For example, the big-eyed bug is a predatory insect that looks very similar to chinch bugs but with much bigger eyes. Naturally occurring fungi won't hurt the grass and will help with chinch bug control if you water the lawn properly.

## Do nematodes work?

Some regional gardening websites and publications have recommended using nematodes to control chinch bugs. Nematodes are microscopic parasites that can be added to soil to control white grub problems. Unfortunately, there is no scientific evidence that supports this method for chinch bug control so we don't recognize it as an effective solution. Use a pest control product only for pests listed on the label to make sure the product is both safe and effective.

## Chemical methods

As a last resort, if physical and biological control methods aren't working, you might have to try insecticidal soaps and diatomaceous earth. Talk with an expert at a garden center about those and other pesticides to treat chinch bugs. Make sure you use only domestic-class pesticides and follow all directions carefully. Remember—you only need to treat infested areas of the lawn.

## Nova Scotia's new *Non-essential Pesticides Control Act*

By the spring of 2011, the provincial act restricting the sale and use of non-essential pesticides will be in effect for lawn care products. In 2012, the act extends to products for outdoor trees, shrubs, flowers, and other ornamental plants. A list of allowable pesticides will be available by the spring of 2011 on the province's website.



## Environment

For more information, go to our website at [www.gov.ns.ca/nse/pests](http://www.gov.ns.ca/nse/pests).

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