

WHAT'S UP?

From Bayer Environmental Science



Bayer Environmental Science



Leatherjackets Update

Many areas of Eastern Canada have reported higher incidence of leatherjacket being a problem on turf this spring. Included is a review of the lifecycle and control of this pest.

Leatherjackets are the larvae stage of the European Crane Fly. The most common species of leatherjackets that causes damage to turf in Canada is *Tipula Paludosa*. This pest used to be confined to coastal areas of B.C. and the Maritimes. Now it is **considered a significant pest in a large part of Ontario** and some southeastern areas of Quebec.

The pest continues to invade geographic areas that were not previously affected in the past and is now considered one of the top turf insect pests that cause damage to golf course turf in Ontario.

How to Monitor For Leatherjackets

Leatherjackets are not an easy pest to monitor for especially in the fall when they are small. Select a few random spots in the lawn to inspect. Dig up a small square area of turf about 15cm by 15cm. Peel apart the samples and count the number of larvae that you find. Larvae tend to feed during the day just below the thatch and in the first 1-2cm of soil. Alternatively use a 4" diameter golf course cup cutter to sample various areas of the lawn. The number of larvae per square foot can be calculated by multiplying the number of larvae found per cup sample by 11.5 to give you the number of larvae per square foot.

Control of Leatherjacket Larvae

CHIPCO SEVIN T&O	MERIT
Chipco Sevin T&O is registered for control of leatherjackets on turf.	The application of Merit is recommended as a preventative treatment in late August or early September.
200ml/100m ²	10 packets/1.2 ha or 1 packet/1200 m ²
It is generally not necessary to water applications in where adequate water volumes (i.e. greater than 8L 100m ²) are used to apply the product. A light irrigation following treatment will help to move the product into the target area where low water volumes are used.	For suppression of early fall leatherjacket larvae apply MERIT SOLUPAK Insecticide to turfgrass areas known to be infected. Application timing should commence when adult crane flies take flight in August and September and begin laying eggs. Irrigate (5 -10ml water) following application to move product into target area.

Consult the product labels for detailed information.

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Life History

Adult crane fly (*Tipula Paludosa*) are typically evident in late August or early September and look similar in appearance to a giant mosquito. They are normally seen flying around turf depositing their eggs at that time. They are also often seen around homes bouncing into screen doors. One female adult crane fly can deposit as many as 300 eggs.

Larvae first appear in later September or early October and begin feeding immediately. They are gray brown with a leathery texture, and grow to 3-3.2 cm (1-1.25") in length when mature. They are from the maggot family and resemble a small cutworm (with no legs). They overwinter in the soil as third instar larvae and resume feeding when the weather warms up in late March or April. In parts of B.C. leatherjackets may feed throughout the winter months if temperatures remain moderate. Leatherjackets complete their fourth and final instar stage in the spring. They generally continue feeding into early to mid June. They then enter a resting stage and remain inactive in the soil for most of the summer, before pupating in mid to late August. Leatherjacket feeding typically occurs on the crowns and roots of turfgrass plants, causing the appearance of thinning or reduced turf density.

There is only one generation per year. Healthy turf may tolerate up to 15 larvae per square foot without significant damage.

Heavy flights of adult European Crane fly in September can be an indication that larvae will be present in large numbers in October. There are two factors that may impact the mortality of leatherjackets:

- 1) Dry conditions during egg development – eggs of leatherjackets require moisture to survive. Excessively dry September weather could play a role in limiting survival rates in some areas of the country.
- 2) Harsh winter conditions – Cold weather conditions, deep frost layers or freeze thaw cycles could potentially reduce populations over the winter.

The significant amount of snow cover that we experienced in Eastern Canada this past winter likely resulted in reduced mortality of leatherjackets.

For more information contact Bayer Environmental Science
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