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Supersweet Sweet Corn Cultivar Evaluation for Northern Indiana, 2015

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Indiana sweet corn acreage harvested for fresh market averaged 5,133 acres annually from 2012-2014, with a yield of 68 hundredweight per acre (162 crates or 3.4 tons per acre) and an annual value of \$12.3 million (USDA NASS, 2015). Indiana ranked 13th among states for production of fresh market sweet corn and produced about 1.7% of the nation's total in 2014. The 2012 USDA Ag Census reported 535 Indiana farms producing sweet corn for fresh markets and 69 farms selling to processors. Sweet corn fields for fresh market sales are located throughout the state. In northern Indiana, bicolor corn is most commonly grown. Varieties with improved eating quality are of interest to both producers and consumers. Producers are also interested in yield, ear size, appearance, and agronomic characteristics.

This paper reports on thirteen bicolor, two yellow, and three white supersweet sweet corn entries that were evaluated at the Pinney-Purdue Agricultural Center in Wanatah, Indiana.

Materials and Methods

The trial was conducted on a Tracy sandy loam. The fall 2014 soil test showed 1.6% organic matter, pH 6.3, 94 ppm phosphorus (P), 92 ppm potassium (K), 125 ppm magnesium (Mg), and 600 ppm calcium (Ca). Potassium was applied in fall 2014 as 275 lbs./A of 0-0-60. Nitrogen, 40 lb./A N from urea ammonium nitrate solution, was applied by injecting perpendicular to rows prior to final seedbed preparation in 2015. An additional 50 lb./A N from urea ammonium nitrate solution was injected on June 11.

The trial was set up as a randomized complete block design with three replications. Sweet corn entries were assigned to individual plots one row wide (30 inches) by 30 feet long. Corn was seeded May 14, 2015, with a finger pick-up planter set to drop seeds 10.125 inches apart (20,600 plants per acre) and later thinned to 35 plants per 30-foot row (20,328 plants per acre).

Weeds were controlled with atrazine (Atrazine 4L[®]) and s-metolachlor (Dual II Magnum[®]) applied preplant incorporated and with hand weeding. Irrigation was applied from an overhead boom as needed.

Emergence was evaluated 13 and 21 days after planting (DAP) and final stand determined 21 DAP, after thinning. Plant vigor was evaluated 21 DAP and shortly before harvest. Also shortly before harvest, plant height, and the height from the soil to the middle of the top ear was measured for three plants per plot, and degree of tillering was rated. Each plot was harvested when corn reached marketable stage, which occurred 21 to 25 days after 50% silking.

For each plot the weight and number of marketable first ears and number of marketable ears that were fancy were recorded. Three ears from each plot were selected to evaluate degree of husk cover, husk tightness, degree of tip fill, flag leaf length, overall attractiveness, average ear diameter and length after husking, and shank length. Overall ear quality was also rated. Four individuals rated flavor and pericarp toughness of an uncooked ear, one ear per plot per individual, but not all plots were rated by all individuals. Rating scales are described in table

footnotes. Letter ratings for flavor and pericarp toughness were converted to numerical ratings and averaged across raters prior to statistical analysis.

Quantitative data with equal variance across treatments ($P > .05$) were analyzed using ANOVA followed by mean separation using Fisher's protected least significant difference at $P \leq 0.05$. When one or two varieties showed a variance of 0 for a particular trait, ANOVA was conducted without those varieties to achieve equal variances. Regression analyses were used to evaluate correlation between mean responses for each entry and mean days to harvest (DAP); r^2 values for linear regressions significant at $P \leq .05$ are reported.

Results and Discussion

Temperatures were at or just below normal the first 10 days after planting, and averaged 0.3°F, 3.5°F, and 0.3°F below normal in June, July, and the first half of August, respectively. From July 13, when early varieties were just silking, to August 16, when all varieties had been harvested, growing degree day (GDD, base 50°F) accumulation was normal. From May 11 to August 16 the accumulation was 1,780 GDD, 68 less than normal. May through the first part of July was fairly wet, with 15.9 inches and 33 days of rain from May 4-July 19, 5.6 inches above normal. No measurable rain fell from July 20 through August 15 except for 1.35 inches on August 3 (USDA NASS 2015 and MRCC 2015.).

By 21 DAP, emergence ranged from 26% to 104% of the desired stand of 20,328 plants per acre (Table 1). Varieties with emergence 90% or better did not differ significantly from the best (Superb XR) and included EX 08767143, Awesome XR, SV 1446SD (yellow), Honor XR, Nirvana, Fantastic, and SV 1580SC (white). Obsession had the lowest emergence, 26%, most likely due to using seed that had been obtained in a previous year. Final plant stand followed a similar pattern.

Early plant vigor ranged from 1.7 to 6.7 on a scale of 1 (poor) to 9 (excellent) and averaged 4.5 (Table 1). Early plant vigor was negatively correlated with days to harvest: early varieties had greater early vigor. Superb XR, Fantastic, Anthem XR, Stellar XR, Placer (white), and Honor XR all received ratings of 5.7 or above for early vigor. In last year's trial, Stellar XR, Anthem XR, and Fantastic also had good early vigor, along with Awesome XR, XTH 2074, and XTH 3274. Varieties with low early vigor (ratings of 3.7 or below) this year included AP 426, SV 1446SD (yellow), BSS 0761, SV 1580SC (white), EX 08767143, and Obsession; these last three also had below average early vigor in last year's trial. Plant vigor ratings near harvest ranged from 5.7 to 8.3 and averaged 7.3 (Table 1). Varieties with ratings of 8 or above included SV 1077SD (yellow), Honor XR, AP 426, and Obsession. Late varieties tended to receive higher ratings for plant vigor near harvest.

Plant height ranged from 5.7 to 7.3 feet and averaged 6.4 feet (Table 1). The tallest varieties were more than 6.9 feet, and included Honor XR, EX 08767143, SV 1580SC (white), and BSS 0761. The shortest varieties were 6 feet or less and included Cumberland, Awesome XR, Fantastic, Stellar XR, Nirvana, Superb XR, and Anthem XR. Days to harvest explained 54% of the variation in plant height: later varieties tended to be taller.

Tiller ratings ranged from 2 to 5.0 on a scale of 1 (no tillers) to 5 (many tillers tall enough to interfere with harvest) and averaged 4.1. SV 1446SD (yellow) and Nirvana both consistently received ratings of 5. Piscataway (white), Superb XR, Awesome XR, and Honor XR averaged

4.7. Varieties with the fewest tillers were SV 1077SD (yellow), Obsession, Placer (white), and BSS 0761; all received ratings of 3.3 or less.

Results for yield and ear quality are presented in Table 2. Per acre yields have been calculated by multiplying plot yields by the number of plots per acre and probably overestimate expected yield from field-scale production. Marketable yield averaged 7.6 tons per acre, and ranged from 2.7 to 9.4 tons per acre. Differences among entries were highly significant. Superb XR produced the greatest weight of marketable ears, 9.4 tons per acre, but not significantly more than EX 08767143, Placer (white), SV 1446SD (yellow), Cumberland, or Awesome XR, which all produced at least 8.1 tons per acre. SV 1580SC (white), AP 426, Nirvana, SV 1077SD (yellow), Cabo, BSS 0761, Piscataway (white), and Anthem XR yielded between 6.5 and 7.5 tons per acre, significantly less than the top yielding varieties but not significantly different from one another. Obsession produced less yield than any other variety due to the low emergence mentioned above.

Marketable ear yield in dozens per acre ranged from 500 to 1,662 and averaged 1,358. EX 08767143 produced the greatest number but did not differ significantly from Superb XR, SV 1446SD (yellow), Awesome XR, Honor XR, SV 1580SC (white), Fantastic, or Nirvana: all produced more than 1,468 dozen per acre. Awesome XR, Fantastic, and SV 1580SC (white) also were among the top producers last year.

The number of fancy ears ranged from 339 to 1,420 dozen per acre and averaged 1,068 (data not shown). Differences among entries were highly significant. Superb XR and Nirvana produced 1,420 dozen fancy ears per acre; but Fantastic, Awesome XR, Stellar XR, SV 1446SD (yellow), Honor XR, Piscataway (white), and Cumberland did not produce significantly fewer. SV 1580SC (white), Cabo, SV 1077SD (yellow), Placer (white), and Obsession produced significantly fewer fancy ears than any of those. The percent of ears that were fancy also differed significantly among varieties, and ranged from 50% for Placer to 100% for Stellar XR, and averaged 78% (data not shown). Varieties split into two groups: those with at least 80% of ears graded fancy included Stellar XR, Nirvana, Piscataway (white), Fantastic, Anthem XR, Superb XR, AP 426, Cumberland, Awesome XR, BSS 0761, Honor XR, and SV 1446SD (yellow). The remaining varieties produced less than 70% fancy ears.

In 2014, Stellar XR, Anthem XR, Awesome XR, Fantastic XR, and Cabo did not differ from the top variety in percentage of fancy ears. The number and percentage of fancy ears were negatively correlated with days to harvest; early varieties produced a higher number and percentage of fancy ears. Varieties Placer (white) and SV 1077SD (yellow) produced a lower percentage of fancy ears than would be expected based on their harvest dates.

Average weight per ear (including the shank) ranged from 0.85 to 1.10 lb. and averaged 0.93 lb. Differences among entries were highly significant ($P < .0001$). Placer (white) had the heaviest ears. Stellar XR, Cumberland, Anthem XR, Superb XR, and SV 1077SD (yellow) were all heavier than 0.95 lb. but did not differ significantly from one another. EX 08767143, Fantastic, BSS 0761, Obsession, Piscataway (white), Awesome XR, SV 1580SC (white), Honor XR, and Nirvana produced ears between 0.92 and 0.85 lb. and did not differ from one another. Cabo, SV 1446SD (yellow), and AP 426 produced ears between 0.95 and 0.93 lb. In 2014, Stellar XR, Anthem XR, and Fantastic XR produced among the heaviest ears.

Ear length ranged from 7.1 to 8.4 inches, and diameter ranged from 1.81 to 2.14 inches. Nirvana had the longest ears, but Placer (white), SV 1446SD and SV 1077SD (both yellow), and EX 08767143 all produced ears longer than 8.15 inches and did not differ significantly from

Nirvana. In 2014, SV 1077SD and EX 08767143 also produced among the longest ears in the trial. Cabo, Obsession, Honor XR, AP 426, Piscataway and SV 1580SC (both white), and BSS 0761 had ears between 8.11 and 7.85 inches and did not differ significantly. Cumberland, Anthem XR, Stellar XR, and Superb XR ranged from 7.71 to 7.47 inches long and did not differ significantly. Awesome XR was significantly shorter than all other varieties. In 2014, Awesome XR also produced the shortest ears in the trial. Cumberland ears were the widest but not significantly wider than ears of Anthem XR, Placer (white), or Cabo. Varieties with ear diameter in the middle range (2.05 to 1.95 inches) included Superb XR, Stellar XR, Awesome XR, SV 1077SD (yellow), EX 08767143, Fantastic, BSS 0761, SV 1446SD (yellow), and Nirvana. Piscataway (white) had the narrowest ears, 1.81 inches, but not significantly narrower than Honor XR or Obsession.

Shank length ranged from 3.3 to 7.6 and averaged 5.4 inches. Differences among entries were highly significant ($P < .0001$). Shanks on AP 426 averaged more than 7.5 inches, but were not significantly longer than those for Stellar XR or BSS 0761, which all had shanks averaging at least 6.75 inches. Last year Stellar XR also produced among the longest shanks. Shanks of Superb XR, SV 1077SD (yellow), Honor XR, Awesome XR, Placer and Piscataway (both white), Cumberland, SV 1446SD (yellow), Obsession, and SV 1580SC (white) averaged between 5.4 and 4.6 inches and did not differ significantly. Nirvana had the shortest shanks, 3.25 inches, but shanks of Cabo and EX 08767143 were statistically similar. In 2014, EX 08767143 was also among the varieties with the shortest shanks.

Ear height from the soil to mid-ear ranged from 21.9 to 31.9 and averaged 26.5 inches. Varieties with ears 28 inches high or more above the soil included SV 1580SC (white), SV 1077SD (yellow), EX 08767143, Obsession, Honor XR, and Cabo. These did not differ significantly. Nirvana produced ears closest to the ground (21.9 inches), but not significantly different from seven other varieties: BSS 0761, Placer (white), Stellar XR, Awesome XR, Fantastic, Cumberland, Anthem XR, and Superb XR. Days to harvest explained 45% of the variation in ear height, with later varieties producing ears farther off the ground.

Husk cover ratings averaged 3.3 (on a 1 to 5 scale, with 5 best). Superb XR received the top rating of 5.0. Others with ratings averaging greater than 3.5, meaning more than 1.25 inches of husk cover on most ears, included: AP 426, SV 1446SD (yellow), Anthem XR, Awesome XR, Stellar XR, and Obsession. Other varieties with at least 3/4 inch of husk covering the tip on most ears: Fantastic, Honor XR, Piscataway (white), Cumberland, BSS 0761, SV 1077SD (yellow), and Cabo. SV 1580SC (white), EX 08767143, and Nirvana had less than 3/4 inch of husk cover on most ears. For Placer (white), the husk typically did not fully cover the tip of the ear. Husk tightness rating ranged from 1.0 to 3.0 on a 3-point scale, and averaged 2.1. Superb XR and Awesome XR received the top rating of 3. Other varieties with ratings greater than 2.5 included AP 426, Stellar XR, Anthem XR, BSS 0761, and Obsession. Honor XR, SV 1580SC (white), Nirvana, SV 1077SD (yellow), and Placer (white) received ratings of less than 1.5 for husk tightness, meaning husks were noticeably loose for most ears.

Tip fill rating ranged from 4.0 to 5.0 and averaged 4.6. Varieties with all sampled ears filled completely to the tip included Superb XR, Anthem XR, and SV 1580SC (white). Other varieties with a rating of at least 4.5, indicating that most ears sampled were completely filled to the tip included: Honor XR, SV 1446SD and SV 1077SD (both yellow), Awesome XR, Cumberland, Cabo, Stellar XR, Fantastic, Piscataway (white), and EX 08767143.

Overall ear quality rating ranged from 3.0 to 8.3 and averaged 6.5 on a 9-point scale. Anthem XR and Fantastic received ratings of 8.3, followed by Stellar XR and Piscataway (white) at 8.0 and Awesome XR and AP 426 at 7.7. These varieties were attractive and uniform and had acceptable husk cover and tip fill. In 2014, Stellar XR, Anthem XR, Awesome XR, and AP 426 also received “overall” ratings among the top for the trial. Other varieties rated above the trial average in 2015 were Superb XR, SV 1446SD (yellow), Honor XR, BSS 0761, and Obsession. Varieties below the trial average included Cumberland, Nirvana, EX 08767143, SV 1077SD (yellow), SV 1580SC (white), Cabo, and Placer (white). The rating of 3 for Placer, a full 1.3 points below any other variety, reflects the poor husk cover and loose husks. In 2014, EX 08767143, SV 1077SD (yellow), and SV 1580SC (white) also received ratings below the trial average.

Flavor ratings ranged from 2.5 to 4.4 on a 5-point scale and averaged 3.8 (Table 1). Significant differences among varieties were detected ($p < .05$). Nirvana received the top rating but was not significantly different from other varieties with ratings of 3.6 or greater: Superb XR, Awesome XR, Honor XR, Cumberland, Obsession, Anthem XR, Cabo, BSS 0761, EX 08767143, AP 426, and SV 1580SC (white). EX08767143, Stellar XR, and Anthem XR also were rated among the top for flavor in 2014. Placer (white) and SV 1077SD (yellow) received the lowest flavor ratings and did not differ significantly from each other. Pericarp toughness ratings ranged from 1.9 to 3.6 on a 4-point scale (1=very tough; 4=not tough) and averaged 2.7 (Table 1). Differences among varieties were highly significant ($p < .001$). Anthem XR, Cumberland, AP 426, Nirvana, Superb XR, and Fantastic were rated 3.0 or above, corresponding to “somewhat tough” or “not tough,” and did not differ significantly. Anthem XR, AP 426, and Fantastic were also among the least tough in 2014. SV 1446SD (yellow), Obsession, SV 1580SC and Placer (both white), BSS 0761, SV 1077SD (yellow), and EX 08767143 were rated 2.5 or below for pericarp toughness, indicating most ears were rated as “tough” or “very tough.” They did not differ significantly.

A comparison of varieties with similar maturity dates is worthwhile. Fantastic, Nirvana, and Awesome XR were the earliest bicolors in the trial. Nirvana had longer ears, shorter shanks, and ears about 2 inches closer to the ground than the other two varieties. Husk cover on ears of Nirvana was not very good, in contrast to Fantastic and Awesome XR.

Bicolors Anthem XR, Superb XR, Stellar XR, and BSS 0761 were harvested 85 to 87 days after seeding. Of these, Superb XR produced the most ears and tons per acre, had excellent emergence, was one of the most vigorous early in the season, and received good ratings for eating quality. Ears were fairly short, however. Anthem XR and Stellar XR had ears slightly longer than Superb XR, and Stellar XR was notable for 100% of ears in the fancy category. BSS 0761 had the longest and narrowest ears of these four varieties, lower early vigor, and much taller plants.

The latest maturing varieties were all harvested 88 to 92 days after seeding. Of the bicolors, Honor XR and AP 426 were the most promising, followed by Cumberland. Of the two yellow varieties, SV 1446SD produced better yield and ear quality than SV 1077SD.

Of the three white varieties, Piscataway was the earliest and looked the best in terms of ear quality. Placer, harvested mid-season, had the longest ears, but husk cover was not acceptable. SV 1580SC, harvested at the end of the season, had ear size and eating quality similar to Piscataway, but ear quality was not as good.

Evaluation of results presented in Tables 1 and 2 combined with results from other locations and years should aid producers in selecting varieties best suited to their operations. A separate trial evaluating sugar-enhanced and synergistic varieties was also conducted at Pinney Purdue Ag Center, and results are reported in a separate article.

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Literature Cited

- Midwestern Regional Climate Center. 2015. cli-MATE: MRCC Application Tools Environment. Daily Data Between Two Dates for WANATAH 2 WNW (IN) USC00129222. mrcc.isws.illinois.edu/CLIMATE. Accessed 10/20/2015.
- USDA NASS. 2014. 2012 Ag Census, Indiana State and County Data. www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Indiana/st18_1_038_038.pdf. URL verified 12/22/2014.
- USDA NASS. 2015. Indiana Crop Progress and Condition 2015. www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Crop_Progress_&_Condition/index.php. Accessed 10-20-2015.
- USDA NASS, Great Lakes Region. 2014. Indiana Agricultural Statistics 2013-2014. www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Annual_Statistical_Bulletin/1415/15index.php. URL verified 12/15/2015.

Table 1. Emergence, final stand, plant characteristics, and eating quality of supersweet sweet corn varieties in northern Indiana, 2015. Varieties listed in order of harvest within kernel color groupings.¹

Cultivar	Emergence %	Stand plants/A	Plant Ht. ft	Tillers ²	Vigor ²		Flavor ³	Peri-carp ³
					Early	Harvest		
<i>Bicolor</i>								
Fantastic	91	18,586	5.8	4.3±0.3	6.7±0.3	7.3±0.9	3.6	3.0
Nirvana	93	18,973	5.8	5.0±0.0	4.7±0.3	6.0±0.0	4.4	3.3
Anthem XR	68	13,746	5.7	4.0±0.0	6.0±0.0	7.7±0.3	3.9	3.6
Superb XR	104	19,941	5.7	4.7±0.3	6.7±0.3	6.7±0.3	4.2	3.2
Awesome XR	99	19,747	5.9	4.7±0.3	4.3±0.3	7.3±0.3	4.2	2.7
Stellar XR	80	16,262	5.8	4.3±0.3	6.0±0.6	6.3±0.3	3.5	2.8
Cabo	79	16,069	6.5	3.7±0.3	4.0±0.0	7.0±0.0	3.9	2.8
Cumberland	88	17,811	6.0	4.0±0.6	5.3±0.3	7.3±0.3	4.0	3.4
BSS 0761	81	16,456	6.9	2.0±0.6	3.3±0.3	6.7±0.3	3.9	2.2
Honor XR	93	18,973	7.3	4.7±0.3	5.7±0.3	8.3±0.3	4.1	2.7
AP 426	85	17,230	6.6	4.0±0.0	3.7±0.3	8.3±0.3	3.8	3.4
EX 08767143	103	20,328	7.2	4.3±0.7	3.0±0.0	7.3±0.3	3.9	1.9
Obsession	26	5,227	6.7	3.3±0.9	1.7±0.7	8.0±0.6	4.0	2.4
<i>Yellow</i>								
SV 1446SD	96	18,973	6.5	5.0±0.0	3.3±0.3	7.7±0.3	3.4	2.5
SV 1077SD	79	16,069	6.8	3.3±0.3	4.0±0.0	8.3±0.3	3.3	2.2
<i>White</i>								
Piscataway	85	17,230	6.2	4.7±0.3	4.7±0.3	5.7±0.3	3.6	2.7
Placer	80	16,262	6.2	3.3±0.7	5.7±0.3	7.7±0.3	2.5	2.3
SV 1580SC	90	18,392	7.0	3.7±0.3	3.0±0.0	7.3±0.3	3.6	2.3
<i>Grand Mean</i>	<i>84</i>	<i>17,015</i>	<i>6.4</i>	<i>4.1</i>	<i>4.5</i>	<i>7.3</i>	<i>3.8</i>	<i>2.7</i>
<i>LSD .05⁴</i>	<i>16</i>	<i>3,160</i>	<i>0.36</i>	—	—	—	<i>0.81</i>	<i>0.71</i>
<i>R² vs DAP⁵</i>	<i>NS</i>	<i>NS</i>	<i>0.54</i>	<i>NS</i>	<i>0.47</i>	<i>0.34</i>	—	—

¹Means in bold do not differ significantly from the highest in that column. Cultivars with means in italics were not included in AOV for that response. Emergence is reported as percent of desired final stand before thinning. Stand was determined after thinning.

²Tillers: 5=most plants with tall tillers; 3=most plants have tillers, but not tall; 1=no or few tillers. Vigor: 9=excellent; 5=average; 1=poor. Mean ± s.e.m.

³Flavor: 5=excellent; 4=very good; 3=good; 2=medium; 1=poor. Pericarp: 4=not tough; 3=somewhat tough; 2=tough; 1=very tough.

⁴Means differing by more than this amount are significantly different at $P \leq .05$ based on Fisher's Protected LSD. — = AOV not performed.

⁵R-squared value for linear regression of response vs. mean of actual days to harvest, if regression significant at $P < .05$. NS=not significant. — = regression not performed.

Table 2. Yield, ear size, and quality of supersweet sweet corn varieties in northern Indiana, 2015. Varieties listed in order of harvest within kernel color.

Cultivar	Seed Source ¹	Days to Harvest ²		Yield of Marketable Ears		Avg. Ear Weight <i>lb</i>	Ear Length <i>in</i>	Ear Dia. <i>in</i>	Shank Length <i>in</i>	Ear Ht. <i>in</i>	Husk Cover ³	Husk Tightness ³	Tip Fill ³	Overall ³
		<i>Pred.</i>	<i>Actual</i>	<i>doz/A</i>	<i>ton/A</i>									
<i>Bicolor</i>														
Fantastic	ST	75	81-83	1,468	8.0	0.91	7.81	1.99	5.9	24.2	3.4±0.1	1.9±0.1	4.7±0.2	8.3±0.3
Nirvana	CR	76	83-85	1,468	7.5	0.85	8.40	1.96	3.3	21.9	1.9±0.3	1.1±0.1	4.0±0.0	6.3±1.7
Anthem XR	ST	73	85	1,113	6.6	0.98	7.69	2.13	6.4	23.7	4.2±0.1	2.7±0.2	5.0±0.0	8.3±0.3
Superb XR	ST	74	85	1,613	9.4	0.97	7.47	2.06	5.4	23.2	5.0±0.0	3.0±0.0	5.0±0.0	7.3±0.9
Awesome XR	ST	76	83-85	1,549	8.1	0.87	7.06	2.03	5.3	24.6	4.0±0.3	3.0±0.0	4.8±0.2	7.7±0.7
Stellar XR	ST	77	85	1,291	7.9	1.02	7.53	2.04	7.3	25.0	3.8±0.2	2.8±0.1	4.7±0.2	8.0±0.6
Cabo	SY	78	88	1,258	7.2	0.95	8.11	2.08	4.3	28.0	2.6±0.1	1.8±0.2	4.8±0.2	4.3±0.7
Cumberland	HM	77	88	1,387	8.3	1.00	7.71	2.14	4.9	24.1	3.2±0.5	2.1±0.5	4.8±0.2	6.3±0.3
BSS 0761	SY	82	85-88	1,307	7.0	0.90	7.89	1.97	6.8	25.3	3.0±0.2	2.7±0.3	4.3±0.3	6.7±0.7
Honor XR	ST	79	88	1,533	7.9	0.86	8.00	1.82	5.4	29.1	3.3±0.0	1.4±0.1	4.9±0.1	6.7±0.3
AP 426	CR	84	88	1,355	7.6	0.93	7.92	1.93	7.6	26.6	4.8±0.2	2.9±0.1	4.1±0.2	7.7±0.3
EX 08767143	SM	81	90-92	1,662	9.1	0.92	8.15	1.99	4.0	29.9	2.3±0.3	1.7±0.7	4.6±0.2	5.0±0.6
Obsession	SM	79	90-92	500	2.7	0.89	8.10	1.86	4.8	29.9	3.8±0.1	2.6±0.3	4.0±0.3	6.7±0.3
<i>Yellow</i>														
SV 1446SD	SM	75	88-90	1,549	8.8	0.94	8.24	1.96	4.9	26.4	4.4±0.2	1.8±0.1	4.8±0.1	7.3±0.3
SV 1077SD	SM	81	88	1,275	7.3	0.95	8.22	1.99	5.4	31.0	2.6±0.2	1.0±0.0	4.8±0.1	4.7±0.3
<i>White</i>														
Piscataway	HM	70	81-83	1,291	6.8	0.89	7.90	1.81	5.1	27.0	3.2±0.5	2.4±0.3	4.6±0.1	8.0±0.0
Placer	HM	74	85-88	1,339	8.9	1.10	8.36	2.10	5.2	25.1	1.3±0.2	1.0±0.0	4.2±0.1	3.0±0.6
SV 1580SC	SM	80	88-90	1,484	7.7	0.87	7.90	1.92	4.6	31.9	2.4±0.1	1.2±0.1	5.0±0.0	4.3±0.9

Continued on next page

Table 2 (continued)

Cultivar	Seed Source ¹	Days to Harvest ²		Yield of Marketable Ears		Avg. Ear Weight <i>lb</i>	Ear Length <i>in</i>	Ear Dia. <i>in</i>	Shank Length <i>in</i>	Ear Ht. <i>in</i>	Husk Cover ³	Husk Tightness ³	Tip Fill ³	Overall ³
		<i>Pred.</i>	<i>Actual</i>	<i>doz/A</i>	<i>ton/A</i>									
<i>Grand Mean</i>			87	1,358	7.6	0.93	7.91	1.99	5.4	26.5	3.3	2.1	4.6	6.5
<i>LSD .05⁴</i>			–	237	1.3	0.07	0.26	0.08	1.1	4.13	–	–	–	–
<i>R² vs DAP⁵</i>				NS	NS	NS	NS	NS	NS	0.45	–	–	–	–

¹Seed Source: CR=Crookham; HM=Harris Moran; SM=Seminis; ST=Stokes, SY=Syngenta.

²Days from planting to harvest. Predicted number is from seed supplier. Actual values are range for 3 replications.

³Husk cover: 5=more than 2 inches cover; 4=1.25-2 inches; 3=0.75-1.25 inches; 2=less than 0.75 inch; 1=ear exposed. Husk tightness: 1=loose; 3=very tight. Tip fill: 5=kernels filled to tip of cob; 4=less than 0.5 inch unfilled; 3=0.5-1 inch unfilled; 2=more than 1 inch unfilled; 1=more than 2 inches unfilled. Overall: 1=worst. 9 =best. Mean ± s.e.m.

⁴Means differing by more than this amount are significantly different at $P \leq .05$ based on Fisher's Protected LSD. Means in bold font do not differ significantly from the highest in that column. Cultivars with means in italics were not included in AOV for that response. NS=not significant. – =AOV not performed.

⁵R-squared value for linear regression of response vs. mean of actual days to harvest, if regression significant at $P < .05$. – = regression not performed.