

Horticulture Series No. 514

3059

January 1982

New OARDC

O. A. R. D. C.

1981

FEB 14 1983

EVALUATION OF
SWEET CORN CULTIVARS

LIBRARY

COLUMBUS AND FREMONT, OHIO

William M. Brooks, J.M. Pisarczyk, James D. Utzinger
S.F. Gorske, Gerald G. Myers and Charles C. Willer

5865

Department of Horticulture
Ohio Agricultural Research and Development Center
U.S. 250 and Ohio 83 South
Wooster, Ohio

639
Oh3

305 3

OLIVER O.

LIBRARY

UNIVERSITY OF TORONTO

EVALUATION OF SWEET CORN CULTIVARS - 1981
Columbus and Fremont

William M. Brooks¹, J.M. Pisarczyk², James D. Utzinger¹,
S.F. Gorske¹, Gerald G. Myers¹ and Charles C. Willer³

The 1981 Sweet Corn Cultivar Trials at Fremont consisted of twenty-eight cultivars which were replicated four times.

Corn was seeded on May 13 at Fremont in rows 36" apart with hills spaced 18" apart in the row. Single row plots of 21 hills were 31.5' long. Blocks and tiers of plots were separated by a distance of at least six feet. Guard rows were planted to the north and south sides of rows running east and west at Fremont. All plots were planted by hand jabbers with 4 kernels per hill. Plants were thinned to 2 plants per hill at the 2 to 3 leaf stage.

Prior to planting at Fremont, 15-15-15 fertilizer was broadcast at the rate of 1000 pounds per acre. One hundred fifty pounds of 6-24-12 fertilizer was placed in bands at planting. The corn was sidedressed with ammonium nitrate at a rate of 50 lbs. N/acre on June 18. Three quarts of Lasso per acre was used for weed control. Insecticides and fungicides were applied on a regular spray schedule.

The first harvest was made at Fremont on July 20 and the last harvest was made on August 14. Buttervee was the only cultivar harvested on July 20. The highest yielding cultivars for each color type as dozens of marketable ears per acre were: 1) yellow: Seneca Sentry-1875, Jubilee-1855, Merit-1804; 2) bi-color: Sweet Sal-1824, Symphony-1431, Calico King-1270, Sugar Dot-1240; and 3) white: NCX 2021-2399, Silver Queen-1895, Crystal Delight-1492. The earliest maturity cultivar in each color was: Yellow: Buttervee; Bi-color: Sugar Dot; and White: Earliqueen (See Table 1).

Listed below are the seed companies who generously supply the seed for these trials without charge:

<u>Code used in tables</u>	<u>Company and Location</u>
1	Stokes Seed, Inc., Box 548, Buffalo, NY 14240
2	Seedway, Inc., Hall, NY 14463
3	Robson Seed Farms, Co., Hall, NY 14463
4	Joseph Harris Co., Rochester, NY 14624
5	Asgrow Seed Co., Kalamazoo, MI 49001
6	Rogers Bros. Co., Idaho Falls, ID 83401
7	FMC Niagara Corp., El Macero, CA 95618
8	Ferry-Morse Seed Co., Mountain View, CA 94042
9	Sun Seeds, Bloomington, MN 55420

-
- 1) Mailing address: Department of Horticulture, The Ohio State University, 2001 Fyffe Ct., Columbus, OH 43210.
 - 2) Mailing address: Department of Horticulture, OARDC, Wooster, OH 44691.
 - 3) Manager, Vegetable Crops Branch, Fremont, OH.

All publications of the Ohio Agricultural Research and Development Center are available to all on a nondiscriminatory basis without regard to race, color, national origin, sex, or religious affiliation.

TABLE 1. Replicated Trial: Yield and Other Characteristics of Sweet Corn Cultivars - Fremont - 1981.

Variety and Source ()*	Days to first harvest	Marketable Yield/A		per- cent	Avg.Wt.	Avg.	Avg.	Ear worms %	Smut %	Bird damage %	Color
		dozens of ears	wt. (tons)		mkt.ears unhusked (lbs.)	lgth.ears husked (in.)	dia.ears husked (in.)				
Buttervee (1)	69	1159	3.6	86	.52	7.4	1.6	1	-	-	Y
Seneca Horizon (3)	73	1179	4.7	85	.66	6.9	1.8	1	-	-	Y
Aztec (5)	76	1391	5.0	95	.60	7.2	1.7	1	-	-	Y
Spring Gold (4)	76	1341	4.2	88	.52	6.8	1.6	-	1	1	Y
Goldenvee (1)	79	806	2.6	84	.53	7.8	1.7	-	-	-	Y
Sugar Dot (8)	82	1240	4.4	86	.59	7.9	1.7	-	-	1	Bi
Tablevee (1)	83	1411	4.9	87	.58	7.5	1.6	-	-	-	Y
Wondersweet (4)	83	968	3.7	77	.64	8.5	1.7	-	-	4	Y
Burgandy Delight (2)	83	1119	3.4	74	.51	8.4	1.5	-	-	1	Bi
Candy Bar (8)	83	544	2.3	78	.71	7.2	1.8	-	1	-	Y
Gold Winner (4)	85	1643	6.0	96	.61	7.6	1.7	-	-	1	Y
Honeycomb (9)	85	1421	5.8	92	.68	8.7	1.6	-	-	-	Y
Earlqueeen (6)	85	1210	4.0	82	.55	7.1	1.8	-	-	2	W
NCX 2021 (7)	86	2399	8.3	88	.57	7.7	1.7	-	-	-	W
Jubilee (6)	86	1855	7.2	94	.65	8.8	1.7	-	-	-	Y
Merit (5)	87	1804	7.1	89	.65	8.3	1.8	-	-	-	Y
Sugar Loaf (9)	87	1532	5.7	87	.62	8.0	1.7	-	-	-	Y
Sweet Sal (4)	90	1824	7.3	96	.67	7.7	1.8	-	-	-	Bi
Atlantic (7)	90	1714	7.2	86	.69	7.7	1.9	-	-	1	Y
Crystal Delight (2)	90	1492	6.1	83	.68	7.9	1.8	-	-	1	W
Seneca Scout (3)	90	1643	6.0	89	.60	7.7	1.9	-	-	1	Y
Sugar Time (9)	90	1482	5.2	90	.58	7.7	1.7	-	-	3	Y
Symphony (4)	91	1431	5.6	84	.63	7.3	1.8	-	-	-	Bi
Silver Queen (6)	92	1895	7.9	91	.69	8.2	1.7	-	-	-	W
Flavorvee (1)	92	1431	6.4	93	.74	8.2	1.7	-	-	-	Y
Silver Chief (5)	93	1371	6.3	92	.77	9.3	1.7	-	-	-	W
Calico King (5)	94	1270	7.5	98	.98	8.6	1.9	-	-	-	Bi
Seneca Sentry (3)	94	1875	7.1	95	.63	7.9	1.7	1	-	-	Y.

* Cultivars ranked according to days to first harvest (lowest first) and dozens of marketable ears per acre (highest yield) based on ears listed first within maturity. () numbers within bracket refer to seed company supplying seed.

1981 Evaluation of Sweet Corn Cultivars - Columbus

The 1981 sweet corn cultivar trials at The Ohio State University Horticultural Farm, 1000 West Lane Avenue, Columbus, consisted of twenty-eight cultivars which were replicated four times and seventy-seven cultivars in non-replicated, single plots.

Corn was seeded on May 20, 1981, in 36" rows with hills spaced 18" apart. Single row plots of 21 hills were 31.5' long. Blocks and tiers of plots were separated by a distance of six feet. Guard rows were planted to the east and west sides of rows running north and south with guard hills across the north and south ends of the entire planting. In addition to the other guard rows, 4 rows of an early maturing and a late maturing cultivar were planted on both the east and west sides of the entire planting of plots to enhance pollination. All plots were planted by hand jabber with 4 kernels per hill. Plants were thinned to 2 plants per hill at the 2 to 3 leaf stage.

Prior to plowing, 15-15-15 fertilizer was applied broadcast at the rate of 1000 pounds per acre. There was also 250 pounds 6-24-12 placed 2 inches to the side and 2 inches below the seed at planting time. Ramrod herbicide was applied, immediately after planting, at 5 pounds active ingredient per acre. No insecticides or fungicides were applied after planting. Most lots of seed had been treated with a fungicide and/or an insecticide. Irrigation was used throughout the season as needed. However with the high rainfall in May and June, which probably resulted in stunted plant growth, only one irrigation in July was needed.

The following information on temperature and rainfall was obtained for the University Farm records in Columbus, Ohio:

<u>Month</u>	<u>Average Temperature (°F)</u>	<u>Weather Data</u>	
		<u>Total Rainfall (inches)</u>	<u>Above or Below Normal (inches)</u>
May	58.8	6.78	2.50
June	70.0	6.37	2.28
July	73.6	4.04	-0.37
August	71.2	1.30	-2.51

The first harvest was made on July 24 and the last harvest was made August 16. Seneca Horizon, Buttervee and Earlivee were harvested on the first day of harvest. The highest yielding cultivars in the replicated plots (Table 2) based on marketable ears harvested per acre were Gold Winner, Honeycomb and Silver Chief with over 1200 dozen ears per acre. The Gold Winner cultivar produced the highest percent of marketable ears. Silver Chief, a white variety, had ears with the highest weight per ear and the longest ears in the replicated plots. Silver Chief was also the highest yielding white cultivar in the trials. Sweet Sal was the highest yielding bi-color cultivar in the trial based on dozens of ears per acre. Seneca Sentry was the highest yielding yellow cultivar in the replicated trials.

The numbered cultivars 77-2269 and 79-2537 were the highest yielding in the non-replicated plots.

TABLE 2. Replicated Trial: Yield and Other Characteristics of Sweet Corn Cultivars - Columbus - 1981.

Variety and source ()*		Days to first harvest	Marketable Yield/A		Per-cent	Avg. wt.	Avg.	Avg.	Ear		Bird damage %	Kernel Color
			doz/A	ton/A		mkt. ears unhusked (lbs.)	lgth. ears husked (in.)	dia. ears husked (in.)	worms %	Smut %		
Seneca Horizon	(3)	64	930	2.83	73	.51	6.6	1.6	6.2	0.0	4.4	Y
Buttervee	(1)	64	797	1.60	52	.35	7.1	1.5	9.9	0.6	15.2	Y
Spring Gold	(4)	70	657	1.55	46	.39	6.0	1.6	4.2	3.6	17.7	Y
Burgandy Delight	(2)	72	708	1.73	52	.41	8.0	1.4	0.0	0.7	0.0	BC
Wondersweet	(4)	72	554	2.47	51	.74	8.5	1.7	0.6	3.2	18.0	Y
Aztec	(5)	72	531	1.48	39	.46	7.3	1.5	3.3	2.2	37.8	Y
Goldenvee	(1)	72	439	1.35	47	.51	7.2	1.7	2.7	0.0	15.3	Y
Honeycomb	(9)	75	1279	4.37	83	.57	8.5	1.7	0.0	0.0	1.7	Y
NCX 2021	(7)	75	1162	3.29	58	.47	7.6	1.7	1.1	0.8	2.3	W
Tablevee	(1)	75	637	2.11	62	.55	8.0	1.7	0.0	1.2	2.4	Y
Candy Bar	(8)	75	379	1.13	26	.50	5.2	1.2	0.7	8.2	11.6	Y
Gold Winner	(4)	77	1221	5.18	85	.71	7.9	1.9	0.6	0.0	1.2	Y
Earliqueen	(6)	77	1060	3.20	69	.50	6.1	1.7	2.0	0.0	0.0	W
Sugar Loaf	(9)	77	893	2.57	54	.48	7.4	1.5	0.8	0.0	1.2	Y
Sugar Dot	(8)	77	657	1.64	51	.42	7.5	1.6	0.0	0.0	3.4	BC
Seneca Scout	(3)	78	1196	4.14	79	.58	7.5	1.4	0.5	0.0	1.9	Y
Sweet Sal	(4)	78	1196	4.39	82	.61	8.2	1.7	0.0	0.5	1.5	BC
Merit	(5)	78	1183	4.64	79	.65	8.2	1.7	0.0	0.0	0.0	Y
Atlantic	(7)	78	1123	4.54	75	.67	8.4	1.8	1.4	0.0	0.0	Y
Jubilee	(6)	78	902	3.22	62	.60	8.6	1.6	0.0	0.0	0.0	Y
Symphony	(4)	78	750	2.23	57	.50	7.6	1.8	0.0	1.9	0.6	BC
Sugar Time	(9)	78	615	1.81	42	.49	8.7	1.5	1.4	0.0	1.9	Y
Flavorvee	(1)	79	954	3.73	68	.65	8.0	1.8	3.6	0.0	3.0	Y
Crystal Delight	(2)	80	1047	3.50	74	.56	7.8	1.5	0.0	0.5	0.0	W
Calico King	(5)	80	814	4.00	76	.82	9.0	1.7	0.0	0.7	1.4	BC
Silver Chief	(5)	81	1208	6.49	84	.90	9.5	1.6	4.1	0.6	0.6	W
Seneca Sentry	(3)	84	1183	4.22	56	.59	8.2	1.6	0.4	0.0	0.0	Y
Silver Queen	(6)	84	912	3.41	48	.62	8.0	1.5	1.4	1.4	1.0	W

LSD

*Cultivars ranked according to days to first harvest (lowest first) and dozens of marketable ears per acre (highest yield) based on ears listed first within maturity. () number within bracket refers to seed company supplying seed.

TABLE 3. Non-Replicated Trial: Yield and Other Characteristics of Sweet Corn Cultivars - Columbus - 1981.

Variety and source ()*		Days to first harvest	Marketable Yield/A			Avg. wt. mkt. ears	Avg. lgth. ears	Avg. dia. ears	Ear		Bird damage	Kernel Color
			doz/A	ton/A	Per-cent	unhusked (lbs.)	husked (in.)	husked (in.)	worms %	Smut %	%	
Earlivee	(1)	64	273	0.57	12	0.35	6.0	1.3	6.9	30.2	4.6	Y
Early Sunray	(2)	68	500	1.91	53	0.63	7.6	1.7	17.5	2.5	2.5	Y
Spring White	(4)	68	192	0.41	15	0.36	5.8	1.6	5.5	2.7	25.0	W
Seneca Star	(3)	70	714	2.29	46	0.53	7.6	1.7	6.1	4.0	2.0	Y
Early Arctic	(9)	70	230	0.81	36	0.58	7.0	1.8	15.7	0.0	26.3	Y
Dawn	(9)	70	115	0.32	11	0.46	7.0	1.7	6.2	3.1	9.3	Y
Exp. 1800	(9)	72	230	0.37	20	0.26	6.0	1.5	0.0	6.6	20.0	Y
79-1888	(6)	73	40	0.71	2	0.29	7.0	1.8	17.6	5.8	67.6	Y
Tablevee	(1)	76	361	1.30	39	0.60	7.2	1.7	0.0	2.8	2.8	Y
Bellringer	(4)	77	1191	7.00	96	0.98	7.7	1.8	0.0	0.0	5.0	Y
Seneca RXP-293	(3)	77	1125	3.42	80	0.50	7.7	1.6	0.0	0.0	5.4	Y
XP-2538	(5)	77	1114	4.12	61	0.61	7.1	1.6	3.3	0.0	6.7	BC
Bellegold	(4)	77	1037	2.76	59	0.44	7.3	1.6	3.8	3.8	7.6	Y
Sundance	(4)	77	926	2.48	59	0.44	7.0	2.4	1.9	5.7	5.7	Y
Calico	(5)	77	922	2.83	74	0.51	8.2	1.6	0.0	0.0	0.0	BC
Spring Calico	(15)	77	807	2.53	54	0.52	7.9	1.6	4.5	0.0	2.3	BC
SX-1009	(4)	77	764	2.46	47	0.53	8.3	1.6	0.0	4.1	2.1	Y
Starlet	(2)	77	764	2.17	50	0.47	8.3	1.5	0.0	4.3	15.2	Y
Quicksilver	(4)	77	764	2.51	40	0.54	7.3	1.6	0.0	1.4	10.2	W
NCX-2033	(7)	77	691	1.82	56	0.43	7.6	1.5	0.0	2.1	4.2	Y
Bullseye	(8)	77	522	2.12	42	0.67	8.4	1.8	2.0	2.0	14.0	Y
Mevak	(5)	77	503	1.23	34	0.40	7.6	1.5	4.9	2.4	22.0	Y
Tastyvee	(1)	77	423	0.92	31	0.36	8.4	1.4	0.0	0.0	22.0	Y
Early Gold	(7)	77	323	1.16	38	0.59	7.4	1.6	6.2	0.0	15.6	Y
Debut	(6)	77	230	0.88	16	0.63	6.8	1.7	9.1	0.0	45.4	Y
Goldenvee	(1)	77	132	0.55	24	0.48	6.8	1.8	0.0	0.0	34.4	Y
Mellow Yellow	(8)	77	1119	4.29	69	0.60	8.1	1.7	1.5	0.0	6.1	Y
79-2537	(6)	78	1690	5.16	62	0.50	8.5	1.7	3.5	0.0	0.0	Y
Nov-2043	(7)	78	1152	3.71	54	0.53	7.8	1.6	0.0	4.0	16.0	Y
79-2727	(6)	78	964	2.82	77	0.48	7.3	1.6	0.0	0.0	3.1	W
Exp-5651	(9)	78	964	4.03	86	0.69	8.7	1.5	2.8	0.0	5.6	Y
NCX-2022	(7)	78	960	2.30	68	0.40	7.4	1.5	8.7	0.0	13.0	Y
Reliance	(9)	78	807	2.58	54	0.53	7.8	1.5	0.0	0.0	11.0	Y
79-2608	(6)	78	807	2.53	42	0.52	8.9	1.7	7.7	0.0	23.1	BC
E-0501	(8)	78	499	1.91	26	0.63	7.4	1.8	10.4	0.0	26.9	Y
NCX-2029	(7)	78	499	1.67	49	0.55	7.9	1.5	0.0	0.0	2.8	Y
XP-2553	(5)	78	38	0.07	2	0.31	8.5	1.5	0.0	6.4	38.7	Y
Burgandy Delight	(1)	79	730	1.94	48	0.44	8.0	1.5	0.0	1.7	3.5	BC

TABLE 3. Non-Replicated Trial: Yield and Other Characteristics of Sweet Corn Cultivars - Columbus - 1981.

Variety and source ()*		Days to first harvest	Marketable Yield/A		Per-cent	Avg. wt.	Avg.	Avg.	Ear worms %	Smut %	Bird damage %	Kernel Color
			doz/A	ton/A		mkt.ears unhusked (lbs.)	lgth.ears husked (in.)	dia.ears husked (in.)				
XP-2500	(5)	79	653	1.18	66	0.30	7.7	1.6	3.7	3.7	0.0	Y
XP-2539	(5)	79	484	1.69	26	0.58	8.2	1.6	8.7	0.0	39.1	Y
Harmony	(4)	79	119	0.38	9	0.53	6.7	1.8	0.0	0.0	74.5	BC
Reward	(6)	79	-	-	-	-	-	-	5.9	5.9	88.2	Y
77-2269	(6)	80	1679	6.39	69	0.63	8.6	1.6	4.1	0.0	2.7	Y
79-2649	(6)	80	1268	5.02	74	0.66	9.0	1.9	1.4	0.0	0.0	BC
XP-2554W	(5)	80	964	4.10	62	0.70	9.4	1.7	3.7	0.0	5.7	W
AX-409	(4)	80	910	2.32	73	0.42	7.4	1.4	0.0	0.0	3.2	Y
Comet	(5)	80	883	3.32	63	0.62	8.9	1.7	8.0	0.0	2.0	W
Apache	(5)	80	730	2.23	49	0.51	7.7	1.4	6.4	2.1	12.8	Y
E-8501	(8)	80	538	2.53	40	0.78	7.4	1.7	7.8	0.0	23.5	Y
Seneca RXP-347	(3)	81	1072	4.14	86	0.56	8.2	1.5	0.0	0.0	7.9	Y
Golden Nectar	(9)	82	999	3.96	65	0.66	8.8	1.7	0.0	0.0	0.0	Y
BVX-819	(4)	82	999	3.04	58	0.51	8.2	1.6	2.1	4.2	14.6	Y
XP-2541 BC	(5)	82	807	3.32	45	0.68	8.9	1.7	14.8	3.7	5.6	BC
EXP-5133	(9)	82	787	3.04	54	0.64	7.6	1.7	15.6	0.0	18.8	Y
NCX-2028	(7)	82	691	2.81	60	0.67	7.6	1.6	0.0	2.6	5.1	BC
Seneca RXP-258	(3)	82	691	3.34	37	0.81	8.9	1.8	7.9	0.0	19.1	Y
Flavorvee	(1)	82	691	3.02	50	0.73	8.1	1.7	0.0	0.0	0.0	Y
E-9503	(8)	82	603	1.93	39	0.53	7.7	1.7	5.4	0.0	21.8	Y
Seneca RXP-258	(3)	82	1191	3.50	76	0.49	7.8	1.6	0.0	0.0	4.3	Y
78-2656	(6)	83	1306	5.18	68	0.66	8.4	1.7	4.3	1.4	2.9	Y
E-9502	(8)	83	499	1.96	40	0.65	8.5	1.6	14.3	0.0	21.4	Y
Mini Max	(9)	83	161	0.48	17	0.49	8.2	1.5	12.9	0.0	16.1	Y
Sucro	(6)	83	-	-	-	-	-	-	0.0	0.0	0.0	Y
White Lightning	(1)	84	1229	3.36	56	0.46	7.5	1.4	1.5	6.2	7.7	W
Calypso	(6)	84	1045	4.22	54	0.67	8.0	1.9	0.0	1.5	12.1	BC
E-0502	(8)	84	979	4.56	53	0.78	8.8	1.7	3.1	0.0	12.5	Y
WX-309	(4)	84	764	2.80	34	0.61	8.7	1.5	5.7	0.0	0.0	W
VX-719	(4)	84	499	2.38	43	0.79	8.5	1.7	6.7	3.3	43.3	Y
Honey-N-Frost	(2)	84	307	0.92	22	0.50	7.5	1.5	15.6	0.0	28.9	BC
76-2883	(6)	84	230	0.97	13	0.70	9.2	1.7	10.5	1.8	42.1	Y
Kandy Korn	(1)	84	77	0.37	6	0.80	8.0	2.0	1.5	0.0	24.6	Y
E-9501	(8)	84	0	0.00	0	0.00	8.4	1.7	28.0	0.0	16.0	Y
Seneca Pinto	(3)	85	384	0.97	27	0.42	7.4	1.4	4.3	10.6	0.0	BC
XP-2555 W	(5)	86	1364	5.19	60	0.64	8.1	1.7	0.0	0.0	1.3	W
XP-2534 BC	(5)	88	273	1.01	23	0.62	7.5	1.3	0.0	7.1	0.0	BC

*Cultivars ranked according to days to first harvest (lowest first) and dozens of marketable ears per acre (highest yield) based on ears listed first within maturity. () number within brackets refers to seed company supplying seed.

