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# Sweet Corn Cultivar Trial, 2007

Vincent Lawson
*Iowa State University*, vlawson@iastate.edu

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**Abstract**
The 2007 sweet corn cultivar trial was conducted to identify cultivars with good ear characteristics for local marketing or short distance shipping. This year's trial focused on the bicolored, high-quality sh2 types, often referred to as augmented or improved sh2, that are reported to be exceptionally sweet and tender. These hybrids need isolation from other corn genetic types in the field and careful handling at harvest, but can provide the best combination of gourmet eating quality with shelf-life that is available.

**Disciplines**
Agricultural Science | Agriculture

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## Introduction

The 2007 sweet corn cultivar trial was conducted to identify cultivars with good ear characteristics for local marketing or short-distance shipping. This year's trial focused on the bicolored, high-quality sh2 types, often referred to as augmented or improved sh2, that are reported to be exceptionally sweet and tender. These hybrids need isolation from other corn genetic types in the field and careful handling at harvest, but can provide the best combination of gourmet eating quality with shelf-life that is available.

## Materials and Methods

*Planting.* Trial planted on April 23, 2007, on a dark-colored, loamy-sand soil.
*Plot Design*. A randomized complete block design with three replications was used. Plots consisted of two rows 25 ft long and row spacing was 30 in. After emergence, plants were thinned to approximately 8 in. apart and a uniform population of 28,000/acre.
*Fertility and Irrigation.* Water applied as needed by center pivot irrigation system to supplement rainfall. Fertilizer applied preplant incorporated at rate of 60 lb nitrogen (N) and 100 lb potassium (K2O). After crop emergence, 45 lb N (UAN) was sidedressed on May 21 and again on June 9.
*Pest Control.* Dual II Magnum, Atrazine 4L, and Callisto herbicide were applied crop preemergence. Fanfair insecticide was sprayed on a three to four day schedule once silking started.

## Results and Discussion

After harvest, informal comparisons of kernel sweetness and tenderness were made between cultivars. Differences were noted but there were not any really bad choices for eating quality in this group. Overall, considering ear appearance, ear size, kernel depth, husk cover, tip fill, and eating quality the following cultivars produced ears with superior quality: 274A, Mirai 334 BC, Mirai 301 BC, Fantastic, 277A, Mirai 350 BC, XTH 2281, and Obsession.

Cultivars are arranged by maturity, early-to-late, in the tables. 272A was the earliest maturing cultivar in the trial and had surprising seedling vigor and ear size for its maturity and genetic type. All cultivars produced acceptable yields except Fantastic and Mirai 308BC. Their poor yields might have been due to poor seed causing weak plant emergence. Fantastic showed excellent vigor and performance in 2005 and 2006 trials. XTH 2171, XTH 2281, Obsession, and BSS 0982 are new to the trial this year and performed well with average to good seedling vigor, yield, and ear quality. BSS 0982 is an insect-protected (Bt) hybrid.

**Table 1. Sweet corn cultivar seed source and trial comments.**

| Cultivar | Source* | Comments |
|---|---|---|
| 272A | ST | Good plant vigor, yield, and ear quality for early maturing cultivar. |
| XTH 2171 | ST | Long shanks and flag leaves, skinny ear, good eating quality – looked promising. |
| 274A | ST | Strong plant and yield, good ear quality. |
| Optimum | CR | Seedling vigor can be weak, medium-sized ears were good quality. |
| Mirai 334BC | CE | Nice ears, tender and sweet but tip fill could be a little better. |
| Mirai 308 BC | CE | Poor yield due to poor stand, ears tender and sweet. |
| Fantastic | ST | Excellent ear quality, poor yield due to bad seed this year? |
| Mirai 302BC | CE | Nice big ears, tip fill okay but could be better, some plant lodging noted. |
| Mirai 301BC | CE | Attractive and good eating ears, bad plant lodging and uneven ear maturity. |
| Triumph | ST | Attractive ears, sweet and tender kernels, severe plant lodging at harvest. |
| 277A | ST | Some plant lodging, only fair husk cover and tip fill, short ear length but deep kernels tender and sweet – one of the best eating cultivars in trial. |
| Mirai 350BC | CE | Weak seedling vigor, uneven plant development but some nice ears. |
| Mirai 336BC | CE | Uneven maturity, skinny ears and shallow kernels. |
| XTH 2281 | ST | First year of trial, showed good characteristics, looked promising. |
| Obsession | SE | Strong plant and yield, a few small secondary ears in husk, crunchy sweet kernels. |
| BSS 0982 | RG | Insect protected (Bt) hybrid, a lot of foliage, multiple ears, decent eating quality. |
| Holiday | CR | Big attractive ears had shallow kernels that were sweet and tender. |
| 282A | ST | Poor seedling vigor but strong plant once established, multiple ears per plant. |

*Source: CE = Centest, CR = Crookhams, RG = Rodgers, ST = Stokes.

**Table 2. Sweet corn cultivar marketable yield and ear characteristics.**

| Cultivar | DTH | Seedling vigor rating* | Dozen (ears/A) | Yield (cwt/A) | Husked ear (wt–lb) | Ear length (in.) | Ear diameter (in.) | Husk cover | Tip fill |
|---|---|---|---|---|---|---|---|---|---|
| 272A | 75 | G | 1,525 | 127.5 | 0.51 | 7.7 | 1.84 | G | G |
| XTH 2171 | 77 | G | 1,392 | 112.7 | 0.47 | 7.7 | 1.72 | G | G |
| 274A | 77 | G | 1,343 | 129.1 | 0.62 | 8.2 | 1.96 | G | G |
| Optimum | 77 | F-G | 1,198 | 92.1 | 0.45 | 7.4 | 1.74 | G | G |
| Mirai 334BC | 77 | G | 1,125 | 102.4 | 0.53 | 8.3 | 1.86 | G | F-G |
| Mirai 308 BC | 77 | P | 617 | 50.3 | 0.52 | 8.0 | 1.87 | F-G | G |
| Fantastic | 78 | F | 968 | 92.2 | 0.54 | 7.7 | 1.89 | F-G | G |
| Mirai 302BC | 80 | F | 1,476 | 139.5 | 0.59 | 8.5 | 1.94 | G | F-G |
| Mirai 301BC | 80 | F | 1,319 | 120.1 | 0.57 | 8.0 | 1.94 | G | G |
| Triumph | 80 | G | 1,246 | 113.7 | 0.56 | 7.7 | 1.89 | F | G |
| 277A | 80 | F | 1,162 | 91.5 | 0.50 | 7.3 | 1.81 | F | F |
| Mirai 350BC | 81 | F | 1,331 | 116.2 | 0.50 | 7.8 | 1.83 | G | G |
| Mirai 336BC | 81 | F | 1,174 | 106.1 | 0.50 | 8.4 | 1.72 | G | F-G |
| XTH 2281 | 83 | G | 1,573 | 152.5 | 0.54 | 7.8 | 1.89 | G | G |
| Obsession | 84 | F-G | 1,585 | 166.0 | 0.56 | 8.3 | 1.87 | F-G | G |
| BSS 0982 | 84 | G | 1,331 | 137.8 | 0.57 | 8.3 | 1.89 | G | G |
| Holiday | 84 | F | 1,319 | 132.1 | 0.56 | 8.3 | 1.90 | G | G |
| 282A | 86 | P-F | 1,113 | 116.3 | 0.53 | 7.8 | 1.92 | G | G |
| Average | | | 1,266 | 116.6 | 0.54 | 7.9 | 1.86 | | |
| LSD 5% | | | 256 | 26.9 | | | | | |

*Seedling Vigor: based on plant size four weeks after planting: G = good, F = fair, P = poor.