

2004 TOMATO CULTIVAR OBSERVATION

*William H. Shoemaker,
University of Illinois

Tomatoes are among to the most important fresh market vegetables cultivated commercially in northern Illinois. Cultivar selection is critical to profitability and consumer satisfaction. The trial evaluates leading commercial tomato cultivars for suitability to northern Illinois growing conditions and farming systems

Materials and Methods

This cultivar observation took place at the St Charles Horticulture Research Center in St Charles, IL in a Proctor Silt Loam soil. Seeds were set in the greenhouse on 4/05/04 in Pro-Tray 50sq plug flats with Jiffy Mix Plus growing media. Trays were watered daily and fertilized twice weekly in the water with 100 ppm N using 20-20-20 soluble fertilizer. The field was prepared by applying trifluralin herbicide at 0.875 lb aia, ppi. Black plastic mulch with drip irrigation underneath was applied prior to transplanting by hand. Plant progress in the greenhouse was satisfactory and plants were set in the field on May 25. Plant were set in rows 6' apart and 18" apart within rows. A single planting of each cultivar consisted of 8 plants. Transplants were watered in with a soluble starter fertilizer, 9-45-15. No additional fertilizer was used. Plants were raised in #10 wire cages. Irrigation through the drip system was applied as needed. Two applications of Bravo fungicide at 2.5 pints/acre were applied, one tank-mixed with 1lb aia Sevin insecticide. Fruit were harvested by hand as needed until the season ended at the end of September. Fruit were graded, counted, weighed and evaluated for quality.

Results and Discussion

See Table 1 for harvest data. This trial went relatively smoothly with no serious pest problems or weather disasters, with the exception of the season developing too few heat units. Meteorologists have described this Summer as one of the coolest on record. Therefore the tomato crop developed slowly and harvest took place very late. Frequent rainfalls in the early half of the growing season contributed to this problem but also ensured abundant soil moisture during crop establishment and fruit set. Many of the fruit trusses had high numbers of fruit which developed slowly due to cool conditions but also had few flaws. Harvest began at the end of July with a few early cultivars but real productivity didn't take place until the latter half of August. Most cultivars peaked in their production in September.

Many of the cultivars that have performed well in past trials also did well this year. However, sever new cultivars were among the top performers, including Mountain Crest, Amelia and Sebring. These cultivars were productive with high numbers of #1 fruit. Fruit quality overall was very good with no significant incidence of blossom end rot, catfacing or grey-wall in any of the cultivars. The top producer in this year=s trial was a familiar top-performer, Fabulous. It was way out in front with it=s production of number one fruit. Typically, fruit quality was very good with Fabulous. Acclaim, Sunbrite, Sunleaper and Red Sun were also a very good producers in this year=s trial. Among early producers, Sunshine and Sunchief were the first to produce quality fruit.

**Sr Research Specialist, Food Crops. Dept of NRES, St Charles Horticulture Research Center.*

***TABLE 1. Tomato Cultivar Observation Harvest Data**

Cultivars	Source	#1 Fruit		#2 Fruit		Ave Fruit Wt (lb.)
		No.	Wt.	No.	Wt.	
Fabulous	SW	242	164.2	210	73.6	0.53
Mountain Crest	SU	202	128.1	164	61.5	0.52
Amelia	HM	186	119.0	157	57.9	0.52
Acclaim	SK	164	112.7	167	62.4	0.53
Sebring	RG	180	107.7	155	55.5	0.49
Sunbrite	SM	155	104.8	141	52.1	0.53
Sunleaper	RG	174	102.9	331	112.5	0.43
Red Sun	JS	138	100.6	111	43.2	0.58
Primetime	HM	147	99.6	149	59.0	0.54
Florida 47	SM	153	95.7	206	71.9	0.47
BHN 586	SG	145	88.3	316	104.3	0.42
BHN 591	SG	150	86.7	242	84.1	0.44
Mountain Fresh	HM	135	85.6	179	61.3	0.48
Sunchief	SM	150	85.4	115	39.2	0.47
ACX 128	AC	125	82.4	195	70.7	0.48
BHN 543	SG	117	76.6	197	72.3	0.47
Paragon	JS	132	74.9	226	75.0	0.42
Sunpride	SM	121	74.7	179	63.8	0.46
Daybreak	JS	122	74.2	237	68.3	0.40
Mountain Spring	RG	109	67.8	175	64.7	0.47
Sunguard	SM	112	62.1	224	72.6	0.40
Palisade	JS	108	58.7	224	71.5	0.39
Sunshine	SM	96	55.7	273	82.5	0.37

EX 1760334	SM	41	23.6	147	43.6	0.36
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