

Public Evaluation of Sweet Corn Eating Quality, Northern Indiana, 2007

Elizabeth T. Maynard, Purdue University, Westville, Indiana 46391

This paper reports on the evaluation of eating quality for many of the sweet corn varieties included in 2007 trials in Northern Indiana.

Materials and Methods

Twenty-three varieties of sweet corn were planted at the Pinney-Purdue Agricultural Center between June 26 and July 10. Each variety was planted on two dates, approximately four days apart, scheduled so that one of the plantings would be near harvest maturity on September 11. Supersweet (sh2) varieties were planted in one block and se and synergistic varieties in another block at least 250 feet distant. Each variety was planted in four adjacent rows on each planting date. Cultural practices and pest management followed standard procedures for the area. On September 11, ears were harvested from the center two rows of those plots judged to be at market maturity. Ears were dehusked, broken into 2.5- to 4-inch sections, rinsed, and stored in a cooler at approximately 40°F until evening when they were cooked by immersing in boiling water. Care was taken to prevent mixing of varieties. After cooking, ear sections were served to attendees at a pumpkin and sweet corn twilight meeting along with pork chops, sliced tomatoes, and zucchini salad. Attendees were invited to evaluate sweet corn on a scale of 1 (dislike very much) to 5 (like very much), and write in comments as they wished. Attendees were free to evaluate as many or as few varieties as they wished. Corn varieties were identified to tasters by a single code letter. Data were analyzed using a one-way analysis of variance with mean separation using Student's t for means with unequal variances.

Results and Discussion

Forty-five people evaluated the corn out of approximately 95 who ate the meal. Evaluators included gardeners, sweet corn farmers, seed company representatives, and others. On average, each person evaluated 6.8 varieties. Two people evaluated 16 varieties each, and four people evaluated just two varieties each. Each variety was evaluated by two to 26 people, with an average of 15.8 people per variety.

Table 1 shows results for varieties that were rated by at least nine people. The top six varieties were supersweets and did not differ significantly: Optimum, Gourmet Sweet Grand (GSB) 274A, Valor, Cascade, BSS 0982, and Holiday. The next two varieties, a homozygous se (Ambrosia), and a synergistic (Kristine) fell in the middle of a group of 11 varieties that didn't differ significantly. Supersweets, homozygous se, and synergistic types were also represented among varieties at the bottom end of the ranking. Comments provided by evaluators indicated that individuals judged some ears to be over- or under-mature, which influenced the rating.

This trial does not provide a definitive evaluation of eating quality for these varieties. Slight differences in maturity can influence eating quality, and based on the comments and field observations it seems likely that was an issue for at least some of the cultivars in this evaluation. It does provide information beyond the evaluation of uncooked ears performed during harvest of

the replicated trials that are summarized in separate reports. The information presented here should be considered together with results of other trials to identify cultivars with superior eating quality.

Table 1. *Eating quality ratings for 16 sweet corn cultivars, Northern Indiana 2007.*

Cultivar	Seed Source ^z	Eating Quality Mean ^y	Std. Dev.	N ^x	Comments
Optimum	CR	4.38 a	0.8	25	Good corn flavor; has a very good taste; best; sweet; excellent, tender; sweetest — good flavor, firm milk; very tender; great taste, kernels come off very easily; sweet, tender; very sweet
GSB 274A	ST	4.18 ab	0.8	11	Very sweet; sweet
Valor	CR	4.00 abc	0.9	9	Has a real good taste; very good and sweet; tasty, crisp, sweet
Cascade	CR	3.84 abc	0.9	19	My favorite; best; tender, small kernels; too much white; tender, not much taste; very sweet; plain white; not as good as L ('Optimum')
BSS 0982	SY	3.78 abc	1.0	16	Be OK for freezer corn; the best; crisp, sweet, good flavor; good taste; this is best, has good taste; tough, not sweet
Holiday	CR	3.77 abc	1.2	22	Sweeter than G ('Revelation'), D ('Ambrosia'), J ('Polka'); not much taste; not sweet, no taste; good; juicy — very good.
Ambrosia	RI	3.77 bc	1.1	26	Tender, not sweet; watery, mushy; has a little better taste; ?se juicy soft kernel; pasty dry; very sweet — I like the best; nothing to talk about — so-so; somewhat tender, but not very sweet; not as sweet as G ('Revelation'); slightly less sweet than G ('Revelation'); overmature, no sweetness; overmature
Kristine	CR	3.65 bcd	1.3	17	Just like G ('Revelation'); very sweet; very good; has no taste; real good
Polka	CR	3.58 bcd	1.1	18	Very sweet; doesn't seem as sweet as the others; somewhat chalky; chewy but good; bland taste
Montauk	ST	3.56 bcd	0.9	16	My favorite; a bit young, flat; very good; flat taste

^zCR=Crookham, HM=Harris Moran, RI=Rispens, ST=Stokes, SY=Syngenta.

^yEars rated by volunteers attending a sweet corn and pumpkin twilight meeting. 1=dislike very much, 3=neutral, 5=like very much. Means followed by the same letter do not differ significantly at P=.05 according to Student's t Test.

^xN=number of people who rated that variety.

Continued on next page

Table 1 (continued)

Cultivar	Seed Source ^z	Eating Quality Mean ^y	Std. Dev.	N ^x	Comments
GSB 2171	ST	3.42 bcdf	1.1	19	Tender, no sweetness; good, low sugar, low corn taste; nice flavor — good crunch; snappy, not real sweet; good corn flavor; kernels tender
Revelation	HM	3.38 cdf	1.1	26	Did not have a taste; not very sweet, creamy taste; crisp, better texture, hard to determine taste; seems sweet — slightly; tender; tender kernels; candy sweet; good tenderness
BC 0805	SY	3.17 cdef	1.1	15	Odd taste; sweet; crisp, small kernel; tender, right on flavor; too young to tell
Navajo	ST	2.72 e	1.1	20	Too much fibery pericarp — chewy; small kernels; underdeveloped; se, soft; very good and sweet; not sweet.
BC 0808	SY	2.69 efg	0.9	13	Chewy; chewy, not as sweet; bland, soft, not good texture; poor flavor
GSB 2281	ST	2.00 g	1.3	16	Has a cob taste to it; field corn; sweet; crisp, starchy cob taste; Tasteless

^zCR=Crookham, HM=Harris Moran, RI=Rispens, ST=Stokes, SY=Syngenta.

^yEars rated by volunteers attending a sweet corn and pumpkin twilight meeting. 1=dislike very much, 3=neutral, 5=like very much. Means followed by the same letter do not differ significantly at P=.05 according to Student's t Test.

^xN=number of people who rated that variety.

Acknowledgments

J. Leuck and staff, Pinney-Purdue Agricultural Center; N. DeFrank, B. Rhoda, R. Shay, J. Sheets, and Master Gardeners from Porter and LaPorte counties; seed companies listed in Table 1 provided financial support and/or seed.