

## Sweet Corn Seed Treatment and Seedling Establishment Trial – 2003

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### Objective:

Eleven seed treatment combinations plus an untreated control were tested on two cultivars of sweet corn (*sh*<sub>2</sub> ‘How Sweet It Is’ and *se* ‘July Gold’) to determine the best seed treatments for optimum stand establishment.

### Materials and Methods:

Plots were established at the Vegetable Crops Branch near Fremont, Ohio on April 16, 2003 and at the OSU Enterprise Center in Hillsboro, Ohio on April 29, 2003. Four replications of 100 seeds were planted in rows spaced 30” apart with 4-5” between seeds. Each cultivar was planted in a randomized block design. Soil type at the Veg. Crops Branch and the OSU Enterprise Center was Colwood fine sandy loam and Haubstadt silt loam, respectively. Soil temperatures at a 2” depth at planting in Fremont and Hillsboro were 58°F and 60°F, respectively. When plants reached at least the 5-6 leaf stage stand counts were taken (June 19 in Fremont, June 16 in Hillsboro) to determine effective seed treatments for optimum sweet corn stand establishment.

### Results and Discussion:

Emergence of the *sh*<sub>2</sub> cultivar ‘How Sweet It Is’ was lowest in the untreated check plots in both locations, and all seed treatment combinations resulted in significantly higher emergence values. The emergence range in Fremont was 32% to 76% and in Hillsboro 12% to 44% (Table 1).

Seedling emergence of untreated ‘July Gold’ (*se*) seed was lower than any of the treatment combinations at Fremont and all but one treatment at Hillsboro. Percent emergence in Fremont ranged from 47% to 81% and in Hillsboro ranged from 12% to 58% (Table 1).

This project was part of a multi-location trial organized by the Seed Treatment Committee of the International Sweet Corn Development Association, a non-profit research organization. The information generated from this study will be of value to sweet corn producers, industry personnel, consultants, farm advisers, extension plant pathologists and others interested in identifying the best performing seed treatments for optimum stand establishment.

Laboratory cold tests were conducted in the Seed Biology Lab, OSU, Columbus. Seed lot vigor rankings (Table 1) are shown for each seed treatment on both cultivars. Vigor rankings were calculated by using the average of the field emergence from both locations and the percent germination from the cold test. The lower the vigor ranking number, the higher percent germination and seedling emergence for that seed treatment.

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