

1998 FRESH MARKET TOMATO CULTIVAR EVALUATION

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This Fresh Market Tomato trial compared 15 cultivars using 3 replicates of each cultivar. Objectives were to evaluate potential fresh market tomato cultivars for total yield, average fruit size, color, % soluble solids, grade and quality attributes and for their overall suitability in a southern Ohio growing season.

METHODS:

Planting: Seeded April 15, into 98-cell Pro Trays using a peat-vermiculite soilless mix. Cells were thinned as needed to 1 plant / cell. Plants were field planted on May 22, 1998 at Hillsboro, Ohio using a Water Wheel Planter.

Spacing: Rows were 5 feet apart, with plants set onto raised beds at 16" spacing between plants. The beds were covered with black plastic mulch with trickle irrigation under the mulch prior to planting. 11 plants per plot (5' x 15') provided a plant density of approximately 6,534 plants per acre.

Soil Type: Haubstadt Silt Loam

Fertilizer: Applied 120 lbs N., 120 lbs. P₂O₅ and 120 lbs. K₂O per acre prior to planting according to soil test recommendations. 20-20-20 (1 lb. / 100 gal. 8 oz. Per plant) with transplanting water.

Weed Control: 2.00 pt / A Treflan 4 E tank mixed with .51 lb./ A Sencor 75 DF pre plant incorporated on 5/21/98.

Hand hoed and cultivated as necessary.

Pest Management.: 3 pt. / A Echo 720 on 6/1, 6/22, 6/29, 7/7, 7/15, 7/21
2 lb. / A Bravo 720 on 8/3, 8/14, 8/21, 8/28

Irrigation (6 times) : Trickle Irrigated 7/7, 7/13, 7/20, 7/31, 8/10 and 8/18.

Harvests (4): August 14, August 20, August 27 and September 9.

RESULTS:

Total marketable, U.S. No. 1 and U.S. No. 2 , yields for the replicated cultivars ranged from 18.7 tons per acre (Golden Girl) to 4.7 tons per acre (SXT6611) . Golden Girl, the only yellow variety on test this year, was very firm and had smooth, thick fleshed fruit with an average fruit size smaller than Mountain Spring. Other firmer varieties, Majesty and EX10061 had early marketable and total yields above average for this trial and similar to Mountain Spring and Mountain Fresh. RFT 4413 and SXT 6615 had the greatest overall % soluble solids.

SXT 6611 had the lowest total marketable yield as well as the lowest average fruit size.

Sweet Cluster, the only red saladette type of tomato tested, had 17.8 tons total marketable fruit per acre, an average fruit size of .18 lb and 4.6 % soluble solids.

The long range goal is to utilize the existing agricultural infrastructure of southern Ohio to introduce these Fresh Market tomato varieties as an alternative crop for Ohio producers.

Table 1. Yields from replicated Fresh Market Tomato cultivar trials: Ohio State University Extension Enterprise Center, Hillsboro, Ohio 1998

<u>Cultivar</u>	<u>Seed Source</u>	<u>Marketable Ton/Acre</u>	<u>Marketable Fruit/Acre</u>	<u>Average Fruit Wt.</u>	<u>Soluble Solids</u>	<u>Fruit Color</u>
Golden Girl	PS	18.7	87083	0.43	3.6	Yellow
Mountain Fresh	RU		13.4 47083		0.56	3.9 Red
Majesty	RU	12.0	43333	0.48	4.2	Red
EX 10061	AS	11.4	39167	0.55	3.8	Red
Mtn Spring	RU	10.9	42708	0.50	4	Red
RFT 4413	RNK	10.3	34583	0.62	4.7	Red
Sunbright	AS	9.6	34375	0.53	4.1	Red
XPH 10047	RU	9.5	38542	0.51	3.5	Red
SXT 6609	SS	7.0	33125	0.42	3.1	Red
EX 10086	AS	6.9	24583	0.52	3.3	Red
Sanibel	RU	6.8	26458	0.49	3.47	Red
SRT 6629	SS	5.5	19167	0.56	4.2	Red
SXT 6615	SS	4.8	18750	0.51	4.3	Red
SXT 6611	SS	4.7	22917	0.39	2.9	Red
LSD	NA	5.92	20794	0.1155	NA	NA

Table 2. Yields from replicated Fresh Market Saladette Tomato cultivar trials: Ohio State University Extension Enterprise Center, Hillsboro, Ohio 1998

<u>Cultivar</u>	<u>Seed Source</u>	<u>Marketable Ton/Acre</u>	<u>Marketable Fruit/Acre</u>	<u>Average Fruit Wt.</u>	<u>Soluble Solids</u>	<u>Fruit Color</u>
Sweet Cluster Red	PETOSEED	17.8	191875		0.18	4.6