

POTENTIAL INSECT PROBLEMS FOR MICHIGAN

David P. Martin
Department of Agronomy
The Ohio State University

In this brief discussion I would like to consider several insects that have become serious turf pests in central Ohio in recent years. It is not inferred that all of these insects will suddenly become serious threats for turf managers in Michigan. But it is important that you are aware of the potential insect problems that you don't have now and be able to recognize them should they begin to cause damage in your turf.

In order to deal with turf insect problems, you should have a knowledge of their characteristics, life cycle, and injury symptoms on turf. From this information the turf manager can usually make an accurate diagnosis of the problem and a recommendation on remedial procedures. The insects to be considered are as follows:

Root Feeders: Grubs, Bluegrass Billbug

Foliage Feeders: Sod Webworm

Sucking: Chinch Bug, Aphid

ROOT FEEDING INSECTS

Grubs - Most turf managers are acquainted with the annual white grub and Japanese beetle grub. This discussion will, therefore, be limited to the Ataenius spretulus grub which is the larval stage of a small black "dung beetle". The adult beetle is less than 1/4 inch long and is probably the stage that overwinters. It is believed the adult lays eggs about May and the first generation larvae may cause extensive damage in bluegrass or bluegrass-bentgrass turf a short while later. The larvae are small white grubs about 3/8-inch long. They have been observed in turf in populations up to 300 per square foot. The larvae sever the turf roots from the soil which causes wilting and large patches of dead turf.

The presence of the Ataenius spretulus grub has been reported in the following locations: Cincinnati, Cleveland, Columbus, Dayton, Elyria, and Toledo, Ohio; Chicago, Illinois; Toronto, Canada; Kentucky; West Virginia; New Jersey; New York; Connecticut; and 1 or 2 locations in Michigan. The Ataenius is not a new insect but appears to be a new insect problem on turf. Golf course superintendents may wish to pay closer attention to those dead patches of turf in bluegrass-bentgrass fairways this season.

Bluegrass Billbug - The bluegrass billbug (Sphenophorus spp.) became a serious turf pest in Ohio in 1971. Damage has steadily increased since then with many and extensively damaged turf areas reported in 1975.

The bluegrass billbug overwinters as an adult, and is a hard-shelled, black snout beetle. The adult does little damage to turf and can be observed wandering around on sidewalks and driveways adjacent to lawns in early spring, late summer, and fall.

The adult lays eggs in stems of grasses about late May, although precise life cycle data is unavailable for this area. The larvae gradually feed their way down through the stem to the crown tissue. The larvae continue into the upper soil surface and feed on turf roots prior to pupating.

Billbug injury appears as dead patches of turf in mid to late summer. The dead plants will easily break off at the soil line when gently pulled, with sawdust-like material called frass present at the broken, hollowed end of the stem. This obvious

characteristic distinguishes billbug injury from sod webworm injury, chinch bug injury, or summer drought.

FOLIAGE FEEDING INSECTS

Although cutworms, armyworms, and other insects are included in this category, the discussion will be limited to the sod webworm.

Sod Webworm - The most common webworm adult is a buff colored moth that may be seen in turf areas during late spring, summer and early fall. When disturbed it will fly short distances in an irregular zig-zag pattern and quickly dart back into the grass. The adult does no damage to turf but is a warning that larvae will follow.

Sod webworm larvae are about 3/4 to 1-inch long, have a light brown head, and are a dirty, yellowish-white with about 4 parallel rows of small dark spots from head to tail. The larvae live in small silken tunnels at the thatch surface where they chew off and eat grass plants. Therefore, the injury appears as small brown patches of closely clipped stubble. Flocks of feeding birds in turf areas may also indicate the presence of sod webworm larvae.

There are generally 2 generations of this insect. In central Ohio the first generation occurs in late June and the second in late August or September. Turf injury from the second generation has been much more severe the last several years than the first generation.

SUCKING INSECTS

Many insects are included in this category. Only the chinch bug and aphid have been serious turf pests in Ohio, however.

Chinch bug - The hairy chinch bug is a serious pest on bentgrass and bluegrass lawns in Ohio. The nymph stage of the life cycle does the greatest damage to turf. Initially the nymph is red, then orange, orange-brown, and finally black. The black adult is 1/16 of an inch long with a white area over the back between the wings.

Damaged turf from the chinch bug is usually in scattered patches in open, sunny areas, becoming yellow and then brown as the turf dies. Chinch bugs are difficult to find in turf because of their small size. Spreading the turf down to the thatch layer may cause them to move around and make diagnosis better. Another diagnostic method is to add water inside a cylinder pressed into the turf. Some of the nymphs and adults should float to the surface over a period of several minutes. Two generations of chinch bugs in late June and late August - similar to the sod webworm - are commonly observed in Ohio.

Aphids - Aphids, or plant lice, may be found feeding in clusters in fairly large numbers on turf leaves, especially bluegrass. Significant populations were observed on bluegrass lawns in late 1975 near Columbus and Dayton, Ohio.

Damaged turf areas first turn yellow and then die. Aphids are supposedly most severe in shaded areas but were observed in the sunny locations of the lawn in Columbus. The effected turf areas were completely brown. Control with insecticides is accomplished easily when a correct diagnosis is finally made.

SUMMARY

How soon these potential insect problems might be actual problems for turf managers in Michigan is an unanswered question. I do know they are significant in Ohio and have definitely increased in severity the last several years. In Ohio the golf course superintendent must be most cognizant of the Ataenius beetle and the general turf manager the sod webworm, chinch bug, and particularly the bluegrass billbug.