



Research Report:

Control of Powdery Mildew on Gerber Daisies

The following is a report by D.J. Norman of the University of Florida, summarizing the findings of efficacy trials conducted in 2004.*



IFAS

Pesticide Efficacy Trials for Ornamental Plant Diseases - 2004 Experiment 222

Control of Powdery Mildew on Gerber Daisies

D.J. Norman, Associate Professor Plant Pathology, IFAS, University of Florida, CFREC-Apopka, 2807 Binion Rd. Apopka, FL 32703.

INTRODUCTION:

Gerber daisies are very popular as a both a bedding plant and for cut flower production. Gerbera are very susceptible to Powdery Mildew (*Erysiphe cichoracearum*). Frequent applications of fungicides are necessary in order to produce a disease free crop. The following experiment was carried out to determine if Cease would be more effective on powdery mildew in combination with a strobilurin such as Heritage.

TREATMENTS:

| Trt # | Fungicide rate | Application interval |
|---------------------------|--------------------|----------------------|
| 1. Water Control | - | 7 days |
| 2. Cease | 1% | 7 days |
| 3. Cease | 2% | 7 days |
| 4. Cease + Heritage 50 WG | 1% + 2 oz/100gal | 7 days |
| 5. Cease + Heritage 50 WG | 1% + 1 oz/100gal | 7 days |
| 6. Cease + Heritage 50 WG | 1% + 0.5 oz/100gal | 7 days |
| 7. Heritage 50 WG | 2 oz/100gal | 7 days |
| 8. Heritage 50 WG | 1 oz/100gal | 7 days |
| 9. Heritage 50 WG | 0.5 oz/100gal | 7 days |

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EXPERIMENTAL DESIGN:

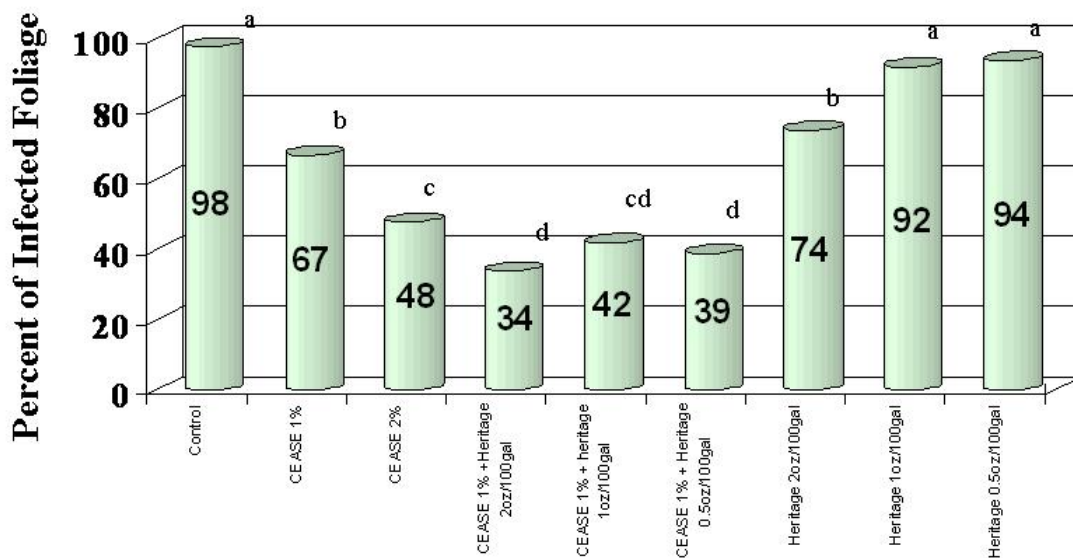
Gerber daisy plugs (cv. 'Yellow', Twyford) were transplanted into 5” pots containing Vergo potting mix (Mix A). Plants were initially fertilized with 2.5 g/pot (Osmocote, 15-15-12 with micronutrients) and were hand watered twice a week. Plants were grown for two months before test was initiated. Experiment was done in a heated glass house with temperatures maintained between 65 - 90°F and light levels between 900 to 1200 foot candles. Experiment was set-up in a block design (3 plants per block) with 9 plants per treatment (81 plants total). This test was begun when small powdery mildew spots were observed on all plants. Fungicides were prepared by mixing in water to desired concentrations and sprayed till run-off (four applications 03-18-04, 03-25-04, 04-01-04, 04-08-04). Plants were evaluated weekly for four weeks. Visual comparisons between treatments were also done to determine if there was any indication of phytotoxicity.

RESULTS & DISCUSSION:

No visible plant phytotoxicity damage was observed in this study (i.e. chlorosis, leaf distortion or stunting). Final disease rating for this test was done on 04-14-04. A visual estimate of percent foliage covered with powdery mildew for each plant was done. Data was compared by ANOVA and LSD statistical procedures. Results are displayed in Figure 1. Note that Cease treatments were statistically better than the disease control and that there is a positive synergistic effect when mixed with Heritage.

Figure 1

Control of Powdery Mildew on Gerbera Daisies
(Fungicides applied every 7 days)



LSD, P = 0.05

*CEASE® and Serenade are identical formulations.

The brand name CEASE has replaced Serenade in this document, with permission from the manufacturer, AgraQuest.

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