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OHIO AGRICULTURAL EXPERIMENT STATION  
Lane Avenue Farm, Columbus, Ohio

Department of Horticulture Mimeograph Series No. 217  
January 26, 1961

FIELD TOMATO VARIETY TRIALS - 1960  
Columbus, Ohio

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The data reported herein was obtained at Columbus from the Processing Evaluation Trials conducted under project Hatch 157-1. Fourteen varieties replicated four times were evaluated for processing characteristics and yield (Table 1).

The 1960 field tomato variety trials normally conducted at the Northwestern Substation, Hoytville, Ohio, were subjected to a severe hail storm on July 19. The damage from hail was such that all leaves were knocked from the plants and stems were severely abraded and bruised. About 10 percent of all fruits were knocked from the plants and the remaining fruit were pock-marked. This planting was abandoned for trial purposes but it was observed for several weeks following the damage to determine the rate of recovery and subsequent condition.

It was interesting to note that the determinate type plants made no further vegetative growth but the indeterminate types developed axillary shoots and a late set of fruit which matured although smaller in size than normal. The damaged fruit remaining intact on both the determinate and indeterminate plants matured but was of inferior quality. The mature fruits showed corky scar tissue where struck by hail, some walls had been broken exposing locular contents, these had also corked over and such fruits were misshapen.

CULTURAL INFORMATION

Plants were greenhouse and frame grown, 70 per standard flat, with the exception of Fireball, Glamour, Rutgers, and Urbana, which were southern grown. Plants were set in the field on June 3, 1960, with 10-52-17 starter - 3 lbs/50 gal. water. Approximately 20 T of manure was plowed down with a rye cover crop on April 21, and 675 lbs/A of 15-15-15 was drilled and disked in on April 28. Plots consisted of two rows of 38 plants each spaced 24" in 5' rows. Six sprays of either Manzate, Fired Copper or Zerlate with suitable insecticide were applied at approximately weekly intervals from June 17 to July 28. Irrigation was applied from overhead Skinner system as needed.

HARVEST DATA

The first harvest was made on August 17 and the last on October 7. Fruits were picked into big boxes and hauled to processing laboratory where all data were recorded. All fruits were graded under MacBeth Examolite lights on basis of U.S. No. 1, No. 2 for color, No. 2 for defects, and culls. These grades are recorded as percentages of total for each individual harvest and for total season's yield. The yield and grade data are recorded in Table 1.

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SOURCES OF SEED

<u>Code</u>	<u>Source</u>
H <sub>1</sub>	Joseph Harris Co., Inc., Moreton Farms, Rochester 11, N. Y.
H <sub>3</sub>	H. J. Heinz, Crop Research Dept., Bowling Green, Ohio.
L	Libby McNeill & Libby. L. A. Holl, Crop Research Dept., Leipsic, Ohio
O <sub>2</sub>	Ohio Agr. Exp. Sta. L. J. Alexander, Depts. of Botany and Plant Path., Wooster, Ohio
P <sub>3</sub>	Purdue Agr. Exp. Sta. Mark Tomes, Dept. of Hort., West Lafayette, Indiana.
S <sub>0</sub>	Southern Grown plants.
T <sub>1</sub>	Texas Agr. Exp. Sta. P.A. Young, Tomato Disease Lab., Jacksonville, Texas.
T <sub>2</sub>	Texas Agr. Exp. Sta. H. C. Mohr, Dept. of Hort., College Station, Texas.

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FIELD TOMATO VARIETY TRIALS - 1960  
 Lane Ave. Farm, Columbus, Ohio

(4 replications)

Variety and Lot Number	Source	Date of Harvest	Grades				Total Yield per Acre	Percentage of Total Yield	No. of Fruits per 25 lbs.	
			No. 1	No. 2C	No. 2D	Culls				
			%	%	%	%	Tons	%	No.	
12 C-52	T-60	L <sub>3</sub>	Aug. 17	84.6	6.3	8.3	0.8	1.08	5.8	134.3
			Sept. 1	57.5	23.0	15.0	4.5	8.11	44.4	125.5
			19	80.0	7.5	11.5	1.0	3.29	17.9	150.3
			Oct. 8	61.5	18.0	14.0	5.5	5.84	31.9	157.0
			Total	70.9	13.9	12.3	2.9	18.33		141.8
3 Fireball	So. Pl	SO	Aug. 17	--	--	--	--	2.96	23.9	92.13
			30	61.5	6.5	21.0	11.0	5.86	47.4	135.30
			Sept. 19	61.0	10.6	21.0	8.4	.18	1.5	141.0
			Oct. 7	51.7	17.7	21.5	9.1	3.34	27.2	132.0
			Total	57.1	11.4	21.2	9.3	12.35		125.1
2 Moreton Hyb 1496	H <sub>1</sub>	H <sub>1</sub>	Aug. 17	--	--	--	--	1.66	10.6	52.6
			30	44.0	10.0	44.0	2.0	6.87	43.9	72.8
			Sept. 19	50.8	24.4	19.4	5.4	2.28	14.5	106.5
			Oct. 7	53.0	9.8	31.4	5.8	4.82	31.0	87.3
			Total	49.3	14.7	31.6	4.4	15.63		79.8
9 Heinz 1370	H <sub>3</sub>	H <sub>3</sub>	Aug. 17	--	--	--	--	--	--	--
			30	77.0	12.5	8.0	2.5	8.01	37.0	74.8
			Sept. 19	76.5	12.5	11.0	0.0	2.77	12.7	109.3
			Oct. 7	71.0	13.5	9.0	6.5	10.85	50.3	99.8
			Total	74.8	12.8	9.3	3.1	21.64		94.6
14 Urbana (Tecumseh) So. pl.	SO	SO	Aug. 17	76.8	12.6	9.4	1.2	1.07	6.1	117.0
			Sept. 1	58.3	17.0	18.5	.9	6.78	39.2	95.3
			19	76.5	10.0	11.5	1.0	4.24	24.4	128.7
			Oct. 8	67.5	13.0	17.0	2.5	5.23	30.3	118.3
			Total	69.9	13.9	14.0	1.9	17.32		114.8

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(4 replications)

Variety and Lot No.	Source	Date of Harvest	Grades				Total Yield per Acre	Percentage of Total Yield	No. of Fruits per 25 lbs.
			No. 1	No. 2C	No. 2D	Culls			
			%	%	%	%	Tons	%	No.
13 Hotset T-29	T <sub>1</sub>	Aug. 17	70.2	10.6	15.6	3.6	1.06	12.6	118.0
		Sept. 1	60.0	11.5	22.5	6.0	6.10	46.4	114.3
		19	81.9	6.2	10.9	1.0	1.71	13.1	159.0
		Oct. 8	57.5	18.5	16.5	7.0	3.68	27.9	166.8
		Total	67.4	11.7	16.4	2.5	13.15		139.5
11 Plainsman T-60	T <sub>2</sub>	Aug. 17	76.3	10.7	12.1	.9	1.07	7.0	92.8
		Sept. 1	55.0	12.0	27.5	5.5	6.66	44.2	82.0
		19	62.9	6.8	24.1	6.2	2.11	13.9	91.5
		Oct. 8	52.5	18.5	19.0	10.0	5.23	34.9	103.3
		Total	61.7	12.0	20.7	5.6	15.13		93.7
7 Hoytville No. 6 T-60	O <sub>2</sub>	Aug. 17	--	--	--	--	--	--	--
		30	62.50	6.50	36.60	1.0	6.27	38.6	65.3
		Sept. 19	57.75	28.25	11.75	2.25	3.06	18.8	98.3
		Oct. 7	60.40	13.00	23.30	3.20	6.91	42.6	82.3
		Total	60.20	15.90	21.70	2.20	16.23		82.0
1 Cardinal Hyb. 1469	H <sub>1</sub>	Aug. 17	--	--	--	--	--	--	--
		30	59.00	2.00	37.00	2.00	6.05	39.5	64.8
		Sept. 19	55.00	23.00	20.50	1.50	3.10	20.3	88.9
		Oct. 7	62.00	11.00	20.50	6.50	5.31	40.2	81.2
Total	58.70	12.00	26.00	3.30	13.24		78.3		
6 KC 146 1489	H <sub>1</sub>	Aug. 17	--	--	--	--	--	--	--
		30	70.0	9.00	19.50	1.50	5.02	23.1	61.3
		Sept. 19	76.0	19.50	4.50	0.0	6.19	28.5	81.5
		Oct. 7	72.5	14.00	10.50	3.0	10.46	48.4	77.5
		Total	72.8	14.20	11.50	1.50	21.68		73.4

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Variety and Lot Number	Source	Date of Harvest	Grades				Total Yield per Acre	Percentage of Total Yield	No. of Fruits per 25 Lbs.	
			No. 1	No. 2C	No. 2D	Culls				
			%	%	%	%	Tons	%	No.	
4 Glamour	So. pl.	S0	Aug. 17	--	--	--	--	--	--	
			30	65.0	17.0	17.0	1.0	4.89	28.8	74.8
			Sept. 19	71.0	22.0	5.75	1.25	4.35	25.6	106.0
			Oct. 7	<u>66.5</u>	<u>20.5</u>	<u>7.5</u>	<u>5.5</u>	<u>7.71</u>	45.6	<u>90.0</u>
			Total	67.5	19.8	10.1	2.6	16.86		90.3
10 Epoch	T-60	P1	Aug. 17	--	--	--	--	--	--	
			30	58.9	6.7	21.0	.4	4.09	36.5	76.3
			Sept. 19	71.5	11.5	14.0	4.0	1.98	17.7	121.1
			Oct. 8	<u>64.5</u>	<u>16.0</u>	<u>16.0</u>	<u>3.5</u>	<u>5.12</u>	45.8	<u>109.5</u>
			Total	65.0	11.4	17.0	2.6	11.19		102.3
5 KC 135	49V3	B2	Aug. 17	--	--	--	--	--	--	
			30	72.0	12.0	16.0	0.0	3.65	21.9	59.3
			Sept. 19	76.5	17.5	4.25	1.75	7.01	42.1	85.6
			Oct. 7	<u>76.0</u>	<u>12.5</u>	<u>10.50</u>	<u>1.0</u>	<u>5.97</u>	36.0	<u>72.5</u>
			Total	74.8	14.0	10.3	.9	16.63		72.5
8 Rutgers	So. pl.	S0	Aug. 17	--	--	--	--	--	--	
			30	58.5	6.5	29.5	5.5	3.33	27.4	91.0
			Sept. 19	76.0	15.3	7.1	1.6	4.10	34.0	117.0
			Oct. 7	<u>62.9</u>	<u>12.7</u>	<u>20.1</u>	<u>5.3</u>	<u>4.68</u>	38.6	<u>107.3</u>
			Total	65.8	11.5	18.9	3.8	10.54		105.1

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