

Sweet Corn Cultivar Trial - 2004

Vincent F. Lawson, Iowa State University
Muscatine Island Research Farm, Fruitland, IA

Thirty-one bicolor sweet corn cultivars were planted in a replicated trial at the Muscatine Island Research Farm on May 3, 2004. Growing conditions for the trial were favorable with mild temperatures, plenty of sunshine and no unusual pest problems. Plots were located under a center pivot irrigation unit that provided a uniform supply of water through the season. Calculated yields per acre (dozen ears and CWT/acre) in Table 2 are higher this year than in the past, primarily because we are using a different planter changing row spacing from 42" to 30". And since there are substantially more row feet in an acre using 30" rows this translates into a higher plant population and higher per acre yields. In-row plant spacing remained the same, 8 to 9 inches. Ear size and quality was still good at this population and might have even improved this year due to good growing conditions.

Cultivars are arranged by maturity, early-to-late, in the tables. Data for all cultivars are presented together in the tables for convenience but in the field the shrunken-2 hybrids were planted in a separate block from the sugary-enhanced and synergistic hybrids 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. This evaluation was aimed at identifying superior cultivars with high quality bicolor ears for local marketing or short distance shipping. Based on trial performance the following sugar-enhanced/synergistic cultivars are recommended for consideration: *Renaissance*, *Temptation*, *Absolute* and *Providence*. *Buccaneer* and *BC 0805* looked good in their first year of evaluation and may be recommended in the future. Supersweet (sh2) cultivars to consider: *Double Up* and *Candy Corner*. *Mirai 301*, *EX 08705788* and *282A*, new sh2 trial entries this year, looked promising based on just one planting season. *276A*, *277A* and *Obsession* have shown outstanding eating quality but susceptibility to lodging prevents a strong recommendation.

Materials and Methods

<u>Planting:</u>	May 3, 2004, loamy sand soil type.
<u>Plot Design:</u>	RCB, 4 reps. Plot = two rows 30' long, row spacing of 30". Plots thinned to uniform plant population of 24,200 (approximately one plant every 8.6" in row).
<u>Irrigation:</u>	Overhead sprinklers, water applied as needed.
<u>Fertility:</u>	Split application of nutrients - preplant incorporated and one sidedressing of nitrogen on June 5. Rates determined by soil test and growing conditions.
<u>Pesticides:</u>	Outlook, Atrazine 4L herbicide; Warrior, Mustang insecticide.

Table 1. Sweet corn cultivar trial observations and comments.

Sugary-enhanced and Synergistic Cultivars

Seneca Spring: earliest maturing entry in trial, small plant and yield but decent ear for maturity
 Renaissance: (HMX 0351) looks promising, good ear size and quality for early maturity
 Bon Appetit: fair seedling vigor, short full ear can be a little rough looking but good eating
 Envoy: 74 day maturity, small plant, ear tended to be skinny (1.6" diameter)

Temptation: Standard early cultivar because of its good consistency and production
 Luscious: 74-76 day se, seedling vigor fair-good, short but full ear, kernels sweet & tender
 Nantasket: nice looking ear, noted some smut at harvest
 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
 Double Play: below average yield due to uneven maturity and some lodging, but nice ears
 Absolute: strong yields of large (8 1/2") ears, good se quality, sometimes slightly curved
 Nauset: long skinny ears were hard to break off stalk, a few ears with smut

Charmed: full season synergistic, nice looking medium-sized ears (7.5" X 1.65")
 Precious Gem: 80-82 day se, has been a strong consistent performer
 Accord: 80-82 day se, looked good in 2004

Avalon: white synergistic, large ear with very small flag leaves, tender & sweet
 Providence: standard full-season bicolor, strong plant, large ears, excellent looking & eating
 BC 0805: 'Attribute' insect protected (bt) hybrid with similar characteristics to Providence

Supersweet Cvs.

272A: early, extra-tender sh2, great eating but lodging & husk cover a problem, smut
 ACX 725 BC: fair husk cover of ear tip, lodged badly in 2003, nice dark green flag leaves
 Candy Corner: standard mid-season sh2, big yield of nice ears, a little smut, fair/good ear quality
 Double Up: (BSS 1690) sturdy clean plant, nice ears are sweet & crunchy, a few smut ears

276A: large yield of attractive good-eating ears, some smut, lodging can be a problem
 Mirai 301BC: excellent ear quality, tender and sweet
 277A: short (7.2") ear, excellent eating quality tender and sweet, went down in 2003
 Obsession: has produced good yields with excellent ear quality, lodged badly in 2003 trial

Camas: sturdy plant, good producer but so-so eating quality
 BSS 0977: 'Attribute' insect protected (bt), 7 1/2" ears nice looking, fair eating quality
 EX 08705788: large ears had good kernel color and eating quality, large flag leaves, a little smut
 ACX 950: plant tended to produce 2-3 smallish ears with large flag leaves, ears pulled hard
 282A: short pointed ear, good eating, reported to have multiple disease resistance

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

	Seed	%	Dozen	Yield
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Cultivar	Source	Type	DTH	Emergence	Ears/Acre	CWT/Acre
Seneca Spring	SM	se	72	73	1296	84.9
Renaissance	HM	syn	74	67	1519	133.4
Bon Appetit	MM	se	74	83	1356	132.6
Envoy	MM	se	74	78	1331	91.0
Temptation	SM	se	75	75	1431	129.7
Luscious	MM	se	75	82	1386	131.8
Nantasket	HR	syn	75	81	1094	122.5
Brocade	MM	se	78	83	1648	162.7
Buccaneer	MM	se	78	93	1320	118.2
Double Play	MM	se	78	80	1170	104.3
Absolute	SM	se	79	86	1692	169.1
Nauset	AC	syn	80	97	1252	97.5
Charmed	HR	syn	82	96	1631	143.9
Precious Gem	MM	se	82	83	1485	171.8
Accord	MM	se	82	77	1414	158.0
Avalon	RG	syn	86	96	1668	179.3
Providence	RG	syn	86	86	1475	158.3
BC 0805	RG	syn	86	84	1310	130.5
<i>Average (se)</i>					<i>1415</i>	<i>134.4</i>
272A	ST	sh2	74	86	1350	128.9
ACX 725 BC	AC	sh2	75	65	1598	136.2
Candy Corner	HM	sh2	78	90	1964	193.5
Double Up	RG	sh2	78	78	1725	177.7
276A	ST	sh2	80	79	2082	224.6
Mirai 301 BC	HR	sh2	80	71	2037	203.5
277A	ST	sh2	82	71	1987	188.7
Obsession	ST	sh2	82	98	1873	179.3
Camas	RG	sh2	84	76	1812	207.4
BSS 0977	RG	sh2	86	86	2179	183.3
EX 08705788	SM	sh2	86	77	1859	204.5
ACX 950	AC	sh2	86	80	1743	167.9
282A	ST	sh2	86	90	1686	165.2
<i>Average (sh2)</i>					<i>1838</i>	<i>181.6</i>

Table 3. Sweet corn cultivar ear characteristics.

Ear Ht on Stalk	Avg Ear	Husk Cover of	Avg Ear Wt	Ear Length	Ear Diameter	Ear Tip
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