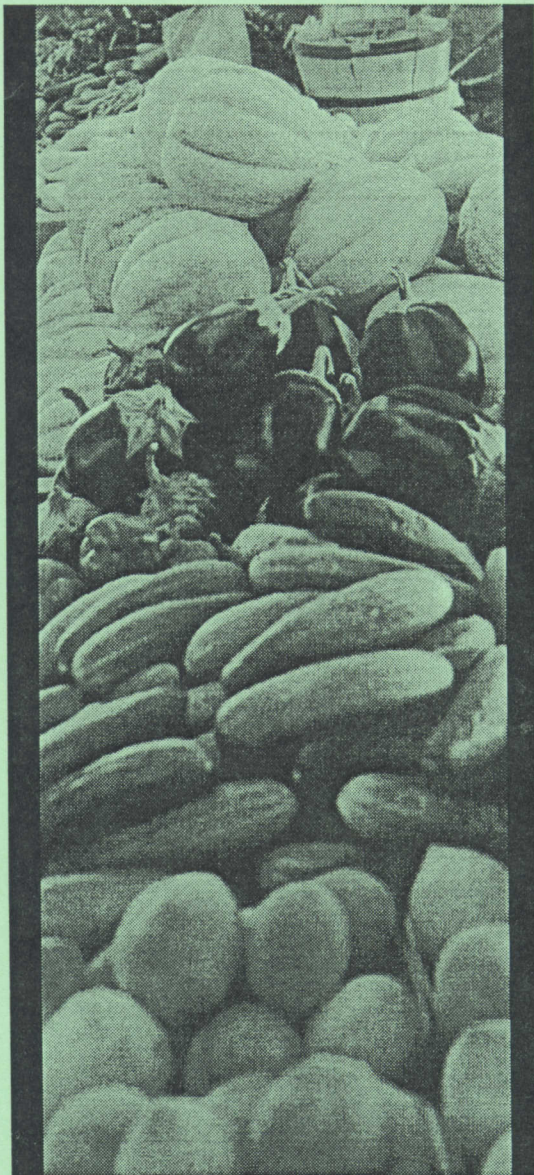


Progress Report No. 125  
Alabama Agricultural Experiment Station  
Lowell T. Frobish, Director  
Auburn University  
Auburn University, Alabama  
October 1994



•  
*Spring*

•  
**Commercial**

•  
Vegetable

•  
Variety

•  
**Trials**

•

# CONTENTS

Introduction .....	1
Bell Pepper Variety Trial .....	2
Cantaloupe Variety Trial .....	5
Colored Pepper Variety Trial .....	6
Eggplant Variety Trial .....	9
Slicer Cucumber Variety Trial .....	11
Southernpea Variety Trial .....	12
Summer Squash Variety Trial .....	14
Sweet Corn Variety Trial .....	17
Tomato Variety Trial .....	19
Watermelon Variety Trial .....	22
Authors .....	24
Appendix .....	25
Locations of Participating Research Units .....	26

---

FIRST PRINTING 1M, OCTOBER 1994

# INTRODUCTION

## *Auburn University Commercial Vegetable Variety Trials: Committed to Support the Industry*

Eric Simonne

The vegetable industry is expanding in Alabama. To support this developing sector of Alabama agribusiness, the Department of Horticulture at Auburn University, supported by the Alabama Agricultural Experiment Station, is actively working to develop the information necessary to meet the industry's needs. The choice of a variety is critical in a commercial operation since a poorly adapted variety may affect yield, quality, postharvest behavior, and subsequently, income.

In the spring of 1994, replicated variety trials were conducted on crops traditionally grown in Alabama, such as bell pepper, sweet corn (including sugar-enhanced and supersweet types), cantaloupe, cucumber, southernpea, yellow squash, tomato, and watermelon. Trials also included vegetables with potential as commercial crops, including zucchini squash, colored pepper, and eggplant.

Production systems ranged from traditional plantings on bare ground to plastic-mulched beds combined with drip irrigation. Soils were fertilized according to recommendations by the Auburn University Soil Testing Laboratory. The actual fertilizers and chemicals used are described only to provide detailed information about the production practices employed. Mention of fertilizers or chemical names does not represent a recommendation or endorsement. 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 94IPM-2 from the Alabama Cooperative Extension Service).

Total yield and standard characteristics used to evaluate varieties were recorded for each crop. However, emphasis was also placed on evaluating varieties for marketing potential. This included grade distribution, earliness, and shelf life. Each commodity was graded according to current standards. The complete reference to these guides is included in each of the reports that follow. Earliness was evaluated by adding the harvests corresponding approximately to the first third of total production period. One-year data on shelf-life evaluation did not show sufficiently clear trends. These preliminary results will be combined with additional results and will be reported at a later date.

Performance of a vegetable variety is affected by soil type, growing environment, weather conditions, and other factors. Therefore, information in this report should be used as a primary source of information to pre-select varieties that showed potential for good yields and quality under Alabama's growing conditions in 1994. 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.

The variety trial program is supported by seven outlying units of the Alabama Agricultural Experiment Station: Gulf Coast Substation in Fairhope — Superintendent **Emmett Carden**; Wiregrass Substation in Headland — Superintendent **Henry Ivey**; The Horticulture Unit of the E.V. Smith Research Center in Shorter — Center Director **Jim Bannon** and Unit Superintendent **Jimmy Witt**; Piedmont Substation in Camp Hill — Superintendent **John Owen**; Chilton Area Horticulture Substation in Clanton — Superintendent **Jim Pitts**; North Alabama Horticulture Substation in Cullman — Superintendent **Marlin Hollingsworth**; and Sand Mountain Substation in Crossville — Superintendent **John Eason**. All outlying unit personnel help make these variety trials possible. Appreciation also is extended to the agencies and seed companies that provided an abundant and diverse supply of seeds in 1994 (see Appendix).

## BELL PEPPER VARIETY TRIAL

Eric Simonne, Jim Bannon, John Eason, Marlin Hollingsworth,  
Joe Kemble, Jim Pitts, Marvin Ruf, Kenneth Short, and Jimmy Witt

Bell pepper variety trials were conducted at the Horticulture Unit of the E.V. Smith Research Center (EVSRC) in Shorter, the Sand Mountain Substation (SMS) in Crossville and the North Alabama Horticulture Substation (NAHS) in Cullman.

Five-week-old peppers were transplanted on May 11 at NAHS, on May 6 at SMS, and on May 4 at EVSRC in single rows on four-feet-wide, drip-irrigated beds covered with plastic. Plastic-mulch colors were white at NAHS and black at EVSRC and SMS. Within-row spacing was one foot, which created a stand of approximately 7,300 plants per acre.

At EVSRC, beds were fumigated with methyl bromide at a rate of 400 pounds per acre eight weeks before transplanting. A combination of 16-0-0, 0-46-0, and 0-0-60 was broadcast-applied preplant to provide 75 pounds of nitrogen (N), 60 pounds of phosphorus (P), and 120 pounds of potassium (K) per acre. Starting one week after transplanting, five pounds of N were injected weekly through the trickle-irrigation system, alternatively from 20-20-20 and potassium nitrate (KNO<sub>3</sub>). Weed control consisted of an application of Roundup (2% solution) on May 12.

Insect control was provided by applications of Thiodan 3EC (at a rate of two pints per acre) on May 25 and July 9, Asana XL (at a rate of seven ounces per

acre) on June 10 and July 28, Carbaryl (at a rate of two quarts per acre) on July 18, and Lannate LV (at a rate of three pints per acre) on June 16.

Fungicide applications consisted of Benlate 50 WP (at a rate of one-half pound per acre) on May 25; Bravo 720 (at a rate of two quarts per acre) on June 10 and 16 and July 28; Ridomil (at a rate of two pounds per acre) on June 16 and July 9; and Dithane (at a rate of two pounds per acre) on July 18.

At NAHS, beds were fumigated with methyl bromide at a rate of 400 pounds per acre on April 28. Preplant application of fertilizer provided (per acre) 30 pounds of N, 50 pounds of P, and 35 pounds of K. Between May 30 and the final harvest, injections of combinations of ammonium nitrate (NH<sub>4</sub>NO<sub>3</sub>), calcium nitrate [Ca(NO<sub>3</sub>)<sub>2</sub>], and KNO<sub>3</sub> were made weekly through the drip tubes. Application rates (per acre) ranged between 10-20 pounds for NH<sub>4</sub>NO<sub>3</sub>, 10-50 pounds for Ca(NO<sub>3</sub>)<sub>2</sub>, and 10-90 pounds for KNO<sub>3</sub>.

Pest control consisted of an application of PennCap M (one pint in 50 gallons<sup>1</sup> per acre), Manzate (three pounds in 50 gallons per acre), and Dimethoate (one-half pint in 50 gallons per acre) on May 16 and July 6. Plants were also sprayed with Bravo (fungicide, at a rate of 1.5 pint in 50 gallons per acre); Asana (insecticide, at a rate of 9.2 ounces in 50 gallons per acre) on June 27 and July 5, 11, 19, and 25; and Ridomil (fungicide, at a rate of one pound in 50 gallons per acre) on July 5, 11, 19, and 25.

At SMS, plots were fumigated with methyl bromide at a rate of 300 pounds per acre two weeks before transplanting. Preplant fertilizer provided (per acre) 30 pounds of N, 60 pounds of P, and 60 pounds of K. Starting one week after transplanting, liquid fertilizer was injected weekly through the drip tubes at a rate of five pounds of N per acre alternately from 20-20-20 and potassium nitrate (13-0-44). Weeds were controlled with applications of Poast (1%) on June 1 and July 1. An application of Sevin (insecticide) was made on June 29, at a rate of 1.25 pound per acre.

<sup>1</sup>50 gallons is the total volume.

TABLE 1. SEED SUPPLIER, TYPE, AND COLOR  
AT HARVEST OF SELECTED PEPPERS

Variety	Seed supplier	Pepper type	Color at harvest
Marengo .....	Asgrow	Bell	Yellow
Renegade .....	Asgrow	Bell	Red
Ranger .....	Asgrow	Bell	Red
Belle Star .....	Ferry Morse	Bell	Red
Four Corners .....	Ferry Morse	Bell	Red
Belle King .....	Harris Seed	Bell	Red
Bellguard .....	Harris Seed	Bell	Red
Honey Belle .....	Harris Seed	Bell	Yellow
Key Largo .....	Harris Seed	Cubanelle	Orange-Red
Carlos .....	Nunhems	Bell	Red
Estima .....	Nunhems	Bell	Red
Zerto .....	Nunhems	Bell	Red
Camelot .....	Petoseed	Bell	Red
Jumbo Sweet .....	Takii	Bell	Red
Green Horn .....	Takii	Small Cubanelle	Red
New Ace .....	Takii	Bell	Red
Wonder Bell .....	Takii	Bell	Red

Plots were harvested six times between July 19 and August 8 at NAHS, five times between July 7 and August 2 at EVSRC, and five times between July 6 and August 14 at SMS. At all locations, fruits were harvested at the 3/4 color development stage of maturity (Table 1), weighed, and graded using the standards of the *Sweet Pepper Grader's Guide* (Tables 2

and 3) (Circular ANR-783 of the Alabama Cooperative Extension Service).

Yields may have been 10-20% higher had the fruits been harvested at the mature-green stage. At EVSRC, early and total production were similar, because heavy rainfalls in June resulted in water logging, early production decline, and plant death.

**TABLE 2. PEPPER EARLY PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>**

Variety	Marketable wt.	Fancy wt.	US #1 wt.	US #2 wt.	Fancy no.	US #1 no.	US #2 no.
	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>No./a.</i>	<i>No./a.</i>
<b>E.V. Smith Research Center</b>							
Ranger .....	4,993	2,092	2,901	936	8,379	14,193	5,643
Key Largo .....	4,974	2,504	2,470	1,235	19,323	28,557	12,312
Honey Belle .....	4,927	3,235	1,692	579	10,602	7,182	2,907
Zerto .....	4,465	3,085	1,380	303	12,996	7,866	1,539
Bell King .....	4,191	3,564	626	372	14,022	3,249	1,710
Carlos .....	3,877	2,764	1,113	513	13,167	6,669	3,249
Renegade .....	3,589	2,828	761	149	14,022	4,104	855
Camelot .....	3,337	1,918	1,419	449	8,208	9,063	2,394
Marengo .....	3,094	2,557	538	295	14,193	2,907	1,026
Jumbo Sweet .....	2,568	1,495	1,073	850	7,011	7,011	5,643
Bellguard .....	2,493	1,713	780	216	8,208	3,762	1,197
Belle Star .....	2,329	1,331	998	92	7,524	7,524	513
New Ace .....	1,790	1,448	342	325	10,431	4,446	342
<b>Sand Mountain Substation</b>							
Zerto .....	11,568	5,776	5,792	1,875	13,917	19,127	8,786
New Ace .....	10,778	1,992	8,786	1,626	6,609	34,210	9,330
Renegade .....	10,723	4,094	6,629	1,155	9,563	23,869	6,764
Ranger .....	10,469	3,870	6,599	839	11,118	22,003	4,821
Belle Star .....	10,340	2,165	8,175	946	5,054	25,658	3,577
Bell King .....	10,260	4,089	6,172	1,199	8,319	19,982	5,443
Jumbo Sweet .....	10,036	2,885	7,151	2,312	5,287	21,070	9,952
Carlos .....	9,647	4,111	5,536	2,290	9,408	17,649	11,352
Marengo .....	9,490	3,107	6,383	1,869	7,309	22,314	8,630
Key Largo .....	9,347	8,929	418	0	53,881	1,244	0
Bellguard .....	9,220	1,754	7,467	947	3,032	25,813	4,976
Wonder Bell .....	9,058	1,557	7,501	1,279	4,354	26,668	7,620
Four Corners .....	8,479	1,559	6,921	1,087	3,810	22,703	5,598
Honey belle .....	8,339	4,818	3,521	799	10,419	12,518	4,510
Camelot .....	7,168	3,890	3,278	1,140	7,931	11,896	5,443
<b>North Alabama Horticulture Substation</b>							
Renegade .....	12,254	9,682	2,572	1,428	27,253	9,985	5,729
Greenhorn .....	10,033	6,442	3,591	6,684	56,150	28,118	57,855
Camelot .....	8,571	7,047	1,524	824	19,920	5,039	2,834
Zerto .....	6,805	4,974	1,831	1,271	16,746	6,220	3,923
Bellguard .....	6,553	5,347	1,206	1,111	15,714	4,583	3,847
Ranger .....	5,995	4,853	1,142	203	13,285	3,916	2,534
Jumbo Sweet .....	5,685	4,035	1,650	2,032	10,207	4,545	6,459
Marengo .....	5,203	4,389	814	787	12,031	2,946	2,210
New Ace .....	5,170	3,191	1,979	1,776	8,708	8,542	8,874
Four Corners .....	4,069	2,868	1,201	352	8,931	4,466	1,435
Belle Star .....	3,357	2,995	362	285	8,214	2,313	1,037
Honey Belle .....	3,302	2,188	1,114	891	6,220	3,028	2,455
Wonder Bell .....	3,011	2,430	582	119	7,593	3,635	1,454

<sup>1</sup>Cumulative productions of the first three harvests (July 23 and 29, Aug. 4 at NAHS; July 7, 12, and 22 at EVSRC; and July 6, Aug. 4 and 17 at SMS).

TABLE 3. PEPPER TOTAL PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>

Variety	Marketable wt.	Fancy wt.	US #1 wt.	US #2 wt.	Culls	Fancy no.	US #1 no.	US #2 no.	Individual fancy wt.
	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>No./a.</i>	<i>No./a.</i>	<i>Lb.</i>
<b>E.V. Smith Research Center</b>									
Key Largo .....	6,210	2,504	2,470	1,235	180	19,323	28,557	12,312	0.12
Ranger .....	5,930	2,092	2,901	936	327	8,379	14,193	5,643	0.26
Honey Belle .....	5,507	3,235	1,692	579	220	10,602	7,182	2,907	0.28
Zerto .....	4,768	3,085	1,380	303	100	12,996	7,866	1,539	0.22
Bell King .....	4,563	3,564	626	372	291	14,022	3,249	1,710	0.24
Carlos .....	4,390	2,764	1,113	513	171	13,167	6,669	3,249	0.20
Camelot .....	3,786	1,918	1,419	449	79	8,208	9,063	2,394	0.23
Renegade .....	3,737	2,828	761	149	94	14,022	4,104	855	0.20
Jumbo Sweet .....	3,418	1,495	1,073	850	192	7,011	7,011	5,643	0.21
Marengo .....	3,390	2,557	538	295	145	14,193	2,907	1,026	0.19
Bellguard .....	2,709	1,713	780	216	81	8,208	3,762	1,197	0.20
Belle Star .....	2,421	1,331	998	92	327	7,524	7,524	513	0.17
New Ace .....	2,115	1,448	342	325	231	10,431	4,446	342	0.16
<b>Sand Mountain Substation</b>									
Key Largo .....	15,826	15,408	418	0	1,626	99,287	1,244	0	0.15
New Ace .....	13,717	2,309	11,408	3,615	2,649	7,620	48,205	24,880	0.31
Zerto .....	13,500	6,678	6,822	2,238	1,085	16,017	22,703	10,963	0.43
Ranger .....	13,372	4,365	9,006	1,738	1,696	12,362	31,333	10,496	0.40
Renegade .....	12,952	4,601	8,351	3,058	884	10,730	30,867	21,148	0.43
Belle Star .....	12,431	2,293	10,137	2,260	908	5,443	33,821	12,984	0.42
Bell King .....	11,578	4,600	6,978	1,469	832	9,563	23,403	7,309	0.48
Marengo .....	11,381	3,660	7,721	2,287	2,394	8,941	28,379	12,362	0.40
Jumbo Sweet .....	11,314	3,365	7,949	3,319	1,328	6,531	24,180	16,794	0.51
Wonder Bell .....	11,301	2,110	9,191	2,837	1,477	5,831	33,510	19,671	0.35
Carlos .....	11,232	4,512	6,719	3,078	1,577	10,341	22,548	17,572	0.43
Honey belle .....	10,803	5,907	4,896	1,437	2,008	13,140	18,349	10,030	0.45
Four Corners .....	10,421	1,624	8,798	2,697	1,351	3,965	30,323	17,105	0.41
Bellguard .....	10,201	1,810	8,391	2,733	1,042	3,188	29,856	18,660	0.66
Camelot .....	8,933	4,527	4,406	1,571	1,104	9,330	16,328	8,242	0.48
<b>North Alabama Horticulture Substation</b>									
Greenhorn .....	22,298	10,836	4,587	6,875	328	103,695	34,764	59,303	0.13
Renegade .....	19,085	14,279	3,196	1,611	483	40,676	12,604	6,466	0.35
Zerto .....	18,015	13,801	2,823	1,391	558	44,688	9,378	4,498	0.31
Camelot .....	17,799	14,949	1,789	1,061	383	36,769	6,141	3,779	0.41
Bellguard .....	15,468	11,113	2,936	1,418	706	35,683	8,921	5,811	0.31
New Ace .....	15,392	10,723	2,658	2,010	1,199	41,218	12,938	11,362	0.28
Jumbo Sweet .....	14,959	10,029	2,407	2,522	549	28,628	8,293	8,214	0.35
Ranger .....	12,549	10,733	1,371	445	183	31,407	5,759	3,379	0.34
Bell Star .....	11,983	10,865	812	306	175	31,419	4,226	1,037	0.35
Four Corners .....	11,557	9,211	1,707	640	94	86,921	6,539	3,110	0.23
Marengo .....	10,877	8,954	979	944	214	24,634	3,765	2,783	0.35
Wonder Bell .....	10,711	9,590	964	157	63	32,716	5,170	2,019	0.30
Honey Belle .....	7,480	4,992	1,515	973	782	19,151	4,256	2,701	0.30

<sup>1</sup>Harvest dates were July 23 and 29 and Aug. 4 and 19 at NAHS; July 7, 12, 22, and 27 and Aug. 2 at EVRSC; and July 6, Aug. 4 and 17, and Sept. 2 and 14 at SMS. Marketable yield and individual fruit weight were determined as Fancy + US #1 grades.

# CANTALOUPE VARIETY TRIAL

Eric Simonne, Joe Kemble, Jim Pitts, and Kenneth Short

On May 6, 13 varieties of orange-fleshed cantaloupes were direct seeded on plastic-mulched beds at the Chilton Area Horticulture Substation in Clanton. Single-row plots were 40 feet long, four feet wide, and contained approximately 10 hills per plot.

Banded preplant fertilizer provided 50 pounds of nitrogen (N) per acre, plus 100% of required phosphorus (P) and 75% of required potassium (K) as based on soil test results. Soluble fertilizer was injected weekly through the drip-irrigation system at a rate of six pounds

of N per acre alternately from 20-20-20 and potassium nitrate (KNO<sub>3</sub>) between emergence and last harvest.

Throughout the growing season, plants were sprayed approximately every 10 days with Bravo (fungicide) and Lannate (insecticide) each at a rate of two pints in 100 gallons per acre.

Cantaloupes were harvested on July 5, 8, 12, and 15 (see table). Soluble solid content, which evaluates sweetness, was determined on two representative cantaloupes of each plot.

SEED SOURCE, YIELD AND SOLUBLE SOLIDS FOR CANTALOUPE<sup>1</sup>

Variety	Seed source	Marketable yield <i>Lb./a.</i>	Marketable fruits <i>No./a.</i>	Individual fruit wt. <i>Lb.</i>	Soluble solids <i>°Brix</i>	Cull wt. <i>Lb./a.</i>
FMX-165 .....	Ferry Morse	20,666	12,124	4.0	7.7	5,391
Mission .....	Asgrow	14,526	11,324	2.9	11.3	6,140
XPH-6008 .....	Asgrow	14,526	10,432	3.1	9.1	5,691
Cordele .....	Asgrow	14,376	8,688	3.9	8.0	2,696
Legend .....	Asgrow	12,280	11,195	3.1	7.4	4,792
Athena .....	Rogers NK	11,980	13,271	2.0	8.9	5,840
Starsweet .....	Harris Seed	10,333	13,720	1.7	6.9	6,290
Hy Mark .....	Petoseed	10,183	9,973	2.4	10.0	4,792
Fanfair .....	Asgrow	9,584	11,076	1.9	8.3	3,744
Superstar .....	Harris Seed	8,835	19,213	1.1	7.4	7,787
AC-82-37-RNL .....	Auburn U.	8,087	12,489	1.6	6.4	10,782
Clipper .....	Nunhems	2,845	13,783	0.5	11.5	6,439
Castella .....	Nunhems	1,797	18,087	0.3	9.0	10,333

<sup>1</sup>Cumulative production for July 5, 8, 12, and 15.  
<sup>2</sup>Soluble solids is a measure of a fruit's sweetness. Cantaloupes of less than 10° Brix do not taste very sweet.

## COLORED PEPPER VARIETY TRIAL

Eric Simonne, John Eason, John Owen, Jim Pitts, Marvin Ruf, and Kenneth Short

Most bell peppers are commercially harvested at the green-mature stage. However, several blocky-type bell pepper varieties with unusual colors at maturity are now available. Colored pepper variety trials were conducted at the Piedmont Substation (PS) in Camp Hill, the Sand Mountain Substation (SMS) in Crossville, and the Chilton Area Horticulture Substation (CAHS) in Clanton.

Five-week-old peppers were transplanted on June 13 at PS, May 6 at SMS, and May 5 at CAHS. Plots consisted of a single 4x20-foot row. Within-row spacing was one foot, which created a stand of approximately 7,300 plants per acre. At CAHS, black plastic mulch and drip irrigation were used, while at PS and SMS peppers were grown on bare ground.

At PS, a 13-13-13 fertilizer was applied preplant at a rate of 600 pounds per acre. Calcium nitrate was sidedressed [20 pounds of nitrogen (N) per acre] on July 5 and 19. Irrigation water was provided through drip tapes as needed. No sprays were necessary.

At SMS, preplant fertilizer provided 30 pounds of nitrogen (N) per acre, plus 100% of required phosphorus (P) and 75% of required potassium (K) as based on soil test results. Potassium nitrate (KNO<sub>3</sub>)

was sidedressed (13 pounds of N per acre) on June 10, July 11, and August 4. Plots were overhead irrigated as needed.

At CAHS, preplant fertilizer provided 30 pounds of N per acre, plus 100% of required P and 75% of required K as based on soil test results. Soluble fertilizer was injected weekly at a rate of six pounds of N per acre alternately from 20-20-20 and KNO<sub>3</sub> between emergence and last harvest.

Plants were sprayed approximately every 10 days with Bravo (fungicide) and Lannate (insecticide), each at a rate of two pints in 100 gallons per acre.

At all locations, fruits were harvested at the <sup>3</sup>/<sub>4</sub> color development stage of maturity (Table 1), weighed, and graded using the standards of the *Sweet Pepper Grader's Guide* (Circular ANR-783 of the Alabama Cooperative Extension Service). Plots were harvested six times between June 23 and August 11 at CAHS, three times between August 17 and September 2 at PS, and four times between July 20 and August 2 at SMS. Early production (Table 2) included the first three harvests. Production at SMS and PS was expected to continue until frost, thus total production did not include all harvests at these units (Table 3).

**TABLE 1. SEED SUPPLIER, FRUIT TYPE, AND COLOR AT HARVEST OF SELECTED COLORED PEPPERS**

Variety	Seed supplier	Pepper type	Color at harvest
Var. #860 .....	A&C	Bell	Red
Chocolate Beauty ...	Ball Seed	Bell	Brown
Golden Bell .....	Harris Seed	Bell	Yellow
Biscayne .....	Petoseed	Cubanelle	Orange-Red
King Arthur .....	Petoseed	Bell	Red
Bomby .....	Rogers NK	Bell	Red
Ivory .....	Rogers NK	Bell	White
Lilac .....	Rogers NK	Bell	Purple
Orobelle .....	Rogers NK	Bell	Yellow
Valencia .....	Rogers NK	Bell	Orange
Black Bird .....	Stokes	Bell	Black
Blue Jay .....	Stokes	Bell	Purple
Canary .....	Stokes	Bell	Yellow
Cardinal .....	Stokes	Bell	Red
Dove .....	Stokes	Bell	White
Klondike Bell .....	Stokes	Bell	Yellow
Oriole .....	Stokes	Bell	Orange
Red Bell C .....	Stokes	Bell	Red
Red Bell G .....	Stokes	Bell	Red
Superset .....	Stokes	Bell	Red



**TABLE 2. COLORED PEPPERS EARLY PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>**

Variety	Marketable wt.	Fancy wt.	US #1 wt.	US #2 wt.	Fancy no.	US #1 no.	US #2 no.
	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>No./a.</i>	<i>No./a.</i>
<b>Piedmont Substation</b>							
Biscayne.....	9,017	4,094	4,923	718	14,513	23,221	3,421
Dove.....	7,260	2,644	4,616	3,383	7,568	15,446	11,611
Ivory.....	6,420	1,878	4,542	3,251	5,805	18,038	12,336
Black Bird.....	5,870	2,630	3,240	2,863	6,842	11,403	13,269
Klondike Bell.....	5,676	2,851	2,825	0	6,738	8,915	0
Valencia.....	5,673	3,017	2,656	38	6,635	8,915	104
Blue Jay.....	5,265	1,308	3,957	2,604	3,732	13,995	12,855
Golden Bell.....	4,053	1,413	2,640	596	3,628	9,123	1,037
Lilac.....	3,641	169	3,472	3,211	311	14,099	18,867
King Arthur.....	3,292	2,579	713	221	4,976	1,659	0
Jupiter.....	1,971	1,050	921	169	1,866	2,073	726
Oriole.....	1,490	622	868	479	1,659	2,695	0
Canary.....	817	610	207	247	1,244	518	1,970
Bomby.....	739	518	221	78	933	622	0
<b>Sand Mountain Substation</b>							
Biscayne.....	6,339	6,339	0	0	26,435	0	0
Blue Jay.....	5,853	1,670	4,183	501	4,354	15,032	4,043
Black Bird.....	5,108	2,844	2,264	653	6,013	6,946	4,665
Dove.....	4,836	1,668	3,168	508	4,043	12,336	3,939
Ivory.....	4,211	962	3,248	722	2,488	12,544	4,665
Orobelle.....	3,867	1,816	2,051	91	4,043	6,116	518
Canary.....	3,577	1,690	1,888	187	3,110	4,147	829
King Arthur.....	3,509	2,522	987	67	4,665	2,799	207
Bomby.....	3,437	1,887	1,550	0	3,421	3,317	0
Superset.....	3,082	510	2,573	146	1,555	10,159	933
Golden Bell.....	3,060	499	2,561	362	1,348	8,604	1,970
Klondike Bell.....	2,975	2,177	798	76	4,147	2,281	415
Oriole.....	2,144	862	1,282	26	1,762	3,525	104
<b>Chilton Area Horticulture Substation</b>							
Chocolate Beauty.....	10,975	1,857	9,118	1,058	3,981	26,705	4,561
King Arthur.....	10,866	3,641	7,225	719	7,049	19,821	3,566
Orobelle.....	10,138	910	9,228	1,814	2,101	29,671	9,918
Var #860.....	7,532	1,012	6,520	1,422	2,470	24,880	10,519
Lilac.....	4,366	468	3,898	2,028	1,022	13,803	11,247
Blue Jay.....	3,514	654	2,860	988	1,728	9,100	4,492
Valencia.....	3,098	485	2,613	299	889	8,441	1,511
Red Bell C.....	2,748	454	2,294	999	1,382	10,194	4,924
Canary.....	2,627	346	2,281	492	711	6,309	1,155
Red Bell G.....	2,462	579	1,883	1,167	1,707	7,074	5,854
Cardinal.....	2,438	632	1,806	597	1,429	5,800	2,942
Oriole.....	2,199	317	1,882	671	691	16,011	2,995
Golden Bell.....	2,028	581	1,447	1,481	1,419	5,020	6,656
Ivory.....	1,902	511	1,391	1,546	1,174	4,694	5,281
Klondike Bell.....	1,789	281	1,508	616	573	4,419	3,192
Dove.....	1,754	338	1,416	785	808	5,170	4,604
Black Bird.....	1,637	214	1,423	649	452	3,845	2,940
Biscayne.....	1,408	815	593	851	3,786	4,057	5,950

<sup>1</sup>Cumulative productions of the first three harvests (June 23, July 12 and 26 at CAHS; July 20, Aug. 2 and 11 at SMS; and Aug. 17 and 29, Sept. 2 at PS).

TABLE 3. COLORED PEPPERS TOTAL PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>

Variety	Marketable wt.	Fancy wt.	US #1 wt.	US #2 wt.	Culls	Fancy no.	US #1 no.	US #2 no.	Individual fancy wt.
	Lb./a.	Lb./a.	Lb./a.	Lb./a.	Lb./a.	No./a.	No./a.	No./a.	Lb.
<b>Piedmont Substation</b>									
Biscayne.....	9,017	4,094	4,923	718	194	14,513	23,221	3,421	0.28
Dove.....	7,260	2,644	4,616	3,383	570	7,568	15,446	11,611	0.35
Ivory.....	6,420	1,878	4,542	3,251	280	5,805	18,038	12,336	0.33
Black Bird.....	5,870	2,630	3,240	2,863	544	6,842	11,403	13,269	0.38
Klondike Bell.....	5,676	2,851	2,825	0	26	6,738	8,915	0	0.43
Valencia.....	5,673	3,017	2,656	38	285	6,635	8,915	104	0.46
Blue Jay.....	5,265	1,308	3,957	2,604	324	3,732	13,995	12,855	0.36
Golden Bell.....	4,053	1,413	2,640	596	634	3,628	9,123	1,037	0.39
Lilac.....	3,641	169	3,472	3,211	398	311	14,099	18,867	0.54
King Arthur.....	3,292	2,579	713	221	402	4,976	1,659	0	0.52
Jupiter.....	1,971	1,050	921	169	156	1,866	2,073	726	0.57
Oriole.....	1,490	622	868	479	803	1,659	2,695	0	0.43
Canary.....	817	610	207	247	389	1,244	518	1,970	0.47
Bomby.....	739	518	221	78	169	933	622	0	0.57
<b>Sand Mountain Substation</b>									
Biscayne.....	9,007	9,007	0	0	526	37,527	0	0	0.24
Blue Jay.....	7,302	2,056	5,246	782	596	5,598	19,489	6,738	0.37
Ivory.....	6,706	1,276	5,430	888	345	3,317	21,044	5,702	0.39
Black Bird.....	6,542	3,376	3,166	977	486	7,153	10,470	7,360	0.48
Dove.....	5,363	1,706	3,657	867	245	4,147	14,306	6,324	0.44
Orobelle.....	5,308	2,236	3,072	221	1,109	5,080	9,434	1,140	0.45
Superset.....	4,896	765	4,131	374	741	2,384	16,276	2,281	0.33
Bomby.....	4,824	2,281	2,542	36	1,041	4,250	6,116	207	0.53
Canary.....	4,740	2,125	2,615	187	1,771	3,939	6,116	829	0.54
King Arthur.....	4,651	3,282	1,370	67	2,412	6,116	4,043	207	0.53
Klondike Bell.....	3,952	2,763	1,189	131	1,676	4,147	3,421	726	0.68
Golden Bell.....	3,786	823	2,963	362	606	1,348	10,263	1,970	0.65
Oriole.....	2,635	1,013	1,621	26	1,748	2,073	4,561	104	0.49
<b>Chilton Area Horticulture Substation</b>									
Orobelle.....	22,777	1,634	16,860	4,283	1,730	2,354	57,913	27,570	0.65
King Arthur.....	21,532	6,782	12,084	2,667	2,586	7,796	36,159	17,831	0.87
Biscayne.....	20,530	977	16,355	3,198	4,825	3,786	81,761	33,534	0.24
Red Bell G.....	19,616	773	15,386	3,458	2,108	1,829	58,663	23,782	0.43
Chocolate Beauty.....	19,044	3,385	13,014	2,645	952	3,981	40,306	15,426	0.80
Red Bell C.....	18,267	515	14,127	3,625	2,677	2,073	55,980	28,076	0.27
Valencia.....	17,764	938	14,585	2,242	5,359	2,399	41,941	14,306	0.35
Var #860.....	15,557	2,006	10,125	3,426	1,996	3,293	38,052	25,703	0.58
Cardinal.....	15,192	1,305	11,611	2,276	3,705	3,194	33,369	12,524	0.41
Klondike Bell.....	14,778	853	11,754	2,171	3,931	1,391	35,274	13,913	0.58
Ivory.....	14,191	1,022	8,794	4,375	2,018	2,934	30,161	23,002	0.41
Golden Bell.....	13,407	629	9,291	3,487	2,292	2,182	34,919	21,825	0.30
Black Bird.....	13,324	617	10,098	2,609	1,614	1,470	27,933	17,077	0.45
Dove.....	12,761	380	9,741	2,640	1,455	1,131	34,977	18,095	0.30
Lilac.....	12,709	671	7,054	4,985	1,224	1,022	25,817	36,383	0.72
Blue Jay.....	12,664	654	8,596	3,415	1,723	1,843	31,215	22,461	0.35
Canary.....	11,534	588	8,370	2,576	2,679	1,333	22,747	14,928	0.37
Oriole.....	7,836	317	5,500	2,019	4,659	1,037	27,760	13,016	0.37

<sup>1</sup>Harvest dates were June 23 and July 12, 26, and 28 at CAHS; July 20 and Aug. 2, 11, and 25, and Sept. 2 at SMS; and Aug. 17 and 29, and Sept. 2 at PS. Additional harvests are expected at SMS and PS. Marketable yield and individual fruit weight were determined as Fancy + US #1 grades.

# EGGPLANT VARIETY TRIAL

Eric Simonne, Jim Bannon, Marlin Hollingsworth, Joe Kemble, and Jimmy Witt

Because the demand for eggplant in specialty markets is increasing, the performance of selected eggplant varieties was evaluated at the Horticulture Unit of the E.V. Smith Research Center (EVSRC) in Shorter and the North Alabama Horticulture Substation (NAHS) in Cullman.

Five-week-old eggplants were transplanted on three-foot-wide, drip-irrigated beds covered with plastic — on May 10 at EVSRC and on May 11 at NAHS. Within-row spacing was 24 inches, which provided a stand of 3,600 plants per acre. Plastic mulch color was white at NAHS and black at EVSRC.

At EVSRC, beds were fumigated with methyl bromide at a rate of 400 pounds per acre eight weeks before transplanting. A combination of 16-0-0, 0-46-0, and 0-0-60 was preplant broadcast to provide 60 pounds of nitrogen (N), 60 pounds of phosphorus (P), and 60 pounds of potassium (K), per acre. Starting one week after transplanting, five pounds of N were injected weekly through the irrigation system, alternately from 20-20-20 and potassium nitrate (KNO<sub>3</sub>).

Insect control consisted of applications of Thiodan 3EC (two pints per acre) on May 25, July 9, and August 5; Asana XL (eight ounces per acre) on June 10, July 18 and 28, and September 9; Carbaryl (two quarts per acre) on June 28 and August 22; Ambush (eight ounces per acre) on August 18 and 22 and September 2, 13, and 21; and Lannate LV (three pints per acre) on August 26 and 29 and September 9, 16, and 19.

Fungicide applications consisted of Benlate 50 WP (one-half pound per acre) on May 25; Bravo 720 (1.5-3 quarts per acre) on June 10, July 9 and 28, and September 9 and 16; Ridomil (two pounds per acre) on July 9, August 5, and September 2 and 13; Dithane (two pounds per acre) on July 18 and August 18; and Manzate (two pounds per acre) on August 11.

At NAHS, beds were fumigated with methyl bromide at a rate of 400 pounds per acre on April 28. Preplant application of fertilizer provided 30 pounds of N, 50 pounds of P, and 35 pounds of K. Between May 30 and final harvest, injections of combinations of ammonium nitrate (NH<sub>4</sub>NO<sub>3</sub>), calcium nitrate [Ca(NO<sub>3</sub>)<sub>2</sub>], and KNO<sub>3</sub> were made weekly through the drip tubes. Per-acre application rates ranged between 10-20 pounds for NH<sub>4</sub>NO<sub>3</sub>, 10 - 50 pounds for Ca (NO<sub>3</sub>)<sub>2</sub>, and 10-90 pounds for KNO<sub>3</sub>.

Pest control consisted of applications of PennCap M (insecticide, at a rate of one pint in 50 gallons per acre), Manzate (fungicide, at a rate of three pounds in 50 gallons per acre), and Dimethoate (insecticide, at a rate of one-half pint in 50 gallons per acre) on May 16 and July 6. Plants were also sprayed with Bravo (fungicide, at a rate of 1.5 pint in 50 gallons per acre); Asana (insecticide, at a rate of 9.2 ounces in 50 gallons per acre) on June 27 and July 5, 11, 19, and 25; and Ridomil (fungicide, at a rate of one pound in 50 gallons per acre) on July 5, 11, 19, and 25.

Eggplants were harvested nine times between July 5 and August 19 at NAHS and 10 times between June 22 and August 23 at EVSRC.

Plant and fruit characteristics were similar at both stations (Table 1). Fruits were graded according to the *Eggplant Grader's Guide* (Circular ANR-780 from the Alabama Cooperative Extension Service). Early production was determined by combining the yields of the first four harvests (Table 2). Total marketable yield was determined by combining the Fancy and US #1 grades (Table 3).

TABLE 1. PLANT AND FRUIT CHARACTERISTICS OF SELECTED EGGPLANT VARIETIES

Variety	Source	Plant appearance	Calix <sup>1</sup>	Fruit color	Fruit shape
XPH 14005 .....	Asgrow	Typical	Green	Purple	Typical
XPH 14006 .....	Asgrow	Typical	Green	Purple	Elongated
Classic .....	Harris Seeds	Typical	Green	Purple	Typical
Black Belle .....	Petoseed	Typical	Green	Purple	Oblong
Epic .....	Petoseed	Typical	Green	Purple	Oblong
Vittoria .....	Petoseed	Typical	Green	Purple	Elongated
Bambino .....	Rupp Seeds	Compact	Green	Purple	Round
Bride .....	Rupp Seeds	Typical	Green	White	Elongated
Long Tom .....	Sakata	Oriental	Purple	Light Purple	Long
Short Tom .....	Sakata	Oriental	Purple	Light Purple	Elongated

<sup>1</sup>The calix is on the stem end of the eggplant.

<sup>2</sup>The leaves of "classic" type plants are fully green, while in the "oriental" (or "japanese") type the veins on the leaves are typically purple to brown. "Compact" plants were no more than three feet tall.

TABLE 2. EGGPLANT EARLY PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>

Variety	Marketable wt.	Fancy wt.	US #1 wt.	US #2 wt.	Fancy no.	US #1 no.	US #2 no.
	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>No./a.</i>	<i>No./a.</i>
<b>E.V. Smith Research Center</b>							
Bambino .....	5,806	3,698	2,108	253	31,200	28,975	5,564
Long Tom .....	5,356	1,516	3,840	322	3,016	14,373	3,120
Short Tom .....	4,252	1,441	2,811	196	2,236	11,522	1,924
Black Belle .....	2,378	1,233	1,145	40	988	1,825	156
Epic .....	2,007	1,327	680	150	1,404	1,711	624
Vittoria .....	1,849	570	1,279	223	832	4,905	1,508
XPH 14006 .....	1,474	1,239	235	94	1,144	913	624
Classic .....	1,149	724	424	7	780	1,027	52
XPH 14005 .....	956	722	234	71	572	684	364
Bride .....	886	577	309	92	1,196	1,711	1,664
<b>North Alabama Horticulture Substation</b>							
Black Belle .....	6,489	5,743	746	1,654	6,599	1,779	1,090
Epic .....	5,662	5,102	560	893	5,824	1,486	654
Short Tom .....	5,457	4,321	1,137	947	10,039	3,273	1,553
Long Tom .....	5,082	3,478	1,604	1,031	8,779	4,303	1,434
Classic .....	4,709	3,960	749	565	5,170	1,189	654
XPH 14005 .....	3,206	2,727	479	293	3,328	805	322
Bambino .....	2,781	2,154	627	187	11,925	4,437	2,163
Vittoria .....	2,281	1,609	673	404	3,853	2,044	701
Bride .....	244	178	66	31	1,196	416	52

<sup>1</sup>Cumulative production of the first four harvests: July 1, 5, 8, and 14 combined harvests at NAHS; June 22 and 30, and July 6 and 12 at EVSRC.

TABLE 3. EGGPLANT TOTAL PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>

Variety	Marketable wt.	Fancy wt.	US #1 wt.	US #2 wt.	Culls	Fancy no.	US #1 no.	US #2 no.	Individual fancy wt.
	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>No./a.</i>	<i>No./a.</i>	<i>Lb.</i>
<b>E.V. Smith Research Center</b>									
Long Tom .....	20,563	9,168	11,395	8,548	94	23,816	31,980	31,616	0.39
XPH 14006 .....	15,989	9,293	6,696	4,971	9	9,152	8,736	8,216	1.01
XPH 14005 .....	15,951	9,521	6,430	5,195	0	10,348	8,840	7,696	0.92
Short Tom .....	15,612	6,563	9,050	7,241	56	14,560	22,412	20,592	0.45
Black Belle .....	14,392	7,357	7,035	5,127	0	6,968	7,748	6,760	1.06
Epic .....	13,586	6,996	6,590	6,940	6	8,372	10,036	11,232	0.84
Bambino .....	13,210	7,600	5,610	9,339	43	87,932	81,276	61,880	0.08
Bride .....	13,160	7,025	6,135	4,245	76	24,440	26,416	20,280	0.29
Classic .....	9,823	5,987	3,836	3,040	52	6,552	5,200	4,316	0.96
Vittoria .....	8,802	3,991	4,811	4,351	2,285	8,372	11,336	11,960	0.48
<b>North Alabama Horticulture Substation</b>									
Classic .....	68,357	61,147	7,210	4,259	2,930	36,608	10,519	14,085	1.80
XPH 14005 .....	33,370	26,438	6,932	3,534	1,499	35,159	10,145	5,260	0.75
Black Belle .....	33,205	25,390	7,814	5,709	2,529	29,436	9,869	7,172	0.86
Epic .....	30,208	20,824	9,384	4,634	2,836	27,218	9,390	6,240	0.77
Short Tom .....	30,163	21,932	8,231	5,307	3,882	43,375	17,139	10,317	0.52
Long Tom .....	29,965	21,414	8,551	3,945	2,763	49,231	22,722	13,484	0.44
Bride .....	18,525	13,775	4,750	2,378	3,038	46,852	18,044	12,012	0.29
Vittoria .....	18,351	13,411	4,939	3,583	1,760	27,617	12,261	8,232	0.48
Bambino .....	8,984	6,458	2,526	2,098	3,630	55,134	32,171	20,523	0.12

<sup>1</sup>Harvest dates were July 1, 5, 8, 14, 22, and 28, and Aug. 5, 12, and 19 at NAHS; June 22 and 30, and July 6, 12, 20, and 26, and Aug. 1, 8, 15, and 23 at EVSRC. Marketable yield and individual fruit weight were determined as Fancy + US#1 grades.

# SLICER CUCUMBER VARIETY TRIAL

Eric Simonne, Marlin Hollingsworth, and Joe Kemble

On May 23, 17 varieties of slicer cucumbers were direct seeded on bare-ground at a one-inch depth at the North Alabama Horticultural Substation in Cullman. Plots consisted of a single 42-inch x 20-foot row and within-row spacing was eight inches, which provided a stand of 19,000 plants per acre approximately.

Preplant herbicide was Curbit applied on May 23 at a rate of three quarts in 50 gallons per acre. Plants were sprayed with Bravo (fungicide, at a rate of 1.5 pints in 50 gallons per acre); Asana (insecticide, at a rate of 9.2 ounces in 50 gallons per acre) on June 20 and 27 and July 5, 11, and 19; and Ridomil (fungicide, at a rate of one pound in 50

gallons per acre) on July 5, 11, 19, and 25.

Fertilization consisted of a preplant application four days before planting of 13-13-13 at a 1,000-pound per acre rate and a sidedress application of 240 pounds per acre of 34-0-0 (NH<sub>4</sub>NO<sub>3</sub>) 30 days after planting. Plots were overhead irrigated immediately after planting.

Cucumbers were harvested 10 times between July 5 and July 27. After each harvest, fruits were counted and graded as described in the *Cucumber Grader's Guide* (Circular ANR-771 from the Alabama Cooperative Extension Service). Early (Table 1) and total (Table 2) productions were determined.

**TABLE 1. SLICER CUCUMBER EARLY PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>**

Variety	Seed source	Marketable wt.	Fancy wt.	Fancy no.	US #1 wt.	US #1 no.
		Lb./a.	Lb./a.	No./a.	Lb./a.	No./a.
General Lee .....	Stokes	23,237	18,086	41,072	5,151	12,602
Dasher II .....	Petoseed	22,305	16,132	33,604	6,173	13,846
Slice Nice .....	Twilley	18,182	12,468	31,426	5,714	16,802
Var #100 .....	A&C	17,084	13,432	27,848	3,651	10,890
Encore .....	Harris Seed	16,804	11,520	28,003	5,283	12,290
Prolific .....	Sakata	14,856	9,198	14,313	5,658	11,201
Harvestmore .....	Rogers NK	14,207	12,088	26,603	2,119	4,667
Soarer .....	Takii	11,804	7,085	15,402	4,719	8,712
A&C 1810 .....	A&C	10,514	8,774	23,803	1,739	4,667
Turbo .....	Petoseed	10,276	7,421	17,424	2,855	8,245
Paska .....	Nunhems	8,862	4,921	11,201	3,941	10,268
XPH 1701 .....	Asgrow	7,934	3,261	28,937	4,673	9,490
Meteor .....	Asgrow	7,895	5,305	31,893	2,590	10,112
Speedway .....	Petoseed, Stokes	7,569	2,292	28,781	5,277	12,446
Orient Express .....	Harris Seed	7,212	3,718	7,001	3,494	7,156
Thunder .....	Asgrow	7,079	2,306	14,002	4,773	9,801
Marketmore 76 .....	Harris Seed	5,996	4,851	11,357	1,145	3,423

<sup>1</sup>Productions of July 5, 7, and 11 combined.

**TABLE 2. SLICER CUCUMBER TOTAL PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>**

Variety	Marketable wt.	Fancy wt.	Fancy no.	US #1 wt.	US #1 no.	Culls	Individual fruit wt.
	Lb./a.	Lb./a.	No./a.	Lb./a.	No./a.	Lb./a.	Lb.
General Lee .....	34,763	26,208	63,163	8,555	19,914	3,877	0.42
Dasher II .....	32,811	22,194	59,118	10,616	26,759	3,325	0.38
Encore .....	30,458	20,772	58,029	9,686	23,959	5,957	0.37
Var #100 .....	26,816	19,243	49,317	7,573	22,247	2,710	0.36
Slice Nice .....	26,281	16,670	46,361	9,611	26,914	5,136	0.36
Harvestmore .....	25,041	19,265	49,628	5,776	13,691	3,087	0.41
Prolific .....	23,089	13,159	23,025	9,930	18,513	9,565	0.56
A&C 1810 .....	23,002	18,207	54,451	4,795	12,446	811	0.37
Soarer .....	21,378	12,586	25,514	8,792	17,113	6,439	0.52
Turbo .....	17,837	11,735	33,137	6,102	15,091	2,620	0.38
XPH 1701 .....	17,473	9,492	47,450	7,981	18,047	5,988	0.33
Meteor .....	15,822	10,756	50,406	5,066	17,580	2,943	0.26
Speedway .....	15,665	6,873	46,984	8,792	19,602	4,033	0.31
Paska .....	14,988	8,196	21,314	6,792	16,802	5,481	0.40
Thunder .....	13,467	5,833	23,025	7,634	15,869	6,380	0.32
Orient Express .....	12,295	6,019	13,224	6,276	11,513	7,028	0.42
Marketmore 76 .....	9,213	6,901	18,980	2,312	6,067	2,122	0.36

<sup>1</sup>Harvest dates were July 5, 7, 11, 13, 15, 18, 19, 22, 25, and 27. Marketable yield and individual fruit weight were determined as Fancy + US #1 grades.

## SOUTHERNPEA VARIETY TRIAL

Eric Simonne, Gene Hunter, Oyette Chambliss, Jim Bannon, Brian Gamble,  
Marlin Hollingsworth, Henry Ivey, Larry Wells, and Jimmy Witt

Forty-two varieties of southernpeas were evaluated at the Wiregrass Substation (WS) in Headland, the Horticulture Unit of the E.V. Smith Research Center (EVSRC) in Shorter, and the North Alabama Horticulture Substation (NAHS) in Cullman. Plots consisted of 15-foot-long rows spaced 30 inches apart. Within-row spacing was approximately four inches.

At WS, a 6-20-20 fertilizer was preplant applied at rate of 500 pounds per acre on May 2. Treflan (herbicide) was preplant applied on May 3 at a rate of one pint per acre. Planting date was May 5. Plants were sprayed with Thiodan (insecticide) at a rate of 1.5 pints per acre on June 21 and 28. Plots were cultivated on July 2 and 22. Abundant rainfall and overhead irrigation supplied at least one inch of water per week.

At EVSRC, following soil testing recommendation, 30 pounds of N per acre were preplant applied. Planting date was May 13. Plots were overhead irrigated as needed. Treflan (herbicide) was applied on May 12 at a rate of one pint per acre.

Insect control consisted of applications of Thiodan 3EC (at a rate of 2.5 pints per acre) on July 9 and August 5, Asana XL (at a rate of eight ounces

per acre) on July 18, and of Carbaryl (at a rate of two quarts per acre) on June 28 and July 28. Fungicide applications consisted of Bravo 81W (at a rate of two pounds per acre) on June 28 and Ridomil (at a rate of two pounds per acre) on June 28 and July 9.

At NAHS, following soil testing recommendation, a 5-10-15 fertilizer was preplant applied at a rate of 250 pounds per acre. Planting date was July 7. Pest control consisted of a preplant application on July 7 of Di-syston 15G (insecticide) at a rate of 10 pounds per acre. Dual (herbicide) was applied on July 7 at a rate of 1.5 pints per acre. Due to abundant rainfall, no overhead irrigation was needed.

To simulate once-over harvesting used by commercial processors, plots were individually harvested when 80% of the pods became dry. Actual harvest dates were between July 13 and Aug. 2 at WS, July 27 and August 23 at EVSRC, and Sept. 13 and 27 at NAHS. Total weight and shelled weight were determined. However, due to differences in dryness, imbibed weights were reported (see table). Imbibed weights were determined by weighing all the shelled peas after they were soaked in water to allow the dry seeds to absorb water (imbibe) and reach similar water content as the green seeds.

SOUTHERNPEA IMBIBED YIELD <sup>1</sup>				
Treatment	Seed source	WS	EVSRC	NAHS
		<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>
<b>Blackeye</b>				
AU-89-M 102 .....	Auburn U.	1,459	1,789	2,891
AU-M-90-84-GC67 .....	Auburn U.	2,330	2,056	2,855
AUBE .....	Auburn U.	1,380	1,726	2,251
Bettergrow Blackeye .....	U.S. Vegetable Lab.	1,091	3,852	2,465
California Blackeye #5 .....	Local Retail	531	3,382	4,067
California Blackeye #46 .....	U. of California	1,689	3,628	3,654
California Blackeye #88 .....	U. of California	746	3,193	3,178
Genegreen .....	Auburn U.	1,229	2,350	3,076
Giant Blackeye (90-M-INC) .....	Auburn U.	875	6,819	3,888
Giant Blackeye-BVR .....	Auburn U.	1,081	2,286	3,343
Royal Blackeye .....	Louisiana State U.	1,557	4,239	3,446
<b>Cream</b>				
Bettergreen .....	U.S. Vegetable Lab.	1,659	1,856	1,982
Carolina Cream .....	U.S. Vegetable Lab.	1,709	2,163	1,152
Freezgreen .....	Auburn U.	1,815	4,325	2,050
Green Acre .....	Western Seed Multipl.	705	1,617	2,073
Mississippi Cream .....	Wax Seed Co.	1,485	2,755	2,317
Sa-Dandy .....	Peas, Inc.	1,237	2,764	1,813
Zipper Cream .....	Wax Seed Co.	1,738	3,726	2,358
<b>Crowder</b>				
AU-EVS-91-298 .....	Auburn U.	1,611	2,687	2,337
AU-EVS-91-BC-9 (VK-9) .....	Auburn U.	2,871	3,977	2,681
C.T. Dimpled Brown Crowder .....	Peas, Inc.	1,573	4,609	3,613
C.T. Tennessee White Crowder .....	Peas, Inc.	1,100	3,303	2,347
Carolina Crowder .....	U.S. Vegetable Lab.	2,915	4,285	2,213
Carolina Sugar .....	Great Plains Res.	2,156	3,373	2,400
Clemson Purple .....	Clemson U.	3,225	4,726	4,801
Colossus 80 .....	U.S. Vegetable Lab.	3,212	2,880	4,001
Mississippi Purple .....	Wax Seed Co.	1,673	3,334	3,463
Mississippi Shipper .....	Wax Seed Co.	2,050	3,826	3,198
Mississippi Silver .....	Local Retail	2,197	2,816	2,553
Worthmore .....	Ga. Seed Dev. Comm.	1,689	3,676	2,848
<b>Pinkeye</b>				
AU-C-91-INC-328-GT .....	Auburn U.	1,476	1,833	2,441
AU-C-91-INC-328-MIX .....	Auburn U.	2,132	2,026	1,924
C.T. Pinkeye Purplehull .....	Peas, Inc.	783	1,988	2,426
Corona .....	Ga. Seed Dev. Comm.	1,053	1,834	1,785
Coronet .....	Montgomery Seed	1,273	1,555	2,413
Kiawah .....	U.S. Vegetable Lab.	915	2,394	1,974
Mississippi Pinkeye .....	Wax Seed Co.	2,553	2,991	3,784
Pinkeye Pinkpod .....	Montgomery Seed	1,920	1,637	3,373
Pinkeye Purplehull-BVR .....	Ga. Seed Dev. Comm.	693	2,145	2,561
Pinkeye Purplehull-GSC .....	Western Seed Multipl.	1,824	--	--
Santee Early Pinkeye .....	U.S. Vegetable Lab.	--	1,364	2,898
Texas Pinkeye .....	Texas A&M U.	673	1,393	1,679

<sup>1</sup>Imbided weights are determined by weighing all shelled peas after they were soaked in water to allow the dry seeds to absorb water (imbibe) and reach similar water content as the green seeds. Annual harvest dates were between July 13 and Aug. 2 at WS, July 27 and Aug. 23 at EVSRC, and Sept. 13 and 27 at NAHS.

## SUMMER SQUASH VARIETY TRIAL

Eric Simonne, Brian Gamble, Marlin Hollingsworth, Henry Ivey,  
Joe Kemble, Jim Pitts, Kenneth Short, and Larry Wells

Squash variety trials were conducted at the Chilton Area Horticulture Substation (CAHS) in Clanton, the North Alabama Horticulture Substation (NAHS) in Cullman, and the Wiregrass Substation (WS) in Headland. Yellow summer squash (straightneck or crookneck) have traditionally been grown in Alabama. However, since the demand for zucchini squash has been increasing, varieties of zucchini squash also were evaluated.

At the three locations, squash were direct seeded at a one-inch depth in single-row 5x20-foot plots. In-row spacing was 18 inches, which provided a stand of 6,000 plants per acre, approximately. At CAHS, the field was drip irrigated, and the beds were covered with black-plastic mulch. Trials at NAHS and WS were conducted on bare ground.

At CAHS, planting date was early May. Preplant fertilizer was banded and provided 30 pounds of nitrogen (N) per acre, plus 100% of required phosphorus (P) and 75% of required potassium (K) as based on soil test results. Soluble fertilizer was injected weekly at a rate of six pounds of N per acre alternately from 20-20-20 and potassium nitrate (KNO<sub>3</sub>) between emergence and last harvest.

Plants were sprayed approximately every 10 days with Bravo (fungicide) and Lannate (insecticide), each at a rate of two pints in 100 gallons per acre.

At NAHS, planting date was May 23, and the field was overhead irrigated the next day. Fertilization consisted of a preplant application four days before planting of 13-13-13 at a rate of 1,000 pounds per acre. Thirty days after planting, ammonium nitrate (NH<sub>4</sub>NO<sub>3</sub>) was sidedressed at a rate of 250 pounds per acre.

Preplant herbicide was Curbit applied on May 23 at a rate of three quarts in 50 gallons per acre. On

June 27 and July 5, 11, 19, and 25, plants were sprayed with Bravo (fungicide, at a rate of 1.5 pint in 50 gallons per acre) and Asana (insecticide, at a rate of 9.2 ounces in 50 gallons per acre). Ridomil (fungicide, at a rate one pound in 50 gallons per acre) was applied on July 5, 11, 19, and 25.

At WS, squash were planted on April 21. Preplant fertilizer consisted of (per acre) 30 pounds of N, 100 pounds of P, and 100 pounds of K and was applied broadcast on April 20. Squash were sidedressed with KNO<sub>3</sub> at a rate (per acre) of 50 pounds of N 28 days after planting and 40 pounds of N 43 days after planting. Due to abundant rainfall, overhead irrigation was applied only on May 25.

Sonalan, a pre-emergence herbicide, was applied at a one-quart per acre rate. Plants were sprayed with Bravo (fungicide, at a one-quart per acre rate) on May 20 and 27.

Frequent harvests are needed for the squash to remain "fairly young and fairly tender," which are necessary characteristics for squash to be graded as US #1. Hence, fruits were harvested 14 times at CAHS between June 10 and July 14, 10 times at NAHS between June 30 and July 29, and eight times at WS between May 30 and June 24. Excessive rainfall occurred in the Wiregrass area during the month of June, resulting in excessive moisture, possible nutrient leach, water logging, and reduced yields.

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. Department of Agriculture G.P.O. 1987-180-916:40730 AMS). Marketable yield was calculated by adding the US #1 and US #2 yields. Earliness (Table 1) was evaluated by combining the yields of the first four harvests. Total production (Table 2) was also determined.



TABLE 1. SUMMER SQUASH EARLY PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>

Variety	Type <sup>2</sup>	Seed source	Marketable wt. <sup>3</sup>		US #2 wt.		US #1 no.	
			Lb./a.	Lb./a.	Lb./a.	No./a.	No./a.	
<b>Chilton Area Horticulture Substation</b>								
Supersett .....	Yellow/CN	Harris Seed	9,001	6,507	2,494	27,859	6,791	
PSX 391 .....	Yellow/SN	Petoseed	8,839	4,627	4,212	17,673	9,210	
Seneca Supreme .....	Yellow/SN	Rupp Seeds	7,957	5,196	2,761	22,986	8,796	
Goldie .....	Yellow/SN	Petoseed	7,124	4,083	3,041	15,545	8,490	
Sundance .....	Yellow/CN	Petoseed	6,215	4,631	1,584	20,003	5,611	
Lemondrop L. ....	Yellow/SN	Asgrow	6,203	4,625	1,578	16,980	4,663	
Dixie .....	Yellow/CN	Asgrow	5,542	3,189	2,353	15,950	7,506	
PSX 2287 .....	Yellow/SN	Petoseed	3,362	2,557	805	9,327	2,272	
PSX 41587 .....	Yellow/SN	Petoseed	2,771	1,677	1,094	8,209	3,636	
Senator .....	Zucchini	Asgrow	14,245	9,389	4,856	20,054	5,512	
Spineless Beauty .....	Zucchini	Rogers NK	12,456	6,568	5,888	15,385	5,821	
Embassy .....	Zucchini	Petoseed	10,369	5,341	5,029	12,590	4,721	
<b>North Alabama Horticulture Substation</b>								
PSX 391 .....	Yellow/SN	Petoseed	26,442	12,014	14,428	20,074	14,484	
Goldie .....	Yellow/SN	Petoseed	22,381	15,705	6,676	35,627	8,987	
Supersett .....	Yellow/CN	Harris Seed	21,166	17,481	3,685	47,480	6,098	
Pavo .....	Yellow/CN	Asgrow	20,264	13,192	7,072	28,096	9,148	
Lemondrop L. ....	Yellow/SN	Asgrow	19,027	10,882	8,145	19,909	7,713	
PSX 41587 .....	Yellow/SN	Petoseed	17,431	10,163	7,268	22,803	6,629	
Crescent .....	Yellow/CN	Rogers NK	16,244	10,134	6,109	25,483	6,970	
Gold Slice .....	Yellow/SN	Petoseed	15,992	11,193	4,799	20,172	5,629	
Dixie .....	Yellow/CN	Asgrow	13,274	8,809	4,465	19,876	6,324	
Embassy .....	Zucchini	Petoseed	41,530	28,073	13,457	25,749	10,842	
Senator .....	Zucchini	Asgrow	23,906	16,220	7,685	16,510	3,867	
Elira .....	Zucchini	Nunhems	17,514	13,019	4,495	10,842	2,485	
<b>Wiregrass Substation</b>								
Dixie .....	Yellow/CN	Asgrow	6,061	5,422	639	9,438	1,452	
Sunbar .....	Yellow/SN	Petoseed	4,896	3,254	1,642	5,277	469	
PSX 391 .....	Yellow/SN	Petoseed	3,024	2,469	554	4,346	421	
Lemondrop L. ....	Yellow/SN	Asgrow	2,393	1,717	675	10,563	1,634	
Pavo .....	Yellow/CN	Asgrow	2,308	1,427	881	10,503	1,581	
Supersett .....	Yellow/CN	Harris Seed	1,617	994	623	8,304	1,817	
Sunrize .....	Yellow/CN	Rogers NK	1,447	1,208	239	9,088	598	
Goldie .....	Yellow/SN	Petoseed	1,433	1,139	294	9,712	903	
Senator .....	Zucchini	Asgrow	7,584	7,061	523	3,267	871	
Commander .....	Zucchini	Petoseed	1,392	672	719	2,658	1,095	
Elira .....	Zucchini	Nunhems	759	407	352	1,525	586	

<sup>1</sup>Yields of June 19, 13, and 15 combined at CAHS; June 30, and July 5 and 7 at NAHS; and May 30, June 1 and 3 at WS.

<sup>2</sup>SN = Straightneck; CN = Crookneck

<sup>3</sup>Marketable yields were determined as US #1 + US #2 grades.

TABLE 2. SUMMER SQUASH TOTAL PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>

Variety	Type <sup>2</sup>	Source	Market. wt. <sup>3</sup>	US #1 wt.	US #2 wt.	Culls	US #1 no.	US #2 no.	Individual US #1 wt.
			<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>No./a.</i>	<i>Lb.</i>
<b>Chilton Area Horticulture Substation</b>									
Supersett .....	Yellow/CN	Harris Seed	27,067	18,588	8,480	4,720	70,825	16,078	0.26
PSX 391 .....	Yellow/SN	Petoseed	25,067	14,629	10,438	20,286	47,792	17,797	0.31
Seneca Supreme .....	Yellow/SN	Rupp Seeds	23,204	15,173	8,032	5,815	60,867	22,517	0.25
Goldie .....	Yellow/SN	Petoseed	15,605	9,057	6,548	21,374	34,199	15,306	0.27
Lemondrop L. ....	Yellow/SN	Asgrow	13,227	8,805	4,422	22,423	30,612	10,642	0.29
PSX 2287 .....	Yellow/SN	Petoseed	12,101	7,042	5,059	18,009	23,796	9,566	0.30
PSX 41587 .....	Yellow/SN	Petoseed	11,651	6,850	4,801	12,029	25,918	10,203	0.27
Dixie .....	Yellow/CN	Asgrow	11,401	6,940	4,461	22,397	29,085	12,080	0.24
Sundance .....	Yellow/CN	Petoseed	10,747	7,658	3,089	22,381	30,492	10,001	0.25
Senator .....	Zucchini	Asgrow	35,808	21,036	14,773	18,024	43,275	17,240	0.48
Spineless Beauty .....	Zucchini	Rogers NK	30,247	16,243	14,005	22,286	30,492	13,721	0.53
Embassy .....	Zucchini	Petoseed	26,737	13,607	13,131	18,393	29,312	12,394	0.48
<b>North Alabama Horticulture Substation</b>									
Pavo .....	Yellow/CN	Asgrow	57,035	42,669	14,366	2,938	100,188	17,424	0.46
Supersett .....	Yellow/CN	Harris Seed	55,278	41,683	13,595	4,230	158,994	23,087	0.26
Goldie .....	Yellow/SN	Petoseed	52,263	38,635	13,628	4,702	103,031	20,863	0.43
Crescent .....	Yellow/CN	Harris Seed	47,267	35,332	11,935	3,913	96,485	16,988	0.36
PSX 41587 .....	Yellow/SN	Petoseed	43,411	29,721	13,690	3,815	80,075	17,500	0.36
PSX 391 .....	Yellow/SN	Petoseed	42,804	23,426	19,378	3,489	70,640	24,902	0.33
Lemondrop L. ....	Yellow/SN	Asgrow	42,117	31,163	10,954	5,898	85,557	12,556	0.36
Gold Slice .....	Yellow/SN	Petoseed	38,031	28,215	9,816	4,494	59,108	12,900	0.52
Dixie .....	Yellow/CN	Asgrow	24,534	17,579	6,955	4,436	52,627	15,133	0.40
Embassy .....	Zucchini	Petoseed	73,008	53,361	19,647	3,341	138,230	27,782	0.51
Senator .....	Zucchini	Asgrow	45,380	32,928	12,453	4,807	53,101	10,858	0.67
Elira .....	Zucchini	Nunhems	30,650	22,105	8,545	2,223	55,789	8,583	0.49
<b>Wiregrass Substation</b>									
Dixie .....	Yellow/CN	Asgrow	7,338	5,959	1,379	2,120	15,246	3,775	0.45
Pavo .....	Yellow/CN	Asgrow	3,844	2,173	1,671	1,366	17,392	3,953	0.13
Sunbar .....	Yellow/SN	Petoseed	3,536	1,425	2,111	563	10,555	1,994	0.13
Lemondrop L. ....	Yellow/SN	Asgrow	3,340	1,892	1,448	1,350	16,008	4,356	0.11
Goldie .....	Yellow/SN	Petoseed	2,788	1,727	1,062	2,507	15,020	2,597	0.12
PSX 391 .....	Yellow/SN	Petoseed	2,647	1,505	1,142	3,459	8,338	1,974	0.18
Sunrize .....	Yellow/CN	Rogers NK	2,571	1,806	765	2,069	15,067	2,392	0.12
Supersett .....	Yellow/CN	Harris Seed	2,538	1,370	1,168	402	13,624	3,763	0.11
Senator .....	Zucchini	Asgrow	8,673	7,235	1,437	5,587	5,336	2,505	1.46
Commander .....	Zucchini	Petoseed	2,955	1,079	1,876	5,285	5,317	3,284	0.22
Elira .....	Zucchini	Nunhems	1,521	618	903	3,260	3,518	1,642	0.19

<sup>1</sup>At CAHS, harvest dates were June 10, 13, 15, 17, 20, 22, 24, 27, 27, and July 1, 5, 8, 11 and 14. At NAHS, plots were harvested on June 30, and July 5, 7, 11, 13, 15, 18, 20, 22, 25, 27, and 29. At WS, plots were harvested on May 30, and June 1, 3, 9, 12, 17, 20, and 24.

<sup>2</sup>SN = Straightneck; CN = Crookneck

<sup>3</sup>Marketable yields were determined as US #1 + US #2 grades.

# SWEET CORN VARIETY TRIAL

Eric Simonne, Emmett Carden, Marlin Hollingsworth, Joe Kemble,  
Ron McDaniel, Malcomb Pegues, Jim Pitts, and Kenneth Short

Sugar-enhanced (*se*) and supersweet (*sh*<sub>2</sub>) sweet corn varieties were evaluated at the Gulf Coast Substation (GCS) in Fairhope, Chilton Area Horticulture Substation (CAHS) in Clanton, and North Alabama Horticulture Substation (NAHS) in Cullman.

At CAHS and NAHS, cultural practices for *se* and *sh*<sub>2</sub> types were the same. However, within each location, the two types were separated by 300 feet because *sh*<sub>2</sub> types require isolation from other sweet and field corn plots to maintain grain characteristics. At all locations, two-row, 5x25-foot plots were established. Within-row spacing was 8-10 inches, which created a stand of approximately 24,500 plants per acre.

At NAHS, planting date was May 24, and the field was overhead irrigated immediately after seeding to ensure uniform germination. Fertilization consisted of a preplant application of 600 pounds per acre of 13-13-13 and a sidedress application 26 days after planting of ammonium nitrate (NH<sub>4</sub>NO<sub>3</sub>) at a rate of 450 pounds per acre.

Preplant herbicides were Aatrix (at a rate of one quart in 50 gallons per acre) and Lasso (at a rate of two quarts in 50 gallons per acre) applied on May 21. Insect control was provided by applications of Asana at a rate of 9.6 ounces in 50 gallons per acre on July 11, 18, and 25.

At CAHS, planting date was April 22. Fertilizer consisted of 100 pounds of nitrogen (N) per acre, 40 pounds of phosphorus (P), and 70 pounds of potassium (K) banded four inches to the side and 2-3 inches below the seeds. No sprays were needed.

At GCS, a 10-10-10 fertilizer was broadcast-applied preplant on March 31 at a rate of 400 pounds per acre. Planting

date was April 1. Ammonium nitrate was sidedressed 27 and 37 days after planting at a rate of 150 pounds per acre each time. Plants were overhead irrigated as needed.

TABLE 1. SWEET CORN MARKETABLE YIELD

Type <sup>1</sup>	Variety	Seed source	Kernel color	Yield		Ear set ht.
				Lb./a.	No./a.	
<b>North Alabama Horticulture Substation</b>						
se	XPH 3044	Asgrow	White	14,496	26,606	--
se	Snow Belle	Asgrow	White	13,488	31,785	--
se	Alpine	Rogers NK	White	13,295	--	--
se	White Delight	Rogers NK	White	13,148	31,070	--
se	Sugar Ace	Harris Seed	Yellow	18,058	28,932	--
se	Empire	Rogers NK	Yellow	16,967	23,957	--
se	Candi King	Rogers NK	Yellow	13,835	--	--
sh2	SS 8102	A & C	Bi-color	21,397	29,274	--
sh2	Festival	Asgrow	Bi-color	13,544	22,019	--
sh2	SS 7801	A & C	White	16,302	22,947	--
sh2	Silver Queen	Rogers NK	White	7,712	13,076	--
sh2	Spring Sweet	Stokes	Yellow	21,150	25,161	--
sh2	Challenger	Asgrow	Yellow	20,604	26,180	--
sh2	SS 7210	A & C	Yellow	19,729	25,242	--
sh2	Sweet Desire	Stokes	Yellow	17,228	27,662	--
sh2	Snow White	Harris Seed	Yellow	16,643	24,527	--
sh2	SS 7630	A & C	Yellow	15,784	22,628	--
sh2	Sweet Belle	Asgrow	Yellow	14,691	22,072	--
sh2	Punchline	Asgrow	Yellow	13,963	22,198	--
<b>Chilton Area Horticulture Substation</b>						
se	XPH 3044	Asgrow	White	15,182	26,673	20
se	Silverado	Rogers NK	White	14,635	28,574	24
se	Alpine	Rogers NK	White	12,925	24,847	28
se	Snow Belle	Asgrow	White	11,961	28,809	25
se	White Delight	Rogers NK	White	8,826	17,111	19
se	Empire	Rogers NK	Yellow	18,117	30,548	20
se	Sugar Ace	Harris Seed	Yellow	14,822	23,149	27
se	Candi King	Rogers NK	Yellow	11,950	21,262	14
sh2	SS 8102	A & C	Bi-color	17,010	25,637	24
sh2	Festival	Asgrow	Bi-color	11,738	22,497	20
sh2	Krispy King	Rogers NK	Yellow	17,483	23,698	25
sh2	Sweet Belle	Asgrow	Yellow	14,781	22,526	27
sh2	SS 7630	A & C	Yellow	14,279	22,249	28
sh2	SS 7210	A & C	Yellow	14,587	22,430	19
sh2	Bunker Hill	Stokes	Yellow	12,313	20,509	20
sh2	Sweet Desire	Stokes	Yellow	11,010	15,778	14
<b>Gulf Coast Substation</b>						
se	Silverado	Rogers NK	White	12,040	51,546	15
se	Alpine	Rogers NK	White	12,297	52,104	14
se	XPH 3044	Asgrow	White	12,498	43,971	14
se	White Delight	Rogers NK	White	11,370	46,387	11
se	Snow Belle	Asgrow	White	9,343	39,304	15
se	Empire	Rogers NK	Yellow	17,906	59,648	15
se	Sugar Ace	Harris Seed	Yellow	16,890	55,212	17
se	Candi King	Rogers NK	Yellow	13,790	32,719	10

<sup>1</sup>se = sugar enhanced; sh<sub>2</sub> = supersweet.

The pre-emergence herbicide was Dual 8E broadcast on April 4 at a rate of one quart per acre. Insect control consisted of applications of Lorsban on May 18, 20, and 23 at a rate of one pint per acre; Ambush on May 25 and 27 at a rate of 12.8 ounces per acre; Asana on May 30 and June 1 at a rate of 9.6 ounces per acre; and Lannate LV on June 3, 8, 10, and 13 at a rate of 1.5 pints per acre.

Ears were harvested on July 29 at NAHS. On June 27 and July 5, the *sh*<sub>2</sub> varieties were harvested, followed by harvest of *se* varieties on June 28 and July 5 at CAHS. Harvest occurred between June 10-14 at GCS. After harvest, ears were graded following the *Sweet Corn Grader's Guide* (Circular ANR-679 of the Alabama Cooperative Extension Service). Yield (Table 1) and ear characteristics (Table 2) were determined.

TABLE 2. SWEET CORN EAR CHARACTERISTICS<sup>1</sup>

Type <sup>2</sup>	Variety	Kernel color	Quality <sup>3</sup>	Tip cover	Ear fill	Eye appeal	Ear length	Ear dia.	Cob dia.
							In.	In.	In.
<b>North Alabama Horticulture Substation</b>									
se.....	XPH 3044	White	14.35	4.55	4.90	4.90	7.3	2.0	0.8
se.....	Snow Belle	White	13.45	4.95	4.00	4.50	7.2	1.7	0.8
se.....	Alpine	White	12.30	4.50	4.10	3.70	7.5	1.5	0.8
se.....	White Delight	White	9.35	2.85	3.25	3.25	6.9	1.6	0.8
se.....	Sugar Ace	Yellow	13.89	4.53	4.68	4.68	7.6	1.5	0.8
se.....	Candi King	Yellow	11.05	4.00	3.50	3.55	8.4	1.6	0.8
se.....	Empire	Yellow	9.60	2.25	3.10	4.25	7.9	2.0	0.8
sh2.....	Silver Queen	White	12.90	3.40	4.85	4.65	8.3	1.5	0.8
sh2.....	SS 8102	Bi-color	14.55	4.85	4.85	4.85	7.3	2.0	0.9
sh2.....	Festival	Bi-color	12.05	3.75	4.05	4.25	7.2	1.8	0.8
sh2.....	SS 7801	White	12.85	4.10	4.50	4.25	6.9	2.0	0.9
sh2.....	Snow White	White	12.30	3.90	4.00	4.40	7.5	1.9	0.8
sh2.....	Punchline	Yellow	14.60	4.85	4.85	4.90	7.1	1.9	1.3
sh2.....	Challenger	Yellow	14.37	4.60	4.85	4.95	7.6	2.0	1.0
sh2.....	SS 7210	Yellow	14.24	4.67	4.71	4.86	7.6	2.1	0.9
sh2.....	Sweet Belle	Yellow	13.25	4.50	4.15	4.60	7.7	1.9	0.8
sh2.....	SS 7630	Yellow	12.10	4.50	3.60	4.00	8.0	1.9	0.8
sh2.....	Spring Sweet	Yellow	11.30	3.25	4.00	4.05	7.7	2.0	0.9
sh2.....	Sweet Desire	Yellow	11.26	3.58	3.95	3.74	7.9	2.0	1.0
<b>Chilton Area Horticulture Substation</b>									
se.....	XPH 3044	White	11.30	3.80	3.90	3.60	7.2	1.5	0.9
se.....	Snow Belle	White	11.05	3.60	3.90	3.55	6.9	1.4	0.8
se.....	Alpine	White	10.70	2.95	3.95	3.80	7.3	1.4	0.8
se.....	Silverado	White	10.60	3.45	3.75	3.40	7.3	1.5	0.8
se.....	White Delight	White	9.70	2.75	3.95	3.00	6.6	1.5	0.8
se.....	Sugar Ace	Yellow	12.15	4.10	3.95	4.10	7.6	1.6	0.8
se.....	Empire	Yellow	11.65	3.95	3.85	3.85	8.3	1.6	1.0
se.....	Candi King	Yellow	7.80	2.05	2.95	2.80	7.7	1.8	1.0
sh2.....	Festival	Bi-color	13.80	4.55	4.95	4.30	7.5	1.6	0.9
sh2.....	SS 8102	Bi-color	13.70	4.25	4.95	4.50	7.3	1.5	1.8
sh2.....	Krispy King	Yellow	13.85	4.25	4.95	4.65	7.4	1.7	1.0
sh2.....	SS 7630	Yellow	13.25	4.75	4.20	4.30	7.4	1.6	0.9
sh2.....	SS 7210	Yellow	13.00	4.70	4.20	4.10	7.4	1.7	0.9
sh2.....	Bunker Hill	Yellow	12.45	3.85	4.60	4.00	7.5	1.6	1.0
sh2.....	Sweet Belle	Yellow	12.00	4.25	3.85	3.90	7.5	1.7	0.9
sh2.....	Sweet Desire	Yellow	11.25	3.70	3.85	3.70	7.9	1.6	1.0
<b>Gulf Coast Substation</b>									
se.....	Snow Belle	White	11.05	3.50	3.70	3.85	9.0	1.6	0.8
se.....	XPH 3044	White	10.30	2.70	3.85	3.75	9.2	1.9	0.8
se.....	Alpine	White	8.60	2.87	2.47	3.27	9.0	1.9	0.8
se.....	Silverado	White	7.80	2.00	3.05	2.75	9.2	1.8	0.8
se.....	White Delight	White	4.87	1.80	1.13	1.93	8.2	2.0	0.8
se.....	Sugar Ace	Yellow	13.85	4.40	4.55	4.90	8.5	1.7	0.8
se.....	Empire	Yellow	8.20	2.80	2.50	2.90	10.8	1.9	0.8
se.....	Candi King	Yellow	4.80	1.87	1.27	1.67	9.4	1.9	0.8

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

<sup>2</sup>se = sugar enhanced; sh<sub>2</sub> = supersweet.

<sup>3</sup>Quality rating is the sum of tip cover, ear fill, and eye appeal ratings.

## TOMATO VARIETY TRIAL

Eric Simonne, John Eason, Marlin Hollingsworth, Joe Kemble, and Marvin Ruf

Tomato variety trials were conducted at the North Alabama Horticulture Substation (NAHS) in Cullman and the Sand Mountain Substation (SMS) in Crossville.

Five-week-old tomatoes were transplanted on May 11 at NAHS and on May 6 at SMS onto three-foot-wide, trickle-irrigated beds covered with plastic. The plastic color was white at NAHS and black at SMS. At both locations, plots were 4x12 feet. Within-row spacing was 18 inches, which created an approximate stand of 5,800 plants per acre.

At NAHS, beds were fumigated with methyl bromide at a rate of 400 pounds per acre on April 28. A preplant application of 600 pounds per acre of a 13-13-13 fertilizer provided 80 pounds of nitrogen (N), 35 pounds of phosphorus (P), and 65 pounds of potassium (K). Between May 30 and final harvest, injections of combinations of ammonium nitrate ( $\text{NH}_4\text{NO}_3$ ), calcium nitrate [ $\text{Ca}(\text{NO}_3)_2$ ], and potassium nitrate ( $\text{KNO}_3$ ) were made weekly through the drip tubes. Application rates ranged between 10-20 pounds per acre for  $\text{NH}_4\text{NO}_3$ , 10-50 pounds per acre for  $\text{Ca}(\text{NO}_3)_2$ , and 10-90 pounds per acre for  $\text{KNO}_3$ .

Preplant herbicide was Lexone DF applied on May 20 at a rate of 1.5 pounds per acre. Insect control consisted of an application of Pencarp M (at a rate of one quart in 50 gallons per acre), Manzate 200 (at a rate of two pounds per 50 gallons per acre), and Dimethoate (at a rate of one-half pint in 50 gallons per acre) on May 30 and June 6. Plants were also sprayed with Bravo (fungicide, at a rate of 1.5 pint in 50 gallons per acre) and Asana (insecticide, at a rate of 9.2 ounces in 50 gallons per acre) on June 20 and 27

and July 1, 5, and 11; and Ridomil (fungicide, at a rate of one pound in 50 gallons per acre) on July 1, 5, and 11.

At SMS, plots were fumigated with methyl bromide at a rate of 300 pounds per acre two weeks before transplanting. Preplant fertilizer incorporated on April 27 provided (per acre) 75 pounds of N, 60 pounds of P, and 60 pounds of K. Between June 14 and August 20, weekly fertilizer application consisted of alternate injections of 20-20-20 and  $\text{KNO}_3$  at a rate of 10 pounds of N per acre.

Weeds were controlled with an application of Poast (1%) on June 1. Other sprays included applications of Sevin at a rate of 1.25 pounds per acre and Bravo at a rate of two pints per acre on June 29, and of applications of Ridomil at a one-pound per acre rate and Sevin at a rate of 1.25 pounds per acre on July 15.

Plots were harvested six times between July 19 and August 8 at NAHS, while at SMS seven harvests were done between July 8 and August 19. At both locations, fruits were harvested at the breaking stage, weighed, and graded. Grades and corresponding fruit diameters (D) were adapted from the *Tomato Grader's Guide* (Circular ANR 643 from the Alabama Cooperative Extension Service). These grades 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). Early production was determined by adding the yields of the first three harvests (Table 1). Marketable yield was calculated by combining the Jumbo, Extra-Large, and Large grades (Table 2).

TABLE 1. TOMATO EARLY PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>

Variety	Source	Market. wt. <sup>2</sup>	Jumbo wt.	Jumbo no.	X-large wt.	X-large no.	Large wt.	Large no.	Med. wt.	Med. no.
		Lb./a.	Lb./a.	No./a.	Lb./a.	No./a.	Lb./a.	No./a.	Lb./a.	No./a.
<b>North Alabama Horticulture Substation</b>										
Merced .....	Rogers NK	6,633	5,585	8,255	998	3,445	50	325	54	130
Daybreak .....	Petoseed	6,560	3,456	5,590	2,711	8,255	393	3,315	398	1,495
MTH 9115 .....	Stokes	6,227	1,661	3,315	3,767	12,285	799	8,775	603	3,575
Muril .....	Nunhems	5,534	3,289	6,045	2,218	7,020	27	1,885	99	650
Sunbeam .....	Asgrow	5,324	2,753	6,175	2,474	7,995	97	1,365	31	130
Sunpride .....	Asgrow	5,292	2,645	4,810	2,575	8,710	72	1,885	228	845
MTH 923 .....	Stokes	5,025	1,269	3,575	3,613	10,075	143	4,680	151	520
Ultramagnum.....	Stokes	4,451	2,876	4,940	1,545	5,070	29	910	67	195
Champion .....	Ball Seed	4,360	1,769	3,380	2,350	7,670	241	1,300	77	325
Regency .....	Harris Seed	4,295	1,833	4,940	2,423	9,230	40	3,965	406	1,625
XPH 10010 .....	Asgrow	4,250	2,800	5,005	1,405	5,850	46	1,040	14	65
Top Forcer .....	Takii	4,232	1,445	3,445	2,543	10,595	244	3,835	73	325
Tango .....	Rogers NK	4,013	2,470	5,395	1,427	5,460	116	1,300	60	585
Mt. Spring .....	Rogers NK	3,803	1,207	3,900	2,551	7,670	44	2,600	206	780
Mt. Delight .....	Petoseed	3,666	1,506	2,860	1,997	8,060	163	3,120	226	910
Colonial .....	Petoseed	3,504	1,188	2,405	2,010	6,305	306	2,665	151	325
Celebrity .....	Petoseed	3,195	1,776	2,925	1,362	4,550	57	845	105	390
Mt. Supreme .....	Asgrow	3,136	896	1,625	2,085	7,800	154	2,080	239	845
Market Pride .....	Harris Seed	2,697	959	2,080	1,715	7,865	22	2,080	324	1,300
<b>Sand Mountain Substation</b>										
Champion .....	Ball Seed	5,397	885	1,235	3,257	6,565	1,255	3,380	260	975
Top Forcer .....	Takii	5,046	501	780	2,967	5,850	1,578	4,485	1,159	5,200
MTH 9115 .....	Stokes	4,492	197	303	1,514	3,207	2,781	8,060	1,310	5,417
Merced .....	Rogers NK	2,756	563	715	2,005	3,835	187	455	66	325
Daybreak .....	Petoseed	2,729	478	585	1,651	3,445	600	1,560	153	520
MTH 923 .....	Stokes	2,097	107	173	1,026	1,907	964	2,643	130	563
XPH 10010 .....	Asgrow	1,959	245	325	1,415	2,600	299	780	99	390
Regency .....	Harris Seed	1,780	86	130	1,261	2,470	432	1,170	103	585
Muril .....	Nunhems	1,731	197	260	1,325	2,405	209	520	91	325
Sunpride .....	Asgrow	1,607	144	195	1,205	2,145	257	650	77	325
Tango .....	Rogers NK	1,585	603	715	983	1,495	0	0	0	0
Ultramagnum.....	Stokes	1,517	424	585	951	1,885	143	390	52	195
Mt. Delight .....	Petoseed	1,506	427	585	1,005	1,820	75	195	0	0
Celebrity .....	Petoseed	1,502	619	780	684	1,235	198	520	27	130
Sunbeam .....	Asgrow	1,417	234	325	1,059	1,885	124	325	50	195
Colonial .....	Petoseed	1,389	240	325	782	1,365	367	975	21	65
Mt. Supreme .....	Asgrow	1,215	82	130	716	1,365	417	1,235	213	845
Mt. Spring .....	Rogers NK	707	144	195	494	910	70	195	0	0
Market Pride .....	Harris Seed	601	141	195	437	845	23	65	35	195

<sup>1</sup>Productions of July 19, 21, and 25 combined at NAHS; July 8, 14, and 18 at SMS. 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).

<sup>2</sup>Marketable production calculated by combining the Jumbo, Extra-Large and Large grades.

**TABLE 2. TOMATO TOTAL PRODUCTION AND GRADE DISTRIBUTION<sup>1</sup>**

Variety	Seed source	Flesh color	Market. wt. <sup>2</sup>	Jumbo wt.	Jumbo no.	X-large wt.	X-large no.	Large wt.	Large no.	Med. wt.	Med. no.	Culls	Ind. fruit wt.
			<i>Lb./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>Lb./a.</i>	<i>No./a.</i>	<i>Lb./a.</i>	<i>Lb.</i>
<b>North Alabama Horticulture Substation</b>													
Merced .....	Rogers NK	Red	18,865	12,698	18,720	5,254	17,160	913	4,615	238	947	4,503	0.34
Celebrity .....	Petoseed	Red	16,717	6,705	11,635	8,906	25,415	1,106	6,240	339	2,080	3,139	0.32
Sunpride .....	Asgrow	Red	15,284	6,213	10,790	8,058	25,545	1,013	7,085	649	2,809	2,647	0.31
XPH 10010 .....	Asgrow	Red	15,050	6,053	12,220	8,141	23,075	857	4,290	385	1,820	2,545	0.29
Daybreak .....	Petoseed	Red	14,388	6,754	10,920	6,438	18,135	1,195	7,020	673	2,108	2,481	0.34
Mt. Supreme .....	Asgrow	Red	14,167	2,811	5,330	9,940	28,860	1,417	10,335	803	4,290	1,502	0.30
Muril .....	Nunhems	Red	13,898	5,609	10,465	7,731	20,865	558	7,670	859	3,667	3,484	0.31
Sunbeam .....	Asgrow	Red	13,575	6,130	11,960	6,657	21,320	788	5,005	461	2,080	2,172	0.29
Tango .....	Rogers NK	Red	13,305	7,236	13,260	5,617	17,550	452	3,445	142	757	2,436	0.30
Colonial .....	Petoseed	Red	12,917	3,196	6,435	8,783	26,260	939	9,490	874	3,900	3,051	0.29
Regency .....	Harris Seed	Red	12,009	2,815	7,085	8,244	22,880	951	8,580	909	2,600	5,483	0.26
Ultramagnum .....	Stokes	Red	11,616	4,668	9,230	6,137	17,030	812	4,485	378	1,495	3,459	0.30
Mt. Delight .....	Petoseed	Red	11,485	4,738	8,125	5,931	18,720	816	6,175	419	1,885	1,719	0.30
Mt. Spring .....	Rogers NK	Red	11,203	3,045	7,410	7,437	20,670	722	6,240	601	2,277	3,351	0.27
Champion .....	Ball Seed	Red	11,100	3,840	6,825	6,681	19,695	579	4,875	276	1,639	5,356	0.30
MTH 923 .....	Stokes	Red	10,505	1,897	5,265	6,648	23,855	1,960	12,415	939	4,680	6,694	0.25
Market Pride .....	Harris Seed	Red	9,833	2,464	5,850	6,372	20,605	996	7,215	661	3,250	2,738	0.26
MTH 9115 .....	Stokes	Red	8,993	1,994	3,900	5,728	17,615	1,271	11,765	850	4,484	4,057	0.32
Top Forcer .....	Takii	Pink	5,915	1,802	4,160	3,512	13,845	601	5,525	205	1,503	8,024	0.25
<b>Sand Mountain Substation</b>													
MTH 9115 .....	Stokes	Red	12,733	774	1,300	4,897	10,270	7,062	21,407	4,370	20,497	5,518	0.28
Champion .....	Ball Seed	Red	12,399	2,682	3,510	6,793	13,260	2,924	8,060	1,010	4,160	5,365	0.23
XPH 10010 .....	Asgrow	Red	12,285	1,413	1,820	7,227	13,715	3,645	10,205	1,294	6,955	3,892	0.24
Mt. Supreme .....	Asgrow	Red	11,383	513	715	6,153	12,870	4,717	13,845	2,021	9,750	2,933	0.23
Sunpride .....	Asgrow	Red	11,107	1,219	1,625	6,495	11,960	3,393	9,360	1,001	4,485	4,019	0.24
Daybreak .....	Petoseed	Red	9,835	1,429	1,820	5,219	10,205	3,187	9,035	1,140	5,460	4,441	0.24
MTH 923 .....	Stokes	Red	9,607	714	1,083	4,664	9,490	4,229	12,480	1,855	9,057	5,419	0.25
Sunbeam .....	Asgrow	Red	9,575	1,582	2,080	5,436	10,400	2,556	7,280	951	4,745	4,226	0.23
Mt. Spring .....	Rogers NK	Red	9,078	1,717	2,340	4,885	9,685	2,477	7,410	7,48	3,705	4,505	0.22
Top Forcer .....	Takii	Pink	8,588	704	1,040	4,523	9,230	3,361	10,400	3,474	17,875	4,522	0.24
Merced .....	Rogers NK	Red	8,272	1,424	1,820	4,993	9,360	1,855	5,200	390	1,885	7,128	0.23
Tango .....	Rogers NK	Red	8,114	2,647	3,250	4,371	7,410	1,096	2,925	148	715	6,233	0.23
Market Pride .....	Harris Seed	Red	8,084	966	1,430	3,921	8,125	3,197	9,880	1,426	7,150	5,307	0.23
Celebrity .....	Petoseed	Red	7,257	1,192	1,560	4,260	8,515	1,805	5,135	443	1,820	6,170	0.22
Mt. Delight .....	Petoseed	Red	7,243	1,373	1,820	3,829	7,345	2,041	6,110	577	2,730	5,197	0.23
Regency .....	Harris Seed	Red	7,214	380	520	3,602	7,150	3,231	8,840	1,341	6,175	5,484	0.25
Colonial .....	Petoseed	Red	7,147	1,045	1,365	3,861	7,150	2,241	6,175	470	2,080	6,099	0.24
Muril .....	Nunhems	Red	6,510	1,293	1,820	3,921	7,735	1,295	3,900	514	2,470	5,380	0.22
Ultramagnum .....	Stokes	Red	6,210	1,420	1,950	3,287	6,695	1,503	4,355	373	1,885	4,899	0.22

<sup>1</sup>Harvests dates were July 19, 21, 25, and 28, and August 1 and 8 at NAHS; and July 8, 14, 18, 22, and 26, and Aug. 1 and 19 at SMS. 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).

<sup>2</sup>Marketable production and individual fruit weight calculated by combining the Jumbo, Extra-Large and Large grades.

## WATERMELON VARIETY TRIAL

Eric Simonne, Emmett Carden, John Eason, Marlin Hollingsworth, Joe Kemble,  
Ron McDaniel, Malcomb Pegues, Marvin Ruf, and George Boyhan

Selected watermelon varieties were tested at the Gulf Coast Substation (GCS) in Fairhope, North Alabama Horticulture Substation (NAHS) in Cullman, and Sand Mountain Substation (SMS) in Crossville.

Watermelons were direct-seeded on bare ground in 5x60-foot plots with a hill spacing of approximately 10 feet. Planting dates were March 31 at GCS, May 23 at NAHS, and May 20 at SMS.

At GCS, fertilization consisted of a preplant broadcast application of a 4-12-12 fertilizer at a rate of 500 pounds per acre on March 18, followed by two sidedress applications on April 25 and May 5 of 15-0-14 at a rate of 200 pounds per acre. Plants were irrigated as needed.

Weed control consisted of broadcast application of a pre-emergence herbicides (Alanap) on April 4 at a rate of six quarts per acre and Poast (with two pints of Oil Concentrate per acre) on April 26 at a rate of 1.5 pints per acre. An application of Manzate (fungicide) was made on May 11, and Bravo 720 (fungicide) was used on May 25, June 8, and 21 at a rate of three pints per acre.

At NAHS, a 13-13-13 fertilizer was preplant incorporated at a rate of 500 pounds per acre on May 19. Plants were sidedressed 40 days after planting with 220 pounds of ammonium nitrate ( $\text{NH}_4\text{NO}_3$ ).

Preplant herbicide was Curbit applied on May 19 at a rate of three quarts in 50 gallons per acre. Pest control consisted of applications of Bravo (fungicide, at a rate of 1.5 pint in 50 gallons per acre) and Asana

(insecticide, at a rate of 10 ounces in 50 gallons per acre) on June 20 and 27. On July 1, herbicides (Post at a rate of one pint in 50 gallons per acre and Crop Oil at a rate of one quart in 50 gallons per acre) were applied.

At SMS, preplant fertilizer provided (per acre) 60 pounds of nitrogen (N), 60 pounds of phosphorus (P), and 100 pounds of potassium (K). The plants received a sidedress application of potassium nitrate ( $\text{KNO}_3$ ) at a rate of 220 per acre 38 days after planting. An application of Post (1.5% solution) was made on July 12. Repeated rainfall interfered with the normal spray schedule.

Watermelons were harvested on June 29 and July 5 and 11 at GCS, August 23 at NAHS, and August 22 at SMS. 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 Service) and marketable yield was determined. Two representative melons were selected from each plot for the measure of soluble solids, which is used to evaluate sweetness (Table 1). Watermelons with soluble solid levels of less than 10° Brix do not taste very sweet. Rind thickness is used as an indicator of shipping ability and resistance to bruising and splitting during handling. In the selected varieties, rind thickness ranged between 0.5-1 inch.



**WATERMELON MARKETABLE PRODUCTION AND SOLUBLE SOLIDS**

Variety	Seed source	Fruit type	Flesh color	Marketable yield	Marketable fruits	Individual fruit wt.	Soluble solids <sup>1</sup>
				<i>Lb./a.</i>	<i>No./a.</i>	<i>Lb.</i>	<i>°Brix</i>
<b>Gulf Coast Substation</b>							
Starbrite .....	Asgrow	Jubilee	Pink	61,101	3,407	18	10.0
Royal Majesty .....	Petoseed	Allsweet	Red	56,076	3,528	16	12.5
Fiesta .....	Rogers NK	Allsweet	Red	54,227	3,431	16	11.1
A&C #400 .....	A&C	Jubilee	Red	50,905	2,920	18	9.0
Crimson Tide .....	Rogers NK	Mirage	Red	49,409	3,285	15	11.8
Crimson Trio .....	Rogers NK	CS/Triploid	Red	46,404	3,650	13	11.6
Juliett .....	Rogers NK	Jubilee	Red	46,258	2,385	19	10.3
Royal Jubilee .....	Petoseed	Jubilee	Red	44,579	2,482	18	10.3
Jubilee II .....	Asgrow	Jubilee	Pink	43,545	2,312	19	9.5
Dumara .....	Nunhems	Allsweet	Red	42,608	2,531	17	8.6
XPH 6190 .....	Asgrow	Jubilee	Red	40,004	2,506	16	10.2
A&C #610 .....	A&C	Jubilee	Red	38,422	2,263	17	10.8
Tiffany .....	Asgrow	CS/Triploid	Red	30,027	2,725	11	12.1
Red Honey .....	Nunhems	Ice Box	Red	21,292	2,409	9	11.6
A&C #5244 .....	A&C	Mirage	White/Pink	21,255	1,533	14	10.3
Asahi Miyako .....	Takii	Ice Box	Red	18,615	1,922	10	12.3
Carolina Cross .....	Petoseed	Mirage	Red	14,843	608	24	8.9
<b>North Alabama Horticulture Substation</b>							
Crimson Tide .....	Rogers NK	Mirage	Pink	23,907	1,337	17	9.5
Starbrite .....	Asgrow	Jubilee	Red	21,343	1,114	19	9.5
Dumara .....	Nunhems	Allsweet	Red	20,895	1,114	18	9.6
Regency .....	Petoseed	Jubilee	Pink	18,997	1,139	17	9.2
Royal Sweet .....	Petoseed	Jubilee	Red	15,401	990	15	9.3
Juliett .....	Rogers NK	Jubilee	Pink	14,771	644	18	9.0
Paradise .....	Harris Seed	Jubilee	Red	14,616	941	16	10.1
Jubilee II .....	Asgrow	Jubilee	Red	13,409	718	17	8.2
Huck Finn .....	Ferry Morse	Mirage	Pink	11,212	718	16	9.7
A&C #400 .....	A&C	Jubilee	Pink	9,280	619	14	7.5
Laurel .....	Takii	CS/Triploid	Red	8,053	619	13	9.3
A&C #610 .....	A&C	Jubilee	Pink	7,464	495	14	9.4
Asahi Miyako .....	Takii	Icebox	Red	6,750	520	9	9.7
Sangria .....	Rogers NK	Allsweet	Red	6,357	520	11	8.0
Sunsweet .....	Rogers NK	Allsweet	Red	5,248	421	13	8.4
XPH 6190 .....	Asgrow	Jubilee	Red	4,860	470	10	8.2
<b>Sand Mountain Substation</b>							
Huck Finn .....	Ferry Morse	Mirage	Pink	21,978	1,848	12	7.4
Starbrite .....	Asgrow	Jubilee	Red	21,335	1,683	12	7.3
Crimson Sweet .....	Rogers NK	CS	Pink	19,627	1,436	14	9.6
Crimson Trio .....	Rogers NK	CS	Red	17,152	1,807	10	10.5
Sweet Scarlet .....	Auburn U.	CS	Red	15,914	1,584	10	8.7
Royal Majesty .....	Petoseed	Jubilee	Red	15,890	1,658	10	7.8
Regency .....	Petoseed	CS	Red	15,642	1,213	13	8.3
Royal Sweet .....	Petoseed	CS	Pink	15,617	1,238	13	8.6
Jubilee .....	Asgrow	Jubilee	Red	15,518	1,287	12	5.0
Paradise .....	Harris Seed	Jubilee	Red	13,241	1,139	12	10.0
Juliett .....	Rogers NK	Jubilee	Pink	13,043	1,114	11	7.3
Fiesta .....	Rogers NK	Allsweet	Red	12,697	1,436	9	6.8
A&C 3731 .....	A&C	CS/Triploid	Pink	11,715	1,485	8	10.8
AU-All Sweet .....	Auburn U.	Allsweet	Red	11,360	1,238	10	7.7
Red Honey .....	Nunhems	Icebox	Red	10,915	1,238	8	9.0
Scarlet Trio .....	Rogers NK	CS/Triploid	Red	10,915	1,188	9	10.9
Asahi Miyako .....	Takii	Icebox	Red	9,009	1,238	7	9.1

<sup>1</sup>Soluble solids is a measure of fruit sweetness. Melons less than 10° Brix do not taste very sweet.

## AUTHORS

**Eric Simonne**, Post-Doctoral Fellow, Horticulture

**Joe Kemble**, Assistant Professor, Horticulture

**Oyette Chambliss**, Professor, Horticulture

**George Boyhan**, Sr. Research Associate, Horticulture

**Gene Hunter**, Sr. Research Associate, Horticulture

**Jim Pitts**, Superintendent, Chilton Area Horticulture Substation

**Kenneth Short**, Associate Superintendent, Chilton Area Horticulture Substation

**Emmett Carden**, Superintendent, Gulf Coast Substation

**Ron McDaniel**, Associate Superintendent, Gulf Coast Substation

**Malcomb Pegues**, Assistant Superintendent, Gulf Coast Substation

**Jim Bannon**, Director, E.V. Smith Research Center

**Jimmy Witt**, Superintendent, E.V. Smith Research Center Horticulture Unit

**Marlin Hollingsworth**, Superintendent, North Alabama Horticulture Substation

**John Owen**, Superintendent, Piedmont Substation

**John Eason**, Superintendent, Sand Mountain Substation

**Marvin Ruf**, Associate Superintendent, Sand Mountain Substation

**Henry Ivey**, Superintendent, Wiregrass Substation

**Brian Gamble**, Assistant Superintendent, Wiregrass Substation

**Larry Wells**, Assistant Superintendent, Wiregrass Substation

## APPENDIX

### *Supporting Seed Companies*

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

WaxSeed Co.  
P.O. Box 60  
Amory, MS 38821

### *Seed Suppliers*

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

Asgrow Seed Co.  
P.O. Box 48503  
Doraville, GA 30362  
Ph. 1-800-334-6571

Ball Seed  
4351 Bell Rd.  
Montgomery, AL 36116  
John McBride  
Ph. (205) 279-8007

Georgia Seed Development Commission  
2420 S. Milledge Ave.  
Athens, GA 30605

Great Plains Research  
1381 Kildaire Farms Rd.  
Carry, NC 27511

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

Jimmy Street Distributor  
P.O. Box 1047  
Theodore, AL 36590  
Jimmy Street  
Ph. (205) 653-0796

Montgomery Seed and Supply  
P.O. Box 349  
Montgomery, AL 36101

Nunhems Seed Co.  
P.O. Box 18  
Lewisville, ID 83431  
Hank Mendee  
Ph. (208) 754-8666

Peas, Inc., DBA; C.T.S. Smith Co.  
P.O. Box 634  
Pleasanton, TX 78064

Petoseed Co.  
3085 Whilraway Trail  
Tallahassee, FL 32308  
Mario Rivas  
Ph. (904) 668-9068

Rogers NK  
2101 Melrose Drive  
Valdosta, GA 31602  
Curt Pollard  
Ph. (912) 560-1863

Rupp Seeds Inc.  
17919 County Rd. B  
Wansiom, OH 43567  
Roger Rupp  
Ph. (417) 337-1841

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

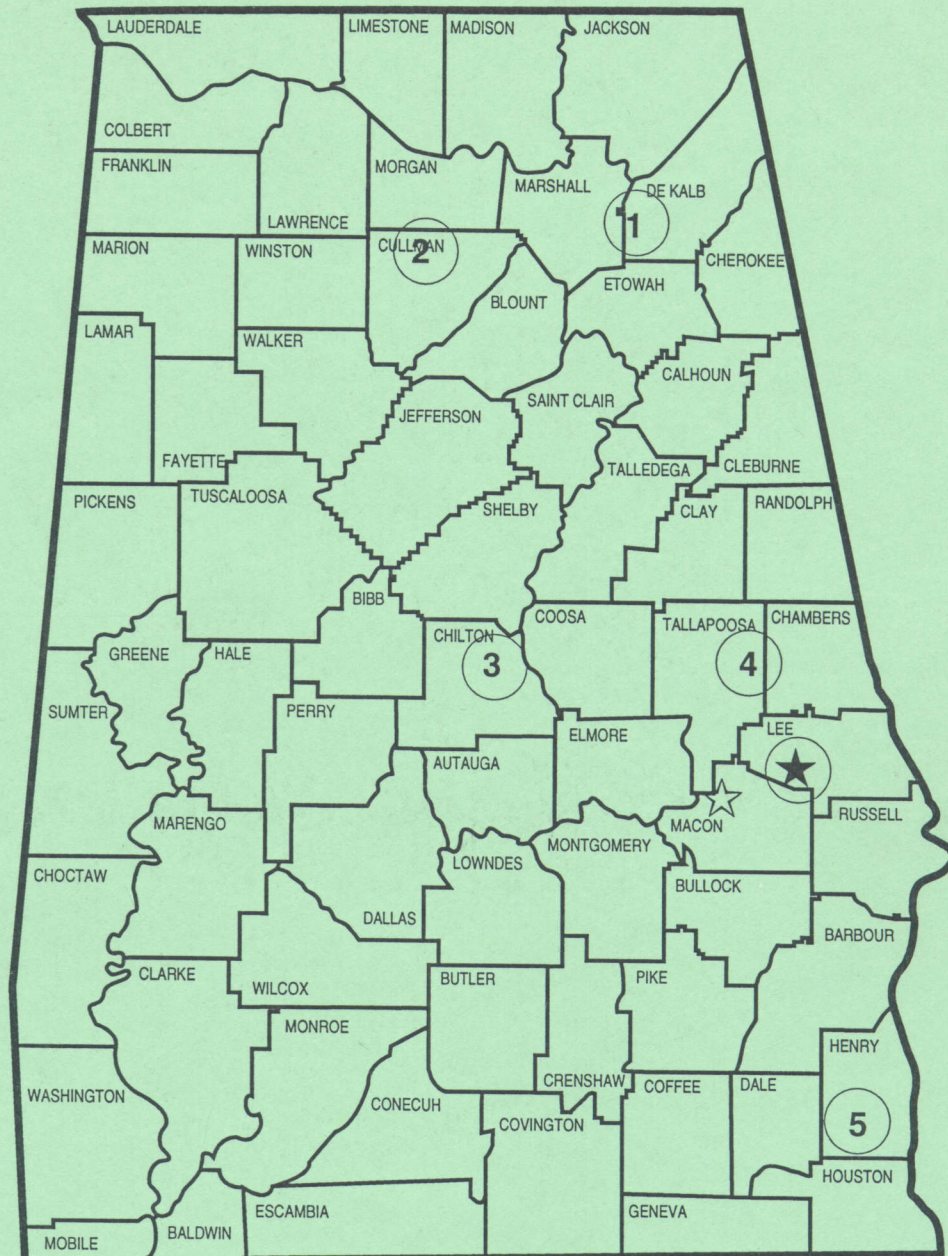
Stokes Seeds Inc.  
PO Box 548  
Buffalo, NY 14240-0548  
Mark Kaminski  
Ph. (716) 695-6980

Takii Seed  
301 Natividad Rd.  
Salinas, CA 93906  
Yuki Benech  
Ph. (408) 443-4901

Twilley Seeds  
P.O. Box 307  
Festerville, PA 19053  
Herb Breiber  
Ph. 1-800-999-8552

Western Seed Multiplication  
Rt. 1, Box 173AA  
Oglethorpe, GA 31068

# LOCATIONS OF PARTICIPATING RESEARCH UNITS



★ Main Agricultural Experiment Station, Auburn.

☆ E. V. Smith Research Center, Shorter.

1. Sand Mountain Substation, Crossville.
2. North Alabama Horticulture Substation, Cullman.
3. Chilton Area Horticulture Substation, Clanton.
4. Piedmont Substation, Camp Hill.
5. Wiregrass Substation, Headland.
6. Gulf Coast Substation, Fairhope.