



Effective Control of Chinch Bugs

July 2000

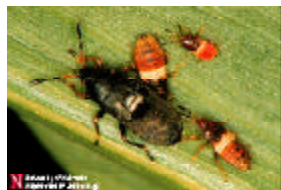
Do you have brown patches on your lawn? Don't be too quick to blame the neighbour's dog — you could have an infestation of chinch bugs.

Damage

Chinch bugs feed by sucking the sap from the crown and stems of turf grasses. This damage appears as irregular yellow patches, which will spread over the summer. The grass may turn brown and die if feeding continues unchecked. A severe infestation of chinch bugs may destroy an entire lawn.

Description

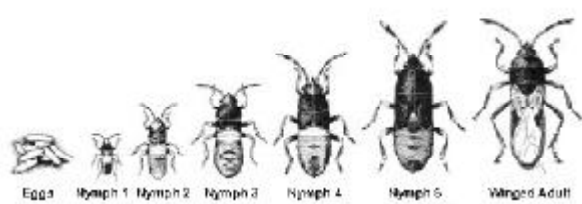
The hairy chinch bug (*Blissus leucopterus hirtus*) is a common species of chinch bug in eastern areas. It likes to feed on bentgrass, bluegrass and varieties of red fescue. It is black with a white spot on the back between the wing pads. Winged adults have white wings folded over their backs. Adults are 4 mm (a little less than 1/4") in length. The immature chinch bug, the nymph, is bright red with distinctive white bands across the back. It turns first orange, then brown and finally black as it matures. Nymphs do not have wings.



Life Cycle

The adults spend winters congregated under trees and shrubs and on edges of lawns under hedges and flower beds. In spring or early summer when temperatures warm up to 20°C (70°F), the overwintering adults will breed. The females will lay 200–300 eggs over the next month. The eggs are laid on the lower leaves or roots of the grass. The eggs will mature in 30–40 days. The nymphs do most of the damage to the grass during this period, generally during the month of June.

Nymphs become adults by July and the next generation will appear in August or September and seek winter hibernation.



Determining the Level of Infestation

Damage caused by chinch bugs appears quickly in hot weather and may be mistaken for drought damage. There are several ways to verify an infestation.

Chinch bugs give off an offensive odour when crushed. If your lawn has a noticeable odour when walked on, you could have a large infestation.

Spread the grass and check the soil surface for red nymphs or black adults. Chinch bugs avoid the light and may hide in soil crevices. The flotation method can help in cases where the bugs are not readily visible.

- Cut the bottom out of a coffee can or large juice can and force it 5 cm (2") into the turf surface. Fill the can with soapy water, adding more water if the level recedes. Wait 5–10 minutes. If you have chinch bugs, they will float to the top of the can. Try this in several areas of the lawn, including lawn edges.
- If there are 5–10 chinch bugs in the can, the infestation is serious enough to damage turf in good condition. Healthy turf should be able to tolerate a level of 2 or 3 bugs per can. Turf that is in poor condition or stressed by hot, dry weather may not tolerate a low-level infestation.

Preventative Measures: Good Lawn Management

Chinch bugs prefer poorly tended lawns with compacted soils, accumulations of thatch, a lack of moisture or an excess of nitrogen. Proper lawn maintenance will discourage infestations and improve tolerance to damage. Some helpful practices include the following:

- if replanting grass, choosing an insect-resistant, endophytic variety of tall fescue or ryegrass (endophytes are naturally occurring fungi that kill lawn pests, including chinch bugs);
- aerating the lawn in the spring to reduce soil compaction;
- removing thick layers of thatch (organic debris on the surface of the soil) in the fall, while keeping in mind that some thatch may be desirable to prevent winterkill in cold regions;

- not overfertilizing, since this will encourage greater insect activity;
- using water-insoluble or slow-release nitrogen fertilizers;
- using 1 kg of nitrogen per 100 m² (approximately 2 lb per 1000 ft²) should be adequate for most lawns;
- watering the lawn thoroughly but infrequently during the summer;
- irrigating in a dry period to help the lawn withstand the damage caused by an infestation;
- keeping soil moist to a depth of 6–8 cm (2.5–3.5");
- not cutting the grass too short — a length of 6–7.5 cm (2.5–3") will help avoid stressing the grass; and
- adding agricultural limestone to soil with a pH below 6.5.

Beneficial Insects

Natural predators and parasites serve to keep chinch bug numbers under control.

- The big-eyed bug (*Geocoris bullatis*) likes to dine on its relative, the chinch bug. It looks similar to the chinch bug, but has a wider body, larger head and large, predominant eyes.
- The tiny wasp, *Eumicrosoma beneficum*, will parasitize chinch bug eggs under favourable conditions, preventing them from hatching.

These predators occur naturally, and may possibly be purchased from a commercial insectary (of beneficial insects).

Monitoring

The soap and flannel trap method of trapping and disposing of chinch bugs can also be used as a monitoring method to determine the level of infestation.

- Put 30 mL (1 oz) of dishwashing soap in 7 L water and drench a small area of lawn, i.e., 0.2 m² (2 ft²). A larger area of lawn can be treated by using a hose attachment. The chinch bugs will crawl to the surface of the grass to escape the soap.
- Lay a flannel sheet over the treated area and wait 10–15 minutes. The chinch bugs will crawl onto the sheet, where their feet will become trapped in the flannel nap. They can be vacuumed off the sheet or drowned in a bucket of water.



Hairy chinch bug adult (courtesy D. J. Sheltar)

Using a Pesticide

An infestation of chinch bugs can be effectively treated with domestic class products. Before purchasing a pest control product, check the label to make sure that the product is registered for this use.

Treat the entire lawn when damage is first noticed in June. A second application may be necessary in August to kill the second generation. Treating after mid-August is not particularly effective. It is best to wait until the following June.

Some illustrations and photographs courtesy of the Department of Entomology, University of Nebraska-Lincoln; the Ohio State University Extension; Stephen C. White, Kansas Department of Agriculture; D.J. Sheltar.

Remember



Before Purchasing a Pesticide Product

- Identify the pest correctly.
- Use physical control methods and alternatives to pesticides.
- Read the label directions and

safety precautions before buying the product. The label must include the name of the pest to be controlled and the treatment location (e.g., indoor, outdoor, garden uses, pet treatment).

- Purchase only the quantity of product needed for the treatment.
- Alternatively, you may choose to hire a licensed pest control operator.

When Using a Pesticide

- Carefully read all label instructions and precautions before using pesticides.
- Do not drink, eat or smoke while applying pesticides.
- Persons and pets should vacate the area during treatment. Cover or remove aquaria.
- If kitchen area is to be treated, cover or remove food, dishes and utensils.

After Handling a Pesticide

- Always wash your hands thoroughly after handling any pesticide product.
- Do not permit persons or pets to contact treated surfaces until residue has dried completely.
- Provide adequate ventilation of treated areas after use.
- Wipe clean all surfaces that come in direct contact with food, such as counters, tables and stovetops, including indoor and outdoor surfaces.

- Always store pesticides out of reach of children and pets and away from food and beverages.

In Case of Accidental Poisoning

- Call a poison control centre immediately and seek medical attention.
- Take the pesticide container or label with you to the emergency facility or physician.
- Follow first aid statements on the label.
- In case of accidental poisoning of pets seek veterinary attention immediately.



When Disposing of Pesticides

Do not reuse empty pesticide containers. Wrap and dispose of in household garbage.

Unused or partially used pesticide products should be disposed of at provincially or municipally designated household hazardous waste disposal sites.

Use Common Sense

- These are general recommendations.
- Consult the label for specific instructions.
- When in doubt, contact a professional.

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