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# se and $sh_2$ Sweet Corn Germplasm Evaluation Results 2001

## Information on the Effects of Genotype and Growing Location on se- and $sh_2$-type Sweet Corn Crop Yield and Ear and Kernel Traits in Ohio in 2001

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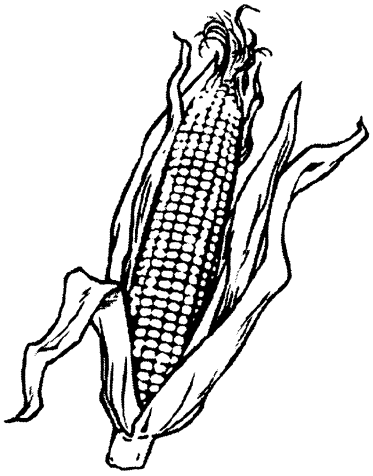

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## The Grower's Section

What Did We Do?

We evaluated thirty-two varieties of bicolor se and $sh_2$ sweet corn grown at OARDC Research Branches in Celeryville (Huron County, muck soil), Fremont (Sandusky County, loam soil), and Wooster (Wayne County, silt loam soil). All locations were planted within three days of each other (May 9 and 11, 2001) and replicated field plots were used (this was not an un-replicated strip trial). Plots, plants, ears, and kernels were examined regularly throughout the season and post-harvest evaluations of quality were completed in the lab.

Why Did We Study only Bicolor Genotypes?

Ohio farmers grow many types and colors of sweet corn. Yellow, white, and bicolor and se-, $sh_2$-, and other endosperm types are grown in Ohio. Resources available to complete this project allow us to compare varieties which differ in endosperm type **or** kernel color but not both traits. At this time, we believe evaluating a single color of se- and $sh_2$- type varieties is most important to the industry. In 1999 and 2000, we evaluated many varieties of yellow se- and $sh_2$-type varieties. Results from these evaluations were summarized in reports similar to this one and in numerous Extension programs. Please contact Matt Kleinhenz for copies of this or past reports.

Why Did We Do this Project?

Stand establishment (germination, emergence), and crop vigor, pest, disease, and stress resistance/tolerance, yield, and quality – these and other variety traits influence a grower's return from sweet corn production. To be successful, Ohio sweet corn growers must have available varieties adapted to the state's varied production conditions and markets. Because sweet corn varieties often differ in traits which affect grower return, scientifically measuring and documenting the performance of varieties under varied local conditions is important. Equipped with reliable information from unbiased testing programs, growers can be confident that the varieties they choose will meet their needs. This project was undertaken to assist Ohio sweet corn growers in identifying varieties with desirable traits.

What did We Find?

**1. Emergence.** Stand establishment was adequate for most varieties at most locations. Important exceptions to this trend occurred in the se group at Celeryville and $sh_2$ group at Wooster. On average, BC 0801 VP Attribute and Temptation had the highest values among se varieties and Candy Corner the highest value among $sh_2$ varieties. Average percent emergence differed widely among varieties within the se- and sh2 groups. But, on average, percent emergence was similar (about 90%) in the se and $sh_2$ groups. See Table 3.

**2. Marketable Yield.** Marketable yield was recorded as the number of marketable ears per plot and it was calculated as the percent by weight of all ears from the plot. Among all locations and genotypes, average marketable yield on a weight basis ranged from 54%-95% in the se group (avg. = 83%) and from 49%-97% in the $sh_2$ group (avg. = 80%). Disease,

insect damage and stress effects on quality criteria (e.g., tip fill, pollination) were the primary reasons for low marketable yield of some varieties. On average, Bojangles, Bon Appetit, Sweet Rhythm, and Seneca Spring produced the greatest number of marketable ears (17 per 20 plants) among se varieties while BSS 1690 and PS 9364169 produced the greatest number of marketable ears (18 per 20 plants) among $sh_2$ varieties. On average, the se and $sh_2$ groups had similar yield values -- approximately 15 ears from every 20 plants and 82% marketable by weight. See Tables 5, 6 and 7.

**3. Overall Field Performance.** Percent emergence and marketable yield can be measured objectively and are important in sweet corn variety selection. Based on these factors, the following varieties were the highest ranked at the locations shown and overall:

| se group | Celeryville | Fremont | Wooster | Overall |
|---|---|---|---|---|
| **top ranked varieties based on emergence and yield** | Bon Appetit<br>Temptation<br>PS 6803<br>Seneca Spring | BC 4806 | Sweet Rhythm | Bon Appetit (1)<br>Luscious (1)<br>Seneca Spring (2)<br>Sweet Rhythm (3) |
| **$sh_2$ group** | | | | |
| **top ranked varieties based on emergence and yield** | BSS 1690 | PS 9364169 | PS 9364169 | PS 9364169 (1)<br>Candy Corner (2)<br>BSS 1690 (3) |

Percent emergence and marketable yield were used to develop the ratings above (see Table 13). Obviously, sweet corn varieties should be chosen based on a number of criteria. In addition to percent emergence and marketable yield, varieties should be chosen based on endosperm type, maturity, crop appearance (e.g., ear size and quality, including tip fill and cover), disease resistance, eating quality, and other factors. Numerical rankings based on a greater number of factors will be attempted in future evaluations.

**4. Estimates of Kernel Sweetness.** Brix readings are a common measure of the concentration of soluble solids, primarily the sugar sucrose, in a sample. Sucrose and other sugars contribute to the sweetness of sweet corn which can be estimated with brix measurements. But, the total eating quality of sweet corn is based on a unique combination of flavor (sweetness), texture and aroma. Brix readings were taken on kernels from each plot within one hour and after 96 hours storage under refrigerated conditions. Averaged across all sites, at-harvest brix values ranged from 16.5% to 20.9% in the se group and from 13.5% to 16.7% in the $sh_2$ group. Averaged across all sites, brix values taken after storage ranged from 15.8% to 19.8% in the se group and from 13.0% to 15.9% in the $sh_2$ group. The decline in average brix values with time across all sites varied by genotype but averaged 0.9% and 0.8% in the se and $sh_2$ groups, respectively. In the se group, Ambrosia had the highest

average brix value at harvest and BC 4315 had the highest average brix value after storage. In the $sh_2$ group, GSS 277A had the highest average brix value at harvest and HMX 8344 BS had the highest average brix value after storage. See Tables 14 and 15.

For more information on this bulletin or to receive digital images of representative ears of each entry and copies of this or similar publications, please contact:

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## Project Details

This study resulted from the cooperation of private breeders, the Ohio Agricultural Research and Development Center, OSU Extension, the Dept. of Horticulture and Crop Science, and Ohio sweet corn and vegetable industries. Results from this study may be used by growers and others to select varieties adapted to Ohio growing conditions. Breeders may look to the data to estimate the narrow or broad adaptation of individual varieties or draw other inferences.

### Materials and Methods

See Table 1 for a list of the varieties and experimental lines included in this study.

**Plot Establishment.** A total of thirty-two se- and $sh_2$-type sweet corn varieties or experimental lines were planted at three locations in northern Ohio in 2001. Plots (four 25-ft rows on 30-in centers) were seeded with a modified John Deere planter at the Vegetable Crops Research Branch in Fremont (Sandusky County, loam soil) and Muck Crops Research Branch in Celeryville (Huron County, organic/"muck" soil) on May 9 and at the OARDC in Wooster (Wayne County, silt loam soil) on May 11. Approximately 2.4 seed were delivered per foot in each row. Ends of plots were separated by two feet at planting. Endosperm type (se, $sh_2$) experiments were separated by a minimum of 250 ft at each location. Plots were arranged in a randomized complete block design with four replication within each endosperm type study.

Plots were shortened by hand after seedling establishment to 20 ft. Plots were also thinned by hand to contain $1.15 \pm 0.17$ plants/foot of row at the same time.

**Plot Maintenance.** With one exception, standard soil, nutrient, and pest management practices were employed at all sites. Excessive rainfall and sub-optimal temperatures predominated for one month after planting (Figure 1) and slowed stand establishment at all locations. Conditions also made weed control a challenge, especially in the $sh_2$ study in Wooster. Stinger herbicide, unlabeled for sweet corn, was applied post-emergence at a rate of 8oz/A to the $sh_2$ study in Wooster, inhibiting plant growth (Table 12). Below average rainfall and above average temperatures predominated for the final two months of the season (Figure 2). Plots in Wooster were irrigated before and during anthesis on July 17 and 18 and August 8 and 9. Plots in Fremont were irrigated on June 29 and July 13. Approximately 1 inch of water was applied in each irrigation. Plots in Celeryville were not irrigated.

**Measurement of Plant and Ear Traits.** Plant and crop development were assessed regularly beginning at emergence. Readiness for harvest was assessed by counting days from 50% anthesis (target = 18 for se-type varieties and 20 for $sh_2$-type varieties) and visual examination of ears in each plot. Midpoint anthesis dates were calculated using the Myers Method. Immediately before harvest, height to the top of the tassel and collar of the primary ear were measured on three plants in the center two rows per plot. All ears were then

removed by hand from the ten center plants in the middle two rows of each plot (20 plants total per plot). The following data were collected for each plot at harvest: total weight of all ears from twenty plants, total number and weight of marketable ears. The following data were collected on five individual marketable ears per plot: ear length, ear diameter, number of rows of kernels, and shank length. Ears were considered non-marketable if they were extremely small, not filled to the tip, or displayed evidence of incomplete pollination, disease, or insect damage.

**Eating Quality.** Brix readings are a common measure of the concentration of soluble solids, primarily the sugar sucrose, in a sample. Sucrose and other sugars contribute to the sweetness of sweet corn which can be estimated with brix measurements. But, the total eating quality of sweet corn is based on a unique combination of flavor (sweetness), texture and aroma. Estimates of kernel sweetness were made on four mature marketable ears collected at harvest from each plot (16 ears/entry/site). Within one hour after harvest, a 2-inch cross section from the middle of two ears per plot was frozen in liquid nitrogen, placed in sealed plastic containers and stored at -20C. The two remaining ears per plot were placed in refrigerated storage for 96 hours before similar cross-sections were removed, frozen in liquid nitrogen, and stored. Later in the lab, brix readings were taken on sap expressed from thawed but cool kernels from the four ears per plot using a Leica tabletop refractometer.

**Statistical Analyses.** Data from se and $sh_2$ experiments were analyzed separately using Statistical Analysis System (SAS; Cary, NC). Analysis of variance was completed on main effects and interactions -- effects were considered significant if $p \leq 0.05$. Means were separated using Fisher's Protected LSD (site and time of sampling effects) and Duncan's Multiple Range (variety effect) tests ($\propto = 0.05$).

## Results

**Site and Variety Effects.** The site by variety (SxV) interaction was significant for nearly all traits analyzed (Table 2). Significant SxV interactions indicate that individual varieties tended to perform differently at the three locations. Therefore, additional analyses were undertaken to determine site-within-variety and variety-within-site effects.

**Stand Establishment and Maturity.** On average, percent emergence was highest for both endosperm types at Fremont (Table 3). Overall, percent emergence was similar in the se and $sh_2$ experiments (about 91%). Among all locations and genotypes, percent emergence ranged from 36% to 100% in the se group and from 64% to 100% in the $sh_2$ group. Harvest readiness was reached in 78-94 days in the se group and 84-96 days in the $sh_2$ group (Table 4). Days to harvest tended to be less in Celeryville and Fremont than Wooster for both endosperm types (Table 4).

**Marketable Yield.** Percent marketable yield by weight in the se group averaged 84% in Celeryville, 79% in Fremont and 85% in Wooster (Table 5) while average yield values in the $sh_2$ group equaled 80% in Celeryville, 90% in Fremont and 71% in Wooster (Table 5). On

average, the number of marketable ears taken from 20 plants per plot was slightly greater in Celeryville and Wooster than Fremont for the se group but much greater in Fremont than Celeryville or Wooster in the $sh_2$ group (Table 8). Above-optimal temperatures and below-optimal moisture availability, especially at sensitive stages in crop development, may have reduced marketable yield. Stress effects were evident in some genotypes as stunted plants and small, incompletely-pollinated ears.

**Ear Traits.** Among all locations and genotypes, ear diameter was similar (about 4.3cm) between both endosperm types (Table 9) although average number of rows of kernels was lower in the se group than $sh_2$ group. Average total ear length, including the shank, was approximately 28 cm in the se group and 29 cm in the $sh_2$ group (Table 10). Total ear length at all locations ranged from 26.1 cm to 31.6 cm and 24.7 cm to 32.7 cm in the se and $sh_2$ group, respectively. Ratings of tip fill and cover are summarized in Table 11. Tip cover was adequate in most genotypes although a number were rated as having poor tip cover at some locations. The same was true of tip fill.

**Plant Traits.** Average plant height for individual genotypes varied significantly among locations for both endosperm types (Table 12). Average plant heights were greatest at Celeryville and lowest in Wooster. Disease incidence was low at all locations, with smut being the most common disease (Tables 6 and 7).

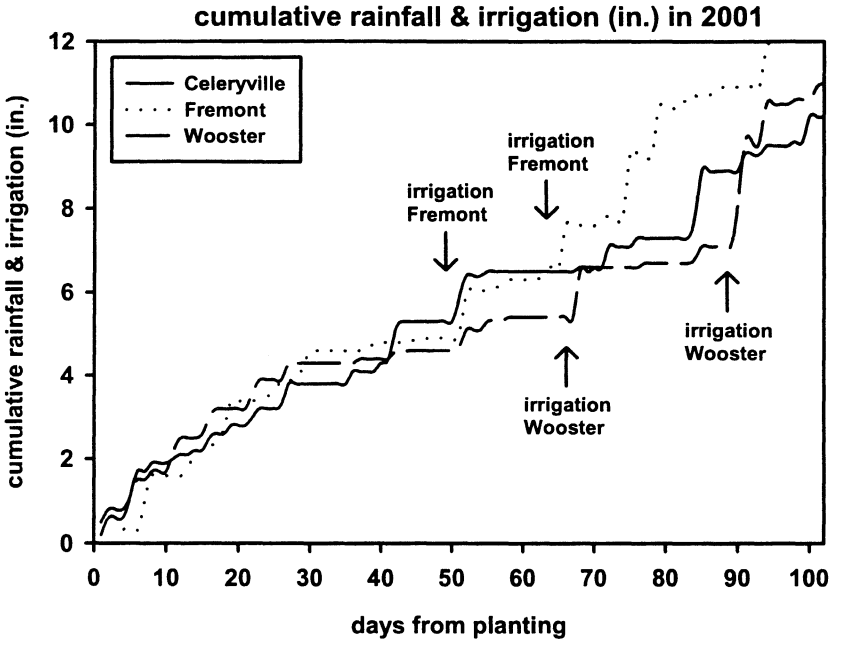
**Overall Field Performance.** The rank of each entry for percent emergence and marketable yield was identified for each location from data in Tables 3, 5, and 8. For example, in Table 3, BC 0801 VP Attribute, BC 4315, Luscious, Temptation, and PS 7404 had the highest percent emergence (at least 100%) among bicolor se entries at Celeryville and were given a rank of "1." Bojangles had the lowest percent emergence among bicolor se entries at Celeryville and was given a rank of "11." Ties are permitted in the rankings. Genotype rankings for each location and overall are shown in Table 13. A lower value suggests favorable emergence and yield at a particular location. The ranks of each entry at each location were then added to identify the genotype's ranking within the overall experiment.

Assuming no ties, the lowest possible sum rank for an individual genotype at a particular location is three (three traits x rank of 1 for each trait) while the highest possible score is forty-eight (three traits x rank of 16 for each trait). In 2001, sum ranks of individual se genotypes for all three traits ranged from 6-28 (Celeryville), 6-24 (Fremont), and 3-29 (Wooster). In 2001, sum ranks of individual $sh_2$ genotypes for all three traits ranged from 4-32 (Celeryville), 5-24 (Fremont), and 5-33 (Wooster).

**Estimates of Kernel Sweetness.** Brix readings were taken on kernels from each plot within one hour and after 96 hours storage under refrigerated conditions. Averaged across all sites, at-harvest brix values ranged from 16.5% to 20.9% in the se group (Table 14) and from 13.5% to 16.7% in the $sh_2$ group (Table 15). Averaged across all sites, brix values taken after storage ranged from 15.8% to 19.8% in the se group (Table 14) and from 13.0% to 15.9% in the $sh_2$ group (Table 15). The decline in average brix values with time across all sites varied

by genotype but averaged 0.9% and 0.8% in the se and $sh_2$ groups, respectively. In the se group, Ambrosia had the highest average brix value at harvest and BC 4315 had the highest average brix value after storage (Table 14). In the $sh_2$ group, GSS 277A had the highest average brix value at harvest and HMX 8344 BS had the highest average brix value after storage (Table 15).

Figure 1


cumulative rainfall & irrigation (in.) in 2001
Celeryville
Fremont
Wooster
irrigation Fremont
irrigation Fremont
irrigation Wooster
irrigation Wooster
cumulative rainfall & irrigation (in.)
days from planting
0
2
4
6
8
10
12
0
10
20
30
40
50
60
70
80
90
100

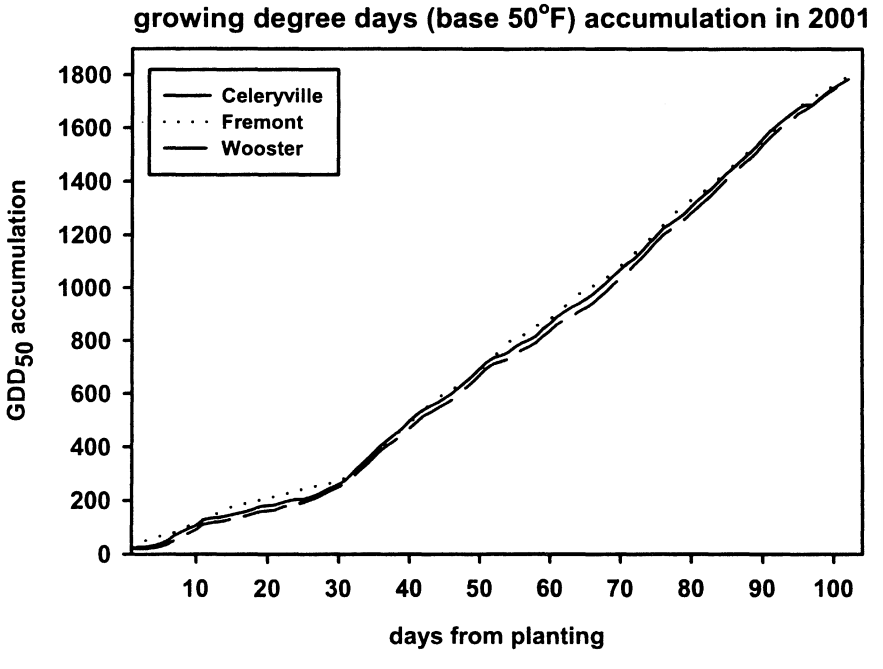

growing degree days (base 50°F) accumulation in 2001
Celeryville
Fremont
Wooster
GDD50 accumulation
days from planting
0
200
400
600
800
1000
1200
1400
1600
1800
10
20
30
40
50
60
70
80
90
100

**Figure 2**

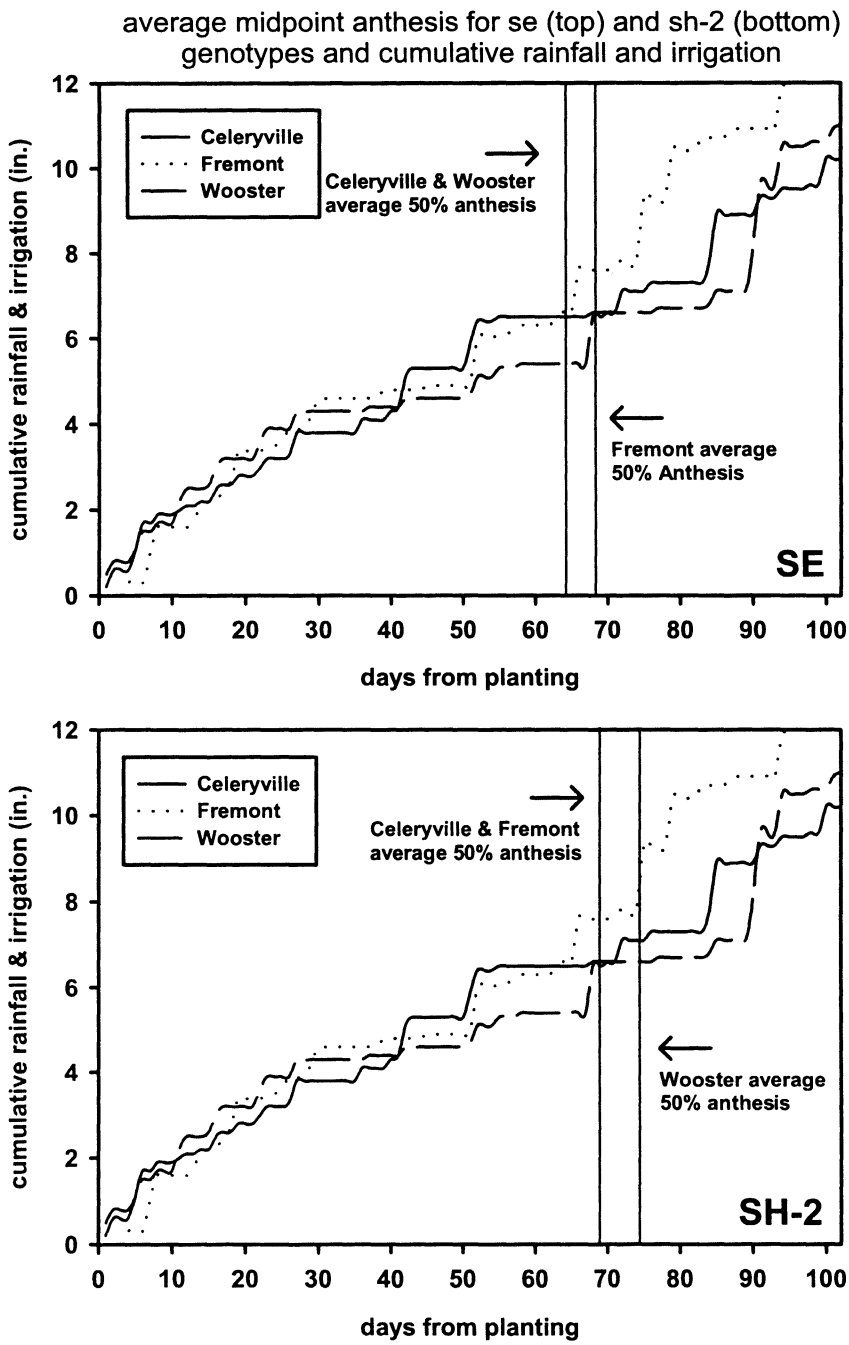

average midpoint anthesis for se (top) and sh-2 (bottom) genotypes and cumulative rainfall and irrigation
cumulative rainfall & irrigation (in.)
days from planting
Celeryville
Fremont
Wooster
Celeryville & Wooster average 50% anthesis
Fremont average 50% Anthesis
SE
Celeryville & Fremont average 50% anthesis
Wooster average 50% anthesis
SH-2

Table 1. List of se- and $sh_2$-type sweet corn entries tested at three locations in Ohio in 2001.

| Type | Entry # | Name | Kernel Color | Company |
|---|---|---|---|---|
| **se** | 1 | Ambrosia | bicolor | Crookham Company |
| | 2 | BC 0801 VP Attribute | bicolor | Syngenta Seeds, Inc. |
| | 3 | BC 4315 | bicolor | Syngenta Seeds, Inc. |
| | 4 | BC 4806 | bicolor | Syngenta Seeds, Inc. |
| | 5 | Bojangles | bicolor | Crookham Company |
| | 6 | Bon Appetit | bicolor | Mesa Maize, Inc. |
| | 7 | Ecstase II | bicolor | Seedway |
| | 8 | Luscious | bicolor | Stokes Seeds, Inc |
| | 9 | Mystique | bicolor | Crookham Company |
| | 10 | Summer Flavor # 79 BC | bicolor | Abbott & Cobb, Inc. |
| | 11 | Sweet Rhythm | bicolor | Harris Moran Seed Co. |
| | 12 | Precious Gem | bicolor | Siegers Seed Company |
| | 13 | Temptation | bicolor | Rispens |
| | 14 | PS 6803 | bicolor | Seminis |
| | 15 | PS 7404 | bicolor | Seminis |
| | 16 | Seneca Spring | bicolor | Seminis |
| **$sh_2$** | 1 | ACX 946 | bicolor | Abbott & Cobb, Inc. |
| | 2 | ACX 951 | bicolor | Abbott & Cobb, Inc. |
| | 3 | BSS 0977 VP Attribute | bicolor | Syngenta Seeds, Inc. |
| | 4 | BSS 1690 | bicolor | Syngenta Seeds, Inc. |
| | 5 | BSS 6284 | bicolor | Syngenta Seeds, Inc. |
| | 6 | GS275A | bicolor | Stokes Seeds, Inc |
| | 7 | GS277A | bicolor | Stokes Seeds, Inc |
| | 8 | GS282A | bicolor | Stokes Seeds, Inc |
| | 9 | Summer Sweet # 8102R | bicolor | Abbott & Cobb, Inc. |
| | 10 | Tango | bicolor | Crookham Company |
| | 11 | Candy Corner | bicolor | Harris Moran Seed Co. |
| | 12 | HMX 8343 BS | bicolor | Harris Moran Seed Co. |
| | 13 | HMX 8344 BS | bicolor | Harris Moran Seed Co. |
| | 14 | PS 8201 | bicolor | Seminis |
| | 15 | PS 9364169 | bicolor | Seminis |
| | 16 | Hollywood | bicolor | Seminis |

Table 2. Analysis of variances results for experiments studying the impact of planting site, variety and time of sampling on sweet corn ear traits, yield, and kernel brix values in Ohio in 2001.

| | | ------Length (cm)------ | | | Height to Ear | Ear Diameter | No. Rows | --Marketable Yield-- | | Kernel |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Ear | Shank | Total Ear | (cm) | (cm) | (kernels) | No. ears/ 20 plants | Percent by weight | Brix (%) |
| | | ---------- Pr > F ---------- | | | | | | | | |
| se Experiment | | | | | | | | | | |
| Source | df | | | | | | | | | |
| Site (S) | 2 | < 0.0001 | 0.0349 | < 0.0001 | < 0.0001 | 0.5258 | < 0.0001 | 0.0046 | 0.0021 | < 0.0001 |
| Variety (V) | 15 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0200 | 0.0057 | < 0.0001 |
| Time (T) | 1 | NA[1] | NA | NA | NA | NA | NA | NA | NA | < 0.0001 |
| S x V | 30 | < 0.0001 | < 0.0001 | 0.0018 | < 0.0001 | < 0.0001 | 0.8011 | 0.0002 | < 0.0001 | < 0.0001 |
| V x T | 15 | NA | NA | NA | NA | NA | NA | NA | NA | 0.9155 |
| $sh_2$ Experiment | | | | | | | | | | |
| Source | df | | | | | | | | | |
| Site (S) | 2 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0001 |
| Variety (V) | 15 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Time (T) | 1 | NA[1] | NA | NA | NA | NA | NA | NA | NA | < 0.0001 |
| S x V | 30 | < 0.0001 | 0.0005 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0067 | < 0.0001 | < 0.0001 | 0.0002 |
| V x T | 15 | NA | NA | NA | NA | NA | NA | NA | NA | 0.4994 |

[1] = Not Applicable. For brix, comparison of readings taken at and 96 hr after harvest. See Materials and Methods.

Table 3. Percent emergence of se- and $sh_2$- type sweet corn entries planted at three sites in Ohio in 2001.

| se Entry | | Celeryville | Fremont | Wooster | Entry Average | Row $LSD_{(0.05)}$ |
|---|---|---|---|---|---|---|
| 1 | Ambrosia | 61 | 93 | 90 | 81.3 | 9.7 |
| 2 | BC 0801 VP Attribute | 101 | 102 | 112 | 104.8 | 4.0 |
| 3 | BC 4315 | 100 | 98 | 97 | 98.3 | 11.5 |
| 4 | BC 4806 | 73 | 97 | 97 | 89.0 | 9.8 |
| 5 | Bojangles | 36 | 94 | 88 | 72.7 | 14.8 |
| 6 | Bon Appetit | 96 | 95 | 93 | 94.7 | 7.4 |
| 7 | Ecstase II | 92 | 94 | 93 | 93.0 | 10.3 |
| 8 | Luscious | 100 | 98 | 93 | 97.0 | 5.5 |
| 9 | Mystique | 47 | 80 | 76 | 67.7 | 8.7 |
| 10 | Summer Flavor # 79 BC | 88 | 94 | 69 | 83.7 | 7.3 |
| 11 | Sweet Rhythm | 91 | 97 | 101 | 96.3 | 11.4 |
| 12 | Precious Gem | 90 | 88 | 83 | 87.0 | 10.8 |
| 13 | Temptation | 101 | 99 | 110 | 103.3 | 13.8 |
| 14 | PS 6803 | 92 | 95 | 95 | 94.0 | 8.0 |
| 15 | PS 7404 | 101 | 100 | 96 | 99.0 | 5.3 |
| 16 | Seneca Spring | 91 | 95 | 92 | 92.7 | 12.1 |
| | | | | | **se overall** | |
| | **site** | 83.4 | 94.5 | 92.6 | 90.2 | |
| | **Column $DMRT_{(0.05)}$** | 9.6 | 7.6 | 13.6 | | |

| $sh_2$ Entry | | Celeryville | Fremont | Wooster | Entry Average | Row $LSD_{(0.05)}$ |
|---|---|---|---|---|---|---|
| 1 | ACX 946 | 89 | 84 | 80 | 84.3 | 12.8 |
| 2 | ACX 951 | 92 | 99 | 85 | 92.0 | 7.3 |
| 3 | BSS 0977 VP Attribute | 91 | 94 | 82 | 89.0 | 11.0 |
| 4 | BSS 1690 | 99 | 94 | 94 | 95.7 | 15.8 |
| 5 | BSS 6284 | 100 | 96 | 91 | 95.7 | 11.7 |
| 6 | GS275A | 97 | 98 | 93 | 96.0 | 6.3 |
| 7 | GS277A | 86 | 88 | 74 | 82.7 | 11.6 |
| 8 | GS282A | 75 | 80 | 64 | 73.0 | 11.6 |
| 9 | Summer Sweet # 8102R | 96 | 95 | 93 | 94.7 | 15.0 |
| 10 | Tango | 82 | 93 | 70 | 81.7 | 10.0 |
| 11 | Candy Corner | 102 | 99 | 99 | 99.9 | 7.1 |
| 12 | HMX 8343 BS | 91 | 101 | 106 | 99.3 | 6.3 |
| 13 | HMX 8344 BS | 97 | 96 | 100 | 97.7 | 6.3 |
| 14 | PS 8201 | 97 | 101 | 95 | 97.7 | 10.1 |
| 15 | PS 9364169 | 98 | 100 | 95 | 97.7 | 4.7 |
| 16 | Hollywood | 93 | 94 | 85 | 90.7 | 16.4 |
| | | | | | **$sh_2$ overall** | |
| | **site** | 92.4 | 94.1 | 87.6 | 91.4 | |
| | **Column $DMRT_{(0.05)}$** | 10.6 | 11.6 | 12.7 | | |

Table 4. Number of days from planting to midpoint anthesis and harvest of se- and $sh_2$ type sweet corn entries planted at three sites in Ohio in 2001.

| | | Celeryville | | Fremont | | Wooster | | Entry Avg. | |
|---|---|---|---|---|---|---|---|---|---|
| **se Entry** | | **anthesis** | **harvest** | **anthesis** | **harvest** | **anthesis** | **harvest** | **anthesis** | **harvest** |
| 1 | Ambrosia | 66 | 89 | 70 | 89 | 70 | 89 | 68.4 | 89.0 |
| 2 | BC 0801 VP Attribute | 65 | 89 | 72 | 92 | 71 | 94 | 69.2 | 91.7 |
| 3 | BC 4315 | 68 | 84 | 70 | 89 | 68 | 89 | 68.4 | 87.3 |
| 4 | BC 4806 | 69 | 92 | 73 | 92 | 73 | 94 | 71.8 | 92.7 |
| 5 | Bojangles | 67 | 86 | 68 | 85 | 65 | 84 | 66.6 | 85.0 |
| 6 | Bon Appetit | 66 | 82 | 67 | 82 | 65 | 80 | 65.8 | 81.3 |
| 7 | Ecstase II | 67 | 78 | 61 | 78 | 60 | 80 | 62.5 | 78.7 |
| 8 | Luscious | 69 | 82 | 69 | 82 | 68 | 84 | 68.6 | 82.7 |
| 9 | Mystique | 65 | 86 | 69 | 85 | 68 | 89 | 67.4 | 86.7 |
| 10 | Summer Flavor # 79 BC | 66 | 86 | 70 | 85 | 71 | 89 | 68.8 | 86.7 |
| 11 | Sweet Rhythm | 68 | 82 | 67 | 82 | 64 | 84 | 66.0 | 82.7 |
| 12 | Precious Gem | 68 | 89 | 73 | 89 | 74 | 90 | 71.3 | 89.3 |
| 13 | Temptation | 70 | 82 | 67 | 82 | 63 | 80 | 66.6 | 81.3 |
| 14 | PS 6803 | 65 | 84 | 72 | 89 | 70 | 90 | 68.8 | 87.7 |
| 15 | PS 7404 | 68 | 84 | 71 | 89 | 73 | 90 | 70.6 | 87.7 |
| 16 | Seneca Spring | 68 | 78 | 63 | 78 | 61 | 80 | 63.8 | 78.7 |
| | | | | | | | | **------ se overall ------** | |
| | **site average** | 67.0 | 84.6 | 68.7 | 85.5 | 67.6 | 86.6 | 67.8 | 85.6 |

| | | Celeryville | | Fremont | | Wooster | | Entry Avg. | |
|---|---|---|---|---|---|---|---|---|---|
| **$sh_2$ Entry** | | **anthesis** | **harvest** | **anthesis** | **harvest** | **anthesis** | **harvest** | **anthesis** | **harvest** |
| 1 | ACX 946 | 70 | 89 | 71 | 89 | 75 | 96 | 71.9 | 91.3 |
| 2 | ACX 951 | 72 | 92 | 73 | 92 | 78 | 94 | 74.4 | 92.7 |
| 3 | BSS 0977 VP Attribute | 70 | 89 | 73 | 92 | 77 | 96 | 73.4 | 92.3 |
| 4 | BSS 1690 | 66 | 84 | 66 | 86 | 72 | 89 | 68.1 | 86.3 |
| 5 | BSS 6284 | 63 | 84 | 63 | 86 | 68 | 84 | 64.4 | 84.7 |
| 6 | GS275A | 69 | 84 | 70 | 86 | 70 | 89 | 69.6 | 86.3 |
| 7 | GS277A | 69 | 89 | 70 | 86 | 72 | 89 | 70.1 | 88.0 |
| 8 | GS282A | 72 | 89 | 72 | 89 | 76 | 96 | 73.3 | 91.3 |
| 9 | Summer Sweet # 8102R | 69 | 84 | 71 | 86 | 73 | 89 | 70.7 | 86.3 |
| 10 | Tango | 70 | 84 | 69 | 86 | 72 | 89 | 70.3 | 86.3 |
| 11 | Candy Corner | 66 | 86 | 68 | 86 | 71 | 89 | 67.9 | 87.0 |
| 12 | HMX 8343 BS | 74 | 89 | 72 | 89 | 75 | 94 | 73.6 | 90.7 |
| 13 | HMX 8344 BS | 71 | 92 | 73 | 92 | 76 | 94 | 73.3 | 92.7 |
| 14 | PS 8201 | 72 | 92 | 73 | 92 | 75 | 96 | 73.3 | 93.3 |
| 15 | PS 9364169 | 71 | 89 | 71 | 89 | 73 | 94 | 71.5 | 90.7 |
| 16 | Hollywood | 72 | 89 | 72 | 89 | 80 | 96 | 74.4 | 91.3 |
| | | | | | | | | **------ $sh_2$ overall ------** | |
| | **site average** | 69.7 | 87.8 | 70.2 | 88.4 | 73.9 | 92.1 | 71.3 | 89.5 |

Note: Midpoint anthesis indicates when 50% of the plants reached anthesis.

Table 5. Percent marketable ears by weight of se- and sh $_2$- type sweet corn entries planted at three sites in Ohio in 2001.

| se Entry | | Celeryville | Fremont | Wooster | Entry Average | Row $LSD_{(0.10)}$ |
|---|---|---|---|---|---|---|
| 1 | Ambrosia | 69 | 87 | 85 | 80.3 | 12.3 |
| 2 | BC 0801 VP Attribute | 78 | 81 | 84 | 80.9 | 24.6 |
| 3 | BC 4315 | 89 | 84 | 83 | 85.4 | 12.5 |
| 4 | BC 4806 | 69 | 91 | 84 | 81.3 | 15.6 |
| 5 | Bojangles | 86 | 84 | 93 | 87.6 | 11.6 |
| 6 | Bon Appetit | 93 | 82 | 90 | 88.5 | 12.0 |
| 7 | Ecstase II | 90 | 68 | 79 | 79.1 | 16.5 |
| 8 | Luscious | 91 | 80 | 92 | 87.9 | 10.9 |
| 9 | Mystique | 54 | 86 | 86 | 75.3 | 24.0 |
| 10 | Summer Flavor # 79 BC | 85 | 87 | 78 | 83.5 | 12.9 |
| 11 | Sweet Rhythm | 93 | 66 | 95 | 84.7 | 12.2 |
| 12 | Precious Gem | 71 | 74 | 85 | 76.7 | 14.6 |
| 13 | Temptation | 92 | 76 | 82 | 83.6 | 15.3 |
| 14 | PS 6803 | 93 | 54 | 83 | 76.5 | 20.8 |
| 15 | PS 7404 | 88 | 82 | 75 | 81.3 | 18.3 |
| 16 | Seneca Spring | 94 | 85 | 87 | 88.4 | 11.0 |
| | | | | | **se overall** | |
| | **site** | 83.5 | 79.0 | 85.1 | 82.6 | |
| | **Column $DMRT_{(0.10)}$** | 17.4 | 16.4 | 17.5 | | |

| $sh_2$ Entry | | Celeryville | Fremont | Wooster | Entry Average | Row $LSD_{(0.10)}$ |
|---|---|---|---|---|---|---|
| 1 | ACX 946 | 87 | 90 | 66 | 80.9 | 28.0 |
| 2 | ACX 951 | 66 | 93 | 51 | 70.0 | 25.0 |
| 3 | BSS 0977 VP Attribute | 91 | 97 | 86 | 91.6 | 8.1 |
| 4 | BSS 1690 | 96 | 91 | 88 | 91.8 | 10.1 |
| 5 | BSS 6284 | 82 | 81 | 83 | 81.7 | 12.7 |
| 6 | GS275A | 84 | 88 | 80 | 84.1 | 13.4 |
| 7 | GS277A | 49 | 92 | 87 | 75.8 | 14.8 |
| 8 | GS282A | 83 | 81 | 85 | 83.2 | 12.8 |
| 9 | Summer Sweet # 8102R | 85 | 85 | 54 | 74.7 | 35.1 |
| 10 | Tango | 79 | 86 | 74 | 79.7 | 20.2 |
| 11 | Candy Corner | 88 | 93 | 82 | 87.5 | 9.4 |
| 12 | HMX 8343 BS | 83 | 81 | 65 | 76.3 | 22.5 |
| 13 | HMX 8344 BS | 77 | 96 | 43 | 72.3 | 19.8 |
| 14 | PS 8201 | 75 | 89 | 78 | 80.8 | 3.0 |
| 15 | PS 9364169 | 91 | 95 | 94 | 93.2 | 9.9 |
| 16 | Hollywood | 70 | 93 | 23 | 62.0 | 12.9 |
| | | | | | **$sh_2$ overall** | |
| | **site** | 80.4 | 89.5 | 71.1 | 80.3 | |
| | **Column $DMRT_{(0.10)}$** | 16.6 | 13.0 | 27.5 | | |

Note: percent marketable ears by weight = (marketable ear weight/total ear weight)*100

Table 6. Percent marketable ears by weight of se- type sweet corn entries planted at three sites in Ohio in 2001.

| se | Entry | Cel | reason non-marketable | Fre | reason non-marketable | Woo | reason non-marketable |
|---|---|---|---|---|---|---|---|
| 1 | Ambrosia | 69 | poor fill, cover, insect damage | 87 | poor fill | 85 | very small ears |
| 2 | BC 0801 VP Attribute | 78 | insect damage | 81 | poor tip fill | 84 | imcomplete pollination |
| 3 | BC 4315 | 89 | poor pollination | 84 | smut, poor tip fill | 83 | poor tip fill |
| 4 | BC 4806 | 69 | small ears, insect damage | 91 | | 84 | incomplete pollination |
| 5 | Bojangles | 86 | | 84 | small ears, poor tip fill | 93 | |
| 6 | Bon Appetit | 93 | | 82 | | 90 | |
| 7 | Ecstase II | 90 | smut | 68 | smut, small ears | 79 | variable tip cover |
| 8 | Luscious | 91 | pollination problems | 80 | variable tip cover | 92 | |
| 9 | Mystique | 54 | insect damage | 86 | poor tip cover | 86 | very small ears |
| 10 | Summer Flavor # 79 BC | 85 | cover variable, insect damage | 87 | poor tip fill | 78 | insect damage |
| 11 | Sweet Rhythm | 93 | | 66 | double ears, variable cover | 95 | double ears |
| 12 | Precious Gem | 71 | insect damage, poor fill | 74 | poor maturity, small ears | 85 | incomplete pollination |
| 13 | Temptation | 92 | | 76 | smut | 82 | small ears |
| 14 | PS 6803 | 93 | insect feeding | 54 | insect, poor tip cover | 83 | small ears, poor maturity |
| 15 | PS 7404 | 88 | insect feeding | 82 | insect damage, poor cover, fill | 75 | poor fill, poor maturity |
| 16 | Seneca Spring | 94 | | 85 | small ears, poor tip fill | 87 | variable tip fill |
| | **site** | 83.5 | | 79.0 | | 85.1 | |
| | **Column DMRT$_{(0.05)}$** | 17.4 | | 16.4 | | 17.5 | |

Note: percent marketable ears by weight = (marketable ear weight/total ear weight)*100

Table 7. Percent marketable ears by weight of $sh_2$- type sweet corn entries planted at three sites in Ohio in 2001.

| $sh_2$ Entry | | Cel | reason non-marketable | Fre | reason non-marketable | Woo | reason non-marketable |
|---|---|---|---|---|---|---|---|
| 1 | ACX 946 | 87 | small ears | 90 | | 66 | split maturity |
| 2 | ACX 951 | 66 | small ears, insect damage | 93 | incomplete pollination | 51 | split maturity, small ears |
| 3 | BSS 0977 VP Attribute | 91 | | 97 | | 86 | split maturity, aphids |
| 4 | BSS 1690 | 96 | | 91 | smut | 88 | small ears |
| 5 | BSS 6284 | 82 | split maturity | 81 | double ears | 83 | poor tip fill |
| 6 | GS275A | 84 | | 88 | nice line, some smut | 80 | small ears |
| 7 | GS277A | 49 | insect feeding on tips | 92 | small ears, split maturity | 87 | insect damage |
| 8 | GS282A | 83 | irregular size ears | 81 | smut | 85 | aphids, split maturity |
| 9 | Summer Sweet # 8102R | 85 | | 85 | smut, small ears | 54 | poor tip fill and pollination |
| 10 | Tango | 79 | split maturity | 86 | smut, small ears | 74 | split maturity, small ears |
| 11 | Candy Corner | 88 | | 93 | some small ears | 82 | small ears |
| 12 | HMX 8343 BS | 83 | smut | 81 | split maturity | 65 | small ears, poor maturity |
| 13 | HMX 8344 BS | 77 | insect damage | 96 | | 43 | poor tip fill and pollination |
| 14 | PS 8201 | 75 | split maturity, small ears | 89 | | 78 | split maturity |
| 15 | PS 9364169 | 91 | | 95 | | 94 | |
| 16 | Hollywood | 70 | small ears, poor tip fill | 93 | | 23 | small plants, did not mature |
| | **site** | 80.4 | | 89.5 | | 71.1 | |
| | **Column $DMRT_{(0.05)}$** | 16.6 | | 13.0 | | 27.5 | |

Note: percent marketable ears by weight = (marketable ear weight/total ear weight)*100

Table 8. Number of marketable ears per 20 plants of se- and $sh_2$- type sweet corn entries planted at three sites in Ohio in 2001.

| se Entry | | Celeryville | Fremont | Wooster | Entry Average | Row $LSD_{(0.05)}$ |
|---|---|---|---|---|---|---|
| 1 | Ambrosia | 13 | 16 | 16 | 14.8 | 3.6 |
| 2 | BC 0801 VP Attribute | 16 | 15 | 16 | 15.5 | 6.2 |
| 3 | BC 4315 | 17 | 16 | 16 | 16.2 | 3.3 |
| 4 | BC 4806 | 13 | 17 | 15 | 15.1 | 4.2 |
| 5 | Bojangles | 17 | 16 | 19 | 16.9 | 3.0 |
| 6 | Bon Appetit | 18 | 15 | 17 | 16.6 | 3.2 |
| 7 | Ecstase II | 19 | 14 | 14 | 15.4 | 3.6 |
| 8 | Luscious | 18 | 14 | 18 | 16.4 | 3.1 |
| 9 | Mystique | 12 | 15 | 16 | 14.2 | 5.9 |
| 10 | Summer Flavor # 79 BC | 17 | 16 | 14 | 15.5 | 3.0 |
| 11 | Sweet Rhythm | 18 | 14 | 19 | 16.9 | 3.5 |
| 12 | Precious Gem | 13 | 13 | 15 | 13.6 | 4.1 |
| 13 | Temptation | 18 | 15 | 15 | 15.8 | 4.1 |
| 14 | PS 6803 | 19 | 10 | 14 | 14.3 | 5.3 |
| 15 | PS 7404 | 17 | 15 | 12 | 14.8 | 4.2 |
| 16 | Seneca Spring | 19 | 16 | 16 | 16.7 | 3.0 |
| | | | | | **se overall** | |
| | **site** | 16.3 | 14.8 | 15.6 | 15.5 | |
| | **Column $DMRT_{(0.10)}$** | 4.2 | 4.0 | 4.9 | | |

| $sh_2$ Entry | | Celeryville | Fremont | Wooster | Entry Average | Row $LSD_{(0.05)}$ |
|---|---|---|---|---|---|---|
| 1 | ACX 946 | 16 | 18 | 10 | 14.3 | 7.2 |
| 2 | ACX 951 | 10 | 18 | 7 | 11.6 | 5.1 |
| 3 | BSS 0977 VP Attribute | 17 | 19 | 14 | 16.7 | 2.7 |
| 4 | BSS 1690 | 19 | 19 | 16 | 17.8 | 3.0 |
| 5 | BSS 6284 | 15 | 18 | 16 | 16.1 | 3.2 |
| 6 | GS275A | 16 | 17 | 14 | 15.6 | 3.4 |
| 7 | GS277A | 10 | 18 | 17 | 14.5 | 2.2 |
| 8 | GS282A | 15 | 18 | 15 | 15.9 | 3.1 |
| 9 | Summer Sweet # 8102R | 16 | 17 | 9 | 13.9 | 7.0 |
| 10 | Tango | 15 | 16 | 12 | 14.1 | 4.9 |
| 11 | Candy Corner | 17 | 19 | 15 | 16.8 | 3.6 |
| 12 | HMX 8343 BS | 15 | 15 | 10 | 13.1 | 5.4 |
| 13 | HMX 8344 BS | 14 | 19 | 7 | 13.5 | 3.8 |
| 14 | PS 8201 | 12 | 17 | 13 | 14.2 | 3.0 |
| 15 | PS 9364169 | 17 | 19 | 17 | 17.6 | 3.4 |
| 16 | Hollywood | 13 | 19 | 3 | 11.6 | 2.8 |
| | | | | | **$sh_2$ overall** | |
| | **site** | 14.7 | 17.7 | 12.1 | 14.8 | |
| | **Column $DMRT_{(0.05)}$** | 4.3 | 3.5 | 5.7 | | |

Table 9. Ear diameter (cm) and number of rows of kernels per ear of se- and $sh_2$ type sweet corn entries planted at three sites in Ohio in 2001.

| se Entry | | Celeryville diam. | Celeryville # rows | Fremont diam. | Fremont # rows | Wooster diam. | Wooster # rows | Entry Avg. diam. | Row $LSD_{(0.05)}$ diam. | Entry Avg. # rows | Row $LSD_{(0.05)}$ # rows |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ambrosia | 4.3 | 15 | 4.4 | 14 | 4.3 | 16 | 4.4 | 0.3 | 14.9 | 2.0 |
| 2 | BC 0801 VP Attribute | 4.3 | 15 | 4.2 | 14 | 4.3 | 15 | 4.3 | 0.3 | 14.8 | 1.4 |
| 3 | BC 4315 | 4.0 | 16 | 4.1 | 15 | 4.3 | 16 | 4.1 | 0.2 | 15.6 | 1.4 |
| 4 | BC 4806 | 4.1 | 15 | 4.1 | 15 | 4.4 | 15 | 4.2 | 0.2 | 15.2 | 1.3 |
| 5 | Bojangles | 4.1 | 14 | 4.2 | 14 | 4.0 | 14 | 4.1 | 0.2 | 13.8 | 1.2 |
| 6 | Bon Appetit | 4.7 | 14 | 4.5 | 14 | 4.1 | 15 | 4.4 | 0.4 | 14.4 | 1.5 |
| 7 | Ecstase II | 3.8 | 12 | 3.9 | 13 | 4.1 | 13 | 3.9 | 0.2 | 12.4 | 0.7 |
| 8 | Luscious | 4.8 | 17 | 4.4 | 16 | 4.4 | 17 | 4.5 | 0.3 | 16.9 | 0.9 |
| 9 | Mystique | 4.2 | 16 | 4.3 | 15 | 4.4 | 16 | 4.3 | 0.2 | 15.4 | 1.2 |
| 10 | Summer Flavor # 79 BC | 4.1 | 16 | 4.4 | 15 | 4.4 | 17 | 4.3 | 0.2 | 15.9 | 2.4 |
| 11 | Sweet Rhythm | 4.3 | 14 | 4.1 | 14 | 4.2 | 15 | 4.2 | 0.3 | 14.2 | 1.2 |
| 12 | Precious Gem | 4.4 | 15 | 4.2 | 16 | 4.1 | 16 | 4.2 | 0.3 | 15.6 | 1.6 |
| 13 | Temptation | 4.2 | 15 | 4.3 | 15 | 4.0 | 15 | 4.1 | 0.3 | 15.1 | 1.2 |
| 14 | PS 6803 | 4.1 | 17 | 4.5 | 17 | 4.7 | 18 | 4.5 | 0.3 | 17.4 | 1.5 |
| 15 | PS 7404 | 4.1 | 17 | 4.5 | 17 | 4.3 | 17 | 4.3 | 0.1 | 16.6 | 1.1 |
| 16 | Seneca Spring | 4.0 | 13 | 3.9 | 13 | 4.2 | 13 | 4.0 | 0.2 | 13.1 | 1.1 |
| | | | | | | | | **se overall** | | **se overall** | |
| | **site** | 4.2 | 15.1 | 4.2 | 14.7 | 4.3 | 15.4 | 4.2 | | 15.1 | |
| | **Column $DMRT_{(0.05)}$** | 0.3 | 1.3 | 0.3 | 1.8 | 0.3 | 1.4 | | | | |

| $sh_2$ Entry | | Celeryville diam. | Celeryville # rows | Fremont diam. | Fremont # rows | Wooster diam. | Wooster # rows | Entry Avg. diam. | Row $LSD_{(0.05)}$ diam. | Entry Avg. # rows | Row $LSD_{(0.05)}$ # rows |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ACX 946 | 4.5 | 17 | 4.1 | 15 | 4.1 | 16 | 4.2 | 0.5 | 16.0 | 1.3 |
| 2 | ACX 951 | 4.2 | 16 | 4.3 | 15 | 4.2 | 15 | 4.2 | 0.2 | 15.2 | 2.1 |
| 3 | BSS 0977 VP Attribute | 4.1 | 17 | 4.0 | 14 | 4.1 | 16 | 4.1 | 0.2 | 15.5 | 0.9 |
| 4 | BSS 1690 | 4.5 | 14 | 4.4 | 15 | 4.2 | 14 | 4.3 | 0.2 | 14.4 | 1.2 |
| 5 | BSS 6284 | 4.5 | 16 | 4.6 | 14 | 4.2 | 15 | 4.4 | 0.2 | 14.7 | 2.2 |
| 6 | GS275A | 4.5 | 19 | 4.3 | 18 | 4.4 | 19 | 4.4 | 0.2 | 18.5 | 1.4 |
| 7 | GS277A | 4.7 | 17 | 4.2 | 16 | 4.5 | 18 | 4.5 | 0.3 | 17.2 | 1.8 |
| 8 | GS282A | 4.2 | 19 | 4.3 | 18 | 4.3 | 18 | 4.3 | 0.3 | 18.0 | 1.1 |
| 9 | Summer Sweet # 8102R | 4.4 | 18 | 4.3 | 16 | 4.3 | 17 | 4.3 | 0.3 | 16.9 | 1.3 |
| 10 | Tango | 4.4 | 17 | 4.1 | 16 | 4.5 | 18 | 4.3 | 0.3 | 16.8 | 2.0 |
| 11 | Candy Corner | 4.4 | 14 | 4.2 | 14 | 4.2 | 15 | 4.3 | 0.2 | 14.4 | 1.0 |
| 12 | HMX 8343 BS | 4.2 | 15 | 4.2 | 14 | 4.2 | 15 | 4.2 | 0.3 | 14.8 | 1.0 |
| 13 | HMX 8344 BS | 4.9 | 16 | 4.5 | 16 | 4.3 | 16 | 4.6 | 0.3 | 16.0 | 1.4 |
| 14 | PS 8201 | 4.3 | 17 | 4.2 | 15 | 4.1 | 16 | 4.2 | 0.2 | 15.7 | 1.6 |
| 15 | PS 9364169 | 4.1 | 17 | 4.2 | 17 | 4.4 | 17 | 4.3 | 0.2 | 16.8 | 1.8 |
| 16 | Hollywood | 4.3 | 17 | 4.5 | 17 | 3.3 | 16 | 4.0 | 0.3 | 16.5 | 1.4 |
| | | | | | | | | **$sh_2$ overall** | | **$sh_2$ overall** | |
| | **site** | 4.4 | 16.5 | 4.3 | 15.5 | 4.2 | 16.3 | 4.3 | | 16.1 | |
| | **Column $DMRT_{(0.05)}$** | 0.3 | 1.8 | 0.3 | 1.5 | 0.3 | 1.6 | | | | |

Table 10. Ear length (cm) and total ear and shank length (cm) of se- and $sh_2$ type sweet corn entries planted at three sites in Ohio in 2001.

| se Entry | | Celeryville ear | Celeryville + shank | Fremont ear | Fremont + shank | Wooster ear | Wooster + shank | Entry Avg. ear | Row $LSD_{(0.05)}$ ear | Entry Avg. + shank | Row $LSD_{(0.05)}$ + shank |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ambrosia | 20 | 27 | 20 | 27 | 18 | 25 | 19.4 | 1.3 | 26.1 | 3.1 |
| 2 | BC 0801 VP Attribute | 21 | 30 | 21 | 31 | 20 | 28 | 20.6 | 1.0 | 29.6 | 2.3 |
| 3 | BC 4315 | 21 | 29 | 21 | 29 | 20 | 28 | 20.8 | 0.7 | 28.7 | 2.4 |
| 4 | BC 4806 | 20 | 32 | 21 | 33 | 19 | 31 | 20.2 | 1.3 | 31.6 | 3.2 |
| 5 | Bojangles | 20 | 30 | 21 | 28 | 20 | 28 | 20.4 | 0.4 | 28.6 | 1.9 |
| 6 | Bon Appetit | 19 | 26 | 19 | 27 | 19 | 25 | 18.6 | 0.8 | 26.1 | 1.7 |
| 7 | Ecstase II | 18 | 27 | 18 | 27 | 19 | 25 | 18.3 | 0.8 | 26.6 | 1.7 |
| 8 | Luscious | 19 | 28 | 19 | 27 | 19 | 26 | 19.0 | 1.3 | 27.3 | 2.4 |
| 9 | Mystique | 22 | 31 | 22 | 31 | 20 | 28 | 21.1 | 1.1 | 30.0 | 2.2 |
| 10 | Summer Flavor # 79 BC | 20 | 27 | 20 | 29 | 19 | 28 | 19.5 | 1.0 | 27.9 | 4.6 |
| 11 | Sweet Rhythm | 18 | 27 | 18 | 26 | 18 | 27 | 18.1 | 1.9 | 26.6 | 3.6 |
| 12 | Precious Gem | 20 | 27 | 20 | 29 | 19 | 28 | 19.8 | 0.8 | 28.1 | 1.4 |
| 13 | Temptation | 19 | 27 | 19 | 28 | 17 | 24 | 18.3 | 1.1 | 26.1 | 2.9 |
| 14 | PS 6803 | 21 | 35 | 20 | 29 | 19 | 30 | 20.4 | 1.2 | 31.1 | 4.2 |
| 15 | PS 7404 | 20 | 27 | 22 | 28 | 19 | 27 | 20.5 | 0.9 | 27.2 | 2.1 |
| 16 | Seneca Spring | 19 | 26 | 19 | 29 | 20 | 28 | 19.3 | 1.0 | 27.6 | 3.0 |
| | | | | | | | | **se overall** | | **se overall** | |
| | **site** | 19.8 | 28.6 | 20.0 | 28.5 | 19.1 | 27.2 | 19.6 | | 28.1 | |
| | **Column $DMRT_{(0.05)}$** | 1.2 | 2.8 | 1.0 | 2.9 | 1.3 | 3.3 | | | | |

| $sh_2$ Entry | | Celeryville ear | Celeryville + shank | Fremont ear | Fremont + shank | Wooster ear | Wooster + shank | Entry Avg. ear | Row $LSD_{(0.05)}$ ear | Entry Avg. + shank | Row $LSD_{(0.05)}$ + shank |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ACX 946 | 19 | 31 | 20 | 34 | 18 | 26 | 19.2 | 1.5 | 30.2 | 4.4 |
| 2 | ACX 951 | 21 | 31 | 21 | 30 | 20 | 32 | 20.7 | 0.9 | 31.0 | 1.7 |
| 3 | BSS 0977 VP Attribute | 19 | 31 | 18 | 29 | 18 | 26 | 18.3 | 0.7 | 28.3 | 2.6 |
| 4 | BSS 1690 | 21 | 30 | 21 | 35 | 18 | 28 | 20.0 | 1.1 | 30.8 | 3.9 |
| 5 | BSS 6284 | 20 | 29 | 21 | 34 | 19 | 28 | 20.0 | 0.6 | 30.5 | 1.7 |
| 6 | GS275A | 18 | 26 | 20 | 30 | 18 | 27 | 18.9 | 0.8 | 27.5 | 2.0 |
| 7 | GS277A | 18 | 28 | 19 | 29 | 18 | 27 | 18.3 | 0.7 | 28.2 | 2.7 |
| 8 | GS282A | 19 | 30 | 19 | 33 | 19 | 30 | 18.8 | 0.7 | 30.9 | 5.9 |
| 9 | Summer Sweet # 8102R | 17 | 25 | 18 | 27 | 17 | 24 | 17.3 | 0.9 | 25.2 | 3.6 |
| 10 | Tango | 20 | 28 | 20 | 31 | 19 | 28 | 19.4 | 0.8 | 29.0 | 2.4 |
| 11 | Candy Corner | 19 | 28 | 19 | 29 | 18 | 27 | 18.6 | 0.9 | 28.0 | 2.3 |
| 12 | HMX 8343 BS | 20 | 30 | 21 | 32 | 19 | 27 | 19.8 | 1.4 | 29.8 | 3.3 |
| 13 | HMX 8344 BS | 20 | 30 | 20 | 30 | 19 | 29 | 19.7 | 0.7 | 29.7 | 2.1 |
| 14 | PS 8201 | 20 | 33 | 20 | 33 | 19 | 32 | 19.7 | 0.6 | 32.7 | 3.7 |
| 15 | PS 9364169 | 20 | 29 | 20 | 31 | 19 | 27 | 19.6 | 0.8 | 28.7 | 2.3 |
| 16 | Hollywood | 19 | 28 | 19 | 29 | 14 | 17 | 17.0 | 1.0 | 24.7 | 3.4 |
| | | | | | | | | **$sh_2$ overall** | | **$sh_2$ overall** | |
| | **site** | 19.3 | 29.1 | 19.8 | 31.1 | 18.2 | 27.1 | 19.1 | | 29.1 | |
| | **Column $DMRT_{(0.05)}$** | 0.6 | 2.1 | 0.9 | 4.5 | 1.3 | 3.4 | | | | |

Note: 2.54 cm = 1 inch

Table 11. Ear leaf cover and complete kernel fill to tip on a scale of 1 = good to 3 = poor of se- and $sh_2$ type sweet corn entries planted at three sites in Ohio in 2001.

| se Entry | | Celeryville tip cover | Celeryville tip fill | Fremont tip cover | Fremont tip fill | Wooster tip cover | Wooster tip fill | Entry Avg. tip cover | Row $LSD_{(0.10)}$ tip cover | Entry Avg. tip fill | Row $LSD_{(0.10)}$ tip fill |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ambrosia | 2.3 | 2.3 | 2.0 | 2.5 | 1.0 | 2.8 | 1.8 | 1.0 | 2.5 | 0.5 |
| 2 | BC 0801 VP Attribute | 2.0 | 2.0 | 1.0 | 2.5 | 1.8 | 2.8 | 1.6 | 0.7 | 2.4 | 0.5 |
| 3 | BC 4315 | 1.3 | 2.3 | 2.0 | 2.5 | 1.0 | 2.5 | 1.4 | 0.7 | 2.4 | 0.5 |
| 4 | BC 4806 | 2.0 | 2.3 | 1.3 | 1.5 | 2.0 | 2.5 | 1.8 | 1.0 | 2.1 | 0.5 |
| 5 | Bojangles | 1.5 | 1.8 | 1.0 | 1.3 | 2.0 | 2.0 | 1.5 | 1.0 | 1.7 | 0.5 |
| 6 | Bon Appetit | 1.0 | 1.3 | 1.0 | 1.3 | 1.0 | 1.3 | 1.0 | 0.5 | 1.3 | 0.0 |
| 7 | Ecstase II | 1.3 | 1.5 | 1.8 | 1.8 | 2.0 | 1.5 | 1.7 | 0.9 | 1.6 | 0.7 |
| 8 | Luscious | 1.0 | 2.0 | 1.8 | 1.3 | 2.0 | 2.5 | 1.6 | 0.5 | 1.9 | 0.5 |
| 9 | Mystique | 2.5 | 2.5 | 2.5 | 2.0 | 1.3 | 2.5 | 2.1 | 1.0 | 2.3 | 0.9 |
| 10 | Summer Flavor # 79 BC | 2.0 | 2.0 | 1.3 | 2.3 | 1.0 | 2.0 | 1.4 | 0.8 | 2.1 | 0.5 |
| 11 | Sweet Rhythm | 1.3 | 2.0 | 1.3 | 2.0 | 2.0 | 2.3 | 1.5 | 0.8 | 2.1 | 0.7 |
| 12 | Precious Gem | 2.0 | 2.8 | 1.8 | 2.0 | 1.8 | 2.0 | 1.8 | 0.7 | 2.3 | 0.7 |
| 13 | Temptation | 1.3 | 2.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.1 | 0.7 | 1.4 | 0.5 |
| 14 | PS 6803 | 3.0 | 2.0 | 2.5 | 2.8 | 1.8 | 2.0 | 2.4 | 0.7 | 2.3 | 0.7 |
| 15 | PS 7404 | 2.8 | 2.0 | 2.0 | 2.5 | 2.0 | 2.3 | 2.3 | 0.8 | 2.3 | 0.5 |
| 16 | Seneca Spring | 2.0 | 1.5 | 2.0 | 2.5 | 1.5 | 1.5 | 1.8 | 0.8 | 1.8 | 1.2 |
| | | | | | | | | **se overall** | | **se overall** | |
| | **site** | 1.8 | 2.0 | 1.6 | 2.0 | 1.6 | 2.1 | 1.7 | | 2.0 | |
| | **Column $DMRT_{(0.05)}$** | 0.8 | 0.6 | 0.8 | 0.8 | 1.0 | 0.5 | | | | |

| $sh_2$ Entry | | Celeryville tip cover | Celeryville tip fill | Fremont tip cover | Fremont tip fill | Wooster tip cover | Wooster tip fill | Entry Avg. tip cover | Row $LSD_{(0.10)}$ tip cover | Entry Avg. tip fill | Row $LSD_{(0.10)}$ tip fill |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ACX 946 | 1.3 | 1.5 | 2.0 | 2.0 | 2.0 | 1.8 | 1.8 | 0.7 | 1.8 | 0.5 |
| 2 | ACX 951 | 2.3 | 2.3 | 1.5 | 1.0 | 2.3 | 2.5 | 2.0 | 0.8 | 1.9 | 1.1 |
| 3 | BSS 0977 VP Attribute | 1.3 | 1.5 | 1.0 | 1.0 | 2.0 | 2.0 | 1.4 | 0.8 | 1.5 | 0.5 |
| 4 | BSS 1690 | 1.0 | 1.0 | 2.0 | 1.0 | 2.3 | 2.0 | 1.8 | 0.8 | 1.3 | 0.9 |
| 5 | BSS 6284 | 2.0 | 2.5 | 2.0 | 1.8 | 1.0 | 1.8 | 1.7 | 0.7 | 2.0 | 0.0 |
| 6 | GS275A | 1.3 | 2.0 | 1.3 | 2.0 | 2.0 | 2.3 | 1.5 | 1.1 | 2.1 | 0.7 |
| 7 | GS277A | 2.8 | 1.3 | 1.8 | 1.5 | 2.3 | 2.0 | 2.3 | 1.3 | 1.6 | 0.8 |
| 8 | GS282A | 1.3 | 1.5 | 2.0 | 2.0 | 1.8 | 2.0 | 1.7 | 0.8 | 1.8 | 0.7 |
| 9 | Summer Sweet # 8102R | 1.5 | 1.5 | 1.8 | 1.3 | 2.5 | 2.3 | 1.9 | 0.8 | 1.7 | 0.9 |
| 10 | Tango | 1.5 | 2.5 | 1.8 | 2.0 | 2.0 | 2.0 | 1.8 | 0.7 | 2.2 | 1.0 |
| 11 | Candy Corner | 1.0 | 1.3 | 1.5 | 1.5 | 2.0 | 2.5 | 1.5 | 0.8 | 1.8 | 0.5 |
| 12 | HMX 8343 BS | 1.8 | 1.5 | 2.0 | 2.3 | 2.0 | 2.3 | 1.9 | 0.5 | 2.0 | 0.5 |
| 13 | HMX 8344 BS | 2.0 | 2.0 | 1.0 | 1.0 | 2.0 | 3.0 | 1.7 | 1.0 | 2.0 | 0.0 |
| 14 | PS 8201 | 2.0 | 2.0 | 1.3 | 1.5 | 2.0 | 2.0 | 1.8 | 0.8 | 1.8 | 0.5 |
| 15 | PS 9364169 | 1.3 | 1.5 | 2.0 | 2.0 | 2.3 | 2.0 | 1.8 | 4.7 | 1.8 | 0.7 |
| 16 | Hollywood | 1.8 | 1.8 | 2.0 | 2.0 | 1.7 | 1.7 | 1.8 | 0.6 | 1.8 | 0.7 |
| | | | | | | | | **$sh_2$ overall** | | **$sh_2$ overall** | |
| | **site** | 1.6 | 1.7 | 1.7 | 1.6 | 2.0 | 2.1 | 1.8 | | 1.8 | |
| | **Column $DMRT_{(0.10)}$** | 0.8 | 0.7 | 0.9 | 0.8 | 2.5 | 0.7 | | | | |

Table 12. Height (cm) to primary ear collar and top of plant tassel of se- and $sh_2$ type sweet corn entries planted at three sites in Ohio in 2001.

| se Entry | | Celeryville ear | Celeryville tassel | Fremont ear | Fremont tassel | Wooster ear | Wooster tassel | Entry Avg. ear | Row $LSD_{(0.05)}$ ear | Entry Avg. tassel | Row $LSD_{(0.05)}$ tassel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ambrosia | 62 | 205 | 45 | 158 | 40 | 160 | 49.0 | 7.6 | 174.2 | 18.7 |
| 2 | BC 0801 VP Attribute | 73 | 200 | 56 | 165 | 60 | 158 | 63.2 | 8.5 | 174.1 | 18.9 |
| 3 | BC 4315 | 60 | 183 | 41 | 147 | 53 | 149 | 51.3 | 9.4 | 159.5 | 15.3 |
| 4 | BC 4806 | 53 | 208 | 54 | 169 | 54 | 166 | 53.8 | 8.0 | 181.1 | 18.2 |
| 5 | Bojangles | 53 | 175 | 41 | 154 | 47 | 168 | 46.9 | 8.5 | 165.9 | 12.3 |
| 6 | Bon Appetit | 69 | 198 | 45 | 172 | 56 | 151 | 56.5 | 7.4 | 173.8 | 12.3 |
| 7 | Ecstase II | 47 | 167 | 34 | 138 | 42 | 133 | 40.8 | 3.8 | 145.9 | 10.7 |
| 8 | Luscious | 77 | 197 | 52 | 169 | 58 | 157 | 62.2 | 6.3 | 174.3 | 12.1 |
| 9 | Mystique | 63 | 197 | 44 | 166 | 41 | 152 | 49.8 | 10.0 | 171.6 | 9.1 |
| 10 | Summer Flavor # 79 BC | 67 | 190 | 42 | 160 | 41 | 153 | 50.0 | 5.7 | 167.9 | 13.4 |
| 11 | Sweet Rhythm | 60 | 207 | 43 | 166 | 54 | 138 | 52.5 | 11.8 | 170.1 | 14.3 |
| 12 | Precious Gem | 72 | 220 | 62 | 192 | 53 | 179 | 62.2 | 4.2 | 197.2 | 14.4 |
| 13 | Temptation | 67 | 191 | 48 | 168 | 53 | 147 | 55.8 | 4.7 | 168.6 | 14.8 |
| 14 | PS 6803 | 83 | 210 | 56 | 161 | 55 | 175 | 64.5 | 8.4 | 182.1 | 16.7 |
| 15 | PS 7404 | 69 | 201 | 55 | 184 | 54 | 170 | 59.1 | 9.6 | 185.0 | 14.1 |
| 16 | Seneca Spring | 44 | 170 | 34 | 148 | 46 | 151 | 41.2 | 8.3 | 156.3 | 8.7 |
| | | | | | | | | **se overall** | | **se overall** | |
| | **site** | 63.8 | 195.1 | 46.9 | 163.5 | 50.4 | 156.7 | 53.7 | | 171.8 | |
| | **Column $DMRT_{(0.05)}$** | 8.1 | 11.9 | 9.6 | 16.1 | 7.6 | 17.6 | | | | |

| $sh_2$ Entry | | Celeryville ear | Celeryville tassel | Fremont ear | Fremont tassel | Wooster ear | Wooster tassel | Entry Avg. ear | Row $LSD_{(0.05)}$ ear | Entry Avg. tassel | Row $LSD_{(0.05)}$ tassel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ACX 946 | 62 | 186 | 53 | 179 | 39 | 138 | 51.3 | 11.0 | 167.8 | 26.1 |
| 2 | ACX 951 | 80 | 210 | 85 | 204 | 46 | 145 | 70.3 | 10.9 | 186.4 | 17.6 |
| 3 | BSS 0977 VP Attribute | 74 | 220 | 82 | 214 | 48 | 163 | 67.9 | 8.3 | 198.9 | 15.5 |
| 4 | BSS 1690 | 67 | 210 | 49 | 179 | 45 | 148 | 53.3 | 7.5 | 178.9 | 12.6 |
| 5 | BSS 6284 | 64 | 198 | 51 | 191 | 47 | 157 | 54.0 | 12.5 | 181.9 | 13.6 |
| 6 | GS275A | 75 | 205 | 58 | 194 | 51 | 167 | 61.2 | 9.6 | 188.7 | 14.7 |
| 7 | GS277A | 66 | 178 | 49 | 164 | 43 | 153 | 52.4 | 8.5 | 164.8 | 14.0 |
| 8 | GS282A | 81 | 197 | 69 | 181 | 48 | 150 | 65.7 | 8.3 | 175.8 | 14.8 |
| 9 | Summer Sweet # 8102R | 76 | 197 | 54 | 192 | 40 | 154 | 56.6 | 9.0 | 180.7 | 18.3 |
| 10 | Tango | 66 | 177 | 50 | 165 | 52 | 154 | 56.0 | 8.9 | 165.7 | 11.2 |
| 11 | Candy Corner | 64 | 193 | 60 | 192 | 55 | 165 | 59.7 | 7.8 | 183.3 | 12.2 |
| 12 | HMX 8343 BS | 69 | 209 | 73 | 206 | 50 | 158 | 64.1 | 8.0 | 190.8 | 15.3 |
| 13 | HMX 8344 BS | 76 | 212 | 79 | 210 | 53 | 164 | 69.3 | 12.2 | 195.0 | 27.8 |
| 14 | PS 8201 | 86 | 202 | 88 | 195 | 64 | 166 | 79.2 | 8.3 | 187.6 | 13.0 |
| 15 | PS 9364169 | 71 | 202 | 65 | 192 | 52 | 158 | 62.5 | 7.5 | 183.6 | 10.4 |
| 16 | Hollywood | 82 | 196 | 68 | 190 | 39 | 119 | 62.9 | 10.5 | 168.5 | 21.6 |
| | | | | | | | | **$sh_2$ overall** | | **$sh_2$ overall** | |
| | **site** | 72.4 | 199.5 | 64.4 | 190.4 | 48.2 | 153.6 | 61.7 | | 181.2 | |
| | **Column $DMRT_{(0.05)}$** | 9.4 | 13.2 | 9.6 | 15.6 | 11.4 | 23.8 | | | | |

Note: 2.54 cm = 1 inch

Table 13. Estimate of overall performance of bicolor se- and $sh_2$-type sweet corn entries planted at three sites in Ohio in 2001 based on percent emergence and marketable yield. The lower the value, the better the rank.

| se Entry | | Rank by Site | | | Sum of Preceding Columns | Overall Rank in Study |
|---|---|---|---|---|---|---|
| | | Celeryville | Fremont | Wooster | | |
| 1 | Ambrosia | 12 | 3 | 8 | 23 | 11 |
| 2 | BC 0801 VP Attribute | 7 | 3 | 5 | 15 | 6 |
| 3 | BC 4315 | 5 | 2 | 6 | 13 | 5 |
| 4 | BC 4806 | 11 | 1 | 6 | 18 | 8 |
| 5 | Bojangles | 10 | 4 | 3 | 17 | 7 |
| 6 | Bon Appetit | 1 | 4 | 4 | 9 | 1 |
| 7 | Ecstase II | 4 | 8 | 12 | 24 | 12 |
| 8 | Luscious | 2 | 5 | 2 | 9 | 1 |
| 9 | Mystique | 13 | 6 | 10 | 29 | 13 |
| 10 | Summer Flavor # 79 BC | 8 | 2 | 14 | 24 | 12 |
| 11 | Sweet Rhythm | 3 | 7 | 1 | 11 | 3 |
| 12 | Precious Gem | 9 | 9 | 11 | 29 | 13 |
| 13 | Temptation | 1 | 4 | 7 | 12 | 4 |
| 14 | PS 6803 | 1 | 10 | 9 | 20 | 9 |
| 15 | PS 7404 | 6 | 2 | 13 | 21 | 10 |
| 16 | Seneca Spring | 1 | 3 | 6 | 10 | 2 |

| $sh_2$ Entry | | Rank by Site | | | Sum of Preceding Columns | Overall Rank in Study |
|---|---|---|---|---|---|---|
| | | Celeryville | Fremont | Wooster | | |
| 1 | ACX 946 | 6 | 8 | 11 | 25 | 11 |
| 2 | ACX 951 | 11 | 3 | 12 | 26 | 12 |
| 3 | BSS 0977 VP Attribute | 4 | 3 | 5 | 12 | 4 |
| 4 | BSS 1690 | 1 | 6 | 2 | 9 | 3 |
| 5 | BSS 6284 | 5 | 8 | 4 | 17 | 5 |
| 6 | GS275A | 5 | 7 | 6 | 18 | 6 |
| 7 | GS277A | 12 | 7 | 4 | 23 | 9 |
| 8 | GS282A | 9 | 11 | 8 | 28 | 14 |
| 9 | Summer Sweet # 8102R | 5 | 9 | 10 | 24 | 10 |
| 10 | Tango | 10 | 10 | 11 | 31 | 15 |
| 11 | Candy Corner | 2 | 2 | 3 | 7 | 2 |
| 12 | HMX 8343 BS | 7 | 8 | 7 | 22 | 8 |
| 13 | HMX 8344 BS | 7 | 2 | 9 | 18 | 6 |
| 14 | PS 8201 | 8 | 5 | 6 | 19 | 7 |
| 15 | PS 9364169 | 3 | 1 | 1 | 5 | 1 |
| 16 | Hollywood | 10 | 4 | 13 | 27 | 13 |

Table 14. Influence of se-type genotype and time of sampling on sweet corn kernel sap sucrose level (Brix, %) in crops planted at Celeryville, Fremont and Wooster, Ohio on May 9 and 11, 2001. Brix readings were taken using a Leica tabletop refractometer on sap expressed from eight ears per site immersed in liquid nitrogen within one hour of harvest and on sap expressed from eight ears held under refrigeration for ninety-six hours after harvest.

| | | Celeryville | | site-time | Fremont | | site-time | Wooster | | site-time | Entry Avg. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| se Entry | | harvest | 96 hr | LSD (0.05) | harvest | 96 hr | LSD (0.05) | harvest | 96 hr | LSD (0.05) | harvest | 96 hr |
| 1 | Ambrosia | 19.7 | 18.6 | 3.04 | 21.7 | 20.0 | 2.65 | 21.2 | 20.1 | 1.74 | 20.9 | 19.6 |
| 2 | BC 0801 VP Attribute | 18.6 | 17.9 | 1.89 | 22.0 | 19.9 | 1.21 | 18.9 | 19.5 | 4.69 | 19.8 | 19.1 |
| 3 | BC 4315 | 15.9 | 18.0 | 5.97 | 23.2 | 22.4 | 1.54 | 22.9 | 19.7 | 1.94 | 20.7 | 19.8 |
| 4 | BC 4806 | 19.6 | 18.7 | 0.88 | 19.1 | 18.7 | 2.16 | 19.2 | 18.6 | 1.99 | 19.3 | 18.7 |
| 5 | Bojangles | 18.6 | 16.5 | 4.15 | 19.3 | 15.7 | 1.69 | 16.7 | 16.3 | 2.76 | 18.1 | 16.2 |
| 6 | Bon Appetit | 17.3 | 16.8 | 2.28 | 16.8 | 17.3 | 1.70 | 16.0 | 15.2 | 1.93 | 16.7 | 16.4 |
| 7 | Ecstase II | 18.3 | 16.9 | 1.30 | 17.7 | 18.7 | 1.77 | 20.2 | 18.7 | 4.41 | 18.8 | 18.0 |
| 8 | Luscious | 18.1 | 17.0 | 1.98 | 17.3 | 16.3 | 1.86 | 19.1 | 18.3 | 2.49 | 18.1 | 17.2 |
| 9 | Mystique | 19.2 | 17.5 | 2.00 | 18.2 | 16.6 | 3.24 | 19.6 | 20.9 | 2.15 | 19.0 | 18.4 |
| 10 | Summer Flavor # 79 BC | 17.8 | 18.1 | 3.33 | 17.2 | 16.8 | 1.42 | 19.4 | 19.4 | 4.27 | 18.0 | 18.0 |
| 11 | Sweet Rhythm | 17.0 | 16.5 | 2.30 | 16.5 | 13.8 | 2.10 | 18.1 | 18.3 | 3.03 | 17.2 | 16.2 |
| 12 | Precious Gem | 18.3 | 17.1 | 2.04 | 17.6 | 16.7 | 4.63 | 17.5 | 16.8 | 3.12 | 17.8 | 16.8 |
| 13 | Temptation | 17.4 | 17.2 | 1.42 | 16.7 | 16.8 | 3.45 | 15.3 | 12.8 | 5.36 | 16.5 | 15.8 |
| 14 | PS 6803 | 13.3 | 13.7 | 3.68 | 20.8 | 18.6 | 2.35 | 21.1 | 20.3 | 1.49 | 18.2 | 17.1 |
| 15 | PS 7404 | 16.5 | 16.8 | 4.02 | 19.9 | 19.4 | 3.32 | 19.9 | 20.6 | 2.44 | 18.8 | 18.9 |
| 16 | Seneca Spring | 18.2 | 17.0 | 2.80 | 18.2 | 16.8 | 5.00 | 21.0 | 19.4 | 1.64 | 19.1 | 17.8 |
| | **column C.V.** | 10.40 | 9.20 | | 8.60 | 8.10 | | 10.20 | 8.20 | | 12.30 | 10.99 |
| | **column DMRT (0.05)** | 3.15 | 2.73 | | 2.80 | 2.51 | | 3.39 | 2.72 | | 2.25 | 1.95 |
| | | | | | | | | | | | **----- se overall -----** | |
| | **site average** | 17.7 | 17.1 | | 18.9 | 17.7 | | 19.1 | 18.5 | | 18.6 | 17.8 |

Table 15. Influence of $sh_2$-type genotype and time of sampling on sweet corn kernel sap sucrose level (Brix, %) in crops planted at Celeryville, Fremont and Wooster, Ohio on May 9 and 11, 2001. Brix readings were taken using a Leica tabletop refractometer on sap expressed from eight ears per site immersed in liquid nitrogen within one hour of harvest and on sap expressed from eight ears held under refrigeration for ninety-six hours after harvest.

| | | Celeryville | | site-time | Fremont | | site-time | Wooster | | site-time | Entry Avg. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $sh_2$ Entry | | harvest | 96 hr | LSD $_{(0.05)}$ | harvest | 96 hr | LSD $_{(0.05)}$ | harvest | 96 hr | LSD $_{(0.05)}$ | harvest | 96 hr |
| 1 | ACX 946 | 14.8 | 13.6 | 1.63 | 14.0 | 13.6 | 2.33 | 14.6 | 14.9 | 2.55 | 14.5 | 14.0 |
| 2 | ACX 951 | 15.4 | 14.4 | 1.28 | 15.3 | 15.5 | 1.74 | 14.1 | 13.1 | 2.74 | 14.9 | 14.3 |
| 3 | BSS 0977 VP Attribute | 15.7 | 14.5 | 1.46 | 14.8 | 15.3 | 2.94 | 15.0 | 15.0 | 2.45 | 15.2 | 14.9 |
| 4 | BSS 1690 | 15.7 | 14.6 | 0.71 | 14.5 | 13.3 | 2.75 | 15.4 | 16.2 | 1.08 | 15.2 | 14.8 |
| 5 | BSS 6284 | 15.9 | 13.0 | 2.07 | 14.2 | 11.3 | 1.57 | 13.6 | 14.7 | 3.13 | 14.6 | 13.0 |
| 6 | GS275A | 15.3 | 14.0 | 2.33 | 15.6 | 13.4 | 2.66 | 17.1 | 16.1 | 1.27 | 16.0 | 14.5 |
| 7 | GS277A | 18.5 | 15.6 | 2.47 | 15.5 | 12.6 | 2.61 | 16.3 | 16.4 | 2.40 | 16.7 | 14.7 |
| 8 | GS282A | 14.9 | 13.0 | 3.31 | 14.8 | 14.8 | 3.05 | 14.7 | 15.1 | 2.62 | 14.8 | 14.3 |
| 9 | Summer Sweet # 8102R | 13.2 | 14.1 | 1.79 | 14.3 | 12.3 | 1.56 | 16.1 | 15.2 | 2.57 | 14.4 | 14.0 |
| 10 | Tango | 15.1 | 14.6 | 1.79 | 15.5 | 13.4 | 4.84 | 16.1 | 16.4 | 1.01 | 15.5 | 14.8 |
| 11 | Candy Corner | 16.4 | 14.5 | 2.03 | 15.2 | 13.9 | 1.29 | 15.6 | 15.6 | 2.70 | 15.7 | 14.6 |
| 12 | HMX 8343 BS | 13.8 | 12.3 | 1.49 | 13.8 | 13.6 | 1.56 | 15.2 | 13.6 | 3.38 | 14.3 | 13.1 |
| 13 | HMX 8344 BS | 16.6 | 16.3 | 0.83 | 16.1 | 15.9 | 1.80 | 16.1 | 15.5 | 3.40 | 16.2 | 15.9 |
| 14 | PS 8201 | 14.0 | 13.7 | 2.13 | 13.0 | 13.8 | 3.85 | 13.2 | 13.1 | 1.66 | 13.5 | 13.5 |
| 15 | PS 9364169 | 15.7 | 14.3 | 1.62 | 15.8 | 14.3 | 1.66 | 15.1 | 14.6 | 3.29 | 15.5 | 14.4 |
| 16 | Hollywood | 16.1 | 13.3 | 2.45 | 15.2 | 14.9 | 2.04 | 15.3 | 14.1 | 2.62 | 15.5 | 14.1 |
| | **column C.V.** | 8.60 | 6.50 | | 9.80 | 11.10 | | 12.30 | 6.10 | | 10.31 | 10.12 |
| | **column DMRT $_{(0.05)}$** | 2.27 | 1.58 | | 2.50 | 2.61 | | 3.32 | 1.56 | | 1.55 | 1.42 |
| | | | | | | | | | | | **---- $sh_2$ overall ----** | |
| | **site average** | 15.4 | 14.1 | | 14.8 | 13.8 | | 15.2 | 15.0 | | 15.2 | 14.3 |

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