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Sweet Corn Cultivar Trial

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Abstract

The 2011 sweet corn cultivar trial evaluated 20 sugary enhanced (se) and synergistic (se/sh2) cultivars having bicolored kernels to identify good production and ear characteristics for local marketing or short-distance shipping.

Keywords

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Sweet Corn Cultivar Trial

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Introduction

The 2011 sweet corn cultivar trial evaluated 20 sugary enhanced (*se*) and synergistic (*se/sh₂*) cultivars having bicolored kernels to identify good production and ear characteristics for local marketing or short-distance shipping.

Materials and Methods

A John Deere 7000 corn planter was used for trial planting on April 29, 2011, in a field with dark loamy-sand soil. Plot design was a randomized complete block with three 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 P₂O₅ and 160 lb/acre K₂O and incorporated by chisel plowing and disking. An additional 50 lb/acre N was sidedressed on May 11 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. Yields are of marketable ears, which needed to have at least 5 in. length of filled kernels.

Results and Discussion

The trial was planted on April 29 and most plots had emerged or 'spiked' by May 10. Other than a couple of minor storms causing some plant lodging, growth was good and plot harvest started on July 14. Trial yields and observations are summarized in Tables 1 and 2. Fastlane and Vitality were the first cultivars to produce harvestable ears. Although eating quality was surprisingly good for such early maturing cultivars, their ears were rather small and yield below average. Seedling vigor ratings in Table 2 are based on plant size approximately four weeks after planting. Charisma and Temptation received excellent vigor ratings and were easy to identify in the field because of their strong early season plant growth. Both cultivars also delivered good yields of attractive ears at harvest. Ambrosia and Montauk deserve special comment because they produced the largest ears in the trial and had great eating quality too. Primus is a new Triplesweet Plus cultivar from Syngenta that is advertised as having improved sweetness and flavor over other Triplesweet cultivars, which have already set a high standard. Judging eating quality by field sampling can be somewhat subjective but Primus, like many cultivars in the trial, produced a good yield of nice looking ears that were sweet, tender, and good tasting. Both BC 0822 and BC 0805 are Bt (or insect resistant) hybrids that performed well. The BC 0805 has been an industry standard because of its consistently high yield of large, good-quality ears and insect resistance. The BC 0822 matured one to two days earlier than BC 0805 and had slightly smaller ears but better flag leaves.

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

Cultivar	Source ^a	Comments
Fastlane	HM	Short plant but early maturity, some lodging, smallish ears but good flavor
Vitality	RU	Short plant, stalk breakage due to wind, smallish ears but good eating quality
Temptation	RI	Standard - strong plant, attractive ears, good yield, and decent eating quality
Bon Jour	HM	Good yield, ears attractive but could have been bigger, nice sweet corn flavor
Renaissance	HM	Long shanks and flag leaves, slender ears, kernels tender, and sweet
Pay Dirt	CR	Slow early plant growth, short plant, small ears, good eating quality
Rendezvous	HM	Some stalk lodging, small 6 in. ears
Reflection	HM	Some stalk lodging, thick ears, good eating quality
Charisma	SE	Excellent seedling vigor, attractive ears, good yield, 'corn' flavor
Ambrosia	CR	Standard – good yield, large ears, tip fill and husk cover could be better
Venue	HM	Trashy plant, long ear shanks, slender ear, good husk cover and tip fill
Synergy	RU	Short uniform plants, good standability, ears pulled a little hard but attractive
Powwow	HM	Tall plant, some lodging, kernels sweet and crisp
Allure	SE	Tall plant, long ear shanks, 8 in. long slender ear
Ka-Ching	CR	Long shanks and flag leaves, attractive slender ear, good eating quality
Montauk	HM	High yield of large ears, kernels sweet and tender
BC 0822	RG	Bt hybrid, nice clean plant, good husk cover, slender ears
Primus	RG	Good yield, long ear shanks, kernels tender and sweet
BC 0805	RG	Standard - Bt hybrid, produced long shanks and ear, fair tip fill, good eating
Kristine	CR	Slow early plant growth due to herbicide injury

^aSeed source: CR = Crookham Co., HM = Harris Moran/Mesa Maize, RG = Rogers Brands, Syngenta Seeds, Inc., RI = Rispens Seeds, Inc., RU = Rupp Seeds, Inc., SE = Seneca Vegetable Research.

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

Cultivar	Days to harvest	Seedling vigor ^a	Yield dozen/A	Yield CWT/A	Husked ear wt (lb)	Ear len. (in.)	Ear dia. (in.)	Tip fill ^a	Husk cover ^a
Fastlane	76	G	1,121	71.9	0.43	7.0	1.72	G	F
Vitality	76	G	1,083	76.6	0.42	7.0	1.73	G	F-G
Temptation	77	E	1,721	137.3	0.47	7.3	1.78	G	G
Bon Jour	77	G	1,643	135.3	0.45	7.4	1.73	G	G
Renaissance	77	F-G	1,411	100.9	0.44	7.6	1.72	G	G
Pay Dirt	78	F	1,353	77.5	0.35	6.7	1.64	F-G	G
Rendezvous	78	G	1,276	83.3	0.39	6.5	1.70	G	G
Reflection	80	F-G	1,566	124.6	0.47	7.1	1.83	G	G
Charisma	80	E	1,547	118.3	0.50	7.8	1.76	G	G
Ambrosia	82	G	1,563	141.3	0.59	8.2	1.89	F-G	F-G
Venue	82	F-G	1,508	104.6	0.43	7.4	1.68	G	G
Synergy	82	G	1,489	123.7	0.50	7.3	1.85	G	G
Powwow	82	F-G	1,478	115.3	0.49	7.2	1.81	G	F-G
Allure	82	F-G	1,411	122.3	0.46	8.0	1.74	F-G	G
Ka-Ching	84	F-G	1,431	119.0	0.48	8.0	1.72	G	G
Montauk	85	G	1,798	170.5	0.56	8.2	1.86	F-G	G
BC 0822	85	G	1,547	117.9	0.47	7.6	1.74	G	G
Primus	86	G	1,643	144.1	0.51	8.0	1.78	F-G	G
BC 0805	86	G	1,624	149.2	0.54	8.2	1.80	F-G	G
Kristine	86	F	1,450	105.7	0.44	7.4	1.73	F-G	G
Trial avg.			1,483	117.0	0.47	7.5	1.76		
LSD 5%			351	30.7	0.05	0.4	0.08		

^aE = Excellent, F = Fair, G = Good.