

Spring
1997

Commercial Vegetable Variety Trials



Progress Report No. 132 November 1997
Alabama Agricultural Experiment Station James E. Marion, Director
Auburn University, Alabama

CONTENTS

	<i>PAGE</i>
INTRODUCTION EXPERTS IN THE FIELD: VEGETABLE VARIETY TRIALS.....	3
FIRST EVALUATION OF GREEN BEAN VARIETIES	4
'PARRIS ISLAND' AMONG TOP ROMAINE LETTUCE	6
SEVERAL PRE-COMMERCIAL LINES INCLUDED IN BELL PEPPER VARIETY TRIAL.....	7
'SPARKLE' CANTALOUPE SHOWS AGAIN GOOD YIELD POTENTIAL IN CENTRAL ALABAMA	11
'STARBRITE' PERFORMS WELL IN WATERMELON TRIALS IN SOUTH ALABAMA.....	14
CUCUMBERS EVALUATED ON BARE GROUND AND PLASTIC MULCH	16
TRANSGENIC VARIETIES TESTED IN SUMMER SQUASH TRIALS	19
IS 'SILVER QUEEN" STILL THE BEST WHITE SWEET CORN VARIETY?	23
TOMATO VARIETIES DIFFER IN YIELD AND QUALITY	27
APPENDIX: SPONSORS AND SUPPLIERS	31

This information is available to all persons without regard to race, color, sex, or national origin.

Authors

Eric Simonne
Assistant Professor
Department of Horticulture
(334) 844-3018
esimonne@acesag.auburn.edu

Joseph Kemble
Assistant Professor
Department of Horticulture
(334) 844-4862

Pascal Lienhard
Visiting Scholar
Ecole Nationale Supérieure Agronomique de Toulouse
France

Amy Simonne
Post-Doctoral Fellow
Department of Nutrition and Food Science
(334) 844-3290

Jeff Taylor
Graduate Research Assistant
Department of Horticulture

Edgar Vinson, III
Research Tech VII
Department of Horticulture

Randy Akridge
Superintendent
Brewton Experiment Field
(334) 867-3139

Jim Bannon
Director
E.V. Smith Research Center
(334) 727-7403

Bobby Boozer
Area Horticulturist
Department of Horticulture
(205) 646-3610

Randall Rawls
Superintendent
Upper Coastal Plain Substation
(205) 487-2150

Tony Dawkins
Superintendent
Sand Mountain Substation
(205) 528-7133

Brian Gamble
Associate Superintendent
Wiregrass Substation
(334) 693-2363

Jim Pitts
Superintendent
Chilton Area Horticulture Substation
(334) 646-3610

Marvin Ruf
Associate Superintendent
Sand Mountain Substation
(205) 528-7133

Larry Wells
Superintendent
Wiregrass Substation
(334) 693-2363

Arnold Caylor
Superintendent
North Alabama Horticulture Substation
(205) 734-5820

Ronnie McDaniel
Superintendent
Gulf Coast Substation
(334) 928-2740

Malcomb Pegues
Associate Superintendent
Gulf Coast Substation
(334) 928-2740

Jason Burkett
Superintendent
E.V. Smith Research Center
Horticulture Unit
(334) 727-6159

Monte Nesbitt
Area Horticulturist
Gulf Coast Substation



Introduction

Experts in the Field: Vegetable Variety Trials

ERIC SIMONNE

In 1997, the Alabama Department of Agriculture and Industries launched under the leadership of Dr. John Gamble a marketing program for Alabama products. The

heart of this program are its logo (see icon) and its motto: "Alabama - Experts in the Field." By supporting the use of the logo and motto, the program aims at developing product recognition; increasing product visibility; increasing sales of Alabama producers, processors and manufacturers; and increasing the value of Alabama products.

While this program is for all Alabama products, products of Alabama agriculture in general, and fruits and vegetables in particular, can benefit from it. The Alabama vegetable industry now has the base of a long-awaited marketing program that will increase the recognition and visibility of Alabama vegetables. This should help increase sales and the value of Alabama vegetable industry. "Alabama - Experts in the Field of watermelon, cantaloupes, tomato," or any other vegetable or fruit does sound good.

The program should be used only with Alabama-grown vegetables of high quality. Presently, it is up to the users of the label, primarily the growers, to determine what attributes constitute quality. It is also up to the user not to misuse the label. Too many not-so-great shipments of vegetables with "Alabama - Experts in the Field" printed on them may result in a negative perception of the product.

Quality vegetables start with the choice of a good variety. Hence, vegetable variety trials are part of the support successful vegetable production needs.

In spring 1997, replicated variety trials were conducted for green and colored bell pepper, sugar-enhanced (se) and supersweet (sh2) sweet corn, cantaloupe and honeydew, cucumber, lettuce, yellow summerand zucchini squash, tomato, and watermelon. Green bean observational trials also were conducted. Results of ornamental corn and winter squash tests will be included in the *Fall 1997 Commercial Vegetable Variety Trial Report*. Production systems included bare-ground planting and plasticulture, combined with overhead or drip irrigation. This report presents in-depth information on the yield and performance of these crops. However, glancing rapidly at the yield results may not provide all the information necessary for choosing the best variety. Here are a few tips for getting the most out of these vegetable variety trial results.

Fertilization, Insect, and Pest Control. Trials were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. The actual fertilizers and chemicals used are described only to provide detailed information about the cultural practices employed. Mention of fertilizers or chemical names represent neither a recommendation nor an endorsement of these products. A list of chemicals recommended for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control*

Recommendations (Publication 97IPM-2 from the Alabama Cooperative Extension System).

Statistical Analyses. The coefficient of determination (R^2), coefficient of variation (CV), and least significant difference (lsd) are reported for each test. These numbers are helpful in separating the differences due to small plots (sampling error) and true (but unknown) differences among entries. These three statistical parameters help minimize the potential errors due to the use of small plots. If it were possible to plant a larger plot of each variety, these parameters would be less important.

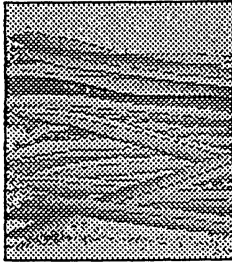
R^2 ranges between 0 and 1. Values close to 1 suggest that the test was conducted under good conditions and most of the variability observed was mainly due to the effect of variety and replication. Random, uncontrolled errors were less important. CV is an expression of yield variability relative to yield mean. Low CVs are desirable (under 20%), but are not always achieved.

Lsd is the minimum yield difference that is to be observed between two varieties to infer that the one with the higher yield actually performed better. When the difference in yield between two varieties is less than the lsd value, one cannot conclude that one variety performed better than the other, despite a numerical difference in yield. For example, in the 1997 bell pepper trial at the North Alabama Horticulture Substation, 'Sentry' yielded 24,600 pounds per acre, while 'Enterprise' and 'Commandant' yielded 21,337 and 13,508 pounds per acre, respectively. Since there was less than a 6,498 (the lsd value for yield) difference between 'Sentry' and 'Enterprise,' there is no statistical difference between the yields of these two varieties. However, the difference between 'Sentry' and 'Commandant' was 11,092, indicating that there is a real difference between the yields of these two varieties. From a practical point of view, growers should compare varieties in terms of lsd.

Using Variety Trial Information for Selection of a Variety. The performance of a genotype is affected by factors such as soil type, growing environment, and weather conditions. Therefore, the information in this report should be used as a primary source of information to pre-select the varieties that have shown under the conditions described hereafter to have potential for high yields and quality. Also, vegetable varieties come and go, and good-performing varieties may not be available consistently. Therefore, it is better to make variety evaluation a part of vegetable production. On-farm evaluation will test the performance of a variety under more specific conditions. The final choice of a variety may have to be adjusted after this second evaluation.

DESCRIPTION OF RATINGS USED TO EVALUATE SPRING 1997

VARIETY TRIALS					
Rating	Weather	Fertilizer	Irrigation	Pests	Overall
5	Very good	Very good	Very good	None	Excellent
4	Favorable	Good	Good	Light	Good
3	Acceptable	Acceptable	Acceptable	Tolerable	Acceptable
2	Adverse	Low	Low	Adverse	Questionable
1	Destructive	Very low	Insufficient		



Observational green bean variety trials were conducted at the Chilton Area Horticulture Substation (CAHS) in Clanton and Sand Mountain Substation

(SMS) in Crossville (tables 1 and 2).

At both locations, beans were direct-seeded on bare ground into 20-foot-long plots at a within row spacing of one foot. Planting dates were May 27 at CAHS and May 12 at SMS. Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production practices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

At CAHS, 550 Pounds of a 13-13-13 fertilizer were broadcast-incorporated preplant on May 13. Preplant herbicides were Treflan (at a rate of 1.5 pints per acre) and Dual 2E (at a rate of two pints per acre). Beans were sidedressed with 15 pounds of nitrogen (N) as ammonium nitrate (NH_4NO_3) three and seven weeks after planting. No additional chemicals were used.

At SMS, preplant fertilization consisted of applications (per acre) of 1.5 tons of lime on April 1 and 300 pounds of concentrated superphosphate and 120 pounds of muriate of potash (KCl) on May 12. Preplant herbicide was Dual applied on May 13 at a

First Evaluation of Green Bean Varieties

ERIC SIMONNE, BOBBY BOOZER, TONY DAWKINS, JIM PITTS,
AND MARVIN RUF

rate of one quart per acre. Beans were fertilized with NH_4NO_3 at a rate of 100 pounds per acre on May 22, potassium nitrate (KNO_3) at a rate of 100 pounds per acre on June 13, and with calcium nitrate [$\text{Ca}(\text{NO}_3)_2$] at a rate of 100 pounds per acre on June 23, July 15 and 25, and Aug. 4. Disease control was provided by applications of Bravo at a rate of two pints per acre on June 20 and July 3. Insect control was provided by applications of Sevin XLR at a rate of one pint per acre on June 3 and 27 and July 3. Green beans were hand harvested on July 16, 18, and 28 at CAHS and July 7, 14, 21, and Aug. 8 at SMS. Marketable yield and weight and length of 50 pods were determined (Table 3).

Based on 1997 results, the most consistent yields corresponded to 'Benchmark.' Of the experimental lines, 'MB-8007' from Sandoz Rogers showed good yield potential at both locations. The standard flat-podded bean 'Roma II' could not be evaluated due to a poor germination rate.

TABLE 1. RATINGS OF 1997 GREEN BEAN VARIETY TRIALS

Location	CAHS	SMS
Weather	5	5
Fertility	5	5
Irrigation	5	5
Pests	5	5
Overall	5	5

See Introduction for description of rating scales.

TABLE 2. SEED SOURCE, EARLINESS, POD CHARACTERISTICS, AND DISEASE RESISTANCE/TOLERANCE OF SELECTED GREEN BEAN VARIETIES

Variety	Type	Seed source	Days to harvest	Growth habit	Pod color	Pod shape	Disease res./tol.	Year eval.
Benchmark	OP	Sandoz Rogers	55	Bush	Green	Round	CBMV,NL8,NY15MV	97
Bronco	OP	Asgrow	53	Bush	Green	Round	CBMV	97
Carlo	OP	Asgrow	55	Bush	Green	Round	CBMV	97
Derby	OP	Ferry-Morse	55	Bush	Green	Round	CBMV,PM	97
Florence	OP	Asgrow	.	Bush	Green	Round	.	97
Golden Rod	OP	Ferry-Morse	55	Bush	Yellow	Round	NY15MV	97
Wax								
Hialeah	OP	Ferry-Morse	53	Bush	Green	Oval	NY15MV	97
Nickel	OP	Vilmorin	52	Bush	Green	Round	BS,WM	97
Nugget	OP	Ferry-Morse	52	Bush	Yellow	Round	NY15MV	97
Mirada	OP	Sandoz Rogers	54	Bush	Green	Round	CBMV,NY15MV	97
Orient Wonder	OP	Sakata	.	Pole	Green	Round	.	97
Rhapsody	OP	SeedWay	.	Bush	Green	Round	.	97
Roma II	OP	Stokes	59	Bush	Green	Flat	CBMV,PSV,RB	97
Seville	OP	SeedWay	56	Bush	Green	Round	CBMV,NY15MV	97
Sonata	OP	Ferry-Morse	.	Bush	Green	Round	.	97
Trueblue	OP	Ferry-Morse	54	Bush	Green	Round	CBMV,NY15MV	97

OP = open pollinated; . = not available

TABLE 3. YIELD AND POD CHARACTERISTICS OF SELECTED GREEN BEAN VARIETIES

Variety	Marketable yield lb./acre	Cull weight lb./acre	Pod weight lb./100 pods	Pod length in./pod
Chilton Area Horticulture Substation¹				
Trueblue	10,912	0	.	.
MB-8007	10,418	0	.	.
Orient Wonder	9,692	0	.	.
Benchmark	9,184	0	.	.
Nickel	9,162	0	.	.
XPB 346	8,814	0	.	.
SB-4129	7,993	0	.	.
Carlo	7,768	0	.	.
Derby	7,732	0	.	.
Hialeah	7,645	0	.	.
Sonata	7,463	0	.	.
Golden Rod Wax	7,304	0	.	.
SB-413	6,563	0	.	.
Seville	6,353	0	.	.
Bronco	6,200	0	.	.
Mirada	5,401	0	.	.
Florence	4,864	0	.	.
Rhapsody ²	.	0	.	.
Roma II ²	.	0	.	.
Nugget ²	.	0	.	.
Sand Mountain Substation¹				
MB-8007	11,955	1,243	1.98	3.1
SB-4130	8,861	1,171	1.60	2.5
Sonata	7,684	972	1.78	2.8
Hialeah	7,451	1,158	1.70	2.7
Seville	7,186	1,266	1.40	2.2
SB-4129	6,319	900	1.56	2.5
Benchmark	6,296	1,864	1.45	2.3
Bronco	5,918	883	1.21	1.9
Derby	5,335	623	1.87	2.9
XPB 346	5,216	937	1.44	2.3
Trueblue	4,817	1,240	1.64	2.6
Nugget	4,552	926	1.50	2.4
Mirada	4,469	1,028	1.37	2.2
Rhapsody	3,966	451	1.56	2.5
Golden Rod	3,854	811	1.36	2.1
Florence	3,592	477	1.48	2.3
Orient Wonder	3,023	0	7.86	12.4
Carlo	2,964	419	1.46	2.3
Nickel	2,679	595	0.70	1.1
Roma II	2,049	295	2.12	3.3

¹ Observational trials² Insufficient stand



'Parris Island' Among Top Romaine Lettuce

ERIC SIMONNE, ARNOLD CAYLOR, AMY SIMONNE, AND JEFF TAYLOR

A lettuce variety trial was conducted at the North Alabama Horticulture Substation (NAHS) in Cullman (tables 1 and 2) using plasticulture. Five-week-old lettuce plants were transplanted in staggered rows 12 inches apart at an in-row spacing of 12 inches on May 13. Plots were 20 feet

long, which created a stand of approximately 18,000 plants per acre.

Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production practices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

Preplant fertilization consisted of an application of 34-0-0 at a rate of 100 pounds per acre. Beginning after transplanting and through harvest, lettuce were fertilized with weekly injections

at a rate of five pounds of N alternatively from calcium nitrate and ammonium nitrate.

On June 24, lettuce was harvested at marketable size and graded according to the *U.S. Standards for Grades of Romaine* (U.S. Dept. of Agriculture Publication 60-6130). Yields were expressed in 50-pound boxes of 24 units (Table 3) calculated by dividing the number of marketable heads by 24. Heads of insufficient size were culled. None of the differences in marketable weight were significantly different. Best performers for 1997 were 'Parris Island' and the advanced line from Asgrow 'XP 5808,' both romaine types.

TABLE 1. RATINGS OF 1997 LETTUCE VARIETY TRIAL

Location	NAHS
Weather	4
Fertility	5
Irrigation	5
Pests	5
Overall	5

See Introduction for description of rating scales.

TABLE 2. SEED SOURCE, EARLINESS AND DISEASE RESISTANCE/TOLERANCE OF SELECTED LETTUCE VARIETIES

Variety	Seed source	Days to harvest	Head type	Leaf color	Disease res./tol.	Years eval.
Greengo	Asgrow	.	Looseleaf	Green	.	96,97
Nancy	SeedWay	66	Butterhead	Green	.	96,97
Nevada	Vilmorin	58	Batavia	Green	DM,LMV,TB	95-97
Optima	Vilmorin	55	Butterhead	Green	DM,LMV	95-97
Parris Island	Stokes	65	Romaine	Green	TB	95-97
Redprize	Ferry-Morse	46	Looseleaf	Green/Red	TB	96,97
Sierra	Vilmorin	.	Batavia	Green/Red	DM,LMV,TB	95-97
Slobolt M.I.	Harris Seeds	48	Looseleaf 'Frisee'	Green	.	96,97
Target	Petoseed	75	Crisphead	Green	DM	95,97

BIT = bitterness; LMV = lettuce mosaic virus; TB = tip burn; DM = downy mildew; . = not available; from seed catalogues

TABLE 3. YIELD AND NUMBER OF 50-POUND CARTON (24 HEADS) OF SELECTED LETTUCE VARIETIES AT THE NORTH ALABAMA HORTICULTURE SUBSTATION

Variety	Marketable weight, lb./acre	Marketable heads, #/acre	Marketable 50-lb. box, #/acre
Parris Island	14,508	9,156	382
XP 5808	11,484	9,701	404
Target	11,352	10,246	427
Nevada	10,982	10,464	436
Optima	10,502	7,848	327
Nancy	9,232	10,464	436
Redprize	8,529	8,720	363
Sierra	8,464	9,483	395
FMX 2153	6,834	9,374	391
Greengo	6,172	9,047	377
FMX 2155	5,984	4,905	204
Slobolt M.I.	5,107	9,265	386
R ²	0.16		
CV	75		
lsd	9,819		

Several Pre-Commercial Lines Included in Bell Pepper Variety Trial

ERIC SIMONNE, JIM BANNON, JASON BURKETT, ARNOLD CAYLOR, JOSEPH KEMBLE, RANDALL RAWLS, JEFF TAYLOR, EDGAR VINSON, AND LARRY WELLS



Bell pepper variety trials were conducted at the Wiregrass Substation (WS) in Headland, Horticulture Unit at the E.V. Smith Research Center (EVSRC) in Shorter, Upper Coastal Plain

Substation (UCPS) in Winfield, and North Alabama Horticulture Substation (NAHS) in Cullman (tables 1 and 2).

Five-week-old peppers were transplanted on May 6 at WS, May 7 at EVSRC and NAHS, and on May 7 at UCPS on four-foot-wide, drip-irrigated and plastic-mulched beds. Plastic mulch color was black at WS, NAHS and UCPS, and white at EVSRC. At WS, EVSRC, and UCPS, peppers were planted in double-staggered rows one foot apart, at a within-row spacing of one foot, which created a stand of approximately 15,000 plants per acre. At NAHS, peppers were planted in single rows at a within-row spacing of one foot, creating a stand of approximately 7,500 plants per acre.

Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production practices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

TABLE 1. RATINGS OF 1997 BELL PEPPER VARIETY TRIALS

Location	WS	EVSRC	NAHS	UCPS
Weather	4	4	4	4
Fertility	5	5	5	5
Irrigation	5	5	5	5
Pests	5	5	5	5
Overall	5	5	5	5

See Introduction for description of rating scales.

At WS, preplant fertilization consisted of applications (per acre) of 450 pounds of a 13-13-13 fertilizer, 50 pounds of ammonium nitrate (NH_4NO_3) and 700 pounds of gypsum (CaSO_4) on April 5. Starting after transplanting and through final harvest, six pounds of N per acre were injected weekly using potassium nitrate and calcium nitrate. A total of 42 pounds of N was injected. Bravo (fungicide) was applied at a rate of three pints per acre on May 14, 21, and 27; June 2, 9, 16, 23, and 30; and July 8. Asana (insecticide) was applied at a rate of eight ounces per acre on May 27 and June 2 and 23.

At EVSRC, preplant fertilization consisted of applications (per acre) of 450 pounds of 0-10-20 and 387 pounds of 15.5-0-0 on March 10. Beds were fumigated with methyl bromide at a rate of 400 pounds per acre on March 10. Starting after transplanting, six pounds of N were injected twice weekly, alternatively from

a liquid calcium nitrate [$\text{Ca}(\text{NO}_3)_2$] solution and 20-10-20. A total of 185 pounds of N was applied (preplant + injections). Fungicides used were Kocide 101 (at a rate of three pounds per acre) on May 12, 19, 26, 30, and July 4 and 12; Manex (at a rate of two quarts per acre) on May 12, 26, and July 4 and 12; Mankocide (at a rate of three pounds per acre) on June 7, 14, 21, July 23, 30, and Aug. 9; and, Bravo 81W/Ridomil (at a rate of three pounds per acre) on June 30. Insect control was provided with applications of Phaser (at a rate of 2.6 pounds per acre) on May 30 and June 7, 14, and 21; Lannate LV (at a rate of three pints per acre) on June 30; and, Asana XL (at a rate of 9.6 ounces per acre) on July 4, 12, 23, and Aug. 9.

At NAHS, 500 pounds per acre of a 15-0-0 fertilizer were preplant incorporated. Beginning after transplanting and through harvest, bell peppers were fertilized with weekly injections at a rate of five pounds of N alternatively from $\text{Ca}(\text{NO}_3)_2$ and NH_4NO_3 . Fungicides used were Dithane F45 (at a rate of 2.4 quarts per acre) on May 22, 29, and July 6, 19, and 27; and, Kocide 101 (at a rate of two pounds per acre) on May 22, June 6, 19, 27, and July 3 and 10. Insecticides used were Asana XL (at a rate of 9.6 ounces per acre) on June 19, 27, July 3, 10, and 16; and, Phaser (at a rate of two quarts per acre) on July 3 and Aug. 1.

At UCPS, three pounds of N were weekly injected between May 22 and Sept. 4, alternatively from $\text{Ca}(\text{NO}_3)_2$ and potassium nitrate (KNO_3). A total of 48 pounds of N was injected.

Plots were harvested seven times between June 30 and July 18 at WS; six times between June 27 and Aug. 11 at EVSRC; on July 23, 31, and Aug. 6 at NAHS; and five times between July 9 and Aug. 18 at UCPS. At both locations, fruits were harvested at the mature-green color stage, weighed, and graded (tables 3 and 4) using the standards of the *Sweet Pepper Grader's Guide* (Circular ANR-783 of the Alabama Cooperative Extension System).

'Sentry,' 'Enterprize,' and 'X3R Camelot' had consistently high early yields. The lines 'SR-4153' (blocky; Sandoz Rogers) and 'E-417' and 'E-123' (deep blocky; Vilmorin) were good yielders and need to be kept in trials in 1998.

TABLE 2. SEED SOURCE, FRUIT CHARACTERISTICS, AND RELATIVE EARLINESS OF SELECTED BELL PEPPER VARIETIES

Variety	Type	Seed source	Color	Days to harvest	Disease tol./res.	Years eval.
Admiral	F1	Sandoz Rogers	G-Y	76	BLS(1,2),PVY,TbMV	95-97
Belle Star	F1	Ferry-Morse	G-R	67	TbMV	94,96,97
Bell King	F1	Harris Seeds	G-R	74	TbMV	94,95,97
Black Bird	F1	Stokes	G-Bk-R	73	--	94-97
Bonita	F1	Ferry-Morse	G-R	.	BLS(1,2,3)	97
Camelot X3R	F1	Petoseed	G-R	74	BLS(1,2,3),TbMV	94-97
Capistrano	OP	Petoseed	G-R	74	TbMV	96,97
Chocolate Beauty	F1	Petoseed	G-Br-R	85	TbMV	94,96,97
Chocolate Bell	F1	Stokes	G-Br-R	75	--	95-97
Commandant	F1	Sandoz Rogers	G-R	80	BLS(1,2,3)	97
Enterprise	F1	Asgrow	G-R	77	BLS(1,2,3),TbMV	95-97
Figaro	F1	Vilmorin	G-R	71	PVY,TbMV	95-97
Goldcoast	F1	Asgrow	G-Y	74	BLS(1,2,3),TbMV	95-97
Ivory	F1	Sandoz Rogers	W-O	68	--	94-95,97
Karma	F1	Ferry Morse	G-R	70	TbMV	97
King Arthur	F1	Petoseed	G-R	72	BLS(2),PVY,TbEV,TbMV	94-97
Lilac	F1	Sandoz Rogers	P-R	68	TbMV	94-97
Primadona	F1	Ferry-Morse	G-R	.	.	97
Purple Beauty	OP	Petoseed	Bk-R	74	TbMV	96,97
Red Dawn	F1	Stokes	G-R	69	--	95-97
Sentry	F1	Sandoz Rogers	G-R	70	BLS(1,2),PVY,Stip,TbMV	97
Superset	F1	Stokes	G-R	64	TbMV	94,96,97
Var.#870	F1	A&C	G-R	.	BLS(1,2,3)	97
Var.#830	F1	A&C	G-R	.	BLS(1,2,3)	97

TABLE 3. EARLY PRODUCTION AND GRADE DISTRIBUTION OF SELECTED BELL PEPPER VARIETIES

Variety	Early marketable wt. lb./acre	Early fancy wt. lb./acre	Early US#1 wt. lb./acre	Early US#2 wt. lb./acre	Early fancy no. #/acre	Early US#1 no. #/acre	Early US#2 no. #/acre
Wiregrass Substation¹							
Sentry	18,140	7,569	6,351	4,220	17,400	20,445	13,920
SR-4153	15,051	5,829	4,307	4,916	14,790	11,310	18,270
XR3 Camelot	12,920	2,349	2,697	7,874	5,655	7,395	28,275
Karma	12,245	3,872	3,545	4,829	10,005	12,615	17,400
King Arthur	11,832	4,698	2,828	4,307	12,180	7,830	18,705
SPP-6112	11,789	2,001	4,959	4,829	4,785	15,660	16,095
ACX-202	11,223	3,437	3,741	4,046	9,135	10,005	14,790
Commandant	11,093	1,044	1,349	8,700	2,175	5,873	8,265
Chocolate Bell	10,092	783	2,567	6,743	1,740	8,265	28,275
Enterprise	9,635	1,610	2,719	5,307	4,350	8,265	21,315
Black Bird	8,744	2,219	2,784	3,741	6,090	7,830	13,485
Capistrano	7,395	0	2,219	5,177	0	7,830	21,315
R ²	.	.	.	.	.	.	.
CV	.	.	.	.	.	.	.
Isd	.	.	.	.	.	.	.
E.V. Smith Research Center							
Enterprise	17,450	555	5,242	11,653	1,598	17,430	51,564
XR3 Camelot	15,692	2,686	4,590	8,416	7,553	16,994	38,637
Chocolate Beauty	14,763	1,084	5,078	8,601	3,341	21,352	45,754
Ivory	13,094	833	4,182	8,078	4,358	23,385	59,407
Sentry	12,512	1,062	3,695	7,756	2,760	12,346	35,441
Bonita	12,326	1,142	4,178	7,007	3,050	16,329	25,308
Goldcoast	12,139	735	2,852	8,552	2,034	11,184	37,765
XPH 12205	11,287	1,783	3,548	5,957	5,229	14,089	25,564
Bell King	11,153	1,407	4,062	5,684	4,358	19,028	32,246
Var. #830	9,401	948	3,361	5,092	2,905	12,927	23,821
Admiral	8,603	40	1,551	7,012	145	6,246	34,570
Commandant	7,436	935	2,630	3,871	2,760	10,603	20,045
Purple Beauty	7,086	655	1,789	4,641	2,179	7,844	24,693
R ²	0.32	0.22	.	.	0.20	.	.
CV	43	127	.	.	124	.	.
Isd	2,244	659	.	.	4,338	.	.
North Alabama Horticulture Substation							
E-417	26,638	11,854	9,525	5,259	26,209	34,583	20,554
E-123	25,090	10,129	11,171	3,790	26,535	38,063	14,790
Sentry	24,600	7,907	11,721	4,972	19,575	40,129	23,164
Figaro	21,637	7,197	9,990	4,450	17,291	34,583	21,206
Enterprise	21,337	7,073	9,568	4,696	20,010	31,973	16,313
King Arthur	17,894	6,473	7,228	4,193	14,573	25,883	17,509
Red Dawn	17,650	2,754	8,885	6,012	7,939	34,909	28,166
Camelot XR3	17,594	4,316	8,257	5,020	11,528	26,535	23,708
HP-4153	16,901	4,720	8,451	3,730	12,724	28,819	16,095
Var. #870	15,746	5,099	6,108	4,538	13,703	21,315	20,445
Super Set	15,445	626	7,449	7,369	2,284	32,516	37,954
Var. #830	13,717	5,001	5,522	3,193	13,050	20,228	14,790
Commandant	13,508	5,670	5,092	2,746	13,703	21,641	13,268
ACX-202	13,261	3,572	6,185	3,504	9,788	20,880	15,334
R ²	0.55	0.67	.	.	0.65	.	.
CV	25	40	.	.	37	.	.
Isd	6,498	3,310	.	.	7,856	.	.
Upper Coastal Plain Substation¹							
Enterprise	19,294	0	4,022	15,273	0	18,270	83,955
Redwing	17,306	0	7,502	9,805	0	34,365	56,550
Var. #870	17,113	0	1,903	15,210	0	7,830	76,560
Belle Star	15,021	0	1,466	13,555	0	6,090	73,950
Primadona	14,857	0	5,279	9,579	0	23,490	60,030
Chocolate Beauty	12,082	0	5,842	6,240	0	23,925	36,975
Bonita	11,064	0	5,986	5,079	0	27,840	31,320
Commandant	9,757	0	1,570	8,187	0	9,135	48,720
Purple Beauty	8,641	0	774	7,867	0	3,045	37,845
XPH 12205	8,548	0	3,913	4,635	0	17,400	32,190
Bell King	8,132	0	4,955	3,178	0	16,530	18,705
Lilac	4,657	0	0	4,657	0	0	25,230
R ²	.	.	.	.	.	.	.
CV	.	.	.	.	.	.	.
Isd	.	.	.	.	.	.	.

¹ Observational trial

Combined productions of June 30, July 3, 7, and 9 at WS; June 27, July 2, 15, and 22 at EVSRC; July 23, 31, and Aug. 6 at NAHS; and, July 9, 14, 28, and Aug. 11 at UCPS.

TABLE 4. TOTAL PRODUCTION AND GRADE DISTRIBUTION OF SELECTED BELL PEPPER VARIETIES

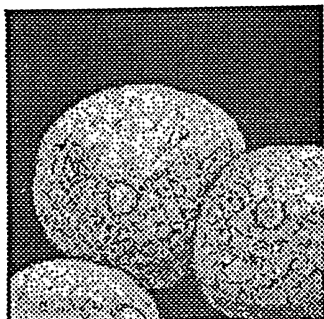
Variety	Total marketable wt. lb./acre	Total fancy wt. lb./acre	Total US#1 wt. lb./acre	Total US#2 wt. lb./acre	Total cull lb./acre	Total fancy no. #/acre	Total US#1 no. #/acre	Total US#2 no. #/a	Individual fancy fruit wt. lb
Wiregrass Substation									
SR-4153	20,706	6,525	6,351	7,830	392	17,400	19,575	33,495	0.38
Sentry	20,402	7,830	7,308	5,264	87	18,270	24,795	20,445	0.43
Karma	18,488	4,829	5,655	8,004	1,001	13,050	21,315	34,800	0.37
Black Bird	17,661	2,784	6,699	8,178	305	7,830	23,055	34,800	0.36
SPP-6112	16,443	2,741	6,873	6,830	392	6,960	22,620	25,230	0.39
Commandant	16,313	2,001	3,219	11,093	827	5,655	13,703	22,185	0.35
Chocolate Bell	15,965	1,131	4,829	10,005	740	3,045	17,400	45,675	0.37
King Arthur	15,660	4,872	3,654	7,134	174	12,615	11,745	36,540	0.39
Enterprise	15,116	1,827	3,980	9,309	740	5,220	13,485	43,935	0.35
Camelot XR3	15,073	2,480	3,263	9,331	1,262	6,090	9,570	36,540	0.41
ACX-202	15,008	4,437	5,090	5,481	696	12,615	15,225	22,185	0.35
Capistrano	8,787	479	2,219	6,090	870	1,305	9,135	26,100	0.37
R ²	.	.	.	.	.	.	.	.	.
CV	.	.	.	.	.	.	.	.	.
lsd	.	.	.	.	.	.	.	.	.
E. V. Smith Research Center									
Enterprise	24,748	555	6,982	17,212	6,497	1,598	26,290	83,228	0.33
XR3 Camelot	23,281	2,686	6,481	14,114	7,146	7,553	23,821	71,173	0.35
Chocolate Beauty	23,078	1,137	6,675	15,266	4,638	3,486	28,469	92,815	0.32
Sentry	18,875	1,062	4,067	13,746	7,805	2,760	13,944	73,642	0.38
Bonita	18,705	1,199	5,409	12,098	6,926	3,196	21,268	56,101	0.37
Var. #830	18,043	948	4,461	12,635	7,741	2,905	17,430	71,027	0.32
Ivory	17,623	833	4,983	11,807	5,664	4,358	26,726	89,038	0.20
Goldcoast	16,691	735	3,418	12,537	6,689	2,034	13,363	62,893	0.36
XPH 12205	16,293	1,783	4,384	10,127	5,269	5,229	17,285	52,726	0.36
Bell King	16,074	1,407	4,990	9,677	6,425	4,358	23,385	63,184	0.34
Commandant	13,708	935	3,661	9,112	6,401	2,760	14,961	52,435	0.34
Admiral	13,341	40	1,551	11,750	11,405	145	6,246	65,435	0.28
Purple Beauty	12,259	655	1,974	9,629	7,791	2,179	8,570	55,486	0.28
R ²	0.28	0.22	.	.	.	.	.	.	0.75
CV	38	126	.	.	.	.	.	.	9
lsd	3,362	661	.	.	.	.	.	.	0.04
North Alabama Horticulture Substation									
E-417	26,638	11,854	9,525	5,259	5,869	26,209	34,583	20,554	0.44
E-123	25,090	10,129	11,171	3,790	4,283	26,535	38,063	14,790	0.38
Sentry	24,600	7,907	11,721	4,972	5,434	19,575	40,129	23,164	0.40
Figaro	21,637	7,197	9,990	4,450	4,614	17,291	34,583	21,206	0.41
Enterprise	21,337	7,073	9,568	4,696	3,576	20,010	31,973	16,313	0.35
King Arthur	17,894	6,473	7,228	4,193	5,078	14,573	25,883	17,509	0.62
Red Dawn	17,650	2,754	8,885	6,012	4,956	7,939	34,909	28,166	0.35
Camelot XR3	17,594	4,316	8,257	5,020	4,706	11,528	26,535	23,708	0.47
HP-4153	16,901	4,720	8,451	3,730	7,079	12,724	28,819	16,095	0.37
Var. #870	15,746	5,099	6,108	4,538	5,357	13,703	21,315	20,445	0.38
Super Set	15,445	626	7,449	7,369	5,718	2,284	32,516	37,954	0.27
Var. #830	13,717	5,001	5,522	3,193	7,195	13,050	20,228	14,790	0.38
Commandant	13,508	5,670	5,092	2,746	6,806	13,703	21,641	13,268	0.41
ACX-202	13,261	3,572	6,185	3,504	8,676	9,788	20,880	15,334	0.48
R ²	0.55	0.67	.	.	0.65	.	.	.	0.23
CV	24	40	.	.	37	.	.	.	27
lsd	6,546	3,335	.	.	7,856	.	.	.	0.13
Upper Coastal Plain Substation									
Enterprise	37,635	0	10,775	26,860	7,067	0	50,460	174,000	0.21
Var. #870	34,300	0	6,914	27,385	5,738	0	39,585	145,290	0.17
Redwing	34,148	0	17,276	16,871	1,429	0	82,650	100,485	0.21
Belle Star	30,644	0	3,112	27,531	3,989	0	12,615	169,215	0.25
Chocolate Beauty	29,202	0	8,685	20,517	1,470	0	36,975	124,845	0.23
Primadona	24,810	0	9,914	14,897	4,502	0	45,240	86,565	0.22
Commandant	24,214	0	8,015	16,199	8,576	0	40,455	97,875	0.20
XPH 12205	22,607	0	9,011	13,596	2,810	0	39,150	84,390	0.23
Bell King	21,563	0	11,175	10,388	5,026	0	44,370	65,250	0.25
Bonita	17,539	0	11,641	5,899	1,477	0	58,725	37,410	0.20
Purple Beauty	15,628	0	1,897	13,732	5,496	0	10,005	67,425	0.19
Lilac	13,648	0	0	13,648	474	0	0	79,605	0.19
R ²	.	.	.	.	.	.	.	.	.
CV	.	.	.	.	.	.	.	.	.
lsd	.	.	.	.	.	.	.	.	.

¹ Observational trials

Actual harvests dates were June 30, July 3, 7, 9, 11, 14, and 18 at WS; June 27, July 2, 15, 22, 29, and Aug. 11 at EVSRC; July 23, 31, and Aug. 6 at NAHS; and, July 9, 14, 28, and Aug. 11 and 18 at UCPS.

'Sparkle' Cantaloupe Shows Again Good Yield Potential in Central Alabama

ERIC SIMONNE, RANDY AKRIDGE, JIM BANNON, JASON BURKETT, ROBERT BOOZER, TONY DAWKINS, PASCAL LIENHARD, JOSEPH KEMBLE, JIM PITTS, MARVIN RUF, AND JEFF TAYLOR



Small melon (cantaloupe, honey dew, and French charentais) variety trials were conducted at the Brewton Experiment Field (BEF) in Brewton, Horticulture Unit at the E.V. Smith Research Center (EVSRC) near Shorter, Chilton Area Horticulture Substation (CAHS) in Clanton, and Sand Mountain Substation (SMS) in Crossville (tables 1 and 2).

Selected varieties of small melons were direct-seeded in single rows on five-foot-wide beds, at a three-foot within-row spacing. At all locations, plastic mulch and drip irrigation were used. Planting dates were April 29 at BEF, May 30 at EVSRC, May 15 at CAHS, and May 13 at SMS.

Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production practices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

At BEF, a 5-10-15 fertilizer was preplant applied on April 2 at a rate of 600 pounds per acre. Beds were fumigated with methyl bromide at a rate of 200 pounds per acre. Herbicide used was Roundup Ultra applied on May 1 (preplant) and June 3 at a rate of two quarts per acre. Ammonium nitrate (NH_4NO_3) was injected (at a rate of 34 pounds per acre) on May 13, 30, 28, and June 3, 13, and 20. A total of 54 pounds of N was injected. Fungicides used were Bravo 720 (at a rate of one quart per acre) on May 27 and June 4; and Bravo Ultra (at a rate of three pounds per acre) on June 16. Insect control was provided by applications of Thiodan 3E (at a rate of one quart per acre) on May 27 and June 4 and 16.

At EVSRC, preplant fertilization consisted of applications (per acre) of 450 pounds of 0-10-20 and 387 pounds of 15.5-0-0 on March 10. Beds were fumigated with methyl bromide at a rate of 400 pounds per acre. Between May 9 and Aug. 14, six pounds of N were weekly injected alternatively from calcium nitrate [$\text{Ca}(\text{NO}_3)_2$] and 20-10-20. A total of 120 pounds of N was applied (preplant + injections). Fungicides used were Ridomil MZ 58 (at a rate two pounds per acre) on May 30; Dithane DF (at a rate of three pounds per acre) on June 7, 14, and 20; Bravo 81 W/Ridomil (at a rate of three pounds per acre) on June 40 and July 4; Teramil 6L (at a rate of three pints per acre) on July 23 and Aug. 9. Insect control was provided with applications of Phaser 3EC (at a rate of 2.7 pounds per acre) on May 30 and June 7 and 14; Asana XL on June 30, July 4, 12, 24, 30, and Aug. 9.

At CAHS, fertilization consisted of a preplant application (per acre) of 54 pounds of N, P_2O_5 , and K_2O and weekly injections ranging between seven and 14 pounds of N using 20-20-20 or potassium nitrate (KNO_3). A total of 54 pounds of N was injected.

Disease control was provided with applications of Kocide (at a rate of 2.66 pints per acre) on May 22 and June 5, 12, 21, and July 3 and 24; Maneb (at a rate of 1.5 pounds per acre) on May 22 and June 5 and 12; and, Bravo/Ridomil (at a rate of two pounds per acre) on June 28 and Aug. 8. Insecticides used were Thiodan at a rate of one quart on May 22 and a rate of 2.5 pints on June 6, 12, and 21; Dithane (at a rate of two pounds per acre) on June 21 and July 3 and 24; and, Lannate LV (at a rate of two pints per acre) on June 28, July 3 and 24, and Aug. 8.

TABLE 1. RATINGS OF 1997 SMALL MELON VARIETY TRIALS

Location	BEF	EVSRC	CAHS	SMS
Weather	5	5	4	5
Fertility	5	5	5	5
Irrigation	5	5	5	5
Pests	5	5	5	5
Overall	5	5	4	5

See Introduction for description of rating scales.

At SMS, preplant fertilization consisted of applications (per acre) of two tons of lime, and 150 pounds of NH_4NO_3 . Weekly injections of seven pounds of N were made between June 5 and July 31 alternatively from 20-20-20 and KNO_3 . A total of 63 pounds of N was injected. Fungicides used were Bravo (at a rate of one pint per acre) on June 6, and two pints per acre on June 20 and July 3 and 17; and, Ridomil (at a rate of 1.5 pounds per acre) on June 13, 27, and July 9. Insecticides used were Asana XL (at a rate of eight ounces per acre) on June 13, 20, 27 and July 3, 9, and 17; and, Sevin XLR (at a rate of one pint per acre) on July 3.

Harvesting small melons at an over-ripe stage may reduce shelf-life and increase the risk of splitting during transportation. Flavor may also be adversely affected. Selected cantaloupe varieties may be harvested at half-slip. Honey dew melons do not slip naturally from the vine and are considered vine-rippe when the pubescence on the melon falls and/or when rind color changes from green to yellowish. Honey dew melons may be harvested at an immature stage; they will continue to ripen and become sweeter during storage. Hence, sugar content at harvest is not a good indicator of sweetness at maturity. French charentais melons may be harvested when the distal end becomes soft to the touch, while the melon still shows a green appearance.

Melons were harvested and graded five times between July 2 and 18 at BEF; nine times between July 17 and Aug. 13 at EVSRC; nine times between July 24 and Aug. 15 at CAHS; and seven times between Aug. 4 and 18 at SMS (Table 3). Sweetness at harvest was evaluated by measuring soluble-solid content with a hand-held refractometer. For each variety of cantaloupe, eight representative melons from each location were selected. Soluble solid content of cantaloupes varies little after harvest. However, a significant increase in sweetness usually occurs in honey dews after harvest. Therefore for honey dews, soluble solids at harvest is not a good indicator of final sweetness and it was not recorded.

The line 'ML-4824' (western, Sandoz Rogers) showed good yield and quality, but also an undesirable pointed blossom end. 'Superstar,' 'Athena' (both eastern) and 'Sparkle' and 'Eclipse' (both western) had highest yields in 1997. Highest honey-dew yields cor-

responded to 'Creme de Menthe,' because of its large fruits. Earliest honey-dew was 'Early-Dew.' The flavor and eating quality of 'Passport' (galia x honey-dew hybrid) was exceptional, as in previous years.

TABLE 2. SEED SOURCE, FRUIT CHARACTERISTICS, AND RELATIVE EARLINESS OF SELECTED VARIETIES OF SMALL MELONS

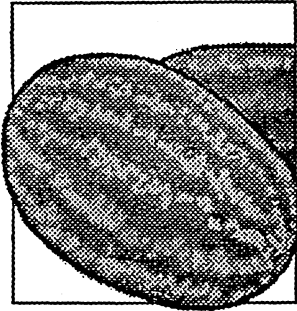
Variety	Type	Seed source	Rind aspect	Flesh color	Days to harvest	Disease res./tol.	Years eval.
Cantaloupe (Muskmelon)							
Allstar	F1	Harris Seeds	E	O	.	.	96,97
Ambrosia	F1	A&C	W	O	88	.	95,97
Athena	F1	Sandoz Rogers	E	O	80	FW,PM	94-97
Cordele	F1	Asgrow	E	O	85	FW,PM	94-97
Durango	F1	Petoseed	W	O	83	FW,PM,Su	96,97
Eclipse	F1	Petoseed	E	O	85	FW,PM	96,97
Gold Mark	F1	Solar Seed	W	O	.	.	97
Hy-Mark	F1	Petoseed	W	O	83	PM,Su	94-97
Laredo	F1	Petoseed	W	O	82	PM,Su	96,97
Mission	F1	Asgrow	W	O	80	PM,Su	94-97
Otero	F1	Hollar	W	O	.	.	97
Pacstart	F1	Asgrow	W	O	85	PM	96,97
Scoop II	F1	Solar Seeds	W	O	79	.	97
Sparkle	F1	Ferry-Morse	W	O	.	FW,PM,DM	94-97
Starship	F1	Harris Seeds	E	O	86	FW,PM	95-97
Superstar	F1	Harris Seeds	E	O	86	FW	94,96,97
French Charentais							
Acor	F1	Vilmorin	Su	O	75	FW	95-97
Alienor	F1	Vilmorin	Su	O	75	FW,TB	95-97
Honeydew							
Creme-de-Menthe	F1	Solar Seeds	Sm	Gr	.	97	
Daybreak	F1	Harris Seeds	Sm	Gr	.	FW,PM	96,97
Earli-Dew	F1	Petoseed	Sm	Gr	80	FW	95-97
Honey Brew	F1	Sakata	Sm	Gr	90	FW,DM,PM	96,97
Moonshine	F1	Asgrow	Sm	Gr	80	FW	96,97
Morning Ice	F1	Harris Seeds	Sm	Gr	84	FW,PM	95-97
Rocio	F1	Solar Seeds	Sm	Gr	.	.	97
Other Melons							
Iberix (Spanish)	OP	Vilmorin	Sm	Gr	.	.	95-97
Passport*	F1	Stokes	Ro	Gr	75	ANT,GSB	96,97
<i>OP = open pollinated; F1 = hybrid</i> <i>Rind aspect: Sm = smooth; N = netted; Su = sutured;</i> <i>Flesh color: O = orange; Gr = green; Y = yellow</i> <i>Disease: FW = fusarium wilt; PM = powdery mildew; ANT = anthracnose; DM = downy mildew; Su = sulfur; . = not available; -- = none; from seed catalogues</i> <i>* = honey dew x galia cross</i>							

Table 3. Yield of Selected Small Melon Varieties

Variety	Type	Marketable yield lb./acre	Marketable fruits #/acre	Individual fruit wt. lb.	Soluble solids o Brix	Cull wt. lb./acre
Brewton Experiment Field						
Creme-de-Menthe	Honey Dew	28,051	5,505	5.1	.	10,788
Starship	Cantaloupe	27,850	5,341	5.3	.	4,630
Cordele	Cantaloupe	26,359	4,306	6.4	.	2,126
Daybreak	Honey Dew	23,803	4,415	5.8	.	2,657
Allstar	Cantaloupe	22,966	3,761	6.1	.	3,142
ML-4824	Cantaloupe	20,977	4,524	5.1	.	927
Passport	Honey Dew	20,631	2,943	7.0	.	164
Laredo	Cantaloupe	19,669	3,815	5.5	.	2,562
Superstar	Cantaloupe	19,402	4,088	5.2	.	1,581
Moonshine	Honey Dew	17,811	2,671	6.6	.	2,853
Honey Brew	Honey Dew	17,794	3,488	5.9	.	1,553
Morning Ice	Honey Dew	17,304	3,052	5.9	.	1,545
Athena	Cantaloupe	13,154	1,853	6.5	.	354
Earli-Dew	Honey Dew	12,745	2,071	6.3	.	995
Rocio	Honey Dew	12,718	1,744	6.9	.	1,749
R ²		0.28	0.34	0.19	.	
CV		45	52	25	.	
Isd		12,958	2,624	2.1	.	
E.V. Smith Research Center						
Pacstart	Cantaloupe	38,526	5,723	6.6	.	14,377
Durango	Cantaloupe	37,817	8,230	4.7	.	19,533
Sparkle	Cantaloupe	35,742	6,758	5.3	.	23,539
Mission	Cantaloupe	34,695	9,102	3.8	.	16,993
Athena	Cantaloupe	32,691	5,505	6.0	.	20,234
Hi-Mark	Cantaloupe	31,861	8,230	3.8	.	7,930
Otero	Cantaloupe	30,525	7,903	3.8	.	10,802
PMR x Topmark (SC,O)	Cantaloupe	29,212	7,630	3.8	.	18,334
Ambrosia	Cantaloupe	28,745	6,595	4.4	.	25,498
AC-82-37 RNL (SC,R)	Cantaloupe	28,215	8,993	3.2	.	8,725
Perlita x PMR 45 (SC,O)	Cantaloupe	27,839	7,848	3.5	.	17,004
AC-75-1-A (SC,R)	Cantaloupe	27,255	9,756	2.8	.	11,107
PMR 45 (SC,O)	Cantaloupe	26,858	7,848	3.4	.	3,837
Laredo	Cantaloupe	26,238	6,758	3.8	.	16,723
Gold Mark	Cantaloupe	25,849	4,578	5.7	.	19,985
Edisto 47 (SC,R)	Cantaloupe	22,519	4,033	5.6	.	10,829
PMR 6 (SC,O)	Cantaloupe	21,582	7,412	2.9	.	7,652
Planter's Jumbo (SC,R)	Cantaloupe	17,053	4,251	4.1	.	19,664
R ²		0.27	0.46		.	
CV		36	34	11	.	
Isd		15,386	3,294	0.7	.	
Chilton Area Horticulture Substation						
Superstar	Cantaloupe	26,976	4,687	5.7	.	.
ML-4824	Cantaloupe	25,663	5,396	4.8	.	.
Passport	Honey Dew	23,640	5,559	4.3	.	.
Athena	Cantaloupe	22,121	4,088	5.3	.	.
Earli-Dew	Honey Dew	22,092	4,469	5.0	.	.
Laredo	Cantaloupe	19,841	6,377	3.1	.	.
Morning Ice	Honey Dew	18,530	2,344	7.9	.	.
Hi-Mark	Cantaloupe	18,149	4,851	3.8	.	.
Cordele	Cantaloupe	17,542	3,216	5.5	.	.
Creme-de-Menthe	Honey Dew	17,050	2,616	6.1	.	.
Rocio	Honey Dew	16,034	2,507	6.1	.	.
Allstar	Cantaloupe	15,372	4,197	3.6	.	.
Daybreak	Honey Dew	13,860	2,180	6.3	.	.
HMX 2608	Cantaloupe	12,974	3,107	4.1	.	.
Honey Brew	Honey Dew	11,508	1,908	5.9	.	.
Moonshine	Honey Dew	7,130	1,145	6.6	.	.
R ²		0.44	0.62	0.79	.	.
CV		37	36	14	.	.
Isd		4,247	1,871	1.0	.	.
Sand Mountain Substation						
Eclipse	Cantaloupe	44,020	5,832	7.5	10	0
ML-4824	Cantaloupe	41,545	7,903	5.3	8	0
Cordele	Cantaloupe	39,262	6,104	6.4	9	0
Durango	Cantaloupe	38,859	8,775	4.4	11	0
Gold Mark	Cantaloupe	38,264	7,085	5.4	9	0
Otero	Cantaloupe	36,559	8,775	4.2	11	0
Pacstart	Cantaloupe	36,068	4,578	7.9	7	0
Mission	Cantaloupe	34,831	9,865	3.5	9	0
Laredo	Cantaloupe	34,253	8,884	3.9	10	0
Hi-Mark	Cantaloupe	32,319	8,175	3.9	9	0
Athena	Cantaloupe	30,929	5,995	5.2	11	0
Acor	Cantaloupe	26,220	7,630	3.5	11	0
Alienor	Cantaloupe	25,408	6,649	3.8	10	0
Scoop II	Cantaloupe	18,339	4,524	4.1	3	0
FMX 220	Cantaloupe	1,417	436	3.3	9	0
Iberix	Spanish	981	109	9.0	10	0
R ²			0.75	0.81	0.52	
CV			28	25	23	
Isd			11,853	2,206	2.9	

Actual harvest dates were July 2, 7, 14, 17, and 18 at BEF; July 17, 22, 25, 28, 31, and Aug. 4, 7, 11, and 13 at EVSRC; July 24, 28, 31, and Aug. 1, 4, 6, 8, 12, 15 and 18 at CAHS; and Aug. 4, 6, 8, 11, 13, 15 and 18 at SMS.

SC = Southern Muskmelon Collaborators' entry; Rep. = replicated; Obs. = observational



'Starbrite' Performs Well in Watermelon Trials in South Alabama

ERIC SIMONNE, ARNOLD CAYLOR, BRIAN GAMBLE, JOSEPH KEMBLE, PASCAL LIENHARD, RONALD MCDANIEL, MALCOM PEGUES, RANDALL RAWLS, AND JEFF TAYLOR

Watermelon varieties were tested at the Gulf Coast Substation (GCS) in Fairhope, Wiregrass Substation (WS) in

Headland, Upper Coastal Plain Substation (UCPS) in Winfield, and North Alabama Horticulture Substation (NAHS) in Cullman (tables 1 and 2). Watermelons were established on bare ground in 60-foot-long, five-foot-wide plots with a hill spacing of approximately 10 feet. Seeds were used at GCS and WS, while transplants were used at NAHS and UCPS. Planting dates were April 9 at GCS and April 10 at WS. Transplanting dates were May 15 at NAHS and May 13 at UCPS. Abnormally wet and cool conditions in North Alabama in June resulted in severe epidemiology of gummy stem blight that destroyed the watermelon tests at NAHS and UCPS.

Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production pract-

TABLE 1. RATINGS OF 1997 WATERMELON VARIETY TRIALS

Location	GCS	WS	UCPS	NAHS
Weather	4	5	1	1
Fertility	5	5	5	5
Irrigation	5	5	5	5
Pests	5	5	1	1
Overall	4	5	1	1

See Introduction for description of rating scales.

TABLE 2. SEED SOURCE, FRUIT CHARACTERISTICS, AND RELATIVE EARLINESS OF SELECTED WATERMELON VARIETIES

Variety	Type	Seed source	Fruit	Flesh color	Days to harvest	Disease res./tol.	Years eval.
Seeded/Diploid							
Arribal	F1	Hollar	Jubilee	Red	82	ANT,FW	97
AU-AS	OP	Auburn University	AS	Red	.	.	94,96,97
AU-Golden Producer	OP	Auburn University	CS	Golden	75	ANT,DM,FW,GSB	95-97
AU-SS Sweet Scarlet	OP	Auburn University	CS	Red	.	.	96,97
Baron	F1	American Sunmelon	Solid Green	Red	.	.	96,97
Carnival	F1	Sandoz Rogers	AS	Red	86	ANT,FW	97
Crimson Glory	F1	Petoseed	CS	Red	82	FW	96,97
Crimson Sweet	OP	Stokes	CS	Red	85	ANT,FW	97
Ferrari	F1	Shamrock	AS	Red	.	.	97
Fiesta	F1	Sandoz Rogers	AS	Red	85	.	97
Huck Finn	F1	Ferry-Morse	Jubilee	Red	85	--	94-97
Mardi Gras	F1	Sandoz Rogers	AS	Red	86	ANT,FW	97
Matador	F1	Hollar	Solid Green	Red	87	FW	97
Regency	F1	Petoseed	AS	Red	83	ANT,FW	94,96,97
Royal Sweet	F1	Petoseed	Jubilee	Red	85	ANT,FW	94,96,97
Seville	F1	Hollar	AS	Red	85	FW	97
Stars'N Stripes	F1	Asgrow	Jubilee	Red	97	.	97
Starbrite	F1	Asgrow	Jubilee	Red	85	FW	97
Sweet Favorite	F1	Sakata	Solid Green	Red	83	--	96,97
Var. #500	F1	A&C	AS Blocky	Red	88	.	97
Var. #510	F1	A&C	AS Blocky	Red	84	.	96,97
Var. #3521Y	F1	A&C	Round	Yellow	88	.	97
Yellow Baby	F1	Park Seed	Round	Yellow	75	.	97
Yellow Doll	F1	Petoseed	Round	Yellow	68	--	96,97
Seedless/Triploid							
Laurel	F1	SeedWay	Round	Red	85	.	97
Paladin	F1	Sakata	Oblong	Red	80	ANT,FW	96,97
Tri-X 313	F1	American Sunmelon	Oblong	Red	.	.	96,97
Tri-X Shadow	F1	American Sunmelon	Round	Red	.	.	96,97
Tri-X Sunrise	F1	American Sunmelon	Round	Red	.	.	96,97
Var. #2532	F1	A&C	Round	Red	90	ANT	96,97
Var. #5244	F1	A&C	Oblong	Red	90	ANT	94,96
Var. #5544	F1	A&C	Oblong	Red	.	.	96,97

. = not available; -- = none; from seed catalogues

Disease: ANT = anthracnose; FW = fusarium wilt; GSB = gummy stem blight; DM = downy mildew

Fruit type: CS = crimson sweet; AS = allsweet

tices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

At GCS, 500 pounds per acre of a 4-12-12 fertilizer were preplant applied on March 17. Herbicide used was Poast (at a rate of 1.5 pint per acre) on May 9 and June 3. Watermelons were sidedressed with ammonium nitrate (NH_4NO_3) at a rate of 35 pounds of N per acre on May 13 and 28. Fungicides used were Bravo (at a rate of two pints per acre) on May 28 and June 3, 17, and 23; and, Bravo 720/Ridomil (at a rate of two pounds per acre) on June 11 and July 2. Insect control was provided by applications of Ambush (at a rate of six ounces per acre) on June 6 and July 2.

At WS, preplant fertilization consisted of applications (per acre) of two tons of broiler litter and 350 pounds of 13-13-13 on April 1. Watermelons were sidedressed on May 14 with 80 pounds of N per acre as NH_4NO_3 . Fungicides used were Bravo (at a rate of three pints per acre) on May 21, 27, June 2, 9, 23, and July 8. Asana insecticide was used on May 27 at a rate of eight ounces per acre on

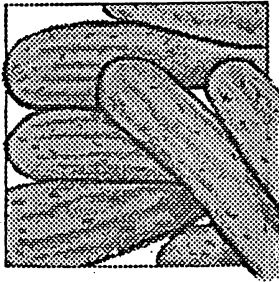
June 23 at a rate of seven ounces per acre. Plants were drip-irrigated as needed.

Watermelons were harvested on July 15 at GCS and July 14 and 15 at WS. Important characteristics for watermelons are marketable yield, sweetness, and rind thickness. Fruits were graded as described in the *Watermelon Grader's Guide* (Circular ANR 681 from the Alabama Cooperative Extension System) and marketable yield was determined. Two representative melons were selected from each plot for the measure of soluble solids levels, which is often used to evaluate sweetness (Table 3). Watermelons with soluble solid levels of less than 10° Brix do not taste sweet. Rind thickness is used as an indicator of shipping ability, and resistance to bruising and splitting during handling. 'Yellow Doll' had a rind thickness of less than 0.25 inch, and was difficult to handle without cracking. For other varieties, rind thickness ranged between 0.5 and 0.75 inch.

Because of the gummy stem blight epidemic, all results were from South Alabama. In the jubilee type, 'Stars'n Stripes,' 'Regency,' and 'Starbrite' had highest yields. Top allsweet-type varieties were 'Fiesta,' 'Mardi Gras,' and 'Sangria.' No triploids were evaluated in South Alabama in 1997.

TABLE 3. YIELD OF SELECTED WATERMELON VARIETIES

Variety	Marketable yield lb./acre	Marketable fruits #/acre	Individual fruit wt. lb.	Soluble solids ° Brix	Hollow heart in.
Gulf Coast Substation					
Starbrite	35,661	1,502	24	10.9	3
Stars N Stripe	32,089	1,740	19	10.4	1
Fiesta	30,485	1,649	19	11.3	1
Royal Sweet	29,336	1,308	22	11.1	1
Mardi Gras	29,166	1,411	21	10.4	0
Regency	28,893	1,467	20	11.1	0
Carnival	28,483	1,263	23	11.8	1
Seville	27,619	1,331	21	10.6	0
Matador	27,391	1,467	19	11.6	1
SSC-460063	27,300	1,183	23	11.3	3
Ferrari	27,004	1,547	17	10.9	1
Sangria	26,868	1,536	18	11.8	1
Huck Finn	25,560	1,297	20	11.2	1
Var. #500	25,287	1,172	21	10.5	1
Arribal	25,025	1,240	20	10.5	2
Crimson Glory	24,570	1,502	16	11.5	3
SSC-460068	22,022	1,320	17	10.3	0
Var. #510	17,063	910	19	10.4	0
R ²	0.39		0.55	0.34	0.29
CV	21		10	7	154
Isd	26,327		3	1.1	2
Wiregrass Substation					
Stars'n Stripes	38,481	1,504	25	11.1	3
Regency	34,389	1,396	25	12.1	2
Starbrite	33,854	1,396	25	11.1	5
Sangria	28,447	1,269	23	12.2	4
Mardi Gras	26,678	1,051	25	12.2	3
Seville	26,479	961	28	11.3	4
Huck Finn	26,145	961	27	12.0	6
Arribal	25,187	1,033	24	12.0	3
Matador	24,213	924	27	12.4	7
Fiesta	23,434	1,106	21	11.6	1
Carnival	21,650	924	24	11.5	5
Royal Sweet	21,529	852	25	11.6	4
AU-SS Sweet Scarlet	19,428	834	23	11.9	2
Crimson Glory	17,739	598	29	12.0	6
AU-Golden Producer	14,627	671	21	11.6	3
AU-Allsweet	8,107	399	20	11.6	3
R ²	0.55		0.17	0.40	0.25
CV	31		25	5	80
Isd	21,750		8	0.8	4



Cucumbers Evaluated on Bare Ground and Plastic Mulch

ERIC SIMONNE, ARNOLD CAYLOR, RONALD MCDANIEL, JOSEPH KEMBLE, MONTE NESBITT, MALCOM PEGUES, AND JEFF TAYLOR

Slicer cucumber variety trials were conducted at the Gulf Coast Substation (GCS) in Fairhope and North Alabama Horticulture

Substation (NAHS) in Cullman (tables 1 and 2). Selected varieties were direct-seeded at a one-inch depth on April 4 at GCS and May 14 at NAHS. At NAHS, black plastic and drip irrigation were used. At both locations, plots consisted of a single 20-foot row. Within-row spacing was eight inches, which provided a stand of approximately 17,000 plants per acre.

Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production practices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

Location	GCS	NAHS
Weather	5	5
Fertility	5	5
Irrigation	5	5
Pests	5	5
Overall	5	5

See Introduction for description of rating scales.

At GCS, 500 pounds per acre of a 10-10-10 fertilizer were applied on April 4. Fungicides used were Bravo 720 (at a rate of 1.5 pints per acre) on May 20, 28, June 3, 17, and 23; Bravo 720/Ridomil (at a rate of two pounds per acre) on June 3 and July 2. Insect control was provided with applications of Ambush (at a rate of eight ounces per acre) on June 3 and July 2. Cucumbers were overhead-irrigated as needed.

At NAHS, preplant fertilization consisted of an application of 15-0-0 at a rate of 500 pounds per acre. Beginning after transplanting and through harvest, cucumbers were fertilized with weekly injections at a rate of five pounds of N alternatively from calcium nitrate [$\text{Ca}(\text{NO}_3)_2$] and ammonium nitrate (NH_4NO_3). Fungicides used were Kocide 101 (at a rate of two pounds per acre) on June 19; Bravo Ultra (at a rate of three pints per acre) on June 26 and July 3, 11, and 17; Benlate (at a rate of 0.5 pound per acre) on June 26 and July 11 and 17; Bravo (at a rate of three pints per acre). Insecticides used were Asana XL (at a rate of 9.6 ounces per acre) on June 19 and 27 and July 11 and 17; Sevin XLR (at a rate of one quart per acre) on June 27; and, Adios (at a rate of 12 ounces per acre) on June 3. Cucumbers were harvested 16 times between May 26 and July 3 at GCS and seven times between July 3 and July 18 at NAHS. After

each harvest, fruits were weighed and graded according to the *Cucumber Grader's Guide* (Circular ANR-771 from the Alabama Cooperative Extension System). Early (Table 3) and total (Table 4) yields were determined. Earliness was evaluated by adding the marketable yields of the first four harvests.

At both locations, total yield differences were not significant for all varieties but for 'ACX-5002' at NAHS. Top yielders were 'Dasher II' at GCS and 'Slice Max' and 'Olympian' at NAHS. The standard 'General Lee' continued to be among the top varieties.

TABLE 2. SEED SOURCE, FRUIT CHARACTERISTICS, AND RELATIVE EARLINESS OF SELECTED CUCUMBER VARIETIES

Variety	Type	Seed source	Days to harvest	Disease tol./res.	Years eval.
Dasher II	F1	Petoseed	58	ALS,ANT,CMV,DMPM,Sc	94-97
Early Star	F1	Ferry-Morse	.	.	97
General Lee	F1	Stokes	55	CMV,DM,PM,Sc	94-97
Indy	F1	Petoseed	.	ALS,ANT,CMV,PM,PRSV,STM,ZYMV	96,97
Jizzer	F1	Stokes	48	CMV,DM,PM,Sc	96,97
Lightning	F1	Asgrow	57	ALS,CMV,DM,PM,Sc	94-97
Meteor	F1	Asgrow	50	ALS,ANT,CMV,DM,PM,Sc	94-97
Olympian	F1	Hollar	59	ALS,DM,PM,Sc	97
Pointsett 76	OP	Stokes	65	ALS,ANT,DM,PM,Sc	97
Seneca Longbow	F1	Solar Seed	62	CMV,DM,PM,SC	97
Slice Max	F1	Sakata	62	ALS,DM,PM,Sc	97
Speedway	F1	Petoseed	56	ALS,ANT,CMV,DM,PM,Sc	94-97
Thunder	F1	Asgrow	56	ALS,CMV,DM,PM,Sc	94-97
Turbo	F1	Petoseed	65	ANT,ALS,CMV,DM,PM,Sc,STM	94,96,97
Ultraslice Early	F1	Stokes	56	ALS,ANT,CMV,DM,PM,Sc	95-97

. = not available; from seed catalogues

Type: F1 = hybrid; OP = open pollinated

Disease: A = anthracnose; ALS = angular leaf spot; CMV = cucumber mosaic virus; DM = downy mildew; PM = powdery mildew; PRSV = papaya ring spot virus; Sc = scab; STM = stemphylium; ZYMV = zucchini yellow mosaic virus

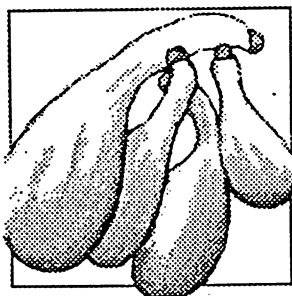
TABLE 3. EARLY PRODUCTION AND GRADE DISTRIBUTION OF SELECTED SLICING CUCUMBER VARIETIES

Variety	Early marketable wt lb./acre	Early fancy wt. lb./acre	Early fancy no. #/acre	Early US#1 wt. lb./acre	Early US#1 no. #/acre	Early US#2 wt. lb./acre
Gulf Coast Substation						
Jizzer	6,296	3,409	7,150	2,117	5,269	974
Olympian	4,844	1,881	4,245	1,265	3,174	272
FMX 5056	4,488	1,898	4,086	1,777	5,248	582
Dasher II	4,457	1,977	4,351	1,399	4,387	598
Thunder	3,547	1,745	3,962	1,193	3,277	792
Meteor	2,855	1,198	2,697	1,373	4,055	401
Lightning	2,520	1,150	2,427	712	2,282	625
General Lee	1,701	1,129	2,583	826	2,531	411
Indy	902.	261	669	622	1,424	190
R ²	0.34					
CV	74					
sd	3,715					
North Alabama Horticulture Substation						
Early Star	33,615	24,183	39,516	9,433	19,914	5,299
Olympian	30,725	16,774	30,493	13,950	21,469	51,396
Slice Max	28,865	21,591	32,826	7,275	14,313	5,560
ACX-5001	25,290	19,820	29,248	5,470	12,446	5,078
Lightning	24,043	14,784	23,647	9,258	16,647	4,605
Meteor	22,744	16,839	30,493	5,904	14,002	3,720
Ultraslice Early	21,619	19,036	34,227	2,583	6,845	1,375
Thunder	19,962	13,673	27,070	6,288	14,468	4,552
Speedway	19,775	15,027	26,759	4,748	11,979	3,276
General Lee	19,419	14,949	35,782	4,470	12,757	3,094
Indy	18,831	13,641	24,114	5,190	12,135	4,389
Turbo	18,545	13,667	26,137	4,877	11,979	2,212
Dasher II	17,258	13,281	25,670	3,976	9,335	2,716
Seneca Longbow	17,020	12,983	29,404	4,037	9,490	2,559
Panther	16,973	12,773	24,581	4,201	10,424	2,799
HMX-1433	15,120	10,914	20,225	4,207	10,112	2,527
Pointsett 76	10,293	7,916	19,914	2,377	8,090	828
ACX-5002	4,891	1,798	3,734	3,093	8,090	660
R ²	0.32					
CV	48					
lsd	15,030					

TABLE 4. TOTAL PRODUCTION AND GRADE DISTRIBUTION OF SELECTED SLICING CUCUMBER VARIETIES								
Variety	Total marketable wt lb./acre	Total fancy wt. lb./acre	Total fancy no. #/acre	Total US#1 wt. lb./acre	Total US#1 no. #/acre	Total US#2 wt. lb./acre	Total cull lb./acre	Individual fruit wt. lb.
Gulf Coast Substation								
Dasher II	69,503	21,588	45,526	26,409	64,942	4,318	714	0.44
Olympian	59,951	14,057	28,719	21,817	47,699	3,145	1,223	0.46
FMX 5056	58,488	15,410	30,560	27,814	64,631	5,463	3,406	0.47
General Lee	53,036	18,769	41,196	28,288	76,662	3,501	1,731	0.41
Meteor	52,195	16,381	35,507	25,892	63,143	3,628	1,234	0.42
Indy	47,637	12,617	26,380	23,609	58,600	4,006	1,828	0.44
Lightning	46,943	13,267	27,003	18,982	45,983	3,276	1,338	0.45
Thunder	44,977	12,590	28,138	20,095	49,691	3,958	2,033	0.42
Jizzer	39,158	13,897	29,341	18,026	41,061	3,127	1,269	0.45
R ²	0.20							0.29
CV	39							7
Isd	29,339							0.05
North Alabama Horticulture Substation								
Slice Max	44,753	32,344	47,139	12,409	25,514	10,952	9,524	0.59
Olympian	44,421	26,424	48,228	17,997	31,582	58,936	8,376	0.79
Early Star	1,349	28,565	46,984	12,784	27,070	12,984	12,514	0.53
Meteor	38,458	26,865	50,717	11,593	30,182	10,581	8,029	0.45
Ultraslice Early	37,531	32,061	58,496	5,470	14,935	6,435	4,225	0.46
General Lee	35,740	25,471	61,141	10,270	28,626	8,771	5,949	0.39
Turbo	34,426	24,106	45,428	10,319	25,203	7,508	4,665	0.47
Seneca Longbow	34,329	23,694	51,029	10,635	27,537	12,051	5,797	0.43
Speedway	34,060	23,179	41,072	10,881	24,892	8,342	4,115	0.51
ACX5001	34,015	25,601	41,072	8,413	21,158	9,378	6,067	0.51
Thunder	33,442	22,107	41,383	11,335	26,759	10,047	7,247	0.47
Lightning	32,946	19,602	33,760	13,344	27,537	11,978	8,550	0.54
Panther	31,705	22,459	43,872	9,246	23,959	8,698	6,816	0.45
Indy	31,616	21,777	41,072	9,839	25,981	12,138	8,624	0.45
Dasher II	29,696	21,435	39,205	8,261	20,691	8,071	6,534	0.48
Pointsett 76	27,898	23,174	46,050	4,723	14,935	4,163	1,798	0.41
HMX-1433	26,748	19,456	39,049	7,292	20,069	7,703	5,467	0.43
ACX-5002	15,831	11,245	23,025	4,586	13,691	4,698	3,136	0.41
R ²	0.18							0.28
CV	42							36
Isd	20,719							0.13
<i>Actual harvest dates were May 26, 30, June 2, 4, 6, 9, 11, 13, 16, 18, 20, 23, 25, 27, and July 3 at GCS; and June 3, 7, 9, 11, 14, 16, and combined productions of May 26 and 30 and June 2 and 4 at GCS; and June 3, 7, 9, and 11 at NAHS.</i>								

Transgenic Varieties Tested in Summer Squash Trials

ERIC SIMONNE, RANDY AKRIDGE, JIM BANNON, JASON BURKETT, JOSEPH KEMBLE, RANDALL RAWLS, AND JEFF TAYLOR



Yellow and zucchini summer squash variety trials were conducted at the Brewton Experiment Field (BEF) in Brewton, Horticulture Unit, E.V. Smith

Research Center (EVSRC) in Shorter, and Upper Coastal Plain Substation (UCPS) in Winfield (tables 1 and 2).

At all locations, squash were direct-seeded at a one-inch depth in single-row, five-foot-wide and 20-foot-long plots. In-row spacing was 18 inches, which provided a stand of approximately 6,000 plants per acre. Trials were drip irrigated and the beds were covered with black-plastic mulch. Planting date was April 29 at BEF, April 30 at EVSRC, and May 23 at UCPS.

Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production practices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

At BEF, the squash was double cropped following fall cabbage. Roundup Ultra was applied on March 21 at a rate of one quart per acre. Beds were cleaned approximately 10 days later. Fertilization consisted of weekly injections ranging between 10 and 20 pounds of N alternatively from ammonium nitrate (NH_4NO_3) and potassium nitrate (KNO_3). A total of 100 pounds of N was injected. Fungicides used were Bravo 720 (at a rate of one quart per acre) on May 20, 27, June 4; Bravo Ultrex (at a rate of two pounds per acre) on June 13; and, Benlate 50W (at a rate of 0.5 pounds per acre) on June 13. Insect control was provided with applications of Thiodan 3E (at a rate of one quart per acre) on May 27 and June 4 and 13.

At EVSRC, preplant fertilization consisted of applications (per acre) of 450 pounds of a 0-10-20 fertilizer and 387 pounds of calcium nitrate [$\text{Ca}(\text{NO}_3)_2$] on March 5. Beds were fumigated with methyl bromide at a rate of 400 pounds per acre on March 7. Between May 9 and June 30, plants received weekly injections of six pounds of N, alternatively from a liquid $\text{Ca}(\text{NO}_3)_2$ solution and 20-10-20. A total of 45 pounds of N per acre was injected. Fungicides used were Ridomil MZ58 (at a rate of three pounds per acre) on May 30; Dithane DF (at a rate of three pounds per acre) on June 7, 14 and 21; and, Ridomil/Bravo 81 W (at a rate of three pounds per acre) on June 30. Insecticides used were Phaser 3EC (at a rate of 2.47 pints per acre) on May 30 and June 7, 14, and 21; and, Asana XL (at a rate of 9.6 ounces per acre) on June 30.

At UCPS, N was weekly injected between May 29 and July 10 alternatively from 20-20-20 (at a rate of six pounds per acre) and KNO_3 (at a rate of nine pounds per acre). A total of 51 pounds of N per acre was injected. Frequent harvests are needed for summer squash to remain "fairly young and fairly tender," which

are necessary characteristics for squash to be graded as US#1. Hence, fruits were harvested on June 7, 9, 11, 13, 16, 18, 19, and 20 at BEF; 10 times between June 6 and 30 at EVSRC; and 10 times between June 18 and July 11 at UCPS. At harvest, fruits were graded as US#1, US#2, or cull according to the *United States Standards for Grades of Summer Squash* (U.S. Dept. Agr. G.P.O. 1987-180-916:40730 AMS). Marketable yield was calculated by adding the US#1 and US#2 yields. Earliness (Table 3) was evaluated by combining the yields of the first four harvests. Total production (Table 4) was also determined.

Although differences were not always significant, the crookneck standard Dixie was out-yielded at all three locations by 'Gentry,' 'Picasso,' and 'Prelude.' The line 'FMX-564' (crookneck; Ferry-Morse) was top yielder both times it was evaluated. In the straightneck type, the experimental line 'SS-6' (Sandoz Rogers) and 'Enterprize' had significantly higher yields than 'Lemondrop L.' and 'Sunbar.' The experimental yellow zucchini 'ACX-27' (Abbott and Cobb) had good yields, and nicely shaped and colored fruits.

TABLE 1. RATINGS OF 1997 SUMMER SQUASH VARIETY TRIALS

Location	BEF	EVSRC	UCPS
Weather	5	5	5
Fertility	5	5	5
Irrigation	5	5	5
Pests	5	5	5
Overall	5	5	5

See Introduction for description of rating scales.

TABLE 2. SEED SOURCE, FRUIT TYPE, AND RELATIVE EARLINESS OF SELECTED SQUASH VARIETIES					
Variety	Type	Seed source	Days to harvest	Disease res./tol.	Years eval.
Yellow Crookneck					
Destiny III**	F1	Asgrow	.	CMV,WMV,ZYMV	97
Dixie	F1	Asgrow	41	--	94-97
Gentry	F1	Sandoz Rogers	.	.	95-97
Goldie	F1	Petoseed	43	--	94-97
Liberator III**	F1	Asgrow	42	CMV,ZYMV	97
Meigs*	F1	Asgrow	.	.	96,97
Picasso	F1	Ferry-Morse	40	--	96,97
Prelude II**	F1	Asgrow	40	PM,WMV,ZYMV	95-97
Prelude	F1	Asgrow	.	PM	97
Sundance	F1	Petoseed	45	--	94-97
Suwanee	F1	Solar Seed	.	.	97
Yellow Straightneck					
Enterprise	F1	Sandoz Rogers	41	--	97
Lemondrop L.	F1	Asgrow	41	--	94-97
Monet	F1	Ferry-Morse	48	--	96,97
Prolific	F1	Seneca Hybrids	45	--	97
Seneca Supreme*	F1	Solar Seed	52	CMV,WMV	97
Sunbar*	F1	Petoseed	43	--	94,96,97
Zucchini Squash					
Condor	F1	Vilmorin	44	--	95-97
Embassy	F1	Petoseed	49	DM,PM	94-97
Gold Rush (Yellow)	F1	Stokes	52	--	96,97
Seasons	F1	A&C	50	--	97
Senator	F1	Asgrow	41	--	94-97
Seneca Zucchini	F1	Seneca Hybrids	42	--	97
Sensation	F1	Asgrow	40	--	96,97
Spineless Beauty	F1	Sandoz Rogers	43	--	94-97
Super Select	F1	Stokes	48	DM,PM	96,97
Tigress**	F1	Harris Seeds	47	WMV,ZYMV	95-97
Zucchini Elite	F1	Harris Seeds	48	--	95-97
Zucchini Select	F1	Stokes	47	DM,PM	97
* <i>precocious (yellow peduncle)</i> ; ** <i>transgenic</i> . = not available; -- = none; from seed catalogues Disease: PM = powdery mildew; DM = downy mildew; ZYMV = zucchini yellow mosaic virus; WMV = watermelon mosaic virus					

TABLE 3. EARLY YIELD AND GRADE DISTRIBUTION OF SELECTED SUMMER SQUASH VARIETIES

Variety	Type	Early marketable wt. lb./acre	Early US#1 wt. lb./acre	Early US#2 wt. lb./acre	Early US#1 no. #/acre	Early US#2 no. #/acre
Brewton Experiment Field						
FMX-564	CN	3,855	3,855	0	18,186	0
Picasso	CN	3,684	3,684	0	16,226	0
Dixie	CN	2,831	2,831	0	14,810	0
Gentry	CN	2,761	2,761	0	15,028	0
Prelude	CN	2,679	2,679	0	15,137	0
Meigs	CN	2,657	2,657	0	14,484	0
Liberator III	CN	2,537	2,537	0	9,910	0
FMX-690	CN	2,407	2,407	0	13,286	0
Prelude II	CN	2,265	2,265	0	12,415	0
CS-9	CN	2,238	2,238	0	13,613	0
Destiny III	CN	2,222	2,222	0	13,721	0
Goldie	CN	2,189	2,189	0	12,850	0
Sundance	CN	2,156	2,156	0	11,870	0
FMX-694	CN	2,151	2,151	0	12,524	0
Condor	Z	4,617	4,617	0	9,148	0
Sensation	Z	3,223	3,223	0	7,841	0
Super Select	Z	1,851	1,851	0	8,276	0
Seasons	Z	1,372	1,372	0	3,049	0
R ²		0.47	0.47			
CV		29	29			
Isd		1,087	1,087			
E.V. Smith Research Center						
Prelude	CN	3,118	2,420	698	22,408	11,488
Picasso	CN	3,093	2,520	573	18,944	8,304
Enterprise	SN	3,037	2,183	854	14,094	6,912
Gentry	CN	2,965	2,534	431	22,808	8,538
SS-6	SN	2,813	2,360	452	16,408	6,098
Sundance	CN	2,533	2,182	351	20,366	6,904
Prolific	SN	2,532	2,129	402	12,716	5,579
Meigs	CN	2,331	1,964	367	18,764	6,216
Lemondrop L.	SN	2,295	1,961	335	13,660	5,489
Dixie	CN	2,259	1,882	377	14,349	5,859
Prelude II	CN	2,118	1,479	639	14,026	5,245
Seneca Supreme	SN	1,978	1,727	251	13,257	3,314
Sunbar	SN	746	531	323	4,815	3,370
Spineless Beauty	Z	4,333	4,116	216	11,088	2,772
Condor	Z	3,661	3,103	558	11,259	4,691
Zucchini Elite	Z	3,375	3,000	375	9,148	2,439
ACX-27 (Yellow)	Z	3,205	1,745	1,460	7,454	4,066
Embassy	Z	2,847	2,334	514	8,444	3,753
Senator	Z	2,119	2,007	112	5,590	508
R ²		0.36	0.39			
CV		34	41			
Isd		1,188	1,221			
Upper Coastal Plain Substation						
FMX-564	CN	4,559	1,300	3,259	4,027	15,879
Prelude	CN	4,485	1,335	3,151	7,154	19,703
CS-9	CN	3,970	1,874	2,097	8,131	11,632
Picasso	CN	3,928	1,825	2,103	8,809	13,213
Destiny III	CN	3,645	1,323	2,321	8,285	11,276
Prelude II	CN	3,590	1,949	1,641	10,672	10,890
Goldie	CN	3,587	1,456	2,130	8,018	12,423
FMX-694	CN	3,548	1,293	2,255	7,792	14,117
Liberator III	CN	3,233	1,479	1,754	9,148	12,563
Dixie	CN	3,192	677	2,515	3,946	11,838
Meigs	CN	3,095	1,869	1,225	14,268	8,860
Sundance	CN	2,857	719	2,138	4,990	8,870
FMX-690	CN	2,691	1,059	1,632	6,970	10,128
Gentry	CN	2,011	637	1,373	4,105	8,092
Suwanee	CN	1,146	0	1,146	0	8,276
XPH 1776	Z	4,487	3,026	1,461	9,148	13,721
XPH 1777	Z	4,356	1,708	2,648	0	19,166
Embassy	Z	2,115	0	2,115	0	3,049
R ²		0.22	0.23			
CV		48	87			
Isd		2,263	1,583			

CN = yellow crookneck; SCN = semi-crookneck; Z = zucchini

Combined productions of June 7, 9, 11, and 13 at BEF; June 6, 9, 11, and 13 at EVSRC; and, June 18, 20, 23, and 25 at UCPS.

Marketable yields were determined as US#1 + US#2 grades.

TABLE 4. TOTAL PRODUCTION AND GRADE DISTRIBUTION OF SELECTED SUMMER SQUASH VARIETIES

Variety	Type	Total marketable wt. lb./acre	Total US#1 wt. lb./acre	Total US#2 wt. lb./acre	Total cull lb./acre	Total US#1 no. #/acre	Total US#2 no. #/acre	Individual US#1 fruit wt. lb.
Brewton Experiment Field								
FMX-564	CN	4,999	4,999	0	240	24,938	0	0.20
Gentry	CN	4,617	4,617	0	0	23,087	0	0.19
Picasso	CN	4,555	4,555	0	278	20,691	0	0.23
FMX-690	CN	4,116	4,116	0	0	20,582	0	0.20
FMX-694	CN	3,980	3,980	0	0	20,364	0	0.20
Meigs	CN	3,920	3,920	0	0	20,691	0	0.19
Prelude	CN	3,888	3,888	0	0	21,127	0	0.18
CS-9	CN	3,773	3,773	0	0	21,889	0	0.17
Dixie	CN	3,752	3,752	0	22	18,949	0	0.20
Liberator III	CN	3,735	3,735	0	0	15,246	0	0.23
Destiny III	CN	3,294	3,294	0	0	18,077	0	0.18
Sundance	CN	3,294	3,294	0	0	17,969	0	0.18
Prelude II	CN	3,256	3,256	0	0	16,771	0	0.19
Goldie	CN	3,136	3,136	0	0	17,315	0	0.18
Condor	Z	7,971	7,971	0	0	15,246	0	0.52
Super Select	Z	6,098	6,098	0	0	13,068	0	0.47
Sensation	Z	5,793	5,793	0	0	11,326	0	0.51
Seasons	Z	3,812	3,812	0	261	6,970	0	0.55
R ²		0.43	0.43					
CV		28	28					
lsd		1,610	1,610					
E.V. Smith Research Center								
Gentry	CN	11,394	9,221	2,172	53	83,914	31,468	0.11
SS-6	SN	10,229	8,517	1,712	232	59,532	19,457	0.14
Prelude	CN	9,105	6,721	2,383	157	65,522	34,463	0.10
Enterprise	SN	9,078	6,919	2,160	62	46,212	20,192	0.15
Meigs	CN	8,741	7,774	968	35	73,298	21,344	0.11
Picasso	CN	8,379	5,940	2,439	138	46,711	26,599	0.13
Seneca Supreme	SN	8,178	6,714	1,464	216	52,764	21,875	0.13
Prelude II	CN	8,099	6,229	1,870	32	55,617	21,100	0.11
Prolific	SN	7,966	6,412	1,555	16	41,391	14,922	0.16
Sundance	CN	7,536	6,208	1,327	142	57,762	25,314	0.11
Dixie	CN	7,360	5,799	1,561	12	46,037	19,730	0.13
Lemondrop L.	SN	7,324	5,888	1,436	70	39,152	14,392	0.15
Sunbar	SN	5,839	4,818	1,021	76	39,319	13,962	0.12
Spineless Beauty	Z	15,662	13,355	2,306	0	42,689	7,207	0.31
Zucchini Elite	Z	13,764	11,486	2,278	0	37,810	4,879	0.30
Condor	Z	9,389	7,775	1,614	0	31,430	7,037	0.25
ACX-27 (Yellow)	Z	9,385	5,563	3,822	0	25,071	10,164	0.22
Embassy	Z	8,864	7,323	1,541	0	25,332	6,568	0.29
Senator	Z	8,035	7,102	933	0	23,377	2,033	0.30
R ²		0.48	0.53					
CV		22	24					
lsd		2,370	1,989					
Upper Coastal Plain Substation								
FMX-564	CN	12,699	3,800	8,899	1,878	9,205	34,749	0.43
CS-9	CN	10,619	2,588	8,031	1,261	10,051	20,780	0.27
Picasso	CN	10,460	4,143	6,317	3,399	15,811	32,412	0.26
Destiny III	CN	9,527	2,861	6,666	4,216	13,923	29,456	0.21
Prelude	CN	9,104	3,056	6,047	7,054	12,783	32,603	0.24
FMX-694	CN	8,537	2,254	6,283	4,171	11,632	31,170	0.19
Dixie	CN	8,497	2,042	6,455	4,044	8,968	30,612	0.26
Liberator III	CN	8,435	2,713	5,722	3,716	13,782	29,638	0.20
Goldie	CN	8,188	3,212	4,976	4,339	14,681	26,765	0.22
Meigs	CN	8,136	3,127	5,008	2,503	19,101	25,774	0.17
Prelude II	CN	7,453	2,781	4,672	2,585	13,286	24,067	0.21
Sundance	CN	6,434	1,391	5,043	1,164	7,762	21,954	0.21
FMX-690	CN	5,581	1,562	4,019	1,999	8,821	21,453	0.18
Gentry	CN	3,885	1,057	2,828	1,422	6,098	15,832	0.20
Suwanee	CN	1,437	170	1,268	1,764	436	9,148	0.39
XPH 1777	Z	6,649	3,023	3,626	527	4,356	23,522	0.69
XPH 1776	Z	6,159	3,186	2,973	1,553	10,164	21,344	0.31
Embassy	Z	2,372	0	2,372	0	0	3,485	0.68
R ²		0.37	0.29					
CV		45	68					
lsd		4,963	2,381					

CN = yellow crookneck; SCN = yellow semi-crookneck; Z = zucchini

Actual harvest dates were June 7, 9, 11, 13, 16, 18, 19, and 20 at BEF; June 6, 9, 11, 13, 16, 18, 20, 23, 26, and 30 at EVSRC; and June 18, 20, 23, 25, 27, 30, July 2, 7, 9, and 11 at UCPS.

Marketable yields were determined as US#1 + US#2 grades.

Is 'Silver Queen' Still the Best White Sweet Corn Variety?

ERIC SIMONNE, ROBERT BOOZER, ARNOLD CAYLOR, JOSEPH KEMBLE, RONALD MCDANIEL, MALCOM PEGUES, JIM PITTS, RANDALL RAWLS, AND JEFF TAYLOR



Sugary (*su*), sugar-enhanced (*se*), and supersweet (*sh₂*) sweet corn varieties were evaluated at the Gulf Coast Substation (GCS; *su/se* and

sh₂) in Fairhope, Chilton Area Horticulture Substation (CAHS, *su/se*) in Clanton, Upper Coastal Plain Substation (UCPS, *su/se*) in Winfield, and North Alabama Horticulture Substation (NAHS, *su/se*) in Cullman (tables 1 and 2). At all locations, three-row plots 20 feet long and eight feet wide were established. Within-row spacing was eight to 10 inches, creating a stand of approximately 26,000 plants per acre.

Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production practices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

At GCS, leaf spots caused by the common rust (*P. sorghi*) on the *sh₂* test were rated for severity (Table 3). Common rust was not detected in the *su/se* test.

At GCS, cultural practices for *su*, *se*, and *sh₂* types were similar. However, within each location, *sh₂* varieties were separated by 300 feet from other field and sweet corn plantings because cross pollination alters grain characteristics, including sweetness. Fertilization consisted of a preplant application (per acre) of 285 pounds of a 14-14-21 fertilizer (*su/se* test) and 600 pounds of 10-10-10 (*sh₂* test), and of a sidedress application of ammonium nitrate (NH_4NO_3) at a rate of 120 pounds per acre on May 7. Sulfur (at a rate of 10 pounds per acre) and zinc (at a rate of three pounds per acre) were also applied to the *sh₂* test on April 4. Preplant herbicide was Dual 8EC applied on April 4 at a rate of one quart per acre. Insecticides used were Lorsban EC (at a rate of one pint per acre) on June 5 and Ambush 2EC (at a rate of 10 ounces per acre) on June 9.

At CAHS, Bicep herbicide was applied preplant at a rate of 0.5 gallon per acre. Preplant fertilization provided (per acre) 100 pounds of N, 40 pounds of P_2O_5 , and 40 pounds of K_2O . Corn seedlings were sidedressed three and six weeks after planting with 60 pounds of N per acre each time using ammonium nitrate. No chemicals were used.

At NAHS, Sutan herbicide was incorporated before emergence on May 19 at a rate of 4.75 pints per acre. Fertilization consisted of a preplant application of 34-0-0 and 15-0-0 each at a rate of 100 pounds per acre on May 19 and a sidedress application of 34-0-0 at a rate of 100 pounds per acre on June 24. Herbicide used was Aatrex (at a rate of three pints per acre) on May 20. Insecticide used was Asana (9.6 ounces per acre) on July 17.

At UCPS, preplant fertilization provided (per acre) 70 pounds of N, 90 pounds of P_2O_5 , and 120 pounds of K_2O on May 15. Preplant herbicide was Atrazine at a rate of one pound per acre. A sidedress application on May 29 provided an additional 27 pounds of N per acre.

Su/se varieties were harvested on June 12 ('Legend'), 16 ('Snow Belle' and 'Champ'), 19 ('Chief Ouray,' 'Merit,' and 'Fantasia') and 23 ('Silver Queen' and 'GH-7080') at GCS; on July 2 ('Sparkler') and July 14 and 16 (other varieties) at CAHS; on Aug. 8 at NAHS; and on July 21 and 29 at UCPS. *Sh₂* varieties were harvested on June 24 ('Blizzard', 'FMX 413' and 'Challenger') and 27 (all other varieties) at GCS. After harvest, ears were graded following the *Sweet Corn Grader's Guide* (Circular ANR-679 of the Alabama Cooperative Extension System). Yield (Table 4) and ear characteristics (Table 5) were determined.

TABLE 1. RATINGS OF 1997 SWEET CORN VARIETY TRIALS

Location	GCS	CAHS	UCPS	NAHS
Weather	5	5	5	5
Fertility	5	5	5	5
Irrigation	5	5	5	5
Pests	5	5	5	5
Overall	5	5	5	5

See Introduction for description of rating scales.

TABLE 2. SEED SOURCE, TYPE, COLOR AND EARLINESS OF SELECTED SWEET CORN VARIETIES

Variety	Seed source	Color	Type	Days to harvest	Disease res./tol.	Years eval.
A-Maizingly Sweet	Ferry-Morse	BC	sh2	82	CR	96,97
Blizzard	Stokes	W	sh2	83	--	96,97
Challenger	Asgrow	Y	sh2	78	CS,NCLB,SBW,SCLB	94-97
Champ	Asgrow	Y	se	68	CR,CS	97
Chief Ouray	Solar Seeds	Y	se	--	--	97
Diabolo	Ferry-Morse	BC	sh2	78	SBW	96,97
Double Dots	Ferry-Morse	BC	sh2	--	--	97
Fantasia	Asgrow	W	se	82	CR,CS	95-97
Festival	Asgrow	BC	sh2	75	NCLB	94-97
Geronimo	Stokes	BC	se	63	--	95-97
King Arthur	Stokes	Y	se	70	--	97
Legend	Harris Seeds	Y	se	73	CS,MDMV,NCLB,SBW	95-97
Merit	Asgrow	Y	su	78	CS,SBW,SCLB,MDMV,NCLB	96,97
Pegasus	SeedWay	W	sh2	90	NCLB,SCLB	96,97
Precious Gem	Asgrow	Y	se	78	CR	97
Prime Plus	Sandoz Rogers	Y	sh2	--	--	97
Prime Time	Sandoz Roger	Y	sh2	--	--	97
Punchline	Asgrow	Y	sh2	74	ANT,NCLS,SBW,SCLB	94-97
Rising Star	SeedWay	W	se	79	SBW	96,97
Silver King	Sandoz Rogers	W	se	82	CR,NCLB,SBW	97
Silver Queen	SeedWay	W	su	92	NCLB,SBW,SCLB	94-97
Sir Galahad	Stokes	BC	se	85	--	95-97
Snow Belle	Asgrow	W	se	85	CR,SCLB	95-97
Sparkler	Solar Seeds	W	se	--	--	97
SS 8100	A&C	Y	sh2	--	--	97
SS 8101	A&C	W	sh2	81	--	96,97
SS 8102	A&C	BC	sh2	81	NCLB,SBW,SCLB	94,96,97
Sweet Desire	Stokes	Y	sh2	69	--	94,96,97
Sweet Ice	Harris Seeds	W	sh2	74	CS,SBW	96,97
Sweet Rhythm	Harris Seeds	BC	sh2	73	CS,SBW	96,97
Sweet Symphony	Harris Seeds	BC	sh2	75	CS,CW,MDMV	97
Vail	Sandoz Rogers	W	sh2	--	--	97

. = not available; -- = none; from seed catalogues

Disease: CR = corn rust; CS = corn smut; MDMV = maize dwarf mosaic virus; NCLB = northern corn leaf blight; SBW = Stewart's bacterial wilt; SCLB = southern corn leaf blight; ANT = anthracnose

TABLE 3. RATINGS OF LEAF SPOT CAUSED BY THE COMMON RUST (*P. SORGHII*) ON SH2 SWEET CORN VARIETIES

AT THE GULF COAST SUBSTATION

Variety	Average rating	Rating range
Vail	5	3-4
SS 8101	3	2-4
Blizzard	5	4-5
Pegasus	5	4-5
FMX 413	1	1
Challenger	3	2-3
Sweet Desire	5	4-5
Punch Line	3	3-4
SS 8100	3	2-4
FMX 415	3	2-4
Prime Plus	1	1
Prime Time	5	4-5

Rating scale includes: 1 = 0%, 2 = 10%, 3 = 11-25%, 4 = 26-50%, 5 = 51-100% of leaf area showing leaf spots. Ratings were made on June 19.

TABLE 4. YIELD OF SELECTED SWEET CORN VARIETIES					
Variety	Kernel color	Type	Yield lb./acre	Ear no. #/acre	Ear set ht. in.
Gulf Coast Substation					
FMX 413	W	sh2	17,356	29,766	19
SS 8101	W	sh2	13,717	27,588	16
Sweet Desire	W	sh2	10,459	25,955	11
Blizzard	W	sh2	10,382	27,316	20
Vail	W	sh2	8,095	16,244	18
Pegasus	W	sh2	7,473	19,874	21
Prime Plus	Y	sh2	17,882	32,035	19
SS 8100	Y	sh2	16,389	31,309	16
Challenger	Y	sh2	14,275	29,675	14
Prime Time	Y	sh2	14,266	28,405	15
Punchline	Y	sh2	13,481	30,946	14
FMX 415	Y	sh2	12,029	24,503	14
R ²			0.74	0.69	0.79
CV			17	13	10
lsd			2,936	4,986	7
Gulf Coast Substation					
Snow Belle	W	se	17,687	39,113	23
Fantasia	W	se	14,656	29,131	19
Silver Queen	W	su	16,412	28,949	28
GH-7080	Y	se	23,014	33,668	23
Champ	Y	se	18,949	32,035	16
Legend	Y	se	16,498	31,581	13
Chief Ouray	Y	se	15,051	29,766	18
Merit	Y	su	18,055	31,309	32
R ²			0.83	0.8	0.93
CV			7	5	9
lsd			1,862	2,569	9
Chilton Area Horticulture Substation					
Precocious Gem	BC	se	19,990	33,215	18
BC-7182	BC	se	19,695	30,129	18
Sir Galahad	BC	se	18,421	28,586	19
WH-4487	W	se	21,228	28,496	17
Silver King	W	se	20,374	37,117	14
Snow Belle	W	se	19,427	32,489	22
Silver Queen	W	su	18,653	31,309	29
Fantasia	W	se	16,992	22,869	21
Sparkler	W	se	15,858	30,583	11
Rizing Star	W	se	15,207	15,428	20
R ²			10.739	0.73	.
CV			15	13	.
lsd			1,966	5,788	.
Upper Coastal Plain Substation					
BC-7192	BC	se	13,838	33,456	45
Sir Galahad	BC	se	10,801	30,328	38
Precocious Gem	BC	se	9,380	30,260	36
GH-7080	BC	se	5,356	20,060	10
Legend	Y	se	10,801	32,776	49
Champ	Y	se	15,140	34,000	12
King Arthur	Y	se	6,971	27,540	11
Chief Ouray	Y	se	2,244	27,880	7
Merit	Y	su	8,991	30,328	61
R ²			0.38	0.46	0.39
CV			75	64	62
lsd			3,341	11,229	4
North Alabama Horticulture Substation					
Sweet Symphony	BC	sh2	30,752	42,753	20
Sweet Rithm	BC	sh2	23,809	35,424	15
Bi-Time	BC	sh2	22,746	25,303	19
Double Dots	BC	sh2	21,786	18,323	19
SS 8102	BC	sh2	17,836	33,940	21
Diabolo	BC	sh2	16,099	13,437	15
Festival	BC	sh2	12,187	12,564	15
A-Maizingly	BC	sh2	7,880	10,994	17
Sweet Ice	W	sh2	29,800	37,169	13
FMX 413	W	sh2	27,551	30,450	17
Vail	W	sh2	23,715	34,726	20
SS 8101	W	sh2	21,187	18,323	13
Pegasus	W	sh2	20,124	22,947	21
FMX414	W	sh2	19,279	24,517	16
Blizzard	W	sh2	12,801	14,484	16
R ²			0.44	0.74	0.29
CV			40	26	26
lsd			5,238	9,394	2,304

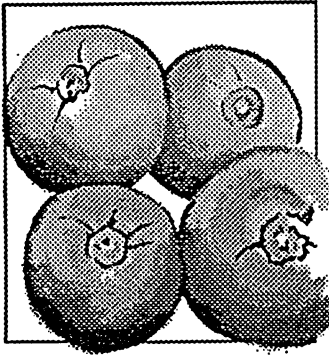
TABLE 5. EAR CHARACTERISTICS OF SELECTED SWEET CORN VARIETIES								
Variety	Kernel color	Type	Quality rating	Tip cover rating	Ear fill rating	Eye appeal rating	Ear length in.	Ear diameter in.
Gulf Coast Substation								
Champ	Y	sc	14.55	4.85	4.85	4.85	7.1	1.8
Fantasia	W	sc	14.10	4.80	4.70	4.60	7.7	1.6
Legend	Y	sc	13.95	4.75	4.65	4.55	6.9	1.6
Silver Queen	W	su	13.70	5.00	4.35	4.35	7.8	1.6
Snow Belle	W	sc	13.65	4.65	4.50	4.50	7.2	1.5
GH-7080	Y	sc	13.65	4.80	4.40	4.45	8.8	1.8
Merit	Y	sc	12.95	4.15	4.40	4.40	7.9	1.7
Chief Ouray	Y	sc	10.55	3.60	3.55	3.40	6.8	1.9
R ²			0.41	0.48	0.25	0.26		
CV			11	10	15	16		
lsd			1.98	0.64	0.9	0.94		
Gulf Coast Substation								
SS 8100	Y	sh2	14.05	5.00	4.70	4.35	7.5	1.6
Prime Plus	Y	sh2	13.80	4.85	4.75	4.20	7.2	1.7
Prime Time	Y	sh2	13.75	4.85	4.70	4.20	7.2	1.7
SS 8101	W	sh2	13.55	4.85	4.45	4.25	7.6	1.8
Vail	W	sh2	13.30	4.80	4.50	4.00	7.2	1.8
Punchline	Y	sh2	13.00	5.00	4.15	3.85	7.1	1.7
Challenger	Y	sh2	12.95	4.85	4.05	4.05	7.5	1.7
FMX 415	Y	sh2	12.95	5.00	4.15	3.80	7.4	1.8
Pegasus	W	sh2	12.90	4.70	4.25	3.95	7.3	1.7
Sweet Desire	Y	sh2	12.85	4.90	4.20	3.75	8.0	1.7
FMX 413	W	sh2	11.60	3.65	3.85	4.10	7.3	1.9
Blizzard	W	sh2	10.30	3.50	3.45	3.35	6.8	1.7
R ²			0.43	0.60	0.30	0.16	0.25	
cv			9	9	13	15	7	
lsd			1.6	0.57	0.79	0.84	0.66	
Upper Coastal Plain Substation								
BC-7192	BC	sc	7.25	2.50	2.25	2.50	.	.
Sir Galahad	BC	sc	7.00	1.50	3.00	2.50	.	.
Legend	W	sc	6.00	2.00	2.00	2.00	.	.
Champ	Y	sc	6.00	2.00	2.00	2.00	.	.
Merit	Y	su	6.00	1.75	2.25	2.00	.	.
Precocious Gem	BC	sc	5.50	2.25	1.25	2.00	.	.
King Arthur	Y	sc	5.50	2.00	1.75	1.75	.	.
GH-7080	W	sc	5.25	1.75	2.00	1.50	.	.
Chief Ouray	W	sc	5.00	2.00	2.00	1.00	.	.
R ²			0.41	0.38	0.46	0.28	.	.
CV			57	62	56	71	.	.
lsd			8.19	6.27	1.21	1.55	.	.
Chilton Area Horticulture Substation								
Silver Queen	W	su	11.10	4.05	3.55	3.50	7.0	1.7
Sparkler	W	sc	10.90	4.10	3.45	3.35	6.2	1.4
Precocious Gem	BC	sc	10.60	3.50	3.50	3.60	7.7	1.8
Rizing Star	W	sc	10.35	3.55	3.45	3.35	7.4	1.8
BC-7182	BC	sc	10.30	3.05	3.55	3.70	7.6	1.7
Sir Galahad	BC	sc	10.15	4.35	2.80	3.00	7.7	1.8
Fantasia	W	sc	9.20	3.30	2.95	2.95	7.3	1.7
WH-4487	W	sc	8.85	3.35	2.45	3.05	7.2	1.8
Silver King	W	sc	8.55	3.40	2.65	2.50	6.7	1.7
Snow Belle	W	sc	8.45	3.80	2.20	2.45	6.7	1.6
R ²			0.33	0.24	0.28	0.28	0.50	0.60
CV			14	20	26	22	6	6
lsd			6.85	2.44	1.49	1.75	5.43	1.06
North Alabama Horticulture Substation								
Sweet Symphony	BC	sh2	13.33	4.78	4.15	4.40	6.5	1.5
Double Dots	BC	sh2	12.95	4.40	4.05	4.50	7.7	1.7
FMX 414	W	sh2	12.60	4.65	3.88	4.08	6.7	1.7
Festival	BC	sh2	11.94	3.78	4.10	4.07	8.0	1.4
Sweet Ice	W	sh2	11.55	4.85	3.13	3.58	7.0	1.6
Diabolo	BC	sh2	11.35	2.98	3.85	4.53	7.8	1.6
Pegasus	W	sh2	11.24	2.68	4.01	4.54	7.2	1.4
Bi-Time	BC	sh2	11.00	1.75	4.65	4.60	7.3	1.3
Vail	W	sh2	10.93	2.92	4.07	3.95	6.8	1.4
FMX 413	W	sh2	10.90	3.03	3.95	3.93	7.3	1.5
SS 8102	BC	sh2	10.85	3.68	3.38	3.80	7.1	1.5
Sweet Rithm	BC	sh2	10.13	4.53	2.58	3.03	6.5	1.7
A-Maizingly Sweet	BC	sh2	10.10	3.18	3.45	3.48	7.3	1.7
Blizzard	W	sh2	9.73	2.40	3.58	3.75	7.2	1.4
SS 8101	W	sh2	8.38	1.85	3.18	3.35	5.6	1.0
Dazzle	BC	sh2	2.25	0.25	1.00	1.00	1.7	0.3
R ²			0.6	0.599	0.49	0.48	0.59	0.57
CV			22	36	27	29	19	22
lsd			3.45	1.66	1.5	1.51	1.9	0.4

Quality rating is the sum of tip cover, ear fill, and eye appeal ratings.

Tip cover, ear fill, and eye appeal ratings include: 5 = excellent; 4 = good; 3 = fair; 2 = poor; 1 = very poor.

Tomato Varieties Differ in Yield and Quality

ERIC SIMONNE, ARNOLD CAYLOR, BRIAN GAMBLE, JOSEPH KEMBLE, JEFF TAYLOR, AND LARRY WELLS



Tomato variety trials were conducted at the Wiregrass Substation (WS) in Headland and North Alabama Horticulture Substation (NAHS) in Cullman (tables 1 and 2).

Five-week-old tomatoes were transplanted on May 10 at WS, and on May 16 at NAHS into three-foot-wide trickle-irrigated beds covered with white plastic. At both locations, plots were 12 feet long and four feet wide. Within-row spacing was 18 inches, which created an approximate stand of 5,800 plants per acre. Plants were staked and tied.

Soils were fertilized according to the recommendations of the Auburn University Soil Testing Laboratory. Names of the chemicals are mentioned only for describing the production practices used. This represents neither a recommendation nor an endorsement of these products. Current recommendations for pest and weed control in vegetable production in Alabama may be found in *IPM Commercial Vegetables: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 97IPM-2 from the Alabama Cooperative Extension System).

At WS, 450 pounds per acre of a 13-13-13 fertilizer, 50 pounds per acre of ammonium nitrate (NH_4NO_3), and 700 pounds per acre of gypsum (CaSO_4) were preplant applied on April 15. Beds were fumigated with methyl bromide at a rate of 200 pounds per acre and formed on April 16. Weekly injection of fertilizer (at a rate of six pounds of N) were made between May 28 and July 14 using calcium nitrate [$\text{Ca}(\text{NO}_3)_2$] and potassium nitrate (KNO_3). A total of 42 pounds of N per acre was injected. Disease control was provided with applications of Bravo (at a rate of 3 pints per acre) on May 14, 21, 27, June 2, 6, 9, 23, 30, and July 8. Asana (insecticide) was applied on May 27 and June 2 and 23 at a rate of eight ounces per acre. Several plants infected with the tomato spotted wilt virus had to be removed from the test.

At NAHS, 500 pounds of a 15-0-0 fertilizer were preplant incorporated on April 18. Beginning after transplanting and through harvest, tomatoes were fertilized with weekly injections at a rate of five pounds of N alternatively from $\text{Ca}(\text{NO}_3)_2$ and NH_4NO_3 . Fungicides used were Dithane F-45 (at a rate of 2.4 quarts pre acre) on May 22 and 29 and June 6, 19, and 27; Kocide 101 (at a rate of two pounds per acre) on May 22, 29, June 6, 19, 27, and July 3 and 10; and, Bravo (at a rate of 32 ounces per acre) on July 17. Insect control was provided by applications of Asana XL (at a rate of 9.6 ounces per acre) June 19, 27, and July 3; and, Lannate and Phaser (both at a rate of 32 ounces per acre) on July 17 and Aug. 1, respectively.

Plots were harvested on July 3, 7, 9, 11, 14, 16, 18, and 21 at WS, and July 31, Aug. 4, 13, 21, and 29 at NAHS. At both locations, fruits were harvested at the breaker stage, weighed, and graded. Grades and corresponding fruit diameters (D) of fresh-market tomato were adapted from the *Tomato Grader's Guide* (Cir

cular ANR 643 from the Alabama Cooperative Extension System) and were Jumbo ($D > 3.5$ inches), Extra-Large ($D > 2.9$ inches), Large ($D > 2.5$ inches), Medium ($D > 2.3$ inches) and Small (others). The grading of Roma-type tomatoes was based on fruit shape more than on fruit size and were Marketable (fruits free of injury and well shaped); Misshaped [fruits free of injury, with defects including pointed end ("nipping"), "pear-shaped," or "eight-shaped"]; and Cull. Yields of the first three harvests were used to evaluate early production (Table 4). Marketable yield was calculated by combining the Jumbo, Extra-Large, and Large grades (Table 5).

'Celebrity' yielded well at both locations. 'Agrisret 761' (standard Florida-type tomato) and 'XPH 10091' were the top yielders at WS. 'Sunpride' and 'Colonial' were the top performers at NAHS. The yellow varieties 'Lemon Boy,' 'Orange Queen,' and 'Husky Gold' were not as firm as 'Mt. Gold.' Because of the labor needed or harvest (fruits are the size of blueberries), 'Spoon' is not suited for commercial production. The standard 'Mt. Delight' was among the top varieties at NAHS.

TABLE 1. RATINGS OF 1997 TOMATO VARIETY TRIALS

Location	WS	NAHS
Weather	5	5
Fertility	5	4
Irrigation	5	5
Pests	3	5
Overall	4	5

*See Introduction for description of rating scales.
At WS, the tomato spotted wilt virus was detected by ELISA technique on some plants.*

TABLE 2. SEED SOURCE, FRUIT CHARACTERISTICS, AND RELATIVE EARLINESS OF SELECTED TOMATO VARIETIES

Variety	Type	Seed source	Plant habit	Fruit color	Days to harvest	Disease res./tol.	Years eval.
Affirm	F1,FM	Sakata	Det.	Red	.	.	97
Agriset 761	F1,FM	U. of Florida	Det.	Red	.	.	97
Atomic	F1,FM	Sakata	Det.	Red	.	.	97
Celebrity	F1,FM	Petoseed	Det.	Red	72	ASC,FW,NE,St,TbMV,VW	94-97
Colonial	F1,FM	Petoseed	Det.	Red	76	ASC,FW,St,VW	94,96,97
Daybreak	F1,FM	Petoseed	Det.	Red	68	ASC,FW,St,VW	94-97
Flavor More	F1,FM	Ferry-Morse	Det.	Red	.	FW,VW	97
Florida 47*	F1,FM	Asgrow	Det.	Red	.	.	97
Golden Boy	F1,FM	Park Seed	Ind.	Gold	80	ASC	97
Husky Gold	F1,FM	Stokes	Ind.	Yellow	70	.	97
Lemon Boy	F1,FM	Park Seed	Ind.	Yellow	72	ASC,FW,NE,St,VW	97
Majesty	F1,FM	Asgrow	Det.	Red	75	ASC,FW,St,VW	97
Marina	F1,SA	Sakata	Det.	Red	.	.	97
Merced	F1,FM	Sandoz Rogers	Det.	Red	69	FW,TbMV,VW	94-97
Mt. Belle	F1,CH	SeedWay	Det.	Red	65	FW,VW	96,97
Mt. Delight	F1,FM	Petoseed	Det.	Red	70	ASC,FW,St,VW	94-97
Mt. Fresh	F1,FM	Ferry-Morse	Det.	Red	75	FW,VW	96,97
Mt. Gold	OP,FM	Stokes	Det.	Golden	70	FW,VW	96,97
Mt. Pride	F1,FM	Stokes	Det.	Red	77	ASC,FW,St,VW	96,97
Mt. Spring	F1,FM	Sandoz Rogers	Det.	Red	69	FW,VW	94-97
Orange Queen	OP,FM	Stokes	Det.	Orange	65	.	96,97
Pilgrim	F1,FM	SeedWay	Det.	Red	68	ASC,FW,St,VW	96,97
Royal Mountie	F1,FM	SeedWay	Det.	Red	.	.	97
Solar Set	F1,FM	Asgrow	Det.	Red	.	ASC,FW,St,VW	97
Spitfire	F1,FM	Ferry-Morse	Det.	Red	68	ASC,FW,St,VW	96,97
Spoon	OP,CH	Park Seed	Ind.	Red	65	.	97
Springfield	F1,FM	Ferry-Morse	Det.	Red	.	.	97
Sunbeam	F1,FM	Asgrow	Det.	Red	75	FW,VW	94-97
Sunbelt	F1,FM	Petoseed	Det.	Red	72	ASC,FW,NE,St,VW	96,97
Suncrest	F1,FM	Sandoz Rogers	Det.	Red	.	.	97
Sunmaster	F1,FM	Park Seed	Det.	Red	72	ASC,FW,St,VW	97
Sunpride	F1,FM	Asgrow	Det.	Red	80	ASC,FW,St,VW	94-97
Supersonic	F1,FM	Harris Seeds	Ind.	Red	79	FW,VW	95-97
Sweepstakes	F1,FM	Park Seed	Det.	Red	.	FW,NE,St,TbMV,VW	97
Sweet Million	F1,CH	Park Seed	Ind.	Red	65	FW,NE,TbMV	97
Ultramagnum	F1,FM	Stokes	Det.	Red	68	FW,TbMV,VW	94-97
Ultrasweet	F1,FM	Stokes	Det.	Red	62	FW,TbMV,VW	95-97
Veronica	F1,SA	Sakata	Det.	Red	.	.	97

Formerly XPH 10047; . = not available; from seed catalogues
Type: F1 = hybrid; OP = open pollinated
FM = fresh market; RO = roma (elongated fruits); CH = cherry (small, round fruits); SA = saladette
Plant habit: Det. = determinate; Ind. = indeterminate
Disease: FW = fusarium wilt; VW = verticillium wilt; ASC = alternaria stem canker; ST = stemphylium (gray leaf spot); NE = root-knot nematodes; TbMV = tobacco mosaic virus

TABLE 3. EARLY PRODUCTION AND GRADE DISTRIBUTION OF SELECTED TOMATO VARIETIES

Variety	Early market wt. lb/acre	Early jumbo wt. lb/acre	Early jumbo no. #/acre	Early extra-large wt. lb/acre	Early extra-large no. #/acre	Early large wt. lb/acre	Early large no. #/acre	Early med. wt. lb/acre	Early med. no. #/acre
Wiregrass Substation									
Suncrest	5,100	345	363	1,815	2,723	2,940	5,627	2,468	5,082
Merced	4,646	218	363	1,978	2,904	2,450	4,175	2,850	6,353
DPS 994 (obs)	3,920	508	726	1,597	2,178	1,815	2,904	4,719	10,890
Agriset 761	3,848	327	363	1,579	2,178	1,942	3,449	2,505	5,627
Solar Set	3,812	0	0	1,216	1,634	2,595	5,082	2,868	7,079
Celebrity (obs)	3,412	1,162	1,452	581	726	1,670	2,904	2,468	6,534
Sunbeam	3,285	327	363	1,016	1,452	1,942	3,267	1,960	3,993
Sunpride (obs)	3,049	508	726	2,033	2,904	508	726	1,742	3,630
Sunmaster (obs)	2,977	581	726	944	1,452	1,452	2,178	3,267	7,986
Ultramagnum	2,958	472	545	1,343	1,997	1,143	2,178	2,886	6,353
Ultrasweet	2,795	272	363	436	908	2,087	3,993	5,082	11,798
Supersonic	2,704	0	0	653	908	2,051	3,630	1,924	3,993
Keren (obs)	2,686	508	726	436	726	1,742	2,904	1,742	3,630
Majesty	2,450	0	0	762	1,089	1,688	2,904	2,995	6,897
Florida 47	2,414	163	182	1,162	1,634	1,089	1,815	2,142	4,901
Atomic	2,378	0	0	1,089	1,634	1,289	2,178	1,797	4,175
Pilgrim	2,196	0	0	726	1,271	1,470	2,904	3,285	8,168
XPH 10091	2,196	345	363	1,016	1,452	835	1,271	853	2,178
Affirm (obs)	1,016	581	726	0	0	436	726	726	1,452
Spitfire	908	0	0	0	0	908	2,178	2,523	5,990
Sunbelt	908	0	0	417	545	490	908	1,869	3,630
Hadas (obs)	726	0	0	0	0	0	0	726	1,452
Mt. Delight (obs)	436	0	0	436	726	0	0	3,340	7,986
R ²	0.42	0.38							
CV	67	179							
lsd	2,581	498							
North Alabama Horticulture Substation									
Springfield	64,563	37,861	57,354	21,925	39,204	4,777	18,876	0	0
Celebrity	64,113	45,027	61,710	16,386	35,574	2,701	7,986	0	0
Sunpride	61,260	30,585	44,649	27,443	41,745	3,233	9,075	0	0
Colonial	52,337	27,777	39,567	19,796	41,564	4,764	12,161	0	0
Daybreak	50,623	34,315	49,368	13,761	30,311	2,546	7,442	0	0
Flavor More	46,333	20,480	30,311	20,413	41,382	5,440	15,609	0	0
Royal Mountie	45,077	28,067	35,574	14,803	29,040	2,207	6,534	0	0
Mt. Fresh	44,829	34,726	41,382	8,923	18,332	1,180	3,086	0	0
Lemon Boy	44,743	16,981	26,136	22,237	51,546	5,525	18,150	0	0
Mt. Delight	41,760	25,864	36,119	12,286	26,318	3,610	11,072	0	0
Mt. Pride	41,576	23,622	32,489	14,863	28,496	3,091	9,620	0	0
Merced	41,389	29,114	37,026	10,271	21,962	2,004	6,534	0	0
Spitfire	41,113	22,689	31,218	15,714	34,485	2,710	7,260	0	0
Sweepestakes	40,721	35,189	50,094	4,320	7,260	1,212	4,356	0	0
Mt. Spring	37,315	28,686	35,030	7,251	13,794	1,378	3,630	0	0
Golden Boy	23,196	17,344	22,506	5,162	11,616	690	2,178	0	0
Mt. Gold	20,466	14,103	18,332	5,558	12,887	806	2,904	0	0
Orange Queen	18,669	630	1,997	7,581	19,965	10,458	34,122	0	0
Ultra- magnum (obs)	17,417	5,358	8,712	8,596	18,150	3,463	10,890	0	0
Husky Gold	5,986	1,900	2,360	3,084	6,716	1,002	3,630	0	0
R ²	0.36	0.63							
CV	70	69							
lsd	41,216	26,094							
<i>Combined productions of July 3, 7, and 9 at WS, and July 31, Aug. 4 and 13 at NAHS.</i>									
<i>Grades and corresponding fruit diameters (D) for fresh-market tomato were Jumbo (D>3.5 inches), Extra-large (D>2.9 inches), Large (D>2.5 inches), Medium (D >2.3 inches), and Small (others).</i>									
<i>Marketable production calculated by combining the Jumbo, Extra-large, and Large grades.</i>									

TABLE 4. TOTAL PRODUCTION AND GRADE DISTRIBUTION OF SELECTED TOMATO VARIETIES

Variety	Total marketable wt. lb./acre	Total jumbo wt. lb./acre	Total jumbo no. #/acre	Total extra-large wt. lb./acre	Total extra-large no. #/acre	Total large wt. lb./acre	Total large no. #/acre	Total medium wt. lb./acre	Total medium no. #/acre	Total cull lb./acre	Individual fruit wt. lb.
Wiregrass Substation											
<i>Fresh market</i>											
Celebrity	34,539	3,775	4,356	7,405	11,616	13,358	26,136	12,850	31,944	3,920	0.88
Atomic	24,121	4,719	5,264	10,509	16,154	8,894	15,428	8,676	20,691	3,638	0.69
Affirm	21,272	6,389	8,712	6,897	10,164	7,986	15,246	5,837	13,068	2,614	0.73
Agriset 761	19,566	2,033	2,178	6,607	9,257	10,926	17,606	16,898	37,026	4,683	0.97
Sunmaster	17,279	581	726	7,696	11,616	9,002	18,150	16,262	32,670	1,016	0.74
XPH 10091	16,389	1,652	1,815	6,897	9,620	7,841	14,157	6,661	14,702	5,173	0.75
Merced	15,264	1,888	2,541	5,663	7,623	7,714	13,794	12,179	25,592	2,741	0.82
Sunbeam	14,284	3,086	3,812	4,701	6,716	6,498	11,072	7,750	17,424	3,358	0.89
Supersonic	14,103	2,142	2,541	5,136	7,805	6,824	11,798	9,747	20,328	4,465	0.78
Keren	13,721	2,468	2,904	4,356	6,534	6,897	15,246	11,689	24,684	1,045	0.85
Sunbelt	13,395	2,287	2,723	4,029	6,171	7,079	12,524	9,075	20,147	2,995	1.00
Majesty	12,433	309	363	3,812	3,993	8,313	15,246	12,524	27,770	2,904	1.45
Ultramagnum	11,961	2,015	2,178	5,046	7,442	4,901	8,531	6,153	23,232	3,104	0.74
Florida 47	11,925	1,470	1,634	4,156	5,990	6,298	10,709	9,220	19,058	3,743	1.05
Solar Set	11,126	690	908	3,975	5,627	6,461	12,524	12,578	29,585	3,340	0.82
Ultrasweet	10,600	1,434	1,815	2,196	3,630	6,970	13,794	11,943	28,496	3,158	1.04
Hadas	10,454	0	0	2,396	3,630	8,059	5,082	10,672	25,410	2,614	.
Sunpride	9,329	508	726	2,396	3,630	6,425	10,164	16,117	35,574	5,460	1.03
Suncrest	9,166	345	363	2,795	4,356	6,026	11,616	6,915	16,880	2,980	1.07
Pilgrim	6,189	145	182	1,797	3,086	4,247	8,349	9,692	23,051	2,704	0.81
DPS 994	6,026	508	726	2,033	2,904	3,485	6,534	8,276	20,328	2,468	0.86
Spitfire	2,051	0	0	218	363	1,833	3,812	6,225	14,883	5,681	.
Mt. Delight	1,162	0	0	436	726	726	1,452	10,527	21,780	3,993	.
<i>Cherry and Saladette</i>											
V-104	1,815	0	0	0	0	1,815	2,904	12,197	48,642	1,888	.
Coronado	799	0	0	0	0	0	0	799	2,178	1,888	.
R ²	0.52	0.40									
CV	55	132									
Isd	9,694	2,974									
North Alabama Horticulture Substation											
<i>Freshmarket</i>											
Lemon Boy	99,527	35,567	58,080	49,629	107,448	14,331	47,916	0	0	33,657	0.40
Celebrity	96,442	63,438	81,312	26,201	58,806	6,803	21,054	0	0	28,873	0.44
Colonial	76,548	33,801	49,187	31,612	71,330	11,135	3,033	0	0	26,989	0.38
Sunpride	75,675	36,213	53,180	34,218	56,447	55,244	16,517	0	0	11,721	0.46
Flavor More	72,286	27,445	41,382	35,169	68,426	9,672	30,311	0	0	11,556	0.43
Sweepestakes	67,634	44,330	63,162	17,279	37,026	6,026	20,328	0	0	35,015	0.44
Mt. Fresh	66,792	43,622	54,813	19,451	36,300	3,719	11,979	0	0	12,513	0.49
Springfield	66,051	38,376	58,080	22,143	39,930	5,532	21,054	0	0	23,726	0.45
Mt. Delight	65,289	36,037	51,728	23,435	48,824	5,817	20,147	0	0	16,820	0.43
Daybreak	58,863	37,170	53,543	17,213	38,297	4,479	14,157	0	0	20,945	0.42
Mt. Gold	56,951	35,044	47,916	18,094	41,927	3,813	13,431	0	0	13,674	0.41
Mt. Spring	55,564	37,736	49,005	14,714	30,492	3,115	9,620	0	0	22,468	0.45
Spitfire	52,620	24,125	33,578	22,479	50,276	6,017	16,154	0	0	20,818	0.45
Merced	52,239	32,683	42,108	15,231	33,941	4,325	14,883	0	0	17,556	0.45
Mt. Pride	51,557	26,504	37,571	20,048	41,564	5,004	16,517	0	0	17,065	0.43
Royal Mountie	47,393	28,416	36,300	15,638	31,218	3,340	10,890	0	0	17,105	0.46
Golden Boy	41,861	28,321	39,204	12,415	30,492	1,125	4,356	0	0	44,025	0.38
Ultramagnum	27,116	6,048	10,164	15,006	34,122	6,062	19,602	0	0	21,054	0.40
Husky Gold	19,464	4,472	7,079	10,997	27,225	3,995	14,883	0	0	28,330	0.41
Orange Queen	18,669	630	1,997	7,581	19,965	10,458	34,122	0	0	47,564	0.19
<i>Cherry and Saladette</i>											
STM 3806	114,301										
Veronica	98,620										
Marina	92,405										
STM 5403	70,843										
Mt. Belle	50,312										
Sweet Million	37,549										
Spoon	.										
R ²	0.36	0.58									
CV	70	68									
Isd	56,566	31,860									
Harvest dates were July 3, 7, 9, 11, 14, 16, 18, and 21 at WS and July 31, Aug. 4, 13, 21, and 29 at NAHS.											
Grades and corresponding fruit diameters (D) were Jumbo (D>3.5 inches), Extra-large (D>2.9 inches), Large (D>2.5 inches), Medium (D>2.3 inches), and Small (others).											
Marketable production and individual fruit weight calculated by combining the Jumbo, Extra-large, and Large grades.											

APPENDIX: SPONSORS AND SUPPLIERS

Corporate Sponsors

Micro Macro International, Inc.
Mike Duemmel
183 Paradise Blvd., Suite 108
Athens, GA 30608
Ph: (706) 548-4557

Lewis Taylor Farms, Inc.
Bill Brim
PO Box 822
Tifton, GA 31793
Ph: (912) 382-4454

Inland Container Corporation
Joe Quilen
29 George Wallace Drive
Albertville, AL 35950
Ph: (205) 878-1941

Asgrow Seed Co.
South Alabama
Greg Davis
Alachua, FL
Ph: (904) 462-7838
Central Alabama
Rusty Autry
Venis, FL
Ph: (941) 497-4227
North Alabama
Ken Baker
Hendersonville, TN
Ph: (615) 824-0383

Supporting Seed Companies

Abbott & Cobb Inc.
Pete Suddarth
207 Wellington Woods Dr.
Hahira, GA 31632
Ph: (912) 249-8135

American Sunmelon
Glenn Price
PO Box 153
Hinton, OK 73047
Ph: (405) 542-3456

Supporting Seed Companies,

cont.

Ferry-Morse Seed Co.
Glenn McKay
PO Box 392
Sun Prairie, WI 53590
Ph: (608) 837-6574

Harris Seeds
Bob Wilkins
60 Saginow Dr.
Rochester, NY 14692-2960
Ph: 1-800-544 7938

Hollar Seeds
P.O. Box 106
Rocky Ford, Colorado
81067-0106
Ph: (719) 254-3539
Internet: www.hollarseeds.com

Petoseed Co.
John Nance
926 Sweet May CT.
Macon GA, 31204
Ph: (912) 477-5544
john.nance@svseeds.com

Sakata Seeds Co.
Howard Adams
P.O. Box 1103
Lehigh, FL 33970-1103
Ph: (813) 369-0032

Sandoz Rogers
Mr. Curt Pollard
2101 Melrose Drive
Valdosta, GA 31602
Ph: (912) 560-1863
curt.pollard@seed.novartis.com

Vilmorin
Gilles Laurin
P.O. Box 707
Empire, CA 95319
Ph: (209) 529-6000
Tom Gordon
2235 Kraft Rd
Ithaca, NY 14850
Ph: (607) 387-3959

Seed Suppliers

Peter Edwards Seed Co.
Jimmy Street
P.O. Box 1047
Theodore, AL 36590
Ph: (334) 653-9206

Peter Edwards Seed Co.
Roland Verlaik
302 South Center Street
Eustis, FL 32726
Ph: 1-800-CARROTS

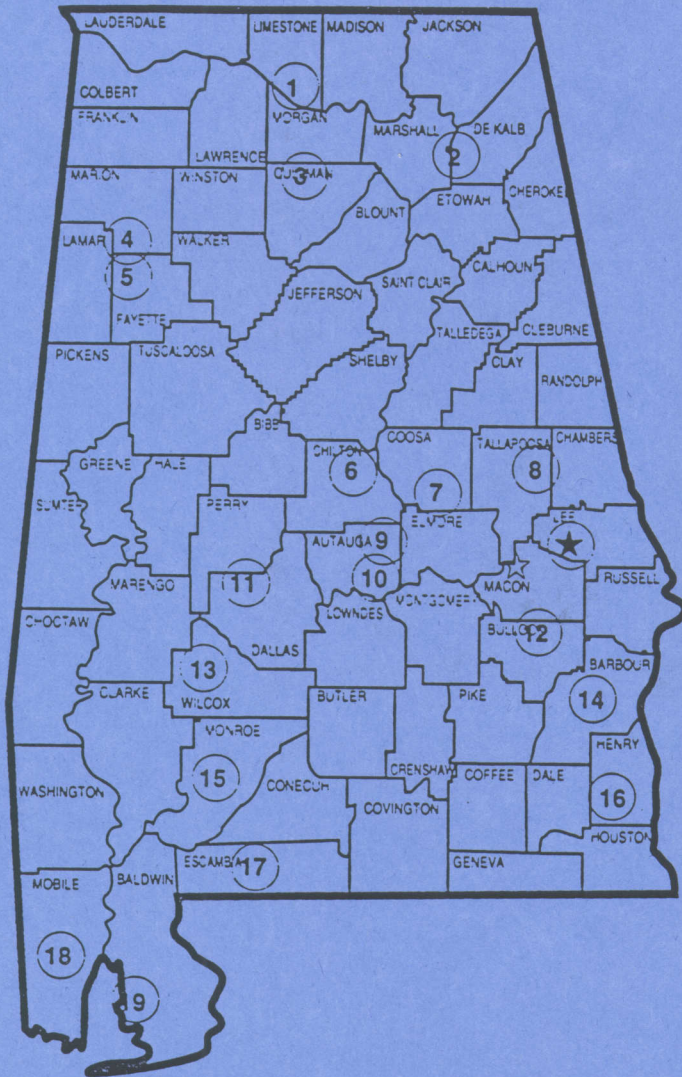
Seedway
Neal Shank
1225 Zeager Rd.
Elizabethtown, PA
Ph: (717) 367-1075

Shamrock Seed Co.
Bill Johson
3832 Hanover Hill Dr.
Valrico, FL 33594
Ph: (813) 245-1371

Steve Olsen
U. of Florida
NFREC Route 3 Box 4370
Quincy, FL 32351
Ph: (904) 875-7144

Stokes Seeds Inc.
Joe Butwin
PO Box 548
Buffalo, NY 14240-0548
Ph: (716) 695-6980

Alabama's Agricultural Experiment Station System AUBURN UNIVERSITY



★ Main Agricultural Experiment Station, Auburn.

☆ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Substation, Belle Mina.
2. Sand Mountain Substation, Crossville.
3. North Alabama Horticulture Substation, Cullman.
4. Upper Coastal Plain Substation, Winfield.
5. Forestry Unit, Fayette County.
6. Chilton Area Horticulture Substation, Clanton.
7. Forestry Unit, Coosa County.
8. Piedmont Substation, Camp Hill.
9. Forestry Unit, Autauga County.
10. Prattville Experiment Field, Prattville.
11. Black Belt Substation, Marion Junction.
12. The Turnipseed-Ikenberry Place, Union Springs.
13. Lower Coastal Plain Substation, Camden.
14. Forestry Unit, Barbour County.
15. Monroeville Experiment Field, Monroeville.
16. Wiregrass Substation, Headland.
17. Brewton Experiment Field, Brewton.
18. Ornamental Horticulture Substation, Spring Hill.
19. Gulf Coast Substation, Fairhope.