# Evaluation of Merit for Preventative and Curative Bluegrass Billbug Control

*Marcus A. Jones and Nick E. Christians*

**Introduction**

Bluegrass billbug (Sphenophorus parvulus) is a serious pest of cool-season turfgrasses in the United States. Adults deposit their eggs into small holes chewed in the stem. Injury occurs after the larvae burrow throughout the stem eventually making their way to the crown to feed. Often misdiagnosed, the symptoms usually appear mid to late summer as the turf is under moisture stress. Chemical control is normally achieved by treating the adults early in the spring or later in the season once the larvae have moved into the soil. The objective of this study was to evaluate different rates of merit for preventative and curative control of bluegrass billbug.

**Methods**

A field trial was established during the spring of 2004 at the Iowa State University Horticulture Research Station near Gilbert, IA. Plots measuring 5 x 5 feet were located on Kentucky bluegrass mowed at 2.5 inches. The randomized complete block trial contained four replications and seven treatments (Table 1). A curative application of merit was made May 1 followed by preventive applications May 26$^{th}$ or July 1$^{st}$. Plots were sampled August 3$^{rd}$ and billbug populations were determined on a square foot basis.

**Table 1.** Protocol used to determine efficacy of insecticide treatments targeting bluegrass billbug in Kentucky bluegrass turf.

| Trt | Product | Formulation | Rate (lb ai/A) | Application Timing |
|---|---|---|---|---|
| **1** | **Control** | - | - | - |
| **2** | **Merit** | 75WP | 0.3 | May 1 |
| **3** | **Merit** | 75WP | 0.4 | May 1 |
| **4** | **Tempo SC Ultra** | 10WP | 0.094 | May 26 |
| **5** | **Merit** | 75WP | 0.25 | June 1 |
| **6** | **Merit** | 75WP | 0.3 | June 1 |
| **7** | **Merit** | 75WP | 0.4 | June 1 |

**Results**

Heavy spring rains during the time adult billbugs were laying eggs resulted in reduced larvae populations when plots were sampled. Bluegrass billbug injury was not observed during this trial, and only two billbugs were observed in untreated control plots. Therefore, differences between treated and untreated controls could not be determined.