

Pest Control

Research evaluates insecticide use and control of a common greenhouse pest



by PAUL FISHER, ALAN EATON and RAYMOND CLOYD

FUNGUS gnats (*Bradysia* spp.) are major insect pests of greenhouse crops and can cause economic losses across a wide range of crops during stock plant, propagation and finished plant production. Female fungus gnat adults lay

eggs in growing media, and the emerging larvae feed on the roots and crown.

Fungus gnat management is an ongoing focus of our research team. The objective of the study reported here was to evaluate the efficacy of different insecticides applied as media drenches. The notable feature of this study was that we tested insecticides at several geographic locations simultaneously. We used poinsettia as a model test crop because it was grown in all the collaborating greenhouses.

Research Methods

Six-inch poinsettias were grown in eight greenhouse locations that included seven commercial growers in Colorado, Michigan, New Hampshire, New Jersey and the University of New Hampshire (UNH). Ten containers received each insecticide treatment in each location. There were a total of eight insecticides evaluated and a control that did not receive an insecticide treatment.

In the commercial greenhouses,

24(11): 20, 22, 24.

the experimental plants, those receiving the treatments, were grown and managed alongside commercial crops. Insecticide sprays or media-applied fungicides were permitted, but no insecticide drenches were applied other than the experimental treatments. At UNH, no insecticides or fungicides were applied other than the experimental treatments.

Only one media drench application was made in the commercial greenhouses. For those insecticides labeled for multiple applications, two applications were made for several treatments at UNH (see Figure 1). Because the study was part of our Young Plant Research Center program, we were interested in fungus gnat control across a wide range of floricultural crops, rather than just poinsettia. We therefore allowed some treatments that were not labeled for poinsettia. There were two applications of Distance at UNH, although Distance should only be applied once to poinsettia, and Adept was used even though this insect growth regulator is not registered for poinsettia. In addition, DuraGuard, which is normally applied as a spray to the growing medium surface for fungus gnat control, was applied as a full-volume drench.

Insecticide applications were made on Oct. 18, 2005. For those treatments at UNH that received two applications, there was an additional drench application two weeks earlier on Oct. 4, 2005.

Continued on page 22

Mid-September 2006 • Greenhouse Grower

