2005 Sweet Corn Trials in Ohio

Robert J. Precheur, Jim Jasinski Jim Doran, David Schacht, Clarence Renk, Michael Haddix and Joe Davlin.
Department of Horticulture and Crop Science, Southwest IPM Extension, , Grower Cooperators: New Albany, OH, Canal Winchester, OH, Manager and staff at the Western Branch, South Charleston, OH

Sweet Corn is Ohio's number one fresh market vegetable with between 15,000 to 17,000 acres planted depending on the year. In the US, Ohio ranks 6th in fresh market sweet corn production. Sweet corn is produced throughout OH, in the southeast along the Ohio River, in many counties around Cincinnati, and also throughout central and northern OH.

Objectives
To identify sweet corn cultivars with good emergence, high marketable yield and excellent quality under OH growing conditions.

Methods
At South Charleston, fifteen SE varieties were planted on April 20th and twenty nine SH2 varieties were planted on May 24th. Plots consisted of 4 rows, 30 in apart and 25 ft long. In row spacing averaged 9 inches. Plots were arranged in a randomized complete block design with 4 replications. The middle two rows are used for yield data. Data collected included early plant vigor, plant and ear characteristics, and marketable yield. Sweetness was determined by a purely subjective evaluation of raw eating quality. Each variety was also evaluated for percent germination at ten different temperatures on the thermo-gradient table (Data not shown). Some of the 2005 varieties were also evaluated at 2 grower locations in central OH. Only South Charleston results are reported here. Complete tables are available in the 2005 OH Sweet Corn Report or at the VegNet website: **http://vegnet.osu.edu**

Results
Very warm and enticing late April weather encouraged early planting of the 15 se varieties. Shortly after planting, a three week period of record breaking cold and several frosts persisted in central OH. Despite the weather, the seed did not rot nor killed but essentially remained dormant for about 3 weeks dashing all hope for early se sweet corn harvest. Days to maturity for the se varieties ranged from 91 to 102 days. In the bicolor se's, Precious Gem and BC 0805 had the best early plant vigor 2-4 weeks after emergence. Chantilly and Whiteout (white) had good early plant vigor but nothing was outstanding in the yellow varieties. In the bicolors, Precious Gem and Brocade had the best yield while BC 0805, Providence and Accord had the best flavor. BC 0805 performed well in 2004. WH 0807 and Whiteout had the best yield in the white varieties. Honey Select was the best yellow with very good flavor.

In the SH2 field, yields ranged from poor to good. Quality and yield were affected by drought, heat and in several locations, outbreaks of triazine resistant lambsquarter. Eighteen bicolor sh2's were evaluated this year. Despite the conditions, several varieties performed well under stress. 270 A and Mirai336 BC were the best in the early 70 day corn category. At 79 days, BSS 0652 and Optimum had the highest yield and good to very good flavor. BSS 0977 was the best 80+

day corn. All the 80 day corn varieties were above 1100 marketable dozen per acre with either a good to very good flavor ranking.

White sh2 varieties, Mirai 421W, and MX420W were the highest in yield. Mirai 421 had better flavor and kernel texture compared to MX 420W.
ACX MS 727W had good flavor but produced less than 1000 marketable dozen.

In the yellow sh2 category, most varieties performed poorly in this location due to conditions mentioned above. Mirai 131Y performed very well at a grower's location with good yield and high quality flavor. Customers at this location resistant to buy yellow corn returned for more.

Yield, ear size and quality, and plant characteristics of SE sweet corn in South Charleston, Ohio, 2005

ID Number	SE Cultivar	Co.[1]	Color	Days to Maturity [2]	Plant Vigor[3]	Yield of Marketable Ears		Ear Length	Ear Diameter	Tip Cover[4]	Tip Fill[5]	Husk Tightness [6]	Shank Length	Flag leavs[7]	Ht. From Ground to Lowest Ear	Harvest Ease[8]	Eating Quality Raw [9]
						(doz/A)	Crates/A	(in)	(in)	(in)	(1-5) [5]	(1-3) [6]	(in)	(in)	(in)		
8	Precious Gem	MM	Bi	91	3.6	1379	275	7.7	1.8	3.8	5.0	2.0	2.0	M	23	E	G
5	Luscious	MM	Bi	91	2.5	1016	203	7.4	1.7	3.2	4.3	1.7	3.5	L	18	E-M	G
3	Bon Jour	MM	Bi	91	2.3	943	188	7.0	1.7	3.7	5.0	2.0	2.0	M	19	E-M	G
7	Brocade	MM	Bi	102	3.0	1234	246	7.2	1.9	4.3	2.9	2.1	3	M	21	M-H	G
11	BC 0805	SY	Bi	102	3.5	1143	228	7.8	1.6	5.0	4.5	1.6	4.5	S-M	18	M-H	G-VG
6	Accord	MM	Bi	102	1.6	907	181	7.3	1.8	4.1	5.0	2.2	4.5	M	23	M-H	G-VG
9	Providence	SY	Bi	102	2.2	871	174	8.1	1.6	4.1	3.7	2.0	4	S-M	18	H	G-VG
12	Chantilly	MM	W	90	3.0	744	148	6.6	1.5	4.4	4.1	2.0	3.5	M	15	M-H	G-VG
13	Sugar Pearl	MM	W	91	2.2	889	177	7.2	1.6	4.1	4.2	2.0	2.0	M	19	M-H	M-G, STP
14	Whiteout	MM	W	95	3.1	1270	254	7.3	1.7	3.6	3.5	2.0	3.0	M	22	M-H	G
15	WH 0807	SY	W	95	2.8	1416	288	7.3	1.7	4.0	4.7	2.1	2.0	M	23	M-H	G
16	Sugar Queen	MM	W	102	2.7	834	166	7.4	1.9	4.5	4.7	2.0	4.5	L->12	23	M-H	G-VG
17	Breeders Choice	MM	Y	95	2.0	889	177	7.1	1.7	3.7	4.7	2.0	2.0	M	20	H	G
18	Honey Sweet	SY	Y	95	2.3	1379	275	8.2	1.7	3.0	3.7	1.6	4.0	M-L	20	M-H	G-VG
19	30748	MM	Y	102	2.2	943	188	7.6	1.8	3.9	5.0	2.0	4.0	M	24	M-H	G-VG
	LSD 0.05				0.95	311	62.2	0.4	0.1	0.6	0.8	0.2					

1. Seed Source: AC=Abbott & Cobb, C=Centest, CR=Crookham, SI=Siegers, ST=Stokes.
2. DAP: days after planting.
3. Early Plant Vigor, 2-4 weeks after emergence:1=poor, 2=medium, 3=good, 4=very good plant vigor.
4. Tip Cover: 1=exposed; 2=<.75 in covered; 3=0.75-1.25 in; 4=1.25 - 2 in covered; 5=2+ in. covered.
5. Tip Fill: 1= 2" or + unfilled; 2= >1in unfilled; 3= 0.5 to 1 in unfilled; 4= <0.5 in unfilled to tip; 5=filled to tip.
6. Husk Tightness: 1=loose; 2=firm; 3=tight. 7. Flag Leaves: S=<4"; M=4-8"; L=8=12"; >12". 8. Harvest Ease: E=easy, M=medium, H=hard. VH=very hard
9. Eating Quality: P = poor; M = medium; G = good; VG = very good; E = excellent. STP = slightly tough pericarp; TP = tough pericarp. * = overmature

Yield, ear size and quality, and plant characteristics of SH2 sweet corn in South Charleston, Ohio, 2005

ID #	SH2 Cultivar	Co.[1]	Color	Predicted Maturity	Days to Maturity [2]	Early Plant Vigor[3] 6/22/05	Yield of Marketable Ears (doz/A)	Crates/A	Ear Length (in)	Ear Diameter (in)	Tip Cover[4] (1-5)[4]	Tip Fill[5] (1-5) [5]	Husk Tightness [6] (1-5) [5]	Shank Length (in)	Flag leaves [7] (in)	Ht. From Ground to Lowest Ear (in)	Harvest Ease [8]	Eating Quality Raw [9]
20	270A	SI	Bi	70	77	M-P	1034	206	7.2	1.9	2.5	2.7	2.0	2	M	15	E	G
29	Mirai 336 BC	C	Bi	73	77	G	998	199	7.1	1.8	3.2	4.1	2.0	2	M-L	26	M	G
22	272A	SI	Bi	72	77	G	962	192	6.8	1.9	2.8	2.7	2.0	2	M	18	E	G, TP*
21	Mirai 308BC	Cen	Bi	71	77	G	907	181	7.5	1.9	2.7	4.0	2.0	3	M	19	E	G
23	6802R	AC	Bi	72	77	M	726	145	7.1	1.9	2.4	4.2	2.0	2.7	L	21	E	G
28	Mirai 334BC	C	Bi	73	78	M	980	196	7.1	1.8	4	3.7	2.0	2	M	23	M	G*
26	Double Up	SY	Bi	73	78	G-VG	925	185	7	1.8	3	3.7	2.0	3.5	L	22	M	G
25	Fantastic	SI	Bi	73	78	M-G	834	166	7.1	1.9	2.8	4.5	2.0	2.2	M	19	E	G-VG
24	726BC	AC	Bi	72	78	M	689	137	6.9	1.8	2	4.0	2.0	3.8	L	18	E	G
27	Mirai 327	C	Bi	73	78	M-P	544	108	7.5	1.8	2.9	3.2	2.0	3.5	M	23	E	G-VG
34	BSS 0652	SY	Bi	78	79	P-M	1052	210	6.9	1.8	3	4.3	2.0	2.7	M	15	M-H	G-VG
35	Optimum	CR	Bi	78	79	P-M	1107	221	5.2	1.3	3.7	3.2	1.5	2.5	S-M	18	H	G-VG
36	Surpass	CR	Bi	78	79	M-G	834	166	7.2	1.8	4.1	4.2	2.0	3.2	M	20	E	G-VG, STP
33	BSS 0977 VP	SY	Bi	73	80	G	1306	261	7.1	1.8	3.7	4.7	1.6	2	M	23	E	G
37	Obession	SI	Bi	79	81	M-G	1143	228	7.3	1.8	2.9	4.6	1.7	1.7	S-M	18	M-H	G-VG
38	BSS 3495	SY	Bi	82	83	M	1179	235	6.9	1.8	2.3	3.5	2.0	3	M	19	E-M	G
39	Holiday	CR	Bi	84	83	G	1161	232	7.3	1.9	3	4.2	1.7	3.3	M	21	M-H	G
30	Mirai 301 BC	C	Bi	76	83	G	1107	221	7.1	1.9	3.3	4.5	1.1	3.2	M	23	M-H	G-VG
40	Mirai 421 W	Cen	W	72	77	M-G	1234	246	7.7	1.9	3.2	5.0	2.0	2.1	L	18	E-M	G
41	MX 420W	Cen	W	72	77	G	1034	206	7.7	2.0	2.2	3.7	2.0	2.5	M	19	M-H	M-G, STP
42	ACX MS727W	AC	W	-	77	G	943	188	7.5	1.8	2.3	3.7	1.9	3.2	M-L	19	E	G, STP
44	Accelerator	AC	W	80	79	G	726	145	7.3	1.7	2.7	4.5	2.0	3	S-M	21	E	G
43	Acropolis	AC	W	76	79	M-G	417	83	7.7	1.6	2.5	3.5	2.0	2.5	S-M	20	E	G
49	Mirai 131Y	Cen	Y	71	77	G	671	134	7.8	1.8	2.3	2.7	2.0	2.2	S	19	E	G
51	AC 6800YR	AC	Y	72	77	P-M	490	98	5.7	1.5	2.2	2.7	2.0	2	S	21	E	P-M*
48	Mirai 117Y	Cen	Y	70	77	M-G	490	98	6.7	1.8	1.7	2.2	2.0	2	S	23	E	P*
50	Mirai 130Y	Cen	Y	72	77	M-P	471	94	7.2	1.8	2.5	3.5	2.0	2	S	18	E	G
47	1178	SI	Y	-	83	G	1070	214	7.4	1.9	2.5	4.5	1.4	2	M	19	E	M-G*
52	945Y	AC	Y	77	83	G	943	188	7	1.8	2.2	3.2	1.9	2	S-M	20	E	P*
LSD 0.05							385	76.9	1.2	-	1.1	1.6	0.3	0.9				

1. Seed Source: AC=Abbott & Cobb, C=Centest, CR=Crookham, SI=Siegers, ST=Stokes.
2. DAP: days after planting.
3. Early Plant Vigor, 2-4 weeks after emergence: P=poor, M=medium, G=good, VG=very good plant vigor.
4. Tip Cover: 1=exposed; 2=<.75 in covered; 3=0.75-1.25 in; 4=1.25 - 2 in covered; 5=2+ in. covered.
5. Tip Fill: 1= 2" or + unfilled; 2= >1in unfilled; 3= 0.5 to 1 in unfilled; 4= <0.5 in unfilled to tip; 5=filled to tip.
6. Husk Tightness: 1=loose; 2=firm; 3=tight. 7. Flag Leaves: S=<4"; M=4-8"; L=8=12"; >12". 8. Harvest Ease: E=easy, M=medium, H=hard. VH=very hard
9. Eating Quality: P = poor; M = medium; G = good; VG = very good; E = excellent. STP = slightly tough pericarp; TP = tough pericarp. * = overmature