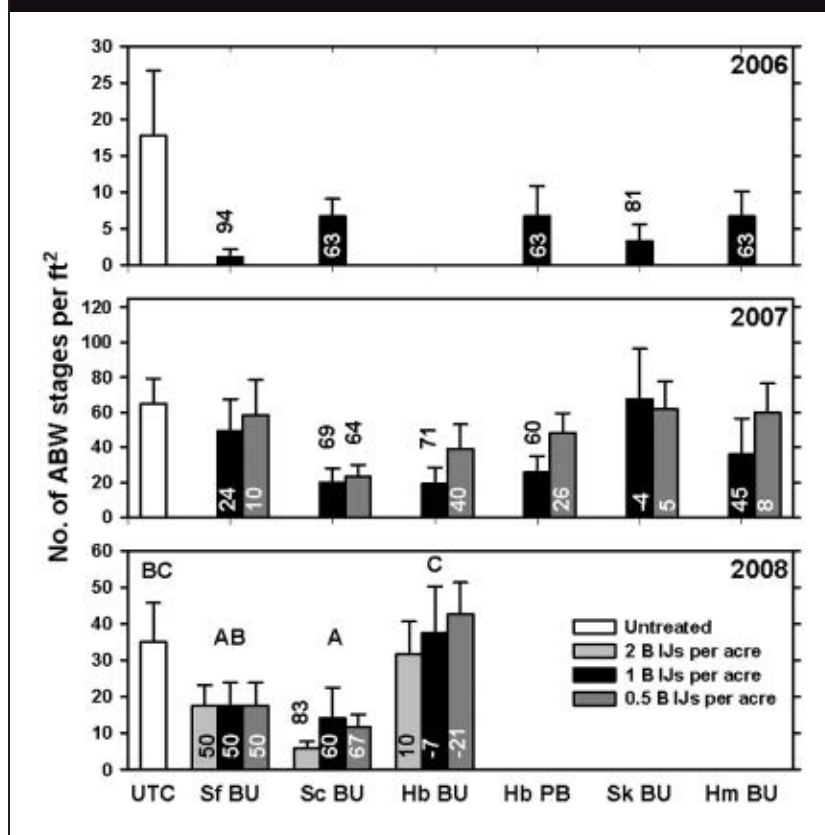


FIGURE 1: EPN IMPACT ON ABW DENSITIES


Effect of EPN species/strain and application rate on ABW densities. Numbers above or within columns indicate percent reduction relative to the density in the untreated control. Letters above columns (2008) indicate significant differences (Tukey's pairwise comparison test, $P < 0.05$) between EPN species when all rates were combined.

tive control of ABW with EPNs may be feasible.

Our results indicate that Sc and Sf could provide control comparable to chemical insecticides (>80 percent) when applied at standard rates (1 billion IJs per acre) to moderate larval densities. Although each species demonstrated the capability of high control in the field, the range of control (Sf = 10–94 percent; Sc = 60–83 percent) is currently far too variable for reliable use on valuable turf. Additionally, we observed a significant decrease in susceptibility between fourth- and fifth-instar ABW larvae in laboratory bioassays, which may indicate that the application of nematodes must be precisely timed to achieve high levels of control. Future studies will investigate the role that pest density and application timing have on control levels to reduce the variability in control.

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in most instances, control was more variable (0–71 percent) than in 2006, and likely attributable to higher ABW densities. Between the two application rates, Sc provided the most consistent control (64–69 percent).

In 2008, the previous top-performing species (Sf, Sc and Hb) were tested at three application rates (2, 1 and 0.5 billion IJs per acre) to intermediate ABW densities (~35-40 ABW/ft²). Sc provided the highest and most consistent control (60–83 percent), however, without clear dose effect and not significantly better than Sf.

Conclusions

Our findings in laboratory bioassays and evidenced in select field trials suggest that ABW larvae are very susceptible to several commercially available EPNs and that cura-