

## TURF INSECTS

# GREENBUG BUILDUP IN OHIO IS LINKED TO OVERWINTERING

By HARRY D. NIEMCZYK and KEVIN T. POWER

The greenbug, *Schizaphis graminum* (Rondani), has been a persistent problem on Kentucky bluegrass and fine fescue lawns in the mid-west since the mid 1970's. In 1981 significant damage was reported from Iowa and Minnesota.

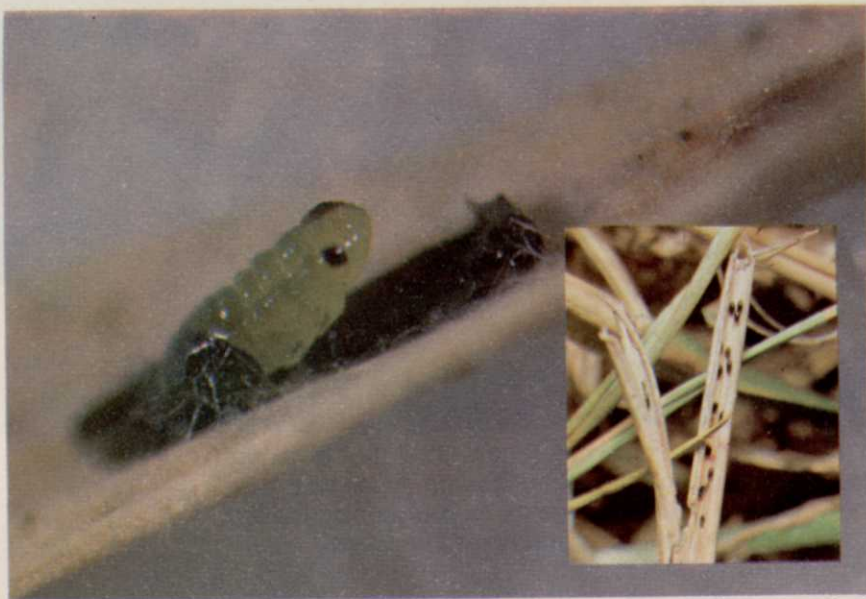
In Ohio, damage was minimal through the summer and early months of fall. However, for reasons not yet understood, populations in Cincinnati and Dayton increased dramatically in late October and persisted through most of November. Doug Halterman, Vice President of Leisure Lawn Corporation, Dayton, Ohio, and Dr. Dan Potter, University of Kentucky, both reported a similar buildup in Louisville, Kentucky. Infestations were high enough to cause severe damage to some lawns. In Ohio, swift application of Orthene® by lawn care firms kept damage from being even more extensive.

### Many eggs laid in 1981

Examination of the infested Ohio lawns in November revealed thousands of greenbug eggs on grass blades and debris, such as tree leaves. While egg-laying female greenbugs have been collected previously from infested Ohio lawns during October - November (WTT June 1980), eggs were rare.

Laboratory and field observations have shown that greenbug eggs are light green when first laid, but soon turn shiny black. Eggs are glued to the surfaces of grass blades

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Nymph emerges from egg after overwintering in the Dayton, Ohio area. Black eggs on infested turf were collected in March and hatched after 48 hours at room temperature.

and various other debris commonly found in lawns.

### Winter survival confirmed

The uppermost question was: would the eggs survive the winter? To shed light on this point, plugs of turfgrass containing overwintered eggs were collected March 2, 1982 from lawns where they were observed the previous November. Some plugs were potted and placed in the greenhouse where temperatures remained about 75°F. Samples of eggs were also removed and incubated in the laboratory.

Within two days after being placed in the warm environments, eggs began hatching. In the same trial, pots placed in the greenhouse had 8 to 10 newly hatched greenbugs on the grass blades. This occurrence confirms my earlier theory (WTT June 1980) that the greenbug can overwinter as an egg

on home lawns in northern states.

Halterman also reports hatched eggs found March 31, 1982.

### What to expect

Does this mean lawns with many overwintered eggs will have a severe problem in 1982? Laboratory observations made on one of the newly hatched greenbugs gives cause for some concern. Seven days after this aphid emerged from the overwintered egg, she bore three healthy young greenbugs. Surely the probability of a problem developing on such a lawn is at least increased. Frequent rains and extreme fluctuations in temperature which commonly occur during spring can destroy many newly hatched aphids. We plan to monitor further the development of greenbug populations on lawns that had high egg populations during the winter of 1981-82. **WTT**