

SUPER SWEET CORN EVALUATIONS IN EASTERN KENTUCKY, 2003

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Introduction

Sweet corn remains a very popular item at roadside markets. This research was undertaken to evaluate super sweet corn varieties that may be suitable for production in eastern Kentucky.

Methods

Forty-eight super sweet (sh₂) corn cultivars were planted by hand on 28 May (early planting) and 24 June (late planting) 2003. Plots consisted of a row, 20-feet long of each cultivar replicated four times in a randomized block design. Rows were spaced 3 feet apart and 100 seeds were planted for each plot of a cultivar. One day after planting, 2 pts. of Dual Magnum was applied pre emergence to control weeds. Each replication received two applications of ammonium nitrate for a total of 424 lbs/acre (140 pounds actual nitrogen). Soil test results (Table 1) showed that additional lime, phosphorus and potassium were needed. Therefore 3 T lime, 40 lb N, 38 lb P₂O₅ and 32 lb K₂O (all rates per acre) were applied prior to planting.

The plots were side dressed (50 lb N) when plants were approximately 14 inches tall, and when plants were 30 inches tall. Supplemental overhead irrigation was applied once. Pounce 3.2 EC was applied every 5 days during silking to reduce worm problems.

In evaluating and ranking cultivars, points were awarded based on plant stand, husk coverage, tip fill, commercial acceptability and yield.

Results

This was a good year to evaluate sweet corn cultivars for pollination and ear fill under extremely humid and wet weather. We experienced wet weather during most of the 2003 growing season. Quicksand was among the wettest locations in the state, having 25.8 inches of rain between April and mid-August.

Despite wet conditions the 2003 sweet corn crop did very well. The cool wet weather of late summer encouraged fungal leafspot and virus problems. We were able to determine which cultivars were tolerant and thus suitable for late season production. Excessive rain occurred shortly after planting and some super sweet cultivars had poor germination and reduced stands (Table 2). Viruses, Northern Corn Leaf Blight, Southern Corn Leaf Blight, and Gray Leaf Spot were severe during 2003. Because wet weather prevailed during most of the growing season, only one irrigation was required on the late-planted corn. Some super sweet corn cultivars performed very well in both the early and late plantings (Tables 2, 3, and 4).

Max (HMX83925), Attribute WSS0966, Rustler, and Gourmet Brand 182A were rated as the four top yielding, best quality, early planted yellow sweet corn cultivars (Table 2). The four best yielding late planted cultivars were Rustler, Max (HMX8392S), Bandit and Morning Star (Table 3).

Attribute BSS0977, Shooting Star, Obsession, and 282 Extra Tender Brand were the best early bi-color sweet corns (Table 2). The four best late planted bicolor sweet corns were Attribute BSS0977, Obsession, Candy Corner, and Shooting Star (Table 3).

Ice Queen, WSS9870, Tahoe, and Gourmet Brand 378A were the four best early planted, white cultivars giving commercially acceptable yields of attractive, high quality ears (Table 2). The best late planted white cultivars were WSS9870, Gourmet Brand 378A, Ice Queen and Summer Sweet 8101R (Table 3).

Based on total points earned from performance in the early and late planting (Table 4) the top eleven cultivars were Attribute BSS0977 (bicolor, BC), Rustler (yellow, Y), WSS9870 (white, W), Max (Y), Ice Queen (W), Shooting Star (BC), Gourmet Brand 378A (W), Obsession (BC), Summer Sweet 7650 (Y), Candy Corner (BC) and Attribute WSS0966 (Y). Sweet corn cultivar selection should take into consideration the cultivar's ability to produce over an extended planting season where weather and changes in disease pressure may drastically change performance.

Table 1. 2003 Sweet corn cultivar trial soil test results.

pH	Buffer pH	P	K	Ca	Mg	Zn
5.65	6.48	50	393	2793	195	7.4