

Super Sweet Corn Evaluations in Central Kentucky

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Introduction

Locally produced sweet corn is a high-demand item at Kentucky retail markets. This trial was designed to evaluate super sweet corn varieties.

Materials and Methods

Sixteen super sweet corn varieties were planted by hand on 10 May. Plots consisted of a 20-foot long row of each cultivar and were replicated four times. Rows were spaced 33 inches apart and 100 seeds were planted in each 20-foot row. Plants were thinned to a distance of 8 inches apart.

Prior to planting, 100 lbs./A of actual N as ammonium nitrate and 18 lbs./A K as 0-0-60 were applied to the soil and tilled in. Plants were sidedressed through the trickle lines with 40 lbs./A of actual N as ammonium nitrate.

Bicep II Magnum at the rate of 25 fl.oz./A was applied on 11 May 2007, for weed control. Capture, SpinTor, Asana, and Baythroid were used for insect control.

Results and Discussion

Variety evaluation results can be found in Tables 1 through 3. Zenith, a super sweet variety that has been available for a number of years, was the best performing yellow variety. This has been a top variety in previous trials and was placed in this trial for comparative purposes. Other excellent yellow varieties were Passion, GSS0966, and Sweet Shipper RS.

Devotion was excellent and the only white variety in the trial. It is notable for its exceptionally sweet flavor.

Obsession, Fantastic, Mirai 301, and Candy Corner were the best bicolor varieties. Both Mirai 301 and Candy Corner had lower husk cover and Mirai 301 had a lower tip fill value, which were accentuated by the excessively dry season. Candy Corner, a standard in the trial, had extremely tender and very sweet ears. It has had much better husk cover in previous trials.

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Table 1. *Plant characteristics and yields of super sweet corn varieties, Lexington, KY, 2007.*

Cultivar	Seed Source ¹	Days to Maturity	Plant Stand ² (%)	Seedling Vigor (1-5)	Height to First Harvested Ear (in.)	Ease of Ear Harvest ⁴ (1-5)	Yield (dozens of ears per acre)
Zenith	HR	81	73.3	2.9	25.8	3.4	2,706 A
Mirai 308BC	SW	70	56.8	3.0	23.8	2.9	2,657 AC
Passion	RU	81	87.5	3.5	18.9	1.8	2,541 ABC
Obsession	SW	78	75.3	3.5	21.6	1.8	2,459 ABCD
GSS0966	SW	79	71.8	3.8	18.8	1.6	2,426 ABCDE
Fantastic	SW	74	50.3	2.5	18.6	2.6	2,376 ABCDE
Mirai 301	HR	76	59.8	2.5	22.5	2.9	2,145 BCDEF
Candy Corner	HR	76	63.8	3.3	16.5	2.1	2,030 CDEF
Sweet Shipper RS	RI	75	85.3	3.3	17.3	1.8	2,030 CDEF
Devotion	SW	82	78.5	4.4	22.9	2.3	2,013 DEFG
Mirai 131Y	RU	71	54.5	3.0	20.2	1.3	2,013 DEFG
Triumph	RI	75	77.0	5.0	17.7	4.0	1,914 EFG
Sweet Perfection RS	RI	77	59.3	2.8	15.0	1.3	1,815 FG
Vision Xtra Tender	SW	75	57.0	2.6	13.0	2.0	1,767 FG
XTH 1273	HR	73	54.5	3.4	12.1	1.3	1,650 FG
Calvary	SW	84	30.8	1.8	28.0	3.4	1,502 G
Waller-Duncan LSD (P=0.5)			11.1		3.1	1.4	515

¹See Sources of Vegetable Seeds listing for seed company addresses.

²Plant Stand is percentage emergence of 100 seeds planted.

³1 = poor, 5 = excellent.

⁴Ease of Ear Harvest: 1 = hard, 5 = easy.

Table 2. *Ear characteristics of super sweet corn varieties, Lexington, KY, 2007.*

Cultivar	Husk Coverage ¹ (1-10)	Ear Length (in)	Ear Width (in)	Tip Fill ² (1-10)	Kernel Color ³
Zenith	9.0	7.3	1.6	8.0	Y
Mirai 308BC	5.8	7.6	1.7	4.0	BC
Passion	9.8	8.1	1.7	7.0	Y
Obsession	9.5	7.9	1.7	6.3	BC
GSS0966	9.5	7.5	1.7	8.0	Y
Fantastic	9.3	7.6	1.8	9.3	BC
Mirai 301	7.3	8.3	1.9	7.3	BC
Candy Corner	6.8	7.5	1.7	8.3	BC
Sweet Shipper RS	9.0	7.2	1.7	6.3	Y
Devotion	8.0	8.2	2.0	8.3	W
Mirai 131Y	7.0	8.4	1.8	5.5	Y
Triumph	9.3	7.7	1.7	9.3	BC
Sweet Perfection RS	7.5	7.7	1.9	8.8	Y
Vision Xtra Tender	8.3	7.2	1.7	8.0	Y
XTH 1273	7.8	7.1	1.6	8.5	Y
Calvary	1.0	8.4	2.0	2.3	BC

¹Number of ears out of 10 that had tight husk coverage over the ear tip.

²Number of ears out of 10 that had good tip fill.

³Y = yellow, W = white, BC = bicolor.

Table 3. Ear quality characteristics of super sweet corn , Lexington, KY, 2007.

Cultivar	Cooked Corn			Comments
	Pericarp Tenderness ¹ (1-4)	Kernel Tenderness ² (1-4)	Sweetness ³ (1-4)	
Zenith	3.0	2.0	3.5	Attractive husk and ear, long flags, some tassels on ear tips.
Mirai 308BC	4.0	3.5	3.5	Attractive husk and ear, long flags.
Passion	2.0	2.5	3.5	Attractive husk and ear, short flags.
Obsession	3.0	2.0	3.5	Attractive husk and ear, short flags.
GSS0966	2.5	2.5	3.5	Attractive husk and ear, medium flags.
Fantastic	4.0	4.0	3.5	Attractive ear, medium long flags.
Mirai 301	3.0	2.0	3.5	Attractive husk and ear, short flags, husks very easily.
Candy Corner	4.0	4.0	4.0	Attractive husk and ear, medium flags.
Sweet Shipper RS	4.0	2.0	3.5	Attractive husk and ear, long flags.
Devotion	2.5	3.0	4.0	Attractive husk and ear, medium flags, good corn flavor.
Mirai 131Y	3.0	3.0	3.5	Attractive husk and ear, short flags.
Triumph	4.0	3.5	3.0	Attractive husk and ear, medium flags, shucks easily.
Sweet Perfection RS	3.5	2.5	2.7	Attractive husk and ear, long flags.
Vision Xtra Tender	3.5	1.5	3.8	Attractive husk and ear, very long flags.
XTH 1273	2.5	1.5	2.5	Attractive husk and ear, long flags, shucks easily.
Calvary	3.5	2.0	3.0	Short flags.

¹1 = tough, 4 = tender.

²1 = crisp, 4 = creamy and tender.

³1 = starchy, 4 = very sweet; ratings are based on one microwaved ear.