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## Sweet Corn Cultivar Trial

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# Sweet Corn Cultivar Trial

## **Abstract**

The 2010 sweet corn cultivar trial was conducted to identify cultivars with good ear characteristics for local marketing or shortdistance shipping. This year's trial focused on the bicolor, high-quality shrunken 2 (sh2) types, often referred to as augmented or improved sh2. They need isolation from other corn genotypes and careful handling at harvest but reward the grower with the best combination of good eating quality and extended shelf life that is available.

## **Keywords**

RFR A1003

## **Disciplines**

Agricultural Science | Agriculture

## Sweet Corn Cultivar Trial

### RFR-A1003

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#### Introduction

The 2010 sweet corn cultivar trial was conducted to identify cultivars with good ear characteristics for local marketing or short-distance shipping. This year's trial focused on the bicolor, high-quality shrunken 2 (sh2) types, often referred to as augmented or improved sh2. They need isolation from other corn genotypes and careful handling at harvest but reward the grower with the best combination of good eating quality and extended shelf life that is available.

#### Materials and Methods

A John Deere 7000 corn planter was used for trial planting on May 4, 2010, in a field with dark loamy-sand soil. Plot design was a randomized complete block with four replications. Plots consisted of two rows 25 ft long spaced 30 in. apart. After emergence, plants were thinned to 8 in. apart establishing a plant density of 26,000/acre. Water was applied as needed by center pivot irrigation to supplement rainfall. Fertilizer was applied preplant at the rate of 60 lb/acre N, 45 lb/acre P<sub>2</sub>O<sub>5</sub> and 160 lb/acre K<sub>2</sub>O and incorporated by chisel plowing and disking. An additional 50 lb/acre N was sidedressed on June 9 and again on June 21. Weeds were controlled with a crop preemergence application of Dual II Magnum, Atrazine 4L and Callisto herbicides. Ear caterpillars were controlled by insecticide sprays starting at ear silking. Data were

collected by once-over hand harvest when majority of ears showed developed kernels at optimum stage for marketing. Marketable ears needed to have at least 5 in. length of filled kernels.

#### Results and Discussion

Cultivars are ranked by relative maturity from early to late in Tables 1 and 2. The trial experienced two weeks of cool weather right after planting when air and soil temperatures occasionally dipped below 50°F. This chilly weather caused differences in early season seedling growth (Table 2). The cultivars 274A, Sweet Surprise and XTH 2281, in particular, stood out with strong cold weather growth. XTH 2171, Awesome, Sweet Success and Obsession also showed good seedling growth under these conditions. After this initial cold spell temperatures warmed up and plants grew rapidly. So rapidly, in fact, that plot harvest started July 17, a short 64 days after planting. The growing conditions evidently compressed maturity differences between cultivars because all were harvested in one week. Cultivar yield, in terms of number of ears (dozen/acre, Table 2) did not differ significantly; however, there were differences in ear size and quality attributes such as tip fill and husk cover of ear tips. Overall, considering early season plant vigor, marketable yield and ear characteristics, the trial's best performers were: 274A, Awesome, Sweet Surprise, Obsession and XTH 2281.

**Table 1. Sweet corn cultivar seed source and trial comments.**

Cultivar	Source <sup>a</sup>	Comments
274A	RU	Consistent good performer in early group, strong seedling vigor, large ears.
XTH 2171	ST	Early maturity, good seedling vigor, smallish ear not as sweet as XTH 2170.
XTH 2170	RU	Early maturity, fair yield of slender pointed ears that were tender and sweet.
GS 2773	ST	Medium-sized slender ear, long flag leaves, tender and sweet.
277A	ST	Short full ears set standard for eating quality, weak vigor and husk cover.
GS 2873	ST	Long dark flag leaves, slender ears, medium-sized kernels tender and sweet.
Awesome	ST	Good seedling vigor, short thick ear with good eating qualities.
Sweet Surprise	RI	Strong seedling vigor and yield, long shanks and flag leaves, attractive thick ears had decent to good eating quality.
Fusion	RU	Slow growth when cool temps, some lodging, crunchy sweet kernels.
Sweet Success	RI	Long flag leaves, deep kernels, good eating quality.
Attraction	RU	Slow early season growth but short fat ears were sweet and tender.
Obsession	RI	Consistently good production of attractive large ears.
XTH 2281	ST	Strong seedling growth, good yield of nice looking ears with good quality.
BSS 0982	RG	Bt hybrid, fair seedling vigor, long ear flags and shanks.
Bueno	CR	Full season, last to mature, strong yield of attractive ears.

<sup>a</sup>Seed source: CR = Crookham Co.; RG = Rogers Brands, Syngenta Seeds, Inc.; RI = Rispen Seeds, Inc.; RU = Rupp Seeds, Inc.; ST = Stokes Seeds, Inc.

**Table 2. Sweet corn cultivar seedling vigor, marketable yield and ear characteristics.**

Cultivar	DTH <sup>a</sup>	Seedling vigor <sup>b</sup>	Yield dozen/A	Yield CWT/A	Husked ear wt (lb)	Ear len. (in)	Ear dia. (in)	Tip fill <sup>c</sup>	Husk cover <sup>d</sup>
274A	74	G-E	1409	127.03	0.55	7.8	1.89	G-F	G
XTH 2171	74	G	1191	91.31	0.43	7.5	1.79	G	F-G
XTH 2170	74	F-G	1075	90.09	0.49	7.9	1.77	G-F	G
GS 2773	75	F-G	1263	93.22	0.42	7.5	1.68	G	G
277A	76	F	1280	98.80	0.48	7.4	1.78	F-P	F-G
GS 2873	76	F-G	1208	88.87	0.43	7.6	1.69	F-G	G
Awesome	77	G	1539	127.20	0.49	7.2	1.84	G	G
Sweet Surprise	77	G-E	1467	121.98	0.50	7.3	1.80	G	G
Fusion	78	P-F	1350	138.01	0.49	7.6	1.83	F-G	G
Sweet Success	78	G	1350	103.33	0.47	7.4	1.80	G	F-G
Attraction	78	F	1220	104.20	0.47	6.9	1.83	G	G
Obsession	79	G	1670	161.53	0.52	8.1	1.85	G	G
XTH 2281	80	G-E	1554	141.49	0.53	7.9	1.84	G	G
BSS 0982	80	F	1394	124.76	0.54	8.0	1.87	G-F	F-G
Bueno	81	F-G	1394	124.24	0.53	8.2	1.79	G	F-G
Trial avg.			1357	115.74	0.49	7.6	1.80		
LSD 5%			n.s.	37.3	0.06	0.4	0.07		

<sup>a</sup>Days to harvest from planting.

<sup>b</sup>Vigor rating based on plant size four weeks after planting: E = excellent (large, vigorous); G = good; F = fair; P = poor.

<sup>c</sup>Tip fill rating: G = good (less than ¼ in. unfilled kernels in tip); F = fair (¼ to 1 in. of unfilled kernels); P = poor (> 1 in. unfilled kernels).

<sup>d</sup>Husk cover rating: G = good (husk tightly covers ear tip); F = fair (husk loosely covers ear tip); P = poor (husk does not cover all of ear tip).