



# Vegetable Variety Trials, 1981<sup>1</sup>

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VEGETABLE VARIETY and breeding line trials were conducted during 1981 at the Gulf Coast Substation, Fairhope, Chilton Area Horticulture Substation, Clanton, North Alabama Horticulture Substation, Cullman, Sand Mountain Substation, Crossville, and E. V. Smith Research Center, Shorter. All trials were conducted in randomized complete block designs with four replications. Non-replicated observational plantings were also made of selected varieties and lines of

tomato. Recommended weed control practices and fertilizer rates and applications were used for each crop and location. Recommended insect and disease control measures were applied on a regular schedule throughout the growing season. Irrigation, where available, was applied when needed.

## RESULTS

### Slicing Cucumbers

CULLMAN. Twelve entries were grown in cooperation with the Southern Cooperative slicing cucumber trial. Seed were planted in 44-inch rows May 12 and plants were thinned to 6 inches in the drill. Twelve harvests were made, beginning June 29 and ending July 27. Rainfall was inadequate during July, a month when temperatures were extremely hot. These environmental conditions probably influenced the performance of some entries through low yields of the fancy grade and reduced total marketable yields. Sprint

<sup>1</sup>Data presented in this report represent an unbiased evaluation of each entry. Variety, company, and chemical names are used for identification and do not imply endorsement of one over the other. Seed of breeding lines are not available for planting until named and released.

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440S produced the highest total marketable yield, table 1. Dasher produced the highest yield of fancy grade fruits and Poinsett 76 produced the lowest. Breeding lines G8M and XP 1187 produced good yields of total marketable and fancy fruits. Average fruit weight, length, and diameter were good for all entries. Although Sprint 440S was the highest yielding, it produced only fair skin color and uniformity of fruit. Marketmore 72NB and Marketsett were rated excellent for color, uniformity of fruit, and vine vigor. Sprint 440S was the only entry rated early for harvest season. This could account for the high yield and may suggest that this variety is tolerant to adverse mid-summer environmental conditions.

### Potatoes

**FAIRHOPE.** Seed potatoes were obtained from Frito-Lay Company (Baldwin County, Alabama); Rodney Schmidt, Saline, Minnesota; Starks Farms in Wisconsin; and the USDA, Beltsville, Maryland, for the 1981 trial. Varieties were planted February 24 and harvested June 2. Both sources of Belchip were the highest yielding entries, table 2. This variety has performed well at Fairhope. While it does not produce a high specific gravity potato in most years, it does have good chipping qualities. Atlantic, an attractive white skin variety, produced potatoes with the highest specific gravity of all the entries. This variety is well adapted for fresh market and processing production. When temperatures are extremely hot during and just prior to harvest, Atlantic has a tendency to develop internal browning. Early harvest can prevent this problem in most situations. FL 1221, 1152, and 1291 produced good yields, and FL 1221 potatoes also had a high specific gravity. Russet Sebago was outstanding for production but somewhat poor for specific gravity. Red La Soda remains the most productive and adapted red skin potato for Alabama. While the yields were somewhat low this year, this red skin variety has performed well over the years as a fresh market potato. La Chipper, Denali, and Superior are white skin varieties that are well adapted to the Baldwin County potato area. A high specific gravity was recorded for Denali.

**CROSSVILLE.** Varieties were planted March 9 and harvested July 7. Red La Soda, from two sources, was the highest yielding variety, table 3. Red La Soda has consistently been among the top yielding varieties in the Sand Mountain Substation potato trials and remains the best red skin variety for this area. FL 657, Atlantic, and FL 1221 were the highest yielding white skin varieties. Atlantic produces high specific gravity potatoes that are ideal for processing and fresh market. Denali produced a good marketable yield of high solids potatoes. Wisconsin 760 produced the highest specific gravity of all the entries. This line, from the University of Wisconsin, has performed well for the past 2 years. All of the entries produced a high percentage of size A potatoes. FL 1152 (Frito-Lay), Red La Soda, and Denali (Starks Farms) produced the highest stand count at harvest.

### Sweet Potatoes

**SHORTER.** Seed potatoes were treated for 1 minute in a solution containing 8 ounces of Mertect 340 F and ½ pound of Botran 75 wp in 7½ gallons of water, before bedding in an electrically heated bed. Plants were grown at the E. V. Smith Research Center, transplanted May 21, and harvested October 13. Travis, a new release from LSU, was the highest yielding entry, table 4. Travis produces excessive amounts of large size roots when grown for more than 100-120 days. This variety can be harvested for early market. Travis is smooth and has an attractive copper skin. Jewel produced the highest yield of No. 1 roots and was second to Travis for total yield. Jewel is well adapted to most sweet potato growing areas of Alabama and produces smooth copper skin roots. Red Jewel, which is similar to Jewel in production and root characteristics, has performed best in Coastal Plains soils. Porto Rico LSU, an orange flesh selection, has produced good yields of marketable roots over the past 3 years. However, this variety is highly susceptible to fusarium wilt disease. Caution should be exercised in growing this variety on soils where fusarium wilt disease is known to exist. Carver and Ti 100 are similar in root type and skin color. Both of these varieties tend to produce long slender roots with dark copper skin. Both varieties have a deep orange flesh color. Centennial is an attractive copper skin potato with a deep orange flesh color. While it did not yield well this year, in most years it is among the top yielding varieties.

### Tomatoes

**FAIRHOPE.** Seed were planted in the greenhouse at Auburn University February 26, and transplanted April 6 at a 15-inch spacing in 5-foot rows. Ten harvests were made beginning June 1 and ending July 9. Early Cascade was the highest yielding entry in the replicated trial, table 5. This variety, in the Clanton and Cullman trials, produced fruits too small for marketable sizes, and in the Fairhope trial over half of its yield graded into small (6 x 7) fruits. Flora-Dade, a jointless and race 2 Fusarium resistant variety, produced the highest yield of the shipping varieties. Terrific VFN and Bonnie Nematode Resistant are early maturing nematode resistant home garden varieties. Big Girl and Four Way Hybrid produced the highest yields of large (5 x 6) fruits, and Flora-Dade the highest yield of medium (6 x 6) fruits. Better Boy VFN produced the highest yield of culls.

Among the observational entries, Calypso produced the highest total marketable yield. Winner produced the highest yield of large (5 x 6) fruits, and Baron produced the highest yield of medium (6 x 6) fruits. Sunny (XPH 674), a new release from Asgrow, has produced well for the past 3 years. The first harvest for Count, Walter PF, and Winner was 10 days later than for the other entries, table 6. Eleven varieties reached their peak harvest date on June 16 and five of these continued peak harvest yields through June 23. Nine varieties began peak harvest yields on June 23 and six of

these continued with peak harvest yields through July 2. Early Cascade and Four Way Hybrid were the latest varieties to reach peak harvest.

Data on plant heights and fruit characteristics for the Fairhope trial, table 7, show that Big Girl and Better Boy VFN were the tallest growing and Baron the shortest growing variety. All varieties were red fruited except for Early Cascade, which had mixed fruit of pink and red color. Flora-Dade, Count, Walter PF, Walter, and Sunny produced globe-shaped fruits. Early Cascade produced mixed fruit shapes. Terrific VFN, Bonnie Nematode Resistant, and Better Boy VFN produced soft fruits. All the other entries were very firm or firm. All entries were rated smooth to slightly rough except XP 2041. Eleven varieties were rated as commercial shipping types and all others were rated for home garden or roadside and other direct marketing use.

CLANTON. Seed were planted in the greenhouse at Auburn University March 3, and transplanted April 13 at a 15-inch spacing in 8-foot rows. Seven harvests were made beginning June 23 and ending August 6. Early Cascade produced the highest yield of marketable fruits, table 8, but most of its yield was small fruits between 1 and 2 inches in diameter. No size arrangement could be made. Sunny was the highest yielding large-fruited variety. It also produced the highest yield of large (5 x 6), medium (6 x 6), and small (6 x 7) size fruits. Marketable yields of the other varieties at Clanton were fair to poor. High quantities of culls were produced this year from cracks and fruits that were too small for acceptable market sizes. Extremely hot temperatures occurred during fruit development and perhaps contributed to the high amounts of culls. All varieties reached peak harvest on June 23, June 30, or July 7 except for Duke, table 9. Tempo, Bigset, Bonnie Nematode Resistant, Calypso, Floramerica, Count, Walter Villemarie, and Contessa reached peak harvest on the first harvest. This early peak harvest perhaps reflects the adverse hot climatic conditions that existed this year at Clanton. Sunny, Flora-Dade, Calypso, Four Way Hybrid, Count, Walter Villemarie, and Duke were rated as commercial shipping varieties, table 10. These varieties also can be used for either home garden or roadside and other direct marketing.

CULLMAN. Seed were planted in the greenhouse at Auburn University March 27, and plants were transplanted April 29 at a 15-inch spacing in 5-foot rows. Fifteen harvests were made beginning July 7 and ending August 14. Eighteen replicated varieties and eight

observational entries were planted, table 11. In the replicated trial, Flora-Dade, Sunny, Bonnie Nematode Resistant, Tempo, 7718 VF, and Calypso produced above 500 hundredweights of marketable fruit. Variety 7718 VF produced the highest yield of large (5 x 6) fruits, Flora-Dade the highest yield of medium (6 x 6) fruits, and AU 76 FMN produced the highest yield of small (6 x 7) fruits. All the other varieties produced good marketable yields. Total cull weights were somewhat high and may reflect the extreme heat occurring during June and July. Cracks, catfacing, and other blemishes accounted for most of the cull yield. Blossom end-rot was low for all varieties except Big Girl and Contessa.

In the observational entries, PSR 38179 produced the highest total marketable yield and the highest yield of large (5 x 6) fruits in both tests. XP 2032 A and Roadside Red also produced good yields of marketable fruits. Roadside Red produced the highest yield of medium (6 x 6) and small (6 x 7) fruits. Culls were also high for the observational entries, with cracks, catfacing, and others accounting for most of the culls. All observational entries produced low yields of blossom end-rot except PSR 20878 and XP 2032 A.

Early Cascade was the earliest maturing variety, table 12. It also reached peak yields first and continued producing peak yields for three harvest dates, July 14, 17, and 20. The first harvest for Sunny, Tempo, and Floramerica was July 17, later than all of the other varieties. Eleven varieties reached peak harvest on July 27 and some continued for two or more harvest dates. Sunny had a peak harvest for four harvest dates, more than any other variety. Early Cascade was harvested over the entire harvest period. Spring Set Hybrid had the shortest harvest period of all entries.

Big Girl produced the tallest plant type and Baron the shortest, table 13. All varieties produced red colored fruits except Early Cascade, which produced fruits that were mixed red and pink. Fruit shape was variable for the different varieties. Fruit firmness was rated into three categories by examination and feel of each variety at pink and/or red ripe maturity. Eye appeal was rated by the overall appearance of fruit before sizing and grading were done.

Varieties were also rated for their potential use in home gardens, roadside markets, and other direct marketing or commercial shipping. Those designated "3" would have potential for all three uses. However, entries rated home garden and roadside use ("1" and "2") should be studied carefully before any plantings for shipping are made.

TABLE 1. YIELD, MATURITY, AND FRUIT AND PLANT CHARACTERISTICS FOR SLICING CUCUMBER VARIETY TRIAL, CULLMAN, SPRING 1981<sup>1</sup>

Variety and seed source	Marketable yield/acre			Average fruit weight	Length	Diameter	Color	Uniformity of fruit	Vine vigor	Harvest <sup>4</sup> season	Stand at harvest
	Fancy <sup>2</sup>	Total <sup>3</sup>	Fancy of total								
	Cwt.	Cwt.	Pct.								
Sprint 440S (Asgrow) . . . . .	196	463	42	0.40	7.0	1.8	Fair	Fair	Excellent	E	87
G8M (Harris) . . . . .	199	404	49	.46	6.7	1.7	Excellent	Fair	Excellent	M	75
Dasher (Petoseed) . . . . .	221	386	57	.40	7.1	1.8	Fair	Excellent	Excellent	M	87
XP 1187 (Asgrow) . . . . .	160	350	46	.39	6.7	1.8	Fair	Fair	Good	L	88
Centurion (Northrup King) . . . . .	138	318	43	.43	6.9	1.7	Excellent	Excellent	Good	L	73
Marketmore 72 NB (Dessert) . . . . .	132	316	42	.44	6.6	1.7	Excellent	Excellent	Excellent	M	85
NCX 5505 (Moran) . . . . .	153	308	50	.39	6.7	1.6	Good	Good	Excellent	M	92
Medalist (Harris) . . . . .	139	242	57	.36	6.4	1.7	Excellent	Fair	Excellent	M	83
Pointmarket (Hollar) . . . . .	105	219	48	.31	6.7	1.6	Excellent	Good	Good	L	73
Guardian (Northrup King) . . . . .	118	194	61	.38	7.1	1.8	Excellent	Good	Excellent	M	78
Marksettt (Hollar) . . . . .	102	186	55	.36	7.3	1.5	Excellent	Excellent	Excellent	M	88
Poinsett 76 (Dessert) . . . . .	50	123	41	.40	6.0	1.6	Excellent	Good	Good	L	48

<sup>1</sup>Soil test: P=300 (VH); K=190 (H); pH=5.4; 2 tons limestone applied per acre.<sup>2</sup>Fancy = cucumbers that were straight, well shaped, and had good green color distribution over the fruit.<sup>3</sup>Some fruits in the total marketable were slightly misshapen and did not have a uniform green color distribution.<sup>4</sup>E=early; M=mid season; L = late.TABLE 2. YIELD, SPECIFIC GRAVITY, AND STAND COUNT FOR POTATO VARIETY TRIAL, FAIRHOPE, 1981<sup>1</sup>

Variety and seed source	Marketable yield/acre			Size A of total	Specific <sup>3</sup> gravity	Stand at harvest
	Total	Size A <sup>2</sup>	Size B			
	Cwt.	Cwt.	Cwt.			
Belchip (USDA) . . . . .	266	259	7	97	1.062	95
Belchip (Starks Farms) . . . . .	255	247	8	97	.066	87
Atlantic (Starks Farms) . . . . .	249	242	7	97	.075	90
FL 1221 (Frito Lay) . . . . .	235	228	7	97	.070	88
FL 1152 (Frito Lay) . . . . .	235	228	7	97	.061	90
FL 1291 (Frito Lay) . . . . .	210	202	8	96	.066	89
Russet Sebago (Starks Farms) . . . . .	209	203	6	97	.059	88
Red La Soda (Rodney Schmidt, Minn.) . . . . .	191	185	6	97	.059	89
Red La Soda (Starks Farms) . . . . .	186	177	9	95	.059	89
La Chipper (Starks Farms) . . . . .	183	175	8	96	.063	86
Denali (Starks Farms) . . . . .	154	147	7	95	.070	83
Superior (Starks Farms) . . . . .	140	133	7	95	.066	94

<sup>1</sup>Soil test: P = 100 (M); K = 110 (H); pH = 6.1.<sup>2</sup>Size A = potatoes with 1 7/8 inches diameter and larger; size B = potatoes with 1 1/2 to 1 7/8 inches diameter.<sup>3</sup>Specific gravity was greater than 1.0 for each variety.TABLE 3. YIELD, SPECIFIC GRAVITY, AND STAND COUNT FOR POTATO VARIETY TRIAL, CROSSVILLE, 1981<sup>1</sup>

Variety and seed source	Marketable yield/acre			Size A of total	Specific <sup>3</sup> gravity	Stand at harvest
	Total	Size A <sup>2</sup>	Size B			
	Cwt.	Cwt.	Cwt.			
Red La Soda (Rodney Schmidt, Minn.) . . . . .	317	301	16	95	1.062	85
Red La Soda (Starks Farms) . . . . .	289	277	12	96	.059	95
FL 657 (Frito Lay) . . . . .	253	246	7	97	.059	90
Atlantic (Starks Farms) . . . . .	243	234	9	96	.082	85
FL 1221 (Frito Lay) . . . . .	242	232	10	96	.070	90
Denali (Starks Farms) . . . . .	226	217	9	96	.081	94
Kennebec . . . . .	225	219	6	97	.066	86
Belchip (Starks Farms) . . . . .	223	216	7	97	.068	83
FL 1291 (Frito Lay) . . . . .	220	207	13	94	.069	88
La Chipper (Starks Farms) . . . . .	200	188	12	94	.069	92
FL 162 (Frito Lay) . . . . .	193	184	9	95	.064	89
Wis 760 (U. Wisconsin, Rhinelander) . . . . .	193	184	9	95	.085	89
Superior (Starks Farms) . . . . .	190	183	7	96	.068	89
FL 1152 (Frito Lay) . . . . .	180	170	10	94	.056	96
Russet Sebago (Starks Farms) . . . . .	125	116	9	93	.054	69

<sup>1</sup>Soil test: P = 230 (VH); K = 180 (H); pH = 5.5.<sup>2</sup>Size A = potatoes with 1 7/8 inches diameter and larger; size B = potatoes with 1 1/2 to 1 7/8 inches diameter.<sup>3</sup>Specific gravity was greater than 1.0 for each variety.

TABLE 4. YIELD AND SKIN COLOR FOR SWEET POTATO VARIETY TRIAL, SHORTER, 1981<sup>1</sup>

Variety and seed source	Marketable yield/acre				Percent No. 1's	Culls	Cracks	Skin color
	Total	No. 1's <sup>2</sup>	Canners	Jumbos				
	Bu. <sup>3</sup>	Bu.	Bu.	Bu.				
Travis (LSU, Chase)	815	202	27	586	25	8	173	Copper
Jewel (Auburn)	601	424	62	115	71	0	29	Copper
Red Jewel (Auburn)	508	316	63	129	62	33	74	Red
Porto Rico (LSU, Chase)	368	261	41	66	71	46	61	Light tan
Carver (Tuskegee Institute)	331	232	78	21	70	7	28	Dark copper
Ti 100 (Tuskegee Institute)	330	230	93	7	70	15	0	Dark copper
Centennial (Auburn)	305	203	30	72	67	37	28	Copper

<sup>1</sup>Soil test: P = 140 (H); K = 160 (H); pH = 5.3. One ton limestone applied per acre.

<sup>2</sup>US No. 1—roots 2 to 3½ inches in diameter, length 3 to 9 inches, well shaped and free of defects.

Canners—roots 1 to 2 inches in diameter, 2 to 7 inches in length.

Jumbo or oversize—roots that exceed the diameter, length, and weight requirements of the above two grades, but are of marketable quality.

Culls—roots 1 inch or larger in diameter and so misshapen or unattractive that they could not fit as marketable root in any of the above three grades.

<sup>3</sup>Bushel = 50 pounds.

TABLE 5. YIELDS FOR STAKED FRESH MARKET TOMATO TRIAL, FAIRHOPE<sup>1</sup>

Variety and seed source	Marketable yield/acre <sup>2</sup>				Culls					
	Total <sup>3</sup>	5 × 6 <sup>4</sup>	6 × 6	6 × 7	Total	Pct. of total yield	Cracks	Cat-face	Blossom end-rot	Others <sup>5</sup>
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Pct.	Pct.	Pct.	Pct.	Pct.
<b>Replicated</b>										
Early Cascade (Petoseed)	596	148	128	320	33	5	9	16	48	27
Flora-Dade (Asgrow)	581	377	147	57	33	7	25	35	8	32
Terrific VFN (Petoseed)	553	443	93	17	79	13	35	37	22	6
Tempo (Asgrow)	546	399	105	42	61	10	21	48	8	23
Bonnie Nematode Resistant (Bonnie Farms)	543	367	138	38	67	15	35	36	17	12
Floradel (Asgrow)	543	416	107	20	61	13	37	21	34	8
Count (Petoseed)	540	339	141	61	38	10	14	19	35	32
Walter PF (U. Florida)	538	345	144	49	43	7	30	43	10	17
Four Way Hybrid (Four Way Farms)	527	466	47	14	58	10	37	36	17	10
Walter (Asgrow)	517	344	137	36	78	13	34	49	9	8
Big Girl (Burpee)	510	469	34	7	87	15	24	41	33	2
Floramerica (Petoseed)	498	400	71	27	67	12	9	67	9	15
Duke (Petoseed)	476	385	74	17	91	16	24	47	18	11
AU 76 FMN (Auburn U.)	476	293	131	52	55	10	23	27	15	35
Tamiami (Petoseed)	467	311	115	41	74	14	20	50	9	21
Better Boy VFN (Petoseed)	453	418	27	8	117	20	44	31	19	6
Walter Villemarie (Petoseed)	449	294	113	42	60	12	23	54	9	14
<b>Observational</b>										
Calypso (Petoseed)	581	429	108	44	49	7	17	60	8	15
Winner (Asgrow)	555	458	76	21	95	15	36	36	16	12
Sunny (Asgrow)	508	381	94	33	49	9	4	41	45	10
XP 2041 (Asgrow)	475	365	89	20	33	6	0	64	22	14
Baron (Petoseed)	440	268	121	51	20	4	6	39	39	16
Contessa (Petoseed)	418	334	67	17	75	15	14	18	59	9

<sup>1</sup>Soil test: P=180 (H); K=140 (H); pH=6.0.

<sup>2</sup>Size yields reported here are in accordance with the size standards established by the USDA for the Los Angeles type lug arrangements.

5 × 6 arrangement: minimum diameter 2 11/16 inches, maximum diameter 3 3/16 inches.

6 × 6 arrangement: minimum diameter 2 8/16 inches, maximum diameter 2 14/16 inches.

6 × 7 arrangement: minimum diameter 2 4/16 inches, maximum diameter 2 10/16 inches.

<sup>3</sup>While fruits were graded as carefully as possible under field conditions, no rigid effort was made to grade for a strict U.S. No. 1 grade. Fruits were separated for cull conditions as reported above.

<sup>4</sup>Some fruits in this size arrangement were larger than standard sizes.

<sup>5</sup>Others were mostly tomatoes too small to be marketed in the above sizes. Some were culled because of rots, insect damage, mechanical damage, and misshapen fruits.

TABLE 6. HARVEST DATES FOR STAKED FRESH MARKET TOMATO TRIAL, FAIRHOPE, 1981

Variety and seed source	Harvest dates <sup>1</sup>									
	6/1	6/5	6/10	6/12	6/16	6/19	6/23	6/26	7/2	7/9
<b>Replicated</b>										
Early Cascade (Petoseed)									X	
Flora-Dade (Asgrow)							X	X	X	
Terrific VFN (Petoseed)					X					
Tempo (Asgrow)							X			
Bonnie Nematode Resistant (Bonnie Farms)					X					
Floradel (Asgrow)							X	X	X	
Count (Petoseed)					X	X	X			
Walter PF (U. Florida)							X	X	X	
Four Way Hybrid (Four Way Farms)									X	
Walter (Asgrow)							X	X	X	
Big Girl (Burpee)						X	X			
Floramerica (Petoseed)					X	X	X			
Duke (Petoseed)					X					
AU 76 FMN (Auburn U.)							X			
Tamiami (Petoseed)					X	X	X			
Better Boy VFN (Petoseed)					X	X	X			
Walter Villemarie (Petoseed)							X	X	X	
<b>Observational</b>										
Calypso (Petoseed)					X	X	X			
Winner (Asgrow)							X	X	X	
Sunny (Asgrow)							X			
XP 2041 (Petoseed)					X					
Baron (Petoseed)					X					
Contessa (Petoseed)					X					

<sup>1</sup>X means peak harvest date, the date at which the highest yield occurred. In some varieties, yield was approximately the same for two or three harvest dates.

TABLE 7. PLANT HEIGHT AND FRUIT CHARACTERISTICS OF TOMATO VARIETIES, FAIRHOPE, 1981

Variety and seed source	Plant height	Fruit characteristic			Eye appeal <sup>3</sup>	Suggested use <sup>4</sup>
		Color	Shape <sup>1</sup>	Firmness <sup>2</sup>		
<b>Replicated</b>						
	<i>In.</i>					
Early Cascade (Petoseed)	54	Mixed red & pink	5	2	1	1,2
Flora-Dade (Asgrow)	34	Red	1	1	1	3
Terrific VFN (Petoseed)	51	Red	2	3	2	1
Tempo (Asgrow)	37	Red	2	1	1	3
Bonnie Nematode Resistant (Bonnie Farms)	38	Red	2	3	2	1
Floradel (Asgrow)	48	Red	3	1	1	1,2
Count (Petoseed)	36	Red	1	1	1	3
Walter PF (U. Florida)	39	Red	1	1	1	3
Four Way Hybrid (Four Way Farms)	47	Red	2	1	1	3
Walter (Asgrow)	35	Red	1	1	2	3
Big Girl (Burpee)	59	Red	2	2	2	1,2
Floramerica (Petoseed)	31	Red	2	2	2	1,2
Duke (Petoseed)	31	Red	2	1	1	3
AU 76 FMN (Auburn U.)	48	Red	2	2	1	1,2
Tamiami (Petoseed)	33	Red	2	2	2	1,2
Better Boy VFN (Petoseed)	57	Red	2	3	2	1,2
Walter Villemarie (Petoseed)	33	Red	2	1	2	3
<b>Observational</b>						
Calypso (Petoseed)	33	Red	2	1	2	3
Winner (Asgrow)	36	Red	3	2	2	1
Sunny (Asgrow)	36	Red	1	1	2	3
XP 2041 (Asgrow)	27	Red	2	2	3	1
Baron (Petoseed)	20	Red	2	1	2	3
Contessa (Petoseed)	39	Red	2	2	2	1,2

<sup>1</sup>Shape rating: 1 = globe, 2 = deep globe, 3 = oblate, 4 = deep oblate, 5 = mixed.

<sup>2</sup>Firmness rating: 1 = very firm, 2 = firm, 3 = soft.

<sup>3</sup>Appearance rating: 1 = smooth, 2 = slightly rough, 3 = rough.

<sup>4</sup>Use rating: 1 = home garden, 2 = roadside and other direct marketing, 3 = commercial shipping.

TABLE 10. PLANT HEIGHT AND FRUIT CHARACTERISTICS OF TOMATO VARIETIES, CLANTON, 1981

Variety and seed source	Plant height	Fruit			Eye appeal <sup>3</sup>	Suggested use <sup>4</sup>
		Color	Shape <sup>1</sup>	Firmness <sup>2</sup>		
	<i>In.</i>					
Sunny (Asgrow) .....	33	Red	2	2	1	3
Flora-Dade (U. Florida) .....	36	Red	2	1	1	3
Tempo (Asgrow) .....	33	Red	2	2	2	1,2
Bigset (Petoseed) .....	30	Red	3	2	2	1
Bonnie Nematode Resistant (Bonnie Farms) .....	38	Red	2	3	2	1
Calypso (Petoseed) .....	29	Red	1	2	1	3
Floramerica (Petoseed) .....	33	Red	2	3	1	1,2
Four Way Hybrid (Four Way Farms) .....	53	Red	1	2	1	3
Count (Petoseed) .....	40	Red	2	1	1	3
Better Boy VFN (Petoseed) .....	55	Red	3	3	2	1,2
Walter Villemarie (Petoseed) .....	33	Red	2	1	1	3
Contessa (Petoseed) .....	49	Red	3	2	1	1,2
Tamiami (Petoseed) .....	27	Red	2	2	2	1,2
Winner (Asgrow) .....	38	Red	2	2	2	1,2
Duke (Petoseed) .....	29	Red	2	2	1	3
Early Cascade (Petoseed) .....	56	Mixed red & pink	5	2	1	1,2

<sup>1</sup>Shape rating: 1 = globe, 2 = deep globe, 3 = oblate, 4 = deep oblate, 5 = mixed.

<sup>2</sup>Firmness rating: 1 = very firm, 2 = firm, 3 = soft.

<sup>3</sup>Appearance rating: 1 = smooth, 2 = slightly rough, 3 = rough.

<sup>4</sup>Use rating: 1 = home garden, 2 = roadside and other direct marketing, 3 = commercial shipping.

TABLE 11. YIELDS FOR STAKED FRESH MARKET TOMATO TRIAL, CULLMAN, 1981<sup>1</sup>

Variety and seed source	Marketable yield/acre <sup>2</sup>				Culls					
					Total	Pct. of total yield	Cracks	Cat-face	Blossom end-rot	Others <sup>5</sup>
	Total <sup>3</sup>	5 × 6 <sup>2</sup>	6 × 6	6 × 7	Cwt.	Pct.	Pct.	Pct.	Pct.	Pct.
<b>Replicated</b>										
Flora-Dade (Castle) .....	555	129	337	89	174	24	18	20	1	61
Sunny (Asgrow) .....	552	228	285	39	207	27	10	47	1	42
Bonnie Nematode Resistant (Bonnie Farms) .....	527	180	282	65	243	32	14	33	1	52
Tempo (Asgrow) .....	512	199	265	48	285	36	15	45	1	39
7718 VF (Petoseed) .....	503	325	166	12	210	29	31	30	3	36
Calypso (Petoseed) .....	500	168	279	53	206	29	19	28	1	52
Count (Petoseed) .....	488	109	296	83	203	29	11	37	4	48
Floramerica (Petoseed) .....	454	284	155	15	257	36	25	45	1	29
Four Way Hybrid (Four Way Farms) .....	442	210	213	19	113	20	36	16	0	48
Better Boy VFN (Petoseed) .....	438	220	195	23	181	29	50	16	4	30
Winner (Asgrow) .....	428	213	183	32	298	41	35	22	1	42
Big Set (Petoseed) .....	415	183	192	40	166	29	27	31	2	40
Big Girl (Burpee) .....	392	200	166	26	142	27	37	21	12	30
Contessa (Petoseed) .....	384	166	187	31	281	42	23	40	10	27
Walter Villemarie (Petoseed) .....	380	120	208	52	326	46	15	31	1	53
Duke (Petoseed) .....	372	143	199	30	286	43	9	56	1	34
AU 76 FMN (Auburn U.) .....	341	54	189	98	217	39	14	6	2	78
Early Cascade (Petoseed) .....	440 <sup>6</sup>	—	—	—	—	—	—	—	—	—
<b>Observational</b>										
PSR 38179 (Petoseed) .....	597	336	229	32	177	23	22	43	2	33
XP 2032 A (Asgrow) .....	583	187	326	70	236	29	14	38	5	43
Roadside Red (Agway) .....	581	143	334	104	207	30	22	12	3	63
Pik-Red Hybrid (Harris) .....	428	257	149	22	280	40	34	31	1	34
PSR 121275 (Petoseed) .....	425	268	146	11	301	41	13	62	2	23
PSR 20878 (Petoseed) .....	418	252	153	13	241	37	21	57	6	16
Spring Set Hybrid (Twilley) .....	355	43	213	99	278	44	8	21	1	70
Baron (Petoseed) .....	296	77	158	61	181	38	5	50	3	42

<sup>1</sup>Soil test: P = 330 (VH); K = 160 (H); pH = 5.0. Two and one-half tons limestone applied per acre.

<sup>2</sup>Size yields reported here are in accordance with the size standards established by the USDA for the Los Angeles type lug arrangements.

5 × 6 arrangement: minimum diameter 2 11/16 inches, maximum diameter 3 3/16 inches.

6 × 6 arrangement: minimum diameter 2 8/16 inches, maximum diameter 2 14/16 inches.

6 × 7 arrangement: minimum diameter 2 4/16 inches, maximum diameter 2 10/16 inches.

<sup>3</sup>While fruits were graded as carefully as possible under field conditions, no rigid effort was made to grade for a strict U. S. No. 1 grade. Fruit were separated for cull conditions as reported here.

<sup>4</sup>Some fruits in this size arrangement were larger than standard sizes.

<sup>5</sup>Others were mostly tomatoes too small to be marketed in the above sizes. Some were culled because of rots, insect damage, mechanical damage, and misshapen fruits.

<sup>6</sup>Fruits of this variety averaged between 1 and 2 inches in diameter. No size arrangement could be made.

TABLE 10. PLANT HEIGHT AND FRUIT CHARACTERISTICS OF TOMATO VARIETIES, CLANTON, 1981

Variety and seed source	Plant height	Fruit			Eye appeal <sup>3</sup>	Suggested use <sup>4</sup>
		Color	Shape <sup>1</sup>	Firmness <sup>2</sup>		
	<i>In.</i>					
Sunny (Asgrow) .....	33	Red	2	2	1	3
Flora-Dade (U. Florida) .....	36	Red	2	1	1	3
Tempo (Asgrow) .....	33	Red	2	2	2	1,2
Bigset (Petoseed) .....	30	Red	3	2	2	1
Bonnie Nematode Resistant (Bonnie Farms) .....	38	Red	2	3	2	1
Calypso (Petoseed) .....	29	Red	1	2	1	3
Floramerica (Petoseed) .....	33	Red	2	3	1	1,2
Four Way Hybrid (Four Way Farms) .....	53	Red	1	2	1	3
Count (Petoseed) .....	40	Red	2	1	1	3
Better Boy VFN (Petoseed) .....	55	Red	3	3	2	1,2
Walter Villemarie (Petoseed) .....	33	Red	2	1	1	3
Contessa (Petoseed) .....	49	Red	3	2	1	1,2
Tamiami (Petoseed) .....	27	Red	2	2	2	1,2
Winner (Asgrow) .....	38	Red	2	2	2	1,2
Duke (Petoseed) .....	29	Red	2	2	1	3
Early Cascade (Petoseed) .....	56	Mixed red & pink	5	2	1	1,2

<sup>1</sup>Shape rating: 1 = globe, 2 = deep globe, 3 = oblate, 4 = deep oblate, 5 = mixed.

<sup>2</sup>Firmness rating: 1 = very firm, 2 = firm, 3 = soft.

<sup>3</sup>Appearance rating: 1 = smooth, 2 = slightly rough, 3 = rough.

<sup>4</sup>Use rating: 1 = home garden, 2 = roadside and other direct marketing, 3 = commercial shipping.

TABLE 11. YIELDS FOR STAKED FRESH MARKET TOMATO TRIAL, CULLMAN, 1981<sup>1</sup>

Variety and seed source	Marketable yield/acre <sup>2</sup>				Culls					
	Total <sup>3</sup>	5 × 6 <sup>2</sup>	6 × 6	6 × 7	Total	Pct. of total yield	Cracks	Cat-face	Blossom end-rot	Others <sup>5</sup>
	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
<b>Replicated</b>										
Flora-Dade (Castle) .....	555	129	337	89	174	24	18	20	1	61
Sunny (Asgrow) .....	552	228	285	39	207	27	10	47	1	42
Bonnie Nematode Resistant (Bonnie Farms) .....	527	180	282	65	243	32	14	33	1	52
Tempo (Asgrow) .....	512	199	265	48	285	36	15	45	1	39
7718 VF (Petoseed) .....	503	325	166	12	210	29	31	30	3	36
Calypso (Petoseed) .....	500	168	279	53	206	29	19	28	1	52
Count (Petoseed) .....	488	109	296	83	203	29	11	37	4	48
Floramerica (Petoseed) .....	454	284	155	15	257	36	25	45	1	29
Four Way Hybrid (Four Way Farms) .....	442	210	213	19	113	20	36	16	0	48
Better Boy VFN (Petoseed) .....	438	220	195	23	181	29	50	16	4	30
Winner (Asgrow) .....	428	213	183	32	298	41	35	22	1	42
Big Set (Petoseed) .....	415	183	192	40	166	29	27	31	2	40
Big Girl (Burpee) .....	392	200	166	26	142	27	37	21	12	30
Contessa (Petoseed) .....	384	166	187	31	281	42	23	40	10	27
Walter Villemarie (Petoseed) .....	380	120	208	52	326	46	15	31	1	53
Duke (Petoseed) .....	372	143	199	30	286	43	9	56	1	34
AU 76 FMN (Auburn U.) .....	341	54	189	98	217	39	14	6	2	78
Early Cascade (Petoseed) .....	440 <sup>6</sup>	—	—	—	—	—	—	—	—	—
<b>Observational</b>										
PSR 38179 (Petoseed) .....	597	336	229	32	177	23	22	43	2	33
XP 2032 A (Asgrow) .....	583	187	326	70	236	29	14	38	5	43
Roadside Red (Agway) .....	581	143	334	104	207	30	22	12	3	63
Pik-Red Hybrid (Harris) .....	428	257	149	22	280	40	34	31	1	34
PSR 121275 (Petoseed) .....	425	268	146	11	301	41	13	62	2	23
PSR 20878 (Petoseed) .....	418	252	153	13	241	37	21	57	6	16
Spring Set Hybrid (Twilley) .....	355	43	213	99	278	44	8	21	1	70
Baron (Petoseed) .....	296	77	158	61	181	38	5	50	3	42

<sup>1</sup>Soil test: P = 330 (VH); K = 160 (H); pH = 5.0. Two and one-half tons limestone applied per acre.

<sup>2</sup>Size yields reported here are in accordance with the size standards established by the USDA for the Los Angeles type lug arrangements.

5 × 6 arrangement: minimum diameter 2 11/16 inches, maximum diameter 3 3/16 inches.

6 × 6 arrangement: minimum diameter 2 8/16 inches, maximum diameter 2 14/16 inches.

6 × 7 arrangement: minimum diameter 2 4/16 inches, maximum diameter 2 10/16 inches.

<sup>3</sup>While fruits were graded as carefully as possible under field conditions, no rigid effort was made to grade for a strict U. S. No. 1 grade. Fruit were separated for cull conditions as reported here.

<sup>4</sup>Some fruits in this size arrangement were larger than standard sizes.

<sup>5</sup>Others were mostly tomatoes too small to be marketed in the above sizes. Some were culled because of rots, insect damage, mechanical damage, and misshapen fruits.

<sup>6</sup>Fruits of this variety averaged between 1 and 2 inches in diameter. No size arrangement could be made.



TABLE 12. HARVEST DATES FOR STAKED FRESH MARKET TOMATO TRIAL, CULLMAN, 1980

Variety and seed source	Harvest dates <sup>1</sup>														
	7/7	7/14	7/17	7/20	7/22	7/24	7/27	7/29	7/31	8/3	8/5	8/7	8/10	8/12	8/14
<b>Replicated</b>															
Flora-Dade (Castle)									X	X					
Sunny (Asgrow)							X	X	X	X					
Bonnie Nematode Resistant (Bonnie Farms)							X	X							
Tempo (Asgrow)							X								
7718 VF (Petoseed)							X	X							
Calypso (Petoseed)							X		X						
Count (Petoseed)							X								
Floramerica (Petoseed)							X	X							
Four Way Hybrid (Four Way Farms)											X				
Better Boy VFN (Petoseed)									X	X					
Winner (Asgrow)											X				
Big Set (Petoseed)								X	X						
Big Girl (Burpee)								X	X	X					
Contessa (Petoseed)									X						
Walter Villemarie (Petoseed)							X								
Duke (Petoseed)							X								
AU 76 FMN (Auburn U.)							X								
Early Cascade (Petoseed)	X	X	X												
<b>Observational</b>															
PSR 38179 (Petoseed)									X						
XP 2032 A (Asgrow)									X	X					
Roadside Red (Agway)			X				X								
Pik-Red Hybrid (Harris)							X	X							
PSR 121275 (Petoseed)								X	X						
PSR 20878 (Petoseed)										X	X				
Spring Set Hybrid (Twilley)		X													
Baron (Petoseed)							X	X							

<sup>1</sup>X means peak harvest date, the date at which the highest yield occurred. In some varieties, yield was approximately the same for three or four harvest dates.

TABLE 13. PLANT HEIGHT AND FRUIT CHARACTERISTICS OF TOMATO VARIETIES, CULLMAN, 1981

Variety and seed source	Plant height	Fruit			Eye appeal <sup>3</sup>	Suggested use <sup>4</sup>
		Color	Shape <sup>1</sup>	Firmness		
<b>Replicated</b>						
Flora-Dade (Castle)	42	Red	1	1	1	3
Sunny (Asgrow)	39	Red	2	1	1	3
Bonnie Nematode Resistant (Bonnie Farms)	34	Red	2	3	2	1,2
Tempo (Asgrow)	37	Red	3	2	1	3
7718 VF (Petoseed)	48	Red	3	3	3	3
Calypso (Petoseed)	35	Red	2	2	2	1,2
Count (Petoseed)	37	Red	2	1	2	3
Floramerica (Petoseed)	37	Red	2	2	2	1,2
Four Way Hybrid (Four Way Farms)	55	Red	2	1	1	3
Better Boy VFN (Petoseed)	55	Red	2	2	1	1,2
Winner (Asgrow)	40	Red	2	2	2	1
Big Set (Petoseed)	36	Red	2	2	2	1,2
Big Girl (Burpee)	58	Red	2	3	2	1
Contessa (Petoseed)	39	Red	2	1	1	1,2
Walter Villemarie (Petoseed)	39	Red	2	2	1	3
Duke (Petoseed)	30	Red	3	1	2	3
AU 76 FMN (Auburn U.)	52	Red	1	2	2	1,2
Early Cascade (Petoseed)	55	Mixed red-pink	2	2	1	1,2
<b>Observational</b>						
PSR 38179 (Petoseed)	38	Red	2	2	1	8,3
XP 2032 A (Asgrow)	39	Red	2	2	1	1,2
Roadside Red (Agway)	49	Red	2	3	1	1
Pik-Red Hybrid (Harris)	38	Red	3	2	2	1,2
PSR 121275 (Petoseed)	37	Red	2	2	2	1,2
PSR 20878 (Petoseed)	40	Red	3	2	2	1,2
Spring Set Hybrid (Twilley)	31	Red	3	3	2	1
Baron (Petoseed)	29	Red	3	1	1	3

<sup>1</sup>Shape rating: 1=globe, 2=deep globe, 3=oblate, 4=deep oblate, 5=mixed.

<sup>2</sup>Firmness rating: 1=very firm, 2=firm, 3=soft.

<sup>3</sup>Appearance rating: 1=smooth, 2=slightly rough, 3=rough.

<sup>4</sup>Use rating: 1=home garden, 2=roadside and other direct marketing, 3=commercial shipping.





*Information contained herein is available to all without regard to race, color, sex, or national origin.*