

Sweet Corn Seed Treatment and Seedling Establishment Trial – 2002

Mark Bennett, Elaine Grassbaugh , Matt Hofelich and Mark Schmittgen
OSU/OARDC
Dept of Horticulture and Crop Science
Ohio State University

Objective:

Thirteen seed treatments plus an untreated control were tested on two cultivars of sweet corn (*se* 'July Gold' and *sh*₂ '277A') to determine the best seed treatments for optimum stand establishment.

Materials and Methods:

Plots were established at the Waterman Ag and Natural Resources Laboratory (WANRL), Columbus, Ohio on April 24, 2002 and at the Veg Crops Branch in Fremont, Ohio on May 6, 2002. 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 WANRL was Miamian silt loam and Rimer loamy fine sand was the soil type in Fremont. When plants reached at least the 5-6 leaf stage stand counts were taken (July 2 in Columbus, July 11 in Fremont) to determine effective seed treatments for optimum stand establishment.

Results and Discussion: Seedling emergence of untreated (UTC) 'July Gold' seed was lower than any of the treatment combinations at both sites. Maximum emergence at Columbus and Fremont were 37% and 36%, respectively. Percent emergence in Columbus ranged from 1-37% and from Fremont 3-36% for the UTC and the 13 seed treatments (Table 1).

Emergence of '277 A' was lowest in the UTC in Columbus, and all but two seed treatment combinations resulted in significantly higher values. No differences were seen in Fremont, where the UTC had 42% emergence. The emergence range in Fremont was 24% to 53% (Table 1).

This project was part of a multi-location trial organized by the Seed Treatment Committee of the National Sweet Corn Breeders Association, a non-profit research organization. The information generated from this national 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.

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**Table 1. Sweet Corn Seed Treatment and Stand Establishment - 2002
Columbus and Fremont, OH**

<u>Treatment rate in fl. oz./ cwt unless otherwise indicated</u>	<u>-- sh2: '277 A' --</u>		<u>-- se: 'July Gold' --</u>	
	<u>Columbus</u>	<u>Fremont</u>	<u>Columbus</u>	<u>Fremont</u>
	--- % emergence ---		--- % emergence ---	
Untreated Check	22	42	1	3
Captan 400 (3), Thiram 42S (2.5), Allegiance (0.75)	46	24	10	30
Captan 400 (3), Thiram 42S (2.5), Allegiance (0.75), Flo Pro IMZ (0.5)	26	37	13	21
Captan 400 (3), Thiram 42S (2.5), Allegiance (0.75), Flo Pro IMZ (0.5), Gaucho 480 (4)	73	42	34	34
Captan 400 (3), Thiram 42S (2.5), Allegiance (0.75), Flo Pro IMZ (0.5), L0263-A1 (3.2)	77	38	37	36
Captan 400 (3), Thiram 42S (2.5), Allegiance (0.75), Vortex (25 ppm product/cwt)	45	46	14	20
Captan 400 (3), Thiram 42S (2.5), Allegiance (0.75), L1115-A1 (100 ppm product/cwt)	46	32	10	24
Allegiance (0.75), L1115-A1 (100 ppm product/cwt), Vortex (25 ppm product/cwt)	37	38	9	18
Allegiance (0.75), L1115-A1 (50 ppm product/cwt), Vortex (25 ppm product/cwt)	40	51	12	21
Maxim 4FS (0.08), Apron XL (0.19), Divident Xtreme (2.00)	38	53	13	28
Maxim 4FS (0.08), Apron XL (0.32), CGA301940 (0.15)	40	53	12	22
Maxim 4FS (0.08), Apron XL (0.32), Cruiser 600 FS (1.28)	53	45	26	28
Maxim 4FS (0.08), Apron XL (0.32), Cruiser 600 FS (5.12)	69	49	30	32
Maxim 4FS (0.08), Apron XL (0.32), Cruiser 600 FS (1.28), CGA301940 (0.15)	63	42	15	36
LSD (0.05)	16.1	NS	10.0	14.4
p value		0.91		
CV	40.7	50.8	69.7	48.3