

2006 Early Tomato Variety Trial Results

Marshfield Agricultural Research Station

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Introduction

Clark County UW-Extension in cooperation with UW-Madison and the Marshfield Agricultural Research Station initiated a tomato variety trial in 2006. The focus of the trial was to identify tomato varieties suited for northern climates and with early tomato maturation. Results are intended to provide farmers' market vendors and produce auction sellers with information to help guide variety selection decisions.

Materials and Methods

Tomatoes were started in a greenhouse at the University of Wisconsin-Madison and shipped to the Marshfield Agriculture Research Station. Seedlings were planted in research plots on June 1st, 2006 at a spacing of 2 feet between plants in the row and 5 feet between rows. Hand weeding was performed throughout the growing season. Irrigation was performed with a drip-line system. Plants were supported by a trellis-weave system. Plots were fertilized according to A2809 recommendations. Plants were evaluated for date of fruit ripening, number of fruit produced, weight of fruit, fruit appearance, and fruit diameter as the tomatoes reached maturity. Fruit harvest began in late July with fruit picked and weighed 2 to 3 times per week through the first killing frost. The final harvest date was October 9th, 2006. Ten "early" varieties were compared in this study with data being collected from 4 plants of each variety.

Results

Total fruit per plant, average fruit weight, and total fruit weight (including all marketable and blemished fruit) are compared through Analysis of Variance and Least Significant Differences. The letters next to the trait

Results (Continued)

being measured are used to identify statistically significant differences. Varieties with the same letter are statistically the same at the 95% confidence interval for the measurement being compared. 'Average harvest' in the descriptions below represents the mean date which the tomatoes were ripe on a given plant and then averaged across the 4 plants of the variety entry.

Description of Trial Entries

Applause VF

- Extra large Sun Chief type, determinate plant.
- Very firm fruit.
- First Ripe: August 3rd.
- Average Harvest: September 2nd.
- New in 2006 submitted by Stokes.

Beefmaster VFN

- Standard Beefmaster type variety.
- Largest fruit of trial.
- Indeterminate plants.
- Outstanding taste.
- First Ripe: August 16th.
- Average Harvest: September 7th.
- Submitted by Stokes.

Champion Hybrid VFNT

- Full-sized tomato.
- Flavorful and prolific fruit.
- First Ripe: August 14th.
- Average Harvest: September 10th.
- Submitted by Totally Tomatoes.

Debut VF

- Smooth, firm fruit.
- Determinate plants with abundant foliage.
- Protects the fruit from sunscald.
- Too much fertilizer may cause blotchy ripening
- First Ripe: August 8th.
- Average Harvest: September 3rd.
- Submitted by Stokes.

Bush Early Girl Hybrid VFNT

- Determinate, patio-sized tomato.
- Abundant tomato production.
- First Ripe: August 9th.
- Average Harvest: September 7th.
- Submitted by Totally Tomatoes.

Variety	Tomatoes Per Plant	Average Tomato Weight ounces	Total Tomato Weight pounds/plant
Beefmaster	27 (DE)	13.8 (A)	24.0 (A)
Mountain Spring	45 (ABC)	8.6 (CD)	23.7 (A)
Champion	43 (BC)	8.1 (D)	21.6 (AB)
Whopper	41 (BC)	7.7 (D)	19.5 (ABC)
Bush Early Girl	52 (AB)	5.9 (E)	19.3 (ABC)
Ultra Sweet	36 (CD)	7.1 (D)	18.2 (BC)
Debut	37 (CD)	7.6 (D)	17.5 (BC)
Sun Chief	25 (DE)	9.9 (BC)	15.3 (CD)
Applause	22 (E)	10.7 (B)	14.4 (CD)
Subarctic	55 (A)	4.0 (F)	12.0 (D)
Average	38	8.4	18.5

Mountain Spring VF

- Determinate plant.
- Tolerant to cracking.
- Tolerates stress well.
- May be oblong, pointed at base.
- First Ripe: August 8th.
- Average Harvest: September 15th.
- Submitted by Holmes.

Park's Whopper Improved Hybrid VFNT

- Earlier and tastier than the original Whopper.
- Disease and crack resistance.
- First Ripe: August 14th.
- Average Harvest: September 10th.
- Submitted by Totally Tomatoes.

Sub-Arctic Maxi

- Earliest, full-sized tomato for northern regions.
- Determinate plant.
- Smallest fruit of trial.
- First Ripe: July 27th.
- Average Harvest: August 29th.
- Submitted by Stokes.

Sun Chief VF

- Early season, large, firm tomato.
- Determinate plant.
- First Ripe: August 10th.
- Average Harvest: September 9th.
- Submitted by Siegers.

Ultra Sweet VFT

- Medium sized beefsteak tomato.
- Indeterminate plant.
- Firm fruit and outstanding flavor.
- First Ripe: August 8th.
- Average Harvest: September 6th.
- Submitted by Stokes.

Disease Resistance or Tolerance:

V= Verticillium, F= Fusarium, N=Root Knot Nematode, T=Tobacco Mosaic Virus



Size Distribution: The figure below presents a box and whiskers plot representing all 1452 tomatoes harvested in this study. For those interested in commercially selling tomatoes, size consistency is important for packaging, shipping and grading purposes. In a box and whiskers plot, the bottom on the whisker indicates the smallest typical sized fruit and the top of the whisker indicates the largest typical sized fruit. An "*" indicates the fruit was an outlier. Stated another way, that fruit was either exceptionally small or exceptionally large. The box begins at the 25% smallest sized fruit and ends at 75% largest fruit. The line running through the middle of the box represents the median size. A variety such as "Applause" having a compressed box and whiskers plot indicates that variety has more uniform sized tomatoes. An elongated plot such as Beefmaster's indicates a more variable sized tomato.

Tomato Size Distribution

