

Sweet Corn Cultivar Trial - 2005

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The 2005 sweet corn cultivar trial was conducted to identify superior cultivars with high quality bicolored ears for local marketing or short distance shipping. Nineteen sugary-enhanced (se)/synergistic hybrids and fifteen supersweet (sh2)/augmented supersweet hybrids were planted in a replicated trial at the Muscatine Island Research Farm on April 20, 2005. The relatively early planting date was selected to enable us to take seedling vigor ratings under cool spring growing conditions. However, the planting date wasn't early enough since April air temperatures ran about five degrees above normal and soil temperatures ranged from 53 to 60°F for three weeks after planting. Most cultivars emerged and grew okay. Surprisingly, the supersweet (sh2) planting group showed pretty strong early season growth which indicates breeders are making real improvements in seedling vigor or we got lucky and picked a really favorable planting date.

Cultivars are arranged by maturity, early-to-late, in the tables. Data for all cultivars are presented together for convenience, but in the field, the shrunken-2 hybrids were planted in a separate block from the sugary-enhanced for isolation purposes and data analyzed separately. While there were significant yield differences between hybrids they all, for the most part, produced acceptable yields. Therefore, selecting a hybrid for planting will largely be made on desired maturity, plant characteristics, ear quality, seed availability and targeted market. Based on trial performance the following sugar-enhanced/synergistic cultivars are recommended for consideration: *Renaissance*, *Temptation*, *BC 0805* and *Providence*. *MXH 12564* and *Cameo* looked good in their first year of evaluation and may be recommended in the future. Standard supersweet (sh2) cultivars with good production characteristics consider: *Candy Corner*, *Double Up*, *BSS 0977* and *Polaris*. Some of the best eating entries in the trial are referred to as "augmented" or "gourmet eating" supersweets and included: *Mirai 301 BC*, *274A*, *Fantastic*, *Obsession* and *282A*.

Materials and Methods

- Planting: April 20, 2005, dark colored loamy sand soil type.
- Plot Design: RCB, 3 reps. Plot = two rows 30' long, row spacing of 30". Seed planted at rate of 25,750 per acre.
- Irrigation: Overhead sprinklers, water applied as needed.
- Fertility: 50 lb N + 120 lb K20 applied preplant incorporated. 50 N (urea) broadcast over plots on May 15 and another 35 lbs on June 12.
- Pesticides: Outlook, Atrazine 4L, Callisto herbicide; Capture, Mustang insecticide.

Table 1. Sweet corn cultivar trial observations and comments.

Sugary-enhanced and Synergistic Cultivars

Temptation:	Standard early cultivar because of its consistent quality and production.
Revelation:	Synergistic, decent looking ear and taste for maturity.
Renaissance:	Looks promising, good seedling vigor, good ear size and quality for maturity.
Bon Jour:	Homozygous se, fair seedling vigor .
Polka:	Synergistic, good eating but smallish ear and low yield (planted too far south?).
Frisky:	Synergistic, good eating but smallish ear and low yield (planted too far south?).
HMX 4380	Mediocre yield and ear size.
Nantasket:	Synergistic, nice looking ear but shallow kernels, noted some smut in 2004.
MXH 12564:	Good vigor and yield, attractive ears, sweet and tender, only fair husk cover.
Accord:	Good yield of medium-sized ears.
Precious Gem:	Usually an 80-82 day se, has been a strong consistent performer.
Brocade:	78 day se, long ears (8.8”), good quality except tip fill lacking when stressed.
Buccaneer:	Long ear shanks, medium-sized husked ear attractive, kernels tender and sweet.
MXH 11467:	Attractive big ears, sweet and tender, husk cover of ear tip only fair.
BC 0805:	‘Attribute’ insect protected (bt) hybrid with similar characteristics to Providence.
Charmed:	Synergistic, nice looking medium-sized ears (7.6” long).
Providence:	Full-season standard, strong plant, large ears, excellent looking & eating.
Cameo:	Synergistic, nice looking big ears, small flag leaves.
BC 1136:	Synergistic, good eating characteristics but ear long and thin.

Supersweet Cvs.

270A:	Earliest sh2 in trial, good early plant vigor, a few secondary ears in husk.
272A:	Early, good looking ear, lodging & husk cover have been a problem previously.
Candy Corner:	Standard mid-season sh2, strong yield of attractive ears, fair to good ear quality.
274A:	Excellent eating quality, attractive dark green husk and flag leaves.
Fantastic:	Eating quality very good, husk cover of ear tips less than desired.
Double Up:	Sturdy clean plant, nice ears are sweet & crunchy.
Mirai 301BC:	Excellent ear quality, tender and sweet, fair emergence and seedling vigor.
ACX 726	Medium-sized ears and yield.
ACX 950	Very sweet and tender but smallish ears covered with a lot of husk, long flags.
281A:	Ears had refined uniform appearance, reported to have good disease resistance.
Obsession:	Good yield, excellent ear quality, has lodged in previous plantings.
Mirai 327BC:	Poor emergence and seedling vigor, big nice looking good eating ears.
BSS 0977:	‘Attribute’ insect protected (bt), 7 _” ears nice looking, fair-good eating quality.
Polaris:	Strong plant, large ears and yield, kernels sweet but a little tough.
282A:	Short pointed ear, good eating, reported to have multiple disease resistance.

Table 2. Sweet corn cultivar marketable yield and ear characteristics.

Cultivar	Seed Source	DTH	Seedling Vigor Rating	Dozen Ears/A	Yield CWT/A	10 Ear Husked Wt - lbs	Ear Length inch	Husk Cover Rating
<i>Sugar-enhanced (se) & synergistic</i>								
Temptation	SM	82	E	2017	168.2	4.5	7.7	G
Revelation	HM	82	F-G	1485	113.6	4.4	7.8	G-F
Renaissance	HM	82	G-E	1372	110.5	4.4	8.0	G
Bon Jour	MM	82	F-G	1307	109.7	4.5	8.2	G
Polka	ST	82	F	1077	72.8	3.8	7.6	G
Frisky	ST	82	F	896	57.7	4.0	7.2	F
HMX 4380	HM	84	F-G	1001	79.1	4.5	7.5	G
Nantasket	MM	87	G	1678	159.7	5.0	7.9	G
MXH 12564	MM	91	G	1743	170.3	5.5	8.1	F-G
Accord	MM	91	G	1727	172.7	5.2	8.3	G-F
Precious Gem	MM	91	G	1614	177.9	6.3	8.7	G
Brocade	MM	91	F-G	1501	140.8	6.0	8.1	G
Buccaneer	MM	91	F-G	1404	130.8	5.1	7.6	F-G
MXH 11467	MM	94	G-E	2074	233.1	6.2	8.5	F-G
BC 0805	RG	94	G	1937	212.5	6.1	8.8	G
Charmed	HR	94	---	1812	165.3	5.1	7.6	G
Providence	RG	94	G	1781	198.2	5.8	8.9	G
Cameo	HR	94	---	1682	169.5	6.0	8.3	G
BC 1136	RG	94	F	1250	122.2	4.7	8.3	G
<i>Supersweet (sh2)</i>								
270A	RU	82	E	1662	148.1	5.3	8.4	F-G
272A	ST	83	G	1453	118.1	5.5	8.1	G
Candy Corner	RG	85	G-E	1904	165.1	4.8	7.9	G
274A	ST	85	G-E	1549	163.5	6.0	8.5	F-G
Fantastic	ST	85	G-E	1501	158.3	5.7	8.2	F
Double Up	RG	85	G-E	1388	152.5	5.2	8.3	G
Mirai 301 BC	HR	85	F	1316	118.4	5.8	8.0	G
ACX 726	AC	85	G	1291	105.5	4.5	7.8	F-G
ACX 950	AC	91	G-E	1840	151.5	5.0	7.5	G
281A	ST	91	G-E	1662	154.7	5.4	8.1	G
Obsession	SM	91	F-G	1630	153.5	5.2	8.2	G
Mirai 327 BC	HR	91	P	859	90.9	5.5	8.6	F-G
BSS 0977	RG	94	G-E	2292	203.4	5.3	7.5	G
Polaris	HM	94	G	2163	228.1	6.2	8.5	G-F
282A	ST	94	F-G	1630	151.9	5.6	7.4	G
<i>Trial average</i>				1636	155.3	5.2	8.1	

Seedling Vigor: based on plant size four weeks after planting, E=excellent, G=good, F=fair, P=poor.

Husk Cover: G = good, husk covers ear tip tightly; F = fair; P = poor, exposed ear tip and loose husk.