

**D. Cucumbers (*Susumis sativus*) Greenhouse**  
**JH Biotech, Inc., Agronomy Department**

**Powdery mildew**  
**(*Sphaerotheca fuligenea*)**

Control of powdery mildew on greenhouse cucumbers at Hollandia Nursery, Inc., Carpinteria, CA: Four 200 foot rows of six week old cucumber plants grown at 75-80 degrees Fahrenheit on rock wool blocks set onto coconut bark bags with automatic drip irrigation were used in the trial. Treatment plots were 20 feet long with a five-foot buffer zone between each plot. Complete randomized design was used with four treatments at seven day intervals for six weeks and five replications. The trial was replicated four times simultaneously.

Applications were made to the point of runoff using a handpowered backpack sprayer (50-60 gal/ac.) and left to dry. The GC-3 post infection treatment received only three applications. Data sampling method involved selecting five plants at random from each treatment plot and labeling one lower, healthy leaf from each. Percentage of infection was estimated by observing the underside of the selected leaves and applying the University of California Pathogenicity rating scale (0-5). Statistical analysis was performed using the ANOVA and Duncan's Multiple Range Test at the 5% level of significance.

Most of the plants in the control plots were completely infected with mildew by week four. The two GC-3 treatments showed excellent results for controlling mildew with less than 10% infection occurring on most of the plants in those plots. The AQ-10 showed significantly less mildew than the control, but did not exhibit control at the same level as GC-3. There was no significant difference among the GC-3 treatments. No greater control was observed for the pre-infection treatment as compared to the post infection treatment. A 1% solution of GC-3 at a rate of 50-60 gallons per acre showed excellent control of *S. fuligenea* on cucumbers. No phytotoxic effects were observed on plants treated with GC-3.

GC3 99 - CUCUMBER

