

ENTOMOGENOUS NEMATODES FOR GRUB CONTROL IN CRANBERRIES

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Interest in entomogenous nematodes (insect parasitic nematodes) for controlling many different insect pests has increased dramatically in recent years. Much of this is attributed to the progress in mass production and formulation methodologies for these nematodes as well as concerns for environmental contamination caused by the use of conventional insecticides.

For the past several years two species of white grub beetles (beetles belonging to the insect family Scarabaeidae) have become an increasing problem in cranberry fields located throughout the states of Massachusetts and Wisconsin. The cranberry root grub (*Lichnanthe vulpina*) is found in Massachusetts and the cranberry white grub (*Phyllophaga anxia*) is found in both states. Effective control strategies are not available for growers at this time.

Biosys (a company devoted to the development and production of entomogenous nematodes) has spent a considerable amount of time and effort investigating the potential use of entomogenous nematodes for controlling white grubs in turf. A complex of beetles (over ten different grub species) has caused annual losses in the turf industry totaling millions of dollars. Data from over four years of research has indicated that certain species of entomogenous nematodes when applied under appropriate conditions have consistently demonstrated reductions of white grub populations comparable to those achieved from the application of conventional insecticides.

For the 1990 growing season Biosys in cooperation with Ocean Spray, the University of Wisconsin-Madison and the University of Massachusetts will be conducting numerous cranberry field trials designed to test the effectiveness of entomogenous nematodes against white grubs. These studies will investigate the following parameters; 1) proper timing of application, 2) method of application, 3) optimal nematode dosage, and 4) best nematode species or strains.

If the data from these trials indicates that entomogenous nematodes could provide an effective means for controlling white grubs in cranberry fields, Biosys will still require positive data from at least one more year of study before recommending commercial sales to cranberry growers.
