

# GREENHOUSE TOMATO VARIETY TRIALS 1976-1977

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Ten greenhouse tomato cultivars were included in the 1976 and 1977 Variety Trials. Trials were conducted in a double glazed air inflated polyethylene greenhouse at the University of Connecticut Agronomy Research Farm. Each variety was direct seeded into 4 inch pots in late January and placed in a lighted germination chamber. After two weeks the plants were moved to the greenhouse and grown on at 65°F. The first week in March the plants were set into troughs 6 inches deep and 30 inches wide containing peat-vermiculite mixture. Plants were spaced to provide 4 square feet of floor space per plant. Each variety was represented by nine plants. Varieties were randomly planted and data taken on a per plant basis.

Eleven harvests were made in the 1976 trial beginning May 21 and ending July 7. Fifteen harvests were made during 1977 beginning June 1 and ending July 20. Numbers and weights of marketable fruit and major defects were recorded. The harvest period was shorter than is common in commercial practice but roughly corresponds to peak harvest periods desirable for roadside stand sales.

During the peak harvest period in both 1976 and 1977 consumer preference panels were set up in an attempt to assess the potential acceptability of each variety in the market place. Tomatoes were harvested, graded, wiped with a soft cloth and one pound samples of each variety--free from defects and typical of the type--were selected for display. Additional samples of each variety were cleaned and prepared for taste testing by slicing into 1/2

inch wedges. Samples were identified by numbers and volunteers asked to rate them for appearance and taste using a 1 to 10 scale with a rating of 1 being the most desirable (best taste, most pleasing appearance) and the higher ratings less desirable. Samples of a given variety in the taste and appearance tests were not identified by the same number. Fifty-three people participated in the 1976 panel. They included visitors to the university as well as professional and classified staff. Only 25 people participated in the 1977 panel.

**MAJOR FRUIT QUALITY DEFECTS OBSERVED  
DURING THE 1976-1977 TRIALS**

Variety	Defect				
	Radial Crack	Gray Wall	Blotchy Ripening	Mis-shappen Fruit	Under-Size Fruit
F <sub>1</sub> HYB 75019	0			0	
F <sub>1</sub> HYB 75020			0	0	
F <sub>1</sub> HYB 75022			0		0
HYB PSX 59975	0				
Michigan-Ohio HYB	M		0		
Ohio-Indiana OF Tomaten NR 47				0	M
Tuckcross 520	0		M		
Tuckcross 533			0	0	
Tuckcross Super M	0				
Veegan	M		M		
Vendor	0	0			

M=Major Defect, occurs frequently

0=Occurs occasionally

Data was also taken on blossom end rot and concentric cracking. The problems were not a factor with these cultivars.

GREENHOUSE VARIETY TRIAL YIELDS 1976-1977

Variety	1976 Yield Per Plant		1977 Yield Per Plant		
	Seed Source	Number	Weight (lbs)	Number	Weight (lbs)
F1 HYB 75019	1	29	6.8	45	7.1
F1 HYB 75020	1	31	8.0	48	8.5
F1 HYB 75022	1	33	7.6	36	6.9
HYB PSX 59975	2			22	8.8
Michigan-OHIO HYB	3	30	10.7	30	9.8
Ohio-Indiana OF	4			30	8.6
Tomaten NR 47	1	33	5.8	55	6.2
Tuckcross 520	4	24	10.5	39	11.4
Tuckcross 533	5	25	12.6		
Veegan	3	28	8.5	42	12.5
Vendor	6	17	5.9	33	8.5

Seed Source:

1. D. van der Ploeg's Elite Zaden B.V. NL 3220 Barendrecht, Holland
2. Petoseed Co., Inc., P.O. Box 4206, Satiloy, CA 93003
3. Joseph Harris Co., Inc., Rochester, NY 14624
4. Geo. W. Park Seed Co., Inc., Greenwood, SC 29647
5. Standard Seed Co., 931 W. 8th St., Kansas City, MO 64101
6. Stokes Seeds, Inc., Box 548, Buffalo, NY 14240

1976 CONSUMER PREFERENCE PANEL

Variety	Number of Fruit Per Sample (lb)	Appearance			Taste		
		Ave. Rating	% of Time Selected	Ave. Rating	% of Time Selected	Ave. Rating	% of Time Selected
		1st or 2nd	1st or 2nd	1st or 2nd	1st or 2nd	1st or 2nd	
F <sub>1</sub> HYB 75019	5	4.5	15	6.0	14		
F <sub>1</sub> HYB 75020	4	5.2	5	5.1	38		
F <sub>1</sub> HYB 75022	5	<u>2.9</u>	45	<u>4.3</u>	33		
Michigan-Ohio HYB	3	<u>2.7</u>	70	<u>4.1</u>	43		
Tomaten NR 47	6	5.3	20	6.1	24		
Tuckcross 520	3	6.5	5	3.8	38		
Tuckcross 533	2	9.8	0	6.1	14		
Tuckcross Super M	3	4.2	15	5.7	10		
Veegan	4	8.5	0	5.3	14		
Vendor	4	5.2	25	6.7	5		

1977 CONSUMER PREFERENCE PANEL

Variety	Number of Fruit Per Sample (lb)	Appearance		Taste	
		Ave. Rating	% of Time Selected	Ave. Rating	% of Time Selected
F <sub>1</sub> HYB 75019	6	7.6	8	6.2	12
F <sub>1</sub> HYB 75020	6	4.4	16	6.4	12
F <sub>1</sub> HYB 75022	5	6.3	12	6.4	4
HYB PSX 59975	3	4.5	12	4.2	20
Michigan-OHIO HYB	3	<u>4.1</u>	32	5.5	52
Ohio-Indiana OF*	4	8.1*	0	<u>3.3</u>	56
Tomaten NR 47	8	7.2	16	5.7	0
Tuckcross 520	3	6.9	16	<u>3.5</u>	12
Veegan	3	<u>3.8</u>	60	5.6	12
Vendor	4	4.5	20	7.6	12

\*Pink fruited variety. Pink tomatoes are not popular in Connecticut.