



**2013 SWEET CORN VARIETY
PERFORMANCE TRIAL
JAY, FLORIDA**



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2013 SWEET CORN VARIETY PERFORMANCE TRIAL, JAY, FLORIDA (SwCorn13, Jay Research farm)

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This report includes a summary of the 2013 sweet corn variety trial at Jay, Florida. It shows the performance of fifteen commercial and experimental Sh₂ super-sweet, sweet corn varieties. This data only represents one year and one location, test results should be considered over several years and locations before final conclusions are valid.

Sh₂ Super-Sweet Varieties Evaluated

<u>Yellow</u>	<u>White</u>	<u>Bicolor</u>
1. SC1336	5. QHW6RH1229	10. EX08767143
2. Passion	6. 1760 MR	11. Obsession
3. ACR 3181 MR	7. 8909 MR	12. Obsession II
4. GSS 0966	8. WSS 0987	13. 7932 MR
	9. Munition	14. 2760 MR
		15. BSS 0977

2013 Growing Conditions and Experimental Design

The trial was located on the University of Florida, West Florida Research and Education Center, Jay Research Farm. On 2 April 2013, sweet corn varieties were planted 3 seed/ft under conventional tillage in a Red Bay sandy loam soil, that was planted to peanut in 2012 and fallow in 2011. Prior to planting, granular fertilizer (5-55-30, 500 lb/A) was broadcast and incorporated. Plots were 25-ft long and 12-ft wide, and rows were spaced 36-in. apart. Sweet corn varieties were replicated in four randomized complete blocks by color (yellow, white, and bicolor). Each color block was separated by 20 border rows to reduce cross-pollination. Supplemental nitrogen was applied on 6 May (33-0-0, 400 lb/A). No herbicides were applied, but plots were cultivated twice (when crop was 6 in. tall and then at fertilization on 6 May). Subsurface drip irrigation provided ca. 1-in. water per week from silking until harvest. No subsurface drip was applied before silking. Lannate (methomyl) 1.3 pt/A was applied on 27 May, 30 May and 4 June. Asana (esfenvalerate) 9.6 oz/A was applied on 29 May and 4 June. Wet conditions limited spraying of three additional planned insecticide sprays. Data was collected from two center rows of each plot. Plots were hand harvested on 20 June (reps 1 and 2) and 21 June (reps 3 and 4), this was 79 and 80 days after planting and corresponded to the average maturity of the varieties (78-82 days). Rainfall for April, May and June was 2.3, 7.1 and 0.7 in. below normal in Jay, FL for 2013 (Table 1). Normal represented the mean for the past 53 years of record.

Table 1. Weather conditions during 2013 sweet corn trial.

Month	Total rainfall (in.)	Average minimum air temperature (°F)	Average maximum air temperature (°F)
April	4.7 (2.3 below normal)	40.6	83.7
May	0.7 (7.1 below normal)	43.0	91.8
June	5.8 (0.7 below normal)	65.5	93.8

Summary

Stand count for all varieties ranged from 1.58 to 1.97 plants/ft (22,869 to 28,532 plants/A), with no significant differences between varieties (Table 2). The bicolor varieties overall averaged higher U.S. fancy yields (549 crates/A) than both the yellow (448 crates/A) and white (423 crates/A) varieties (Table 3). BSS 0977 was the highest yielding variety with 58,516 total ears/A, 46,609 marketable ears/A and 616 of U.S. fancy crates/A. Obsession and Obsession II were the next highest yielding varieties followed by EX08767143 and 7932 MR. 2760 MR was the lowest yielding bicolor. SC1336 was the highest yielding yellow variety followed by GSS 0966 and Passion. ACR 3181 MR was the lowest yielding variety of all those tested with only 368 crates/A. 1760 MR and Munition were the highest yielding white varieties but they were not significantly different from QHW6RH1229, 8909 MR and WSS 0987.

The shanks of the sweet corn varieties ranged from 3.3 to 4.2 across all varieties, with GSS 9066 having the longest shank and QHW6RH1229 with the shortest (Table 4). Husk quality ranged from 4.6 to 5.0, so in general all husks were above average in color. Flag leaf ranged from 2.2 to 4.5. 1760 MR and 7932 MR had the highest rating for flag leaf of all the varieties. In general most ears evaluated had less than one inch gag. GSS 0966, 1760 MR and WSS 0987 had the greatest tip fill, while SC1336 and Passion had the least. Average number of rows per ear ranged from 14.1 in WSS 0987 to 18.4 in SC1336. Average ear length ranged from 7.1 to 8.3 inches across all varieties, 2760 MR and ACR 3181 MR had the longest ears of all varieties evaluated. Significant ear worm developed in our plots since three planned sprays were missed just prior to harvest. Conventional varieties that did not have insecticide resistance averaged 55% ear worm damage. Four varieties with insecticide resistance packages (GSS 0966, WSS 0987, Obsession II, and BSS 0977) had 32 % less ear worm damage than the conventional varieties, with Obsession II with as little as 2.5 % damage.

Table 2. Sweet corn variety emergence for in Jay, FL, 2013.

Cultivar	Maturity	Type	Color	Plants/ft* (20 Jun)	Plants/A* (20 Jun)
SC1336.....	81	Sh ₂	Yellow	1.88	27,298
Passion	80	Sh ₂	Yellow	1.80	26,136
ACR 3181 MR	80	Sh ₂	Yellow	1.58	22,869
GSS 0966	79	Sh ₂	Yellow	1.75	25,410
QHW6RH1229.....	82	Sh ₂	White	1.61	23,305
1760 MR	82	Sh ₂	White	1.77	25,700
8909 MR	79	Sh ₂	White	1.93	27,951
WSS 0987	78	Sh ₂	White	1.83	26,572
Munition.....	78	Sh ₂	White	1.82	26,354
EX08767143	80	Sh ₂	Bicolor	1.79	25,991
Obsession.....	78	Sh ₂	Bicolor	1.92	27,806
Obsession II	78	Sh ₂	Bicolor	1.80	26,136
7932 MR	78	Sh ₂	Bicolor	1.89	27,370
2760 MR	82	Sh ₂	Bicolor	1.91	27,661
BSS 0977.....	78	Sh ₂	Bicolor	1.97	28,532
LSD.....				ns	ns
CV.....				12.6	12.6

* Determined from counts of two, 25-ft rows per plot.

Means are not significantly different according to Fisher's Protected LSD ($P=0.05$).

Table 3. Sweet corn variety trial, WFREC, Jay, FL

Cultivar	Ear height (in.) ^v	Picking ease ^w	% Large ears ^x	% Medium ears ^x	% Cull ears ^x	Total Ears/A	Marketable Ears/A ^y	U.S. Fancy crate/A ^z
SC1336.....	16.7 de	4.0 c	63.7 abc	24.5 a-d	11.7 def	36,518 cd	32,162 bcd	490 a-e
Passion	16.8 cde	4.0 c	65.2 ab	24.8 a-d	10.0 f	34,122 d-f	30,637 b-e	466 b-e
ACR 3181 MR	16.5 e	4.8 ab	55.5 b-e	21.6 bcd	22.9 bc	30,928 f	23,958 e	368 e
GSS 0966	20.1 a	4.5 abc	53.7 cde	27.1 abc	19.3 b-e	40,583 b-f	32,960 bcd	469 b-e
QHW6RH1229.....	19.2 a-d	4.8 ab	65.1 ab	23.2 a-d	11.7 def	31,145 ef	27,443 cde	425 de
1760 MR	13.1 f	4.5 abc	58.7 bcd	19.1 cd	22.2 bc	34,412 def	27,007 de	436 cde
8909 MR	11.7 f	5.0 a	53.3 cde	26.1 a-d	20.6 bcd	35,937 c-f	28,604 cde	413 de
WSS 0987	20.2 a	4.5 abc	44.6 ef	31.9 a	23.6 bc	40,801 b-e	31,799 b-e	404 de
Munition.....	17.4 b-e	4.8 ab	37.9 f	29.6 ab	32.5 a	48,569 b	34,122 bcd	439 cde
EX08767143	16.6 e	4.8 ab	66.4 ab	18.6 cd	15.0 c-f	38,696 c-f	32,743 bcd	534 a-d
Obsession.....	19.7 ab	5.0 a	70.2 a	18.2 d	11.6 ef	40,003 b-f	35,066 bc	572 abc
Obsession II	19.3 a-c	4.5 abc	64.3 abc	20.8 cd	14.9 c-f	45,157 bc	37,752 b	599 ab
7932 MR	13.9 f	4.5 abc	59.9 abc	24.6 a-d	15.6 b-f	41,527 bcd	34,848 bcd	522 a-d
2760 MR	17.2 cde	4.8 ab	56.4 bcd	19.3 cd	24.3 ab	36,663 c-f	27,515 cde	452 cde
BSS 0977.....	21.5 a	4.3 bc	47.7 def	31.3 a	21.0 bc	58,516 a	46,609 a	616 a
LSD	2.5	0.7	11.3	8.8	8.9	9666	7895	140
CV	10.2	11.0	13.8	25.6	33.9	17	17	20

^v Ear height determined from five plants per plot.^w Picking ease rated on a scale of 1-5 where 1=difficult and 5= easy.^x % of large (greater than 7 in. in length, U.S. fancy*), % medium ears (5-7 in. in length, U.S. No. 1), and % cull ears (unmarketable ears) were determined from all harvested ears.^y Marketable ears includes both large and medium ears.^z U.S. fancy crate/A is based on a four-dozen crate size and includes only large ears (U.S. fancy grade).Means followed by the same letter(s) are not significantly different according to Fisher's Protected LSD ($P=0.05$)

* United States Standards for Grades of Sweet Corn, USDA Agricultural Marketing Service, Fruit and Vegetables Programs, Fresh Produce Branch, February 12, 1992 (Reprinted- January 1997)

Table 4. Sweet corn variety trial, individual ear evaluation, WFREC, Jay, FL

Cultivar	Shank (1-5) ^v	Husk quality (1-5) ^w	Flag leaf (1-5) ^x	Tip fill (1-5) ^y	Number of rows	Ear length (in.)	% Ear worm damage
SC1336.....	3.7 b-f	4.8 bc	2.2 g	3.8 fg	18.4 a	7.6 ef	57.5 ab
Passion	3.7 bcd	4.6 e	2.8 ef	3.7 g	17.0 cd	7.7 cde	60.0 ab
ACR 3181 MR	4.0 abc	5.0 a	3.7 c	4.3 b-e	17.3 bc	8.2 a	67.5 a
GSS 0966	4.2 a	4.9 ab	3.9 bc	4.8 a	14.8 gh	7.2 gh	32.5 cd
QHW6RH1229.....	3.2 g	4.6 de	2.6 efg	4.2 cde	16.2 ef	7.8 bc	55.0 ab
1760 MR	4.0 ab	5.0 a	4.5 a	4.7 a	17.0 cd	7.9 b	52.5 abc
8909 MR	3.5 efg	4.9 ab	3.7 c	4.5 a-d	15.5 fg	7.6 ef	55.0 ab
WSS 0987	3.8 b-e	5.0 a	3.5 cd	4.8 a	14.1 h	7.1 h	17.5 de
Munition.....	3.7 b-f	5.0 a	3.6 c	4.1 ef	15.9 ef	7.5 f	52.5 abc
EX08767143	3.5 efg	4.8 bcd	2.5 efg	4.2 de	17.1 bcd	7.8 bcd	57.5 ab
Obsession.....	3.3 fg	4.7 cde	2.5 fg	4.2 de	16.5 de	7.7 cde	42.5 bc
Obsession II	3.5 d-g	4.7 cde	3.0 de	4.1 ef	17.0 cd	7.6 de	2.5 e
7932 MR	3.9 a-d	4.9 ab	4.3 ab	4.6 abc	15.9 ef	7.9 bc	57.5 ab
2760 MR	3.7 b-f	5.0 a	3.9 bc	4.6 ab	17.8 ab	8.3 a	47.5 abc
BSS 0977.....	3.6 c-f	4.9 ab	3.6 c	4.2 e	15.8 f	7.3 g	17.5 de
LSD	0.4	0.2	0.5	0.3	0.7	0.2	20.6
CV	25.1	8.2	33.9	18.1	9.8	5.4	104.2

Ten ears from each plot were evaluated.

^v Shank rated on a scale of 1 to 5, where 1= short, 3= average, 5= long.^w Husk quality rated on a scale of 1 to 5, where 1=dull, 3= average, 5= very attractive.^x Flag leaf rated on a scale of 1 to 5, where 1= none, 3= somewhat attractive, 5= very attractive.^y Tip fill rated on a scale of 1 to 5, where 1= more than 2 inch gap, 3= 1 inch gap, 5= complete tip fill.^z % Ear worm damage calculated from number of the ten ears with visible damage.Means followed by the same letter(s) are not significantly different according to Fisher's Protected LSD ($P=0.05$)

Yellow

SC1336



Passion



ACR
3181
MR



GSS
0966



White

QHW6R
H1229



1760
MR



8909
MR



WSS
0987



Munition



Bicolor

EX08767143



Obsession



Obsession II



7932 MR



2760 MR



BSS 0977

