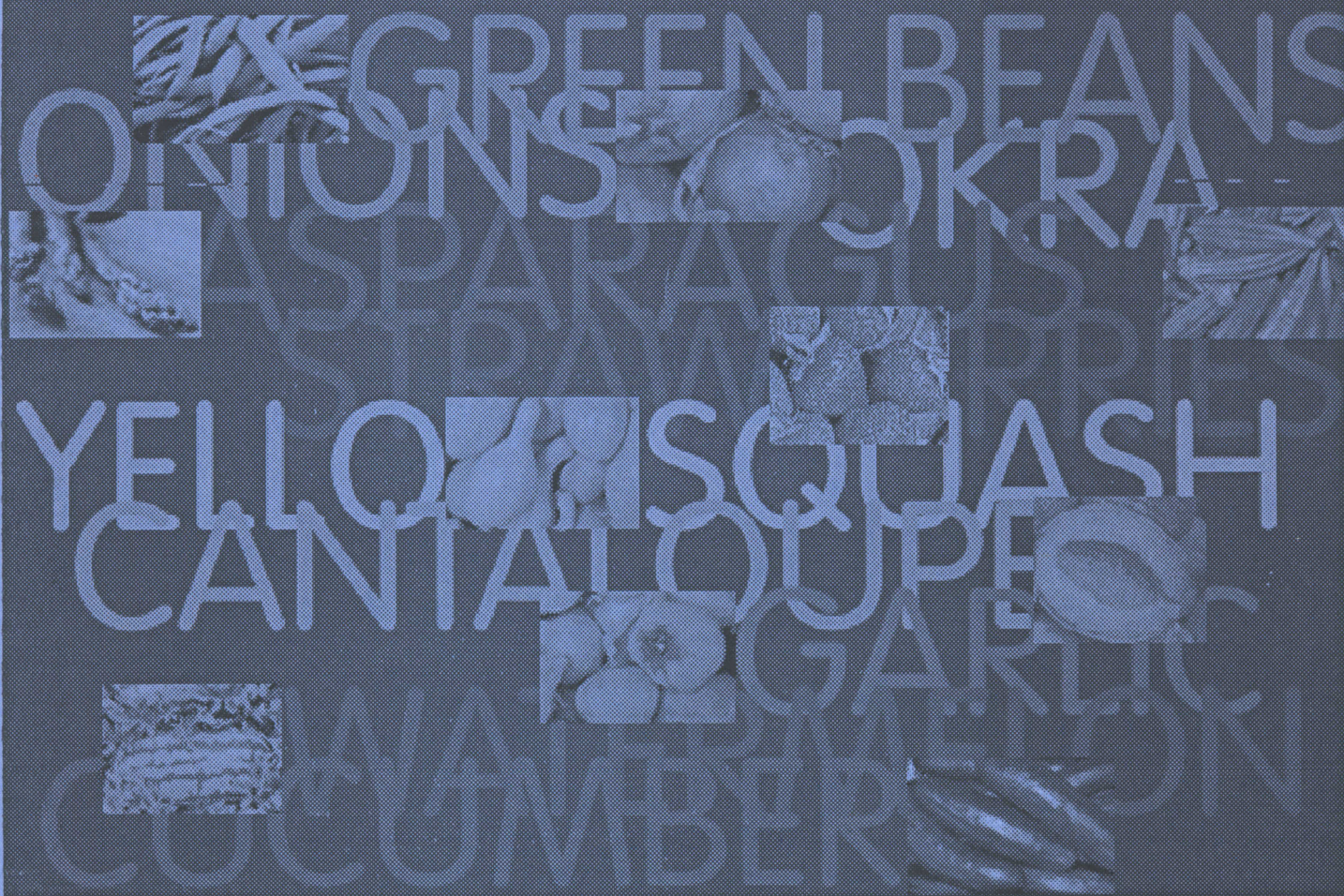


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Spring 2000 Commercial Vegetable Variety Trials



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

Introduction: Tips for Interpreting Vegetable Variety Trial Results

Joe Kemble and Edgar Vinson

The fall 2000 variety trial regional bulletin includes results from Alabama (Auburn University), Georgia (University of Georgia), Mississippi (Mississippi State University), North Carolina (North Carolina State University), and Florida (University of Florida). Trials conducted at various locations offer a wealth of information to growers, extension specialists, researchers, and seed companies. In addition, these trials provide information as to how well a particular variety is performing in several areas within the southern United States. The main purpose of vegetable variety evaluation, however, is to provide growers and seed retailers practical information on varieties and to assist them in selecting a "good" variety. Here are a few tips for interpreting the results of vegetable variety performance.

Open Pollinated vs. Hybrids

In general, hybrids (also referred to as F_1) mature earlier and produce a more uniform crop. Often, they have improved horticultural qualities as well as multiple pest tolerances and/or resistances. Generally, hybrid seed is more expensive than that of open-pollinated (OP) cultivars. With hybrid cultivars, seeds cannot be collected and saved for planting next year's crop. Hybrid seed is available for most crops that are grown throughout the southeastern United States. Despite the advantages hybrids offer, OP varieties are still planted in Alabama. Selecting a hybrid variety is the first step toward improved crop quality and crop uniformity.

Yield Potential

Yields reported in variety trial results are extrapolated from small plots. Depending on the vegetable crop, plot sizes range from 100 to 500 square feet. Yields per acre are estimated by multiplying plot yields by corrective factors ranging from 100 to 1,000. Small errors can be amplified, and estimated yields per acre may not be realistic. Therefore, locations cannot be compared to one another by just looking at the range of yields actually reported. The relative differences, however, in perfor-

mance among varieties within a location are realistic and can be used to identify the best-performing varieties.

Statistical Interpretation

The coefficient of determination (R^2), coefficient of variation (CV), and least significant difference (Lsd, 5%) are reported for each test. These numbers are helpful in separating differences due to small plots (sampling error) and true (but unknown) differences among entries.

R^2 values range between zero and one. Values close to one suggest that the test was conducted under good conditions and most of the variability observed was mainly due to the effect of cultivars and replication. Random, uncontrolled errors were of lesser importance.

CV is an expression of yield variability relative to yield mean. Low CVs (under 20%) are desirable but are not always achieved.

There must be a minimum yield difference between two cultivars before one can statistically conclude that one cultivar actually performs better than another does. This is known as the least significant difference (Lsd). When the difference in yield is less than the Lsd value, one cannot conclude that there is any real difference between two cultivars. For example, in the 2000 canteloupe trial at the Chilton Area Research and Extension Center, 'Eclipse' yielded 41,892 pounds per acre, while 'Athena' and 'Classic' yielded 39,317 pounds per acre and 28,935 pounds per acre, respectively. Since there was less than a 11,616 pounds per acre (the Lsd value for yield) difference between 'Eclipse' and 'Athena', there is no statistical difference between the yields of these two varieties. However, the difference between 'Eclipse' and 'Classic' was 12,957 pounds per acre, indicating that there is a real difference between the yields of these two varieties. From a practical point of view, producers should place the greatest importance on Lsd values when interpreting results.

Testing Conditions

AU vegetable variety trials are conducted under standard, recommended commercial production practices. In-

formation on soil type (Table 1), planting dates, fertilizer rates, and detailed spray schedule is provided to help producers compare their own practices to the standard practices used in the trials.

Ratings of Trials

At each location of the AU tests, the growing conditions of each variety trial were rated on a 1 to 5 scale, based on weather conditions, fertilization, irrigation, pest pressure, and overall performance (Table 2). Results from trials with ratings of 2 and under are not reported. These numbers may be used to interpret differences in performance from location to location.

Where to Get Seeds

Because seeds are alive, their performance and germination rate depend on how old they are, where and how they were collected, and how they have been handled and stored. It is always preferable to purchase certified seeds from a reputable seedsman.

Several factors other than yield should be considered when choosing which variety to grow. The main factors are type, resistance and/or tolerance to pests, earliness, and seed cost. It is important to remember that some varieties may perform differently under different management systems as compared to the trial results re-

ported here. Producers should test some varieties for themselves by trying two to three varieties on a small scale before making a large planting of a single variety. This will be the best test in determining how well suited a particular variety is for a particular operation.

Vegetable Variety Trial Information Available Online

Vegetable variety trial information can now be viewed on the web. With just a few clicks of the mouse, several practical features can be accessed: a list of vegetable crops, an explanation of the ratings system and database, a description of variety types and crops, as well as information on participating seed companies. Is there a variety that could not be found in the AU variety trial reports? Check the list of vegetable crops. This is long list that allows people to search by name, type, and source. The Auburn University Vegetable Variety Trial website can be found at www.ag.auburn.edu/dept/hf/faculty/esimonne. More descriptive information on how to use this site can be found in "AU Vegetable Varieties Online," ANR-1166 from the Alabama Cooperative Extension System.

"Spring 2000 Commercial Vegetable Variety Trials," Regional Bulletin 05, is on the web at the following URL: <http://www/ag.auburn.edu/resinfo/vegetables/spring2000.pdf>

TABLE 1. SOIL TYPES AT THE LOCATIONS OF THE ALABAMA TRIALS

| Location | Water-holding | Soil type capacity (in./in.) |
|--|---------------|---------------------------------------|
| Gulf Coast Research and Extension Center (Fairhope) | 0.09 - 0.19 | Malbis fine sandy loam |
| Brewton Research Field (Brewton) | 0.12 - 0.14 | Benndale fine sandy loam |
| Wiregrass Research and Extension Center (Headland) | 0.14 - 0.15 | Dothan sandy loam |
| Lower Coastal Plain Research Center (Camden) | 0.13 - 0.15 | Forkland fine sandy loam |
| Horticultural Unit, EV Smith Research Center (Shorter) | 0.15 - 0.17 | Norfolk-orangeburg loamy sand |
| Chilton Area Research and Extension Center (Clanton) | 0.13 - 0.15 | Luvernue sandy loam |
| Upper Coastal Plain Research Center (Winfield) | 0.13 - 0.20 | Savannah loam |
| North Alabama Horticultural Research Center (Cullman) | 0.16 - 0.20 | Hartsells-Albertville fine sandy loam |
| Sand Mountain Research and Extension Center (Crossville) | 0.16 - 0.18 | Wynnvilleville fine sandy loam |

TABLE 2. DESCRIPTION OF RATINGS

| 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 | Destructive | Useless |



Asparagus Cultivar Evaluation, 1997-2000

Carl Cantaluppi

In May 1995, a half acre replicated asparagus cultivar trial was planted at the Tim Moore Farm in Stovall, North Carolina, with 24 cultivars and crosses. Seeds were sown in the greenhouse in late January 1995 and transplants were planted into the field in May and June 1995.

A randomized complete block design with 12 plants per plot and four replications was used.

The purpose of this trial was to evaluate new cultivars and crosses of asparagus to see which were suitable for commercial production. Since the asparagus trial was started by using seedling transplants, no harvest was taken in 1996.

TABLE 1. YEARLY YIELD¹ OF ASPARAGUS VARIETIES IN GRANVILLE COUNTY, NORTH CAROLINA

| Cultivar | 1997 | 1998 | 1999 | 2000 | Spear height ² in |
|--------------------------|------|-------|------|-------|---------------------------------|
| E3 X Ghse. | 738 | 6,316 | 420 | 1,253 | 15 |
| UC 157 (F ₁) | 594 | 4,320 | 521 | 1,188 | 15 |
| NJ 878 | 573 | 4,738 | 710 | 2,048 | 10.5 |
| Atlas | 572 | 5,179 | 699 | 1,449 | 16 |
| Jersey Giant | 514 | 5,046 | 612 | 1,788 | 14 |
| G24 X G317 | 457 | 4,302 | 623 | 1,465 | 11 |
| NJ 792 | 397 | 4,211 | 732 | 1,632 | 14 |
| 44P X 22-8 | 350 | 3,340 | 781 | 1,795 | 14 |
| Apollo | 328 | 3,340 | 441 | 1,236 | 16 |
| NJ 877 | 326 | 2,359 | 454 | 975 | 11 |
| NJ 860 | 310 | 3,267 | 517 | 1,216 | 12 |
| G52 X G305 | 294 | 3,993 | 416 | 1,410 | 14 |
| NJ 855 | 286 | 2,977 | 327 | 1,169 | 15 |
| Purple Passion | 261 | 2,868 | 445 | 1,243 | 17 |
| Grande | 248 | 3,218 | 341 | 1,251 | 18 |
| Jersey Knight | 247 | 3,291 | 467 | 1,035 | 11 |
| Jersey General | 246 | 2,849 | 453 | 1,200 | 11.5 |
| Greenwich | 226 | 3,412 | 400 | 1,425 | 15 |
| Jersey King | 225 | 2,439 | 584 | 1,338 | 13 |
| Jersey Jewel | 196 | 3,812 | 592 | 1,281 | 11 |
| Jersey Prince | 190 | 2,596 | 429 | 1,064 | 11 |
| NJ 786 | 177 | 3,450 | 628 | 1,287 | 9.5 |
| Jersey Gem | 159 | 2,632 | 523 | 1,301 | 11.5 |
| NJ 498 | 146 | 2,450 | 430 | 1,162 | 11.5 |

¹Yield is in pounds per acre.

²Spear height refers to the shortest height at which the spear tip opens up or "ferns out" initiating fiber development in the base of the spear, causing them to be tough or woody. Harvesting taller spears before they fern out will give the grower the highest yield (weight) of spears that will be tender. This rating was taken at one observation done in late April when the weather was very cool, causing the spears to get quite tall before ferning out. Warmer temperatures would cause spears to fern out at much shorter heights.

The first harvest season was in 1997 from April 15 to April 30 (two weeks) with a total of four harvests. The second harvest season was in 1998 from April 10 to May 6 (four weeks) with a total of 11 harvests. The third harvest season was in 1999 from April 15 to May 18 (four weeks) for a total of six harvests. The 1999 harvest should have lasted for six weeks, but other commitments prevented the researchers from taking additional harvests. However, the grower was able to harvest the plot for the remaining two weeks without taking the additional data. Even though data was recorded for only four weeks, yields were very low due to a very dry April and May. The fourth harvest season was in 2000 from April 5 to May 25 (seven weeks) for a total of eight harvests; how-

ever, the grower harvested for an additional 15 harvests between April and May without yield data being recorded.

Yearly yields and total yields in pounds per acre are presented in Tables 1 and 2, respectively. Ranking of asparagus varieties from highest to lowest yielding is shown in Table 3.

TABLE 2. TOTAL YIELD¹ OF ASPARAGUS VARIETIES IN GRANVILLE COUNTY, NORTH CAROLINA

| Cultivar | Total yield ² | Pounds greater than 3/8" in diam | Pounds less than 3/8" in diam | Spears per plant |
|--------------------------|--------------------------|-------------------------------------|----------------------------------|---------------------|
| NJ 878 | 2,048 a | 1,730 a | 318 a | 5.0 a |
| 44PX22-8 | 1,795 ab | 1,517 abcd | 278 bcd | 4.8 a |
| Jersey Giant | 1,788 ab | 1,608 ab | 180 bcdef | 4.2 abc |
| NJ 792 | 1,632 abc | 1,532 abc | 100 efg | 3.6 abcd |
| G24XG317 | 1,465 abc | 1,224 abcde | 242 bcdef | 3.2 bcde |
| Atlas | 1,449 abc | 1,338 abcde | 111 defg | 2.8 bcde |
| Greenwich | 1,425 abc | 1,285 abcde | 140 cdefg | 3.3 bcde |
| G52XG305 | 1,410 abc | 1,136 abcde | 274 bcde | 3.7 abcd |
| Jersey King | 1,338 abc | 1,058 abcde | 280 bcd | 3.4 bcd |
| Jersey Gem | 1,301 bc | 1,158 abcde | 143 cdefg | 3.3 bcd |
| NJ 786 | 1,287 bc | 1,087 abcde | 200 bcdef | 3.6 abcd |
| Jersey Jewel | 1,281 bc | 699 e | 583 a | 4.3 ab |
| E3XGhse. | 1,253 bc | 1,024 abcde | 230 bcdef | 3.2 bcde |
| Grande | 1,251 bc | 1,140 abcde | 111 defg | 2.5 de |
| P.Passion | 1,243 bc | 1,243 abcde | 0 g | 1.8 e |
| Apollo | 1,236 bc | 1,126 abcde | 111 defg | 2.8 cde |
| NJ 860 | 1,216 bc | 1,104 abcde | 113 defg | 3.0 bcde |
| Jer.General | 1,200 bc | 1,006 abcde | 194 bcdef | 2.8 bcde |
| UC 157 (F ₁) | 1,188 bc | 878 bcde | 310 bc | 3.2 bcde |
| NJ 855 | 1,169 bc | 1,091 abcde | 78 fg | 2.8 cde |
| NJ 498 | 1,162 bc | 984 abcde | 178 bcdef | 3.0 bcde |
| Jer. Prince | 1,064 bc | 837 cde | 227 bcdef | 2.8 bcde |
| Jer. Knight | 1,035 bc | 766 de | 209 bcdef | 2.5 de |

¹ Yield is in pounds per acre. ²Means with the same letter within columns are not statistically significant, Duncan's Multiple Range Test, .05 level.

TABLE 3. NUMERICAL RANKING¹ OF ASPARAGUS CULTIVARS

| Cultivar | 1997 | 1998 | 1999 | 2000 | Cultivar | 1997 | 1998 | 1999 | 2000 |
|--------------------------|------|------|------|------|----------------|------|------|------|------|
| E3 X Greenhouse | 1 | 1 | 20 | 13 | NJ 855 | 13 | 17 | 24 | 20 |
| UC 157 (F ₁) | 2 | 5 | 11 | 19 | Purple Passion | 14 | 18 | 16 | 15 |
| NJ 878 | 3 | 4 | 3 | 1 | Grande | 15 | 16 | 23 | 14 |
| Atlas | 4 | 2 | 4 | 6 | Jersey Knight | 16 | 14 | 13 | 23 |
| Jersey Giant | 5 | 3 | 7 | 3 | Jersey General | 17 | 19 | 15 | 18 |
| G24 X G317 | 6 | 6 | 6 | 5 | Greenwich | 18 | 11 | 22 | 7 |
| NJ 792 | 7 | 7 | 2 | 4 | Jersey King | 19 | 23 | 9 | 9 |
| 44P X 22-8 | 8 | 13 | 1 | 2 | Jersey Jewel | 20 | 9 | 8 | 12 |
| Apollo | 9 | 12 | 17 | 16 | Jersey Prince | 21 | 21 | 19 | 22 |
| NJ 877 | 10 | 24 | 14 | 24 | NJ 786 | 22 | 10 | 5 | 11 |
| NJ 860 | 11 | 15 | 12 | 17 | Jersey Gem | 23 | 20 | 10 | 10 |
| G52 X G305 | 12 | 8 | 21 | 8 | NJ 498 | 24 | 22 | 18 | 21 |

¹ Ranking is from highest yielding (1) to lowest yielding (24).



Green Bean Trial At Sand Mountain



Joe Kemble, Edgar Vinson, and Tony Dawkins

A green bean variety trial was conducted at the Sand Mountain Research and Extension Center (SMREC) in Crossville, Alabama (Tables 1 and 2).

Green beans were direct seeded on bare ground into 20 foot long plots at a within row spacing of one foot on May 4. 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 Vegetable: Insect, Disease, Nematode and Weed Control Recommendations* (Publication 00IPM-2 from the Alabama Cooperative Extension System).

Fertilization consisted of a preplant application of 5-10-15 at a rate of 1,000 pounds per acre on May 1 and an application of ammonium nitrate at a rate of 120 pounds per acre on May 29. Insecticides used were Dual (at a rate of one quart per acre) and Asana (at a rate of eight ounces per acre) on May 4 and May 9, respec-

TABLE 1. RATINGS OF 2000 GREEN BEAN VARIETY TRIAL¹

| Location | SMREC |
|------------|-------|
| Weather | 4 |
| Fertility | 5 |
| Irrigation | 5 |
| Pests | 5 |
| Overall | 5 |

¹See introduction for a description of rating scales.

tively. Bravo fungicide was applied at a rate of two pints per acre on June 9 and June 14.

Several new green bean varieties were added to the list of entries this year but there were very few differences in yield among varieties. New varieties such as 'Festina', 'Grenoble', 'Fandango' and 'Unidor' all performed as well as the more well-known varieties such as 'Benchmark', 'Bronco' and 'Hialeah'. 'Mercury', which was recently named, exhibited yields comparable to the others while 'Capricorn' (also named recently) had the lowest yield.

TABLE 2. SEED SOURCE, EARLINESS, AND DISEASE CLAIMS OF SELECTED GREEN BEAN VARIETIES

| Variety | Type | Seed source | Days to harvest | Growth habit | Pod color | Pod shape | Disease claims ¹ | Years evaluated |
|--------------------|------|-------------|-----------------|--------------|-----------|-----------|-----------------------------|-----------------|
| Benchmark | OP | Novartis | 55 | Bush | Green | Round | CBMV, NY15MV | 97-00 |
| Bronco | OP | Asgrow | 53 | Bush | Green | Round | CBMV | 97-00 |
| Hialeah | OP | Ferry-Morse | 53 | Bush | Green | Oval | NY15MV | 97-00 |
| Capricorn(MB-8007) | OP | Novartis | 59 | Bush | Green | Round | CBMV, NY15MV | 98-00 |
| Stallion | OP | Asgrow | 53 | Bush | Green | Round | CBMV, HB | 98-00 |
| Mercury (SB 4136) | OP | Novartis | 55 | Bush | Green | Round | NY15 | 98-00 |
| Jade | OP | Novartis | 60 | Bush | Green | Round | CTV,CBMV,NY15 | 00 |
| Festina | - | Petoseed | - | - | - | - | - | 00 |
| Fandango | - | Petoseed | 56 | Bush | Green | Round | ANT, CBMV,HB | 00 |
| Grenoble | OP | Petoseed | 52 | Bush | Green | Round | CBMV, HB | 00 |
| Unidor | OP | Petoseed | 54 | Bush | Yellow | Round | ANT, CBMV | 00 |

¹Disease Claims: CBMV= Common Bean Mosaic Virus; HB=Halo Blight; NY15MV = Mosaic Virus race NY 15; ANT=Anthracnose; CTV = Curly Top Virus. - = not found

TABLE 3. YIELD AND POD CHARACTERISTICS OF SELECTED GREEN BEAN VARIETIES GROWN AT THE SAND MOUNTAIN RESEARCH AND EXTENSION CENTER

| Variety | Plant stand % | Marketable yield lbs/a | Pod weight lbs/100 pods | Pod length in/pod |
|-----------------------|---------------|------------------------|-------------------------|-------------------|
| Festina | 91 | 2,315 | 1.25 | 4.8 |
| Stallion | 90 | 1,542 | 1.20 | 5.3 |
| Benchmark | 74 | 1,393 | 1.00 | 5.0 |
| Grenoble | 86 | 1,322 | 1.13 | 5.1 |
| Bronco | 80 | 1,312 | 1.16 | 5.2 |
| Hialeah | 68 | 1,285 | 1.01 | 5.1 |
| Mercury | 66 | 1,205 | 1.46 | 5.3 |
| Fandango | 78 | 1,087 | 0.86 | 4.6 |
| Unidor | 95 | 953 | 0.96 | 4.9 |
| Jade | 64 | 803 | 0.72 | 3.7 |
| Capricorn | 63 | 545 | 1.00 | 5.1 |
| <i>R</i> ² | <i>0.26</i> | <i>0.27</i> | <i>0.31</i> | <i>0.25</i> |
| <i>CV</i> | <i>29</i> | <i>65</i> | <i>31</i> | <i>17</i> |
| <i>lsd</i> | <i>31</i> | <i>1,460</i> | <i>0.48</i> | <i>1.25</i> |



‘Indy’ Among Top Cucumber Varieties

Joe Kemble, Edgar Vinson, and Arnold Caylor

A slicer cucumber variety trial was conducted at the North Alabama Horticulture Research Center (NAHRC) in Cullman, Alabama (Tables 1 and 2).

Nine cucumber varieties were direct seeded on May 9. Plastic mulch and drip irrigation were used. Plots consisted of a single 20 foot row with a within row spacing of eight inches. This provided a stand of approximately 17,000 plants per acre.

Preplant fertilization consisted of an application of 15-0-0 at a rate of 50 pounds of N per acre. Fertilization consisted of weekly injections of six pounds N per acre as calcium nitrate until harvest. Fungicides used were Kocide 101 (at a rate of two pounds per acre on June 19); Bravo Ultra (at a rate of two pounds per acre) on June 26, July 3, July 11, and July 17; and Benlate (at a rate of 0.5 pounds per acre) on June 26, July 11, and July 17. Insecticides used were Asana XL (at a rate of 9.6 ounces per acre) on June 3.

Cucumbers were harvested 11 times between June 19 and July 14. After each harvest, fruits were weighed and graded according to the *Cucumber Grader’s Guide*

TABLE 1. RATINGS OF 2000 CUCUMBER VARIETY TRIAL¹

| Location | NAHRC |
|------------|-------|
| Weather | 3 |
| Fertility | 5 |
| Irrigation | 5 |
| Pests | 5 |
| Overall | 5 |

¹See introduction for a description of rating scales.

(Circular ANR-771 from the Alabama Cooperative Extension System). Early and total yields were calculated by combining the marketable yields of the first four harvests (Tables 3 and 4).

‘Dasher II’ and ‘Speedway’ had significantly higher yields in both early and total yield (Tables 3 and 4). ‘Indy’ was among the highest early producers but did not perform as well as ‘Speedway’ and ‘Dasher II’ overall. ‘Panther’ had the highest total yield along with ‘Speedway’ and ‘Dasher II’. ‘General Lee’, a well known standard-variety, had yields that were significantly lower than these three varieties.

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

| Variety | Type ¹ | Seed source | Days to harvest | Disease claims ⁴ | Years eval. |
|-------------|-------------------|-------------|-----------------|----------------------------------|-------------|
| Dasher II | F1 | Petoseed | 58 | ALS,ANT,CMV,DM,PM,Sc | 94-97 |
| Daytona | F1 | Petoseed | – | – | 00 |
| General Lee | F1 | Ferry-Morse | 65 | CMV,DM,PM,Sc | 00 |
| Indy | F1 | Petoseed | 59 | ALS,ANT,CMV,PM,PRSV, STM,ZYMV | 96,97 |
| Panther | F1 | Sunseed | 57 | ANT, CMV, DM, PM, Sc | 00 |
| Prolific | F1 | Sakata | – | ALS, DM, PM, Sc | 00 |
| Slice Max | F1 | Sakata | 50 | PM | 96,98,00 |
| Speedway | F1 | Petoseed | 56 | ALS,ANT,CMV,DM,PM,Sc | 94-97 |
| Tasty Green | F1 | Sakata | – | DM, PM | 00 |

– = Not found; from seed catalogue. Type: F1 = Hybrid

Disease claims: ANT = Anthracnose; ALS = Angular Leaf Spot; CMV = Cucumber Mosaic Virus; DM = Downy Mildew; PM = Powdery Mildew PRSV2 = Papaya Ring Spot Virus; Sc = Scab; STM = Stemphylium; ZYMV = Zucchini Yellow Mosaic Virus.



Garlic Shows Promise For Southeast Georgia



George E. Boyhan, Ray Hicks, and C. Randy Hill

Two garlic variety trials were conducted during the 1999-2000 growing season. One trial was held on-farm in Screven County, Georgia, and one was held at the Vidalia Onion and Vegetable Research Center (VOVRC) in Reidsville, Georgia. Garlic cloves were planted on October 25 at the on-farm location and on October 27 at the VOVRC (Tables 1 and 2). The trials were randomized complete block designs with three replications at the on-farm location and four replications at the VOVRC.

The fertility program at the on-farm location followed standard soil test recommendations for onion production. At the VOVRC the fertility program began with 400 pounds per acre of 5-10-15 with 9% sulfur applied preplant. This was followed with 300 pounds per acre of 6-12-18 with 4% sulfur applied on January 18 and 150 pounds per acre of diammonium phosphate applied on January 25. On February 10, 300 pounds per acre of 6-12-18 with 4% sulfur was applied followed by 300 pounds per acre of CaNO₃ applied on March 1. Finally, 200 pounds of CaNO₃ was applied on May 15.

Weed control consisted of one application of bromoxynil (Buctril) herbicide at one pint per acre at both the on-farm location and at the VOVRC applied in January 2000. In addition, hand weeding was done at both locations as needed.

TABLE 1. RATINGS OF 2000 GARLIC VARIETY TRIAL¹

| Location | Screven Co. | VOVRC |
|------------|-------------|-------|
| Weather | 5 | 5 |
| Fertility | 5 | 5 |
| Irrigation | 5 | 5 |
| Pests | 5 | 5 |
| Overall | 5 | 5 |

¹See introduction for a description of rating scales.

The first harvest was conducted at the VOVRC on May 9 for those varieties deemed mature. A second harvest of the later varieties was conducted at the VOVRC on June 7. All garlic varieties were harvested on June 6 at the on-farm location.

The first harvest at the VOVRC was made based on an assessment of crop maturity based on bulb size alone. Subsequent information indicated that a better assessment would include a count of wrapper leaves on the bulbs. Garlic are judged to be mature when there are only three to four wrapper leaves still present. In our case there were eight to 10 wrapper leaves, so the first harvest was done too early.

TABLE 2. THE 2000 GARLIC VARIETY TRIALS AT THE VIDALIA ONION AND VEGETABLE RESEARCH CENTER

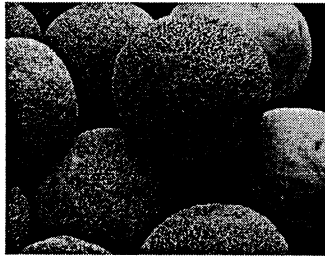
| Entry | Source | Vidalia Farm | | | Screven County | | |
|-----------------------|--------------------------|------------------------|---------------------|-----------------|------------------------|---------------------|-----------------|
| | | Yield 50 lb bags/ac | Bulb diameter in | Harvest date | Yield 50 lb bags/ac | Bulb diameter in | Harvest date |
| VE-2550 | Basic Vegetable Products | 273 | 1.8 | 5/9/00 | 301 | — ¹ | 6/6/00 |
| L-5150 | Basic Vegetable Products | 176 | 2.3 | 6/7/00 | 295 | — | 6/6/00 |
| VE-1750 | Basic Vegetable Products | 332 | 2.3 | 5/9/00 | 220 | — | 6/6/00 |
| LE-4050 | Basic Vegetable Products | 285 | 2.7 | 5/9/00 | 304 | — | 6/6/00 |
| Elephant Garlic D | Shad Dasher | 240 | 2.7 | 6/7/00 | 459 | — | 6/6/00 |
| Elephant Garlic S | Norman Schmidt | 292 | 2.9 | 6/7/00 | 528 | — | 6/6/00 |
| California Early | Empire Garlic | 324 | 2.4 | 5/9/00 | 295 | — | 6/6/00 |
| California Late | Empire Garlic | 260 | 1.8 | 6/7/00 | 265 | — | 6/6/00 |
| <i>R</i> ² | | 0.572 | 0.879 | | 0.933 | | |
| <i>CV</i> | | 33% | 14% | | 32% | | |
| <i>lsd</i> | | 108 | 0.3 | | 80 | | |

¹ Data not included.

The on-farm harvest on June 6 and the second VOVRC harvest on June 7 were too late for several of the varieties. An optimum time for harvest this season in southeast Georgia would have been between the early and late harvests. The late varieties 'L-5150' and 'California Lat'e are inappropriate for southeast Georgia. Typically under California production, these varieties would

not be harvested until late summer. Summers in Georgia are too hot for these varieties to continue to grow and thrive.

The elephant garlic types do very well in southeast Georgia, producing cloves that are twice as large or larger than regular garlic; however, the flavor is considerably milder than regular garlic. In conclusion, there is potential for garlic production in southeast Georgia of early garlic varieties, but late varieties are unsuitable for Georgia's climate.



'Eclipse' Casts a Shadow on other Eastern Melons

Joe Kemble, Edgar Vinson, Jim Pitts, and Tony Dawkins

A small melon variety trial was conducted at the Chilton Area Research and Extension Center (CAREC) in Clanton and the Sand Mountain Research and Extension Center (SMREC) in Crossville (Tables 1 and 2).

At both locations, fifteen varieties of cantaloupe and honey dew melons were direct seeded on bare ground. Plots were seeded on June 19 at CAREC and May 17 at SMREC.

At Clanton, fertilization consisted of a preplant application of 54 pounds of N and K₂O and weekly injections ranging between seven and 14 pounds of N and K₂O between May 3 and July 12. A total of 160 pounds of N and K₂O were injected during the growing season. Insect control was provided by applications of Spintor (at a rate of eight ounces per acre) on June 27 and July 5; and Lannate LV (at a rate of two pints per acre) on June 7, June 14, June 21, June 28, July 3, July 24, and August 3.

TABLE 1. RATINGS OF 2000 MELON VARIETY TRIAL¹

| Location | CAREC | SMREC |
|------------|-------|-------|
| Weather | 3 | 4 |
| Fertility | 5 | 5 |
| Irrigation | 5 | 5 |
| Pests | 5 | 5 |
| Overall | 4 | 5 |

¹See introduction for a description of rating scales.

Fungicides used were Kocide (at a rate of 2.7 pounds per acre) on May 12 and Ridomil/Bravo 81W (at a rate of two pounds per acre) on June 27.

At Sand Mountain, fertilization consisted of a preplant application of 5-10-15 at a rate of 1,000 pounds per acre on May 1. On June 30 calcium nitrate was ap-

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

| Variety | Type ¹ | Seed source | Rind aspect ² | Flesh color | Days to harvest | Disease claims ³ | Years eval. |
|---------------------|-------------------|------------------|--------------------------|-------------|-----------------|-----------------------------|-------------|
| Athena | F1 | Novartis | E | Orange | 80 | FW,PM | 94-00 |
| Classic | F1 | Petoseed | E | Salmon | 86 | - | 00 |
| Durango | F1 | Petoseed | E | Orange | 84 | FW,PM,Su | 00 |
| Earli-Dew | F1 | Petoseed | Ho | Green | 80 | FW | 95-00 |
| Eclipse | F1 | SeedWay/Petoseed | E | Orange | 85 | FW,PM | 96-00 |
| Edonis | F1 | Johnny's | Sp | Orange | 70 | FW,PM | 00 |
| HD-85 | F1 | Takii | Ho | Green | - | - | 00 |
| Honey Brew | F1 | Sakata | Ho | Green | 105 | FW,PM | 00 |
| Honey Star | F1 | Sunseed | Ho | Green | 85 | FW,PM | 00 |
| HY-Mark | F1 | Petoseed | W | Orange | 83 | PM,Su | 94-00 |
| Primo | F1 | Novartis | W | Orange | 77 | PM | 00 |
| Rocio | F1 | Sunseed | Ho | Green | 85 | FW,PM | 00 |
| SMX 7204 | F1 | Sunseed | E | Orange | - | FW,PM | 00 |
| ATX-542 (Honey Ace) | F1 | Takii | Ho | - | - | - | 00 |

- = not found; from seed catalogues

¹ Type: F1=hybrid; OP=open pollinated. ² Rind aspect: W = Western, E = Eastern, Ho = Honey dew, Sp = specialty. ³Disease claims: FW = Fusarium Wilt; PM = Powdery Mildew; Su = Sulfur.

plied at a rate of 350 pounds per acre. Insecticides used were Asana (at a rate of eight ounces per acre) on May 19 and Curbit (at a rate of 1.5 quarts per acre) on May 17. Bravo fungicide was applied on June 4, June 9, June 21, July 19, and July 27. Benlate fungicide was applied at a rate of 0.5 pounds per acre on July 12. Weeds were controlled with an application of Poast Plus (at a rate of 1.5 pints per acre) and crop oil (at a rate of one pint per acre) on July 13.

Cantaloupes and honey dews were harvested on July 7, July 9, July 12, July 14, and July 19 at CAREC and on August 8, August 11 August 15 and August 21 at SMREC (Table 3).

The list of entries for the small melons was the same at both locations. Of the eastern melons, the experimental variety 'SMX7204' had yields that were comparable to the standard variety 'Athena'. At CAHS, 'SMX7204' had a marketable yield that was significantly higher than the other eastern melons. 'Rocio', 'Creme De Menthe', and 'Honey Dew' had the three highest yields among the honey dew melons while the western melons exhibited no differences in yield.

TABLE 3. YIELD OF SELECTED SMALL MELON VARIETIES

| Variety | Type ¹ | Marketable yield lbs/a | Marketable fruits #/a | Individual fruit weight lbs | Soluble solids °Brix |
|--|-------------------|---------------------------|--------------------------|--------------------------------|-------------------------|
| Chilton Area Research and Extension Center | | | | | |
| Eclipse | E | 41,892 | 13,250 | 3.2 | 10.0 |
| Athena | E | 39,317 | 16,426 | 2.4 | 10.0 |
| SMX 7204 | E | 37,203 | 15,791 | 2.4 | 12.2 |
| Classic | E | 28,935 | 12,614 | 2.3 | • |
| Early Brew | Ho | 56,288 | 14,792 | 3.8 | 11.1 |
| Rocio | Ho | 49,831 | 16,517 | 3.0 | 10.0 |
| Creme De Menthe | Ho | 48,682 | 16,789 | 2.9 | 9.0 |
| Honey Brew | Ho | 47,971 | 17,243 | 2.8 | • |
| Earli Dew | Ho | 44,030 | 19,421 | 2.3 | 12.4 |
| HD-85 | Ho | 37,295 | 12,251 | 3.1 | 10.0 |
| ATX-542 | Ho | 36,213 | 12,342 | 2.9 | 13.5 |
| Edonis | Sp | 16,682 | 11,616 | 1.4 | 10.2 |
| Primo | W | 32,616 | 14,520 | 2.3 | 11.5 |
| HY-Mark | W | 32,418 | 20,237 | 1.6 | 11.0 |
| Durango | W | 28,413 | 13,794 | 2.1 | 11.2 |
| <i>R</i> ² | | <i>0.65</i> | <i>0.61</i> | <i>0.71</i> | |
| <i>CV</i> | | <i>21</i> | <i>16</i> | <i>17</i> | |
| <i>lsd</i> | | <i>11,616</i> | <i>3,166</i> | <i>0.63</i> | |
| Sand Mountain Research and Extension Center | | | | | |
| SMX7204 | E | 26,687 | 6,090 | 4.4 | 10.5 |
| Eclipse | E | 16,139 | 3,698 | 4.3 | 10.4 |
| Athena | E | 16,052 | 3,806 | 4.2 | 11.8 |
| Classic | E | 11,386 | 3,263 | 3.5 | • |
| Edonis | Sp | 7,569 | 2,719 | 2.8 | • |
| Rocio | Ho | 24,273 | 3,915 | 6.0 | 8.3 |
| Creme De Menthe | Ho | 22,511 | 4,133 | 5.5 | • |
| Honey Brew | Ho | 18,237 | 2,936 | 6.3 | • |
| ATX-542 | Ho | 14,649 | 2,501 | 5.4 | 11.3 |
| Early Brew | Ho | 11,397 | 2,066 | 5.4 | 10.6 |
| HD-85 | Ho | 6,144 | 979 | 5.8 | • |
| Earli Dew | Ho | 5,786 | 1,305 | 4.1 | 8.4 |
| HY-Mark | W | 21,978 | 6,743 | 3.0 | 13.8 |
| Durango | W | 21,293 | 6,199 | 3.6 | 10.0 |
| Primo | W | 20,804 | 5,438 | 3.7 | 9.9 |
| <i>R</i> ² | | <i>0.26</i> | <i>0.34</i> | <i>0.74</i> | |
| <i>CV</i> | | <i>77</i> | <i>74</i> | <i>17</i> | |
| <i>lsd</i> | | <i>8,972</i> | <i>1,952</i> | <i>2</i> | |

¹ Type: W = Western, E = Eastern, Ho = Honey dew, Sp = specialty. • = not available.



Evaluation of Okra Varieties for Plasticulture Production in North Florida



Eric Simonne and Bob Hochmuth

An okra variety trial was conducted in the spring of 2000 at the North Florida Research and Education Center — Suwannee Valley near Live Oak, Florida, (Tables 1 and 2) on a Lakeland fine sand soil. Okra was transplanted on April 7 in double rows one foot apart, onto 10-foot long plots at a within row spacing of one foot. Black plastic mulch and drip irrigation were used. Center-to-center distance between beds was five feet, which created a stand of approximately 8,700 plants per acre.

Preplant fertilization consisted of an application of a 13-4-13 fertilizer at the rate of 500 pounds per acre. Beginning four weeks after transplanting and through final harvest, additional N and K were injected daily through the drip system. Total N and K used

TABLE 2. SEED SOURCE, EARLINESS AND POD COLOR OF SELECTED OKRA VARIETIES

| Variety | Seed source ¹ | DTH ² | | Pod Color, Shape |
|-----------------------------|--------------------------|------------------|----|------------------|
| | | 1 | 2 | |
| Annie Oakley (F1) | 1 | 48 | 40 | Green, Ridged |
| Baby Bubba (F1) | 2 | 53 | 40 | Green, Ridged |
| Big Un ³ (OP) | 9 | NA | 42 | Green, Ridged |
| Cajun Delight (F1) | 3 | 52 | 40 | Green, Ridged |
| Clemson Spineless (OP) | 1,4,5 | 55 | 40 | Green, Ridged |
| Clemson Spineless 80 (OP) | 6 | 58 | 40 | Green, Ridged |
| Emerald Green (OP) | 6,7 | 55 | 40 | Green, Smooth |
| Green Best (F1) | 3,8 | 48 | 40 | Green, Ridged |
| Lee (OP) | 3 | 56 | 40 | Green, Ridged |
| Long Green Pod (OP) | 2 | 50 | 42 | Green, Ridged |
| Louisiana Green Velvet (OP) | 9 | 58 | 42 | Green, Smooth |
| Mita #7 (F1) | 9 | 49 | 40 | Green, Ridged |
| North & South (F1) | 10 | 46 | 40 | Green, Ridged |
| Penta Green (OP) | 8 | 50 | 40 | Green, Ridged |
| SOK 601 (F1) | 8 | NA | 40 | Green, Ridged |
| Spike (F1) | 9 | 48 | 40 | Green, Ridged |

¹1=Petoseed; 2=Burpee Seeds; 3=Park Seed; 4=Asgrow; 5=Kelly Seeds; 6=Ferry-Morse; 7=Advance Seed; 8=Sakata; 9=Wilhite; 10=SeedWay

²DTH=Days to harvest; 1=from commercial literature; 2=observed from transplant.

³Large variety.

TABLE 1. RATINGS OF 2000 OKRA VARIETY TRIAL¹

| Location | NFREC-SV |
|------------|----------|
| Weather | 5 |
| Fertility | 5 |
| Irrigation | 5 |
| Pests | 5 |
| Overall | 5 |

¹See introduction for a description of rating scales.

(applied+injected) was 175 pounds per acre for the whole season. No fungicides were used, but Malathion was applied on June 16 and June 30 to control stink bugs.

Okra was harvested three times weekly between May and July for a total number of 21 harvests. Early yield was determined by adding the production of the first three harvests (Table 3).

Reference varieties for the area are the hybrid 'North & South' and the open-pollinated 'Clemson Spineless'. The experimental line 'SOK-601' had the numerically highest early yield (1,545 pounds per acre), while 'Louisiana Green Velvet' had the lowest (712 pounds per acre). 'North & South' (4,059 pounds per acre) and 'SOK 601' (4,113 pounds per acre) had significantly higher May yields than the other entries. 'Mita #7' (17,500 pounds per acre) and 'North & South' (16,782 pounds per acre) had significantly higher season yields, and 'Louisiana Green Velvet' had the lowest (11,109 pounds per acre). In this test, average pod production per harvest ranged between 833 pounds per acre ('Mita #7') to 529 ('Louisiana Green velvet'). Yield differences in 'Clemson Spineless' and 'Clemson Spineless 80' were small.

The unusually large pods of 'Big Un' made this variety a 'specialty okra'. The bushy, compact growth habit of 'Babby Bubba' made harvest difficult. This variety is not suited for commercial production.

Overall, hybrids tended to perform better than open pollinated varieties and to produce earlier. The best per-

forming hybrid varieties in this test were 'Mita #7', 'North & South', 'Annie Oakley', and 'Spike', while the best performing open pollinated varieties were the standard

'Clemson Spineless', 'Clemson Spineless 80', and 'Penta Green'. The experimental hybrid 'SOK-601' showed good potential for the area.

TABLE 3. YIELD OF OKRA VARIETIES IN THE SPRING OF 2000 AT THE NOTH FLORIDA RESEARCH AND EDUCATION CENTER, SUWANNEE VALLEY

| Variety | Early ^{1,2} mkt. wt lbs/ac | May mkt. wt lbs/ac | June mkt. wt lbs/ac | July mkt. wt. lbs/ac | Season mkt. wt lbs/ac | Average mkt. wt lbs/ac |
|-----------------------|---|--------------------------|---------------------------|----------------------------|-----------------------------|------------------------------|
| Mita #7 | 1,269 a | 3,683 ab | 10,089 a | 3,729 a | 17,500 a | 833 |
| North & South | 1,275 a | 4,059 a | 9,225 a | 3,498 a | 16,782 ab | 799 |
| Clemson Spineless | 1,262 a | 3,508 a-c | 9,447 a | 3,711 a | 16,667 a-c | 794 |
| SOK 601 | 1,545 a | 4,113 a | 8,863 a | 3,247 a | 16,223 a-c | 773 |
| Green Best | 1,206 a | 3,274 a-d | 8,898 a | 3,951 a | 16,123 a-c | 768 |
| Annie Oakley | 1,425 a | 3,540 ab | 8,417 a | 3,983 a | 15,940 a-c | 759 |
| Clemson Spineless 80 | 1,140 a | 3,631 ab | 8,254 a | 3,449 a | 15,334 a-c | 730 |
| Spike | 1,377 a | 3,648 ab | 7,993 a | 3,043 a | 14,684 a-c | 699 |
| Penta Green | 981 a | 3,312 a-d | 8,071 a | 3,130 a | 14,513 a-c | 691 |
| Cajun Delight | 1,188 a | 3,264 a-d | 6,828 a | 3,281 a | 13,372 a-c | 637 |
| Big Un | 852 a | 2,141 d | 8,020 a | 2,501 a | 12,662 a-c | 603 |
| Emerald Green | 1,007 a | 2,749 b-d | 6,573 a | 2,817 a | 12,139 a-c | 578 |
| Lee | 673 a | 2,271 cd | 7,167 a | 2,695 a | 12,133 a-c | 578 |
| Baby Bubba | 886 a | 2,473 b-d | 5,623 a | 3,549 a | 11,645 bc | 555 |
| Long Green Pod | 781 a | 2,635 b-d | 6,110 a | 2,509 a | 11,254 bc | 536 |
| L.a. Green Velvet | 712 a | 2,271 cd | 5,966 a | 2,872 a | 11,109 c | 529 |
| <i>R</i> ² | 0.59 | 0.70 | 0.59 | 0.59 | 0.67 | |
| <i>CV</i> | 43 | 20 | 26 | 23 | 20 | |

¹ Early yield was the sum of the first three harvests; six harvests in May; 11 harvests in June; four harvests in July; 21 harvests for season yield.

² Within columns, means followed by different letters are significantly different according to Duncan Multiple Range Test (5% level).



Vidalia Onion Variety Trials in Georgia



George E. Boyhan, William M. Randle, Reid L. Torrance, David E. Curry, Robert T. Boland, C. Randy Hill, M. Jeff Cook, and Myron D. Graham

Four short-day onion variety trials were held at two on-farm locations and at the Vidalia Onion and Vegetable Research Center (VOVRC). One on-farm trial was held in Brantley County and one was held in Tattnall County, Georgia. Two additional trials were held at the VOVRC (Table 1).

Onion seed were planted at the Brantley County on-farm location on September 14 or September 24. Seed were sown with an Earthway push planter using a 1002-5 Radish medium plate (Bristol, IN). Onions were transplanted from these direct-seeded onions to their final spacing on December 1 onto raised plastic beds. Two rows of onions were planted approximately six inches apart in the row with a between row spacing of approximately 14 inches. The onions were planted in a randomized complete block design with three replications. Each plot consisted of 40 bulbs. The fertility program followed Georgia soil test recommendations. Disease, insect, and weed control followed Georgia Cooperative Extension Service recommendations.

At the Tattnall County on-farm location, onions were seeded on September 13 onto beds treated with Busan 21 days prior. These onions were transplanted to their final spacing on November 15. Plots consisted of four rows of onions planted 18 inches apart and five inches in the row. Each plot was 50 feet long. This is typical of onion production with a 72-inch wheel row spacing. The experimental design was a randomized complete block design. The fertility program consisted of 350 pounds per acre of 6-18-18 with 6% sulfur applied on November 24. A 5-10-15 fertilizer was applied on January 6 at 300 pounds per acre. Three hundred sixty-five pounds of 6-12-18 was applied on January 20. Finally, two applications of CaNO_3 at 200 pounds per acre each was applied on February 7 and March 1. Disease and weed control followed Georgia Cooperative Extension Service recommendations. Harvests occurred on April 6, April 13, April 20, April 27, May 3, and May 10 as the various varieties matured.

At the VOVRC, two variety trials were conducted. The first trial had seed sown on September 23 in high density plant beds (30-50 seed per foot) that had been fumigated with Busan three weeks prior. The fertility program for the seeded onions started with preplant ap-

TABLE 1. RATINGS OF 2000 VIDALIA ONION VARIETY TRIAL¹

| Rating based on | All locations |
|-----------------|---------------|
| Weather | 5 |
| Fertility | 5 |
| Irrigation | 5 |
| Pests | 5 |
| Overall | 5 |

¹See introduction for a description of rating scales.

plication of 800 pounds of 5-10-15 with 9% sulfur. The fertility program for the seeded onions included 180 pounds per acre of diammonium phosphate applied on September 24. In addition, 180 pounds of CaNO_3 was applied on October 21 as well as 300 pounds of 10-10-10 applied on October 28. Finally, 200 pounds of CaNO_3 was applied on November 8. Transplants were pulled from the plant beds and set at their final spacing on November 23. The fertility program on these plots consisted of 300 pounds of 6-12-18 with 4% sulfur applied on January 18. In addition, 150 pounds of diammonium phosphate was applied on January 25 as well as 300 pounds of 6-12-18 with 4% sulfur on February 10. The final fertilizer application was on March 1 with 300 pounds of CaNO_3 . Harvests occurred on April 6, April 12, April 19, April 26, May 4, and May 11 as the onion varieties matured. Weed control consisted of applications of Goal and Prowl herbicides at the rate of 1.5 pints per acre applied on December 3. Disease and insect control followed current Georgia Cooperative Extension Service recommendations. The experimental design was a randomized complete block design with four replications. The plot size was 50 feet long with plant spacing similar to the on-farm spacing described above.

The second trial at the VOVRC had transplants produced concurrently with transplants for the first trial. Transplants were set on December 21 at the same spacing as the first trial, but consisted of plots 10 feet long. The fertility, weed control, disease, and insect control were the same as the first trial.

The trial at the VOVRC is summarized in Table 2. Field yields ranged from 1,107 50-pound bags per acre for 'Savannah Sweet' to 554 50-pound bags per acre for 'SSC 6372'. Post-cure yields ranged from 879 50-pound bags per acre for 'Savannah Sweet' to 15 50-pound bags per acre for 'Centaur'. This points out one of the problems with the later harvested onions. They tend to have much higher disease incidence, which dramatically reduces yields through the curing and grading process. This was also the case at the on-farm location in Tattall County. Pungency is measured as umoles pyruate per gram fresh weight. Values above 5 will have a detectable pungency to the taste. The pungency values at the VOVRC ranged from 5.4 for 'Georgia Pride' to 2.4 for 'Sweet Sun'.

At the on-farm location in Tattall County field yields ranged from 1,164 50-pound bags per acre for 'DPS 1033' to 508 50-pound bags per acre for 'DPS 1058' (Table 3). The post cure yields ranged from 916 50-pound bags per acre for 'DPS 1033' and 0 50-pound bags per acre for 'Centaur'. Pungency ranged from 4.0 umoles per gram of fresh weight (umole/gfw) for 'Evita' to 2.1 umole/gfw for 'Centaur'.

The two additional trials were of grano-type short-day onions. These onions differ from the typical short-day onions grown in southeast Georgia in that they are round, instead of flattened, yellow onions. In addition, these onions tend to mature later than the granex types typical in this part of Georgia.

TABLE 2. THE 2000 VIDALIA ONION VARIETY TRIAL, VIDALIA ONION AND VEGETABLE RESEARCH CENTER

| Entry | Seed source | Field yield 50-lb bags/ac | Post cure yield 50-lb bags/ac | Large <3.5 in. | Jumbo >3.5 in. | Harvest date | Bacterial diseases no/50-ft plot | Pungency um/gfw |
|--------------------------------|--------------------|------------------------------|----------------------------------|-------------------|-------------------|--------------|-------------------------------------|--------------------|
| Savannah Sweet | Petoseed | 1,107 | 879 | 184 | 654 | 5/4/2000 | 32 | 3.4 |
| SXO 1519 | Sunseeds | 1,064 | 861 | 233 | 487 | 4/26/2000 | 26 | 4.5 |
| DPS 1032 | D. Palmer Seed | 956 | 821 | 519 | 79 | 4/19/2000 | 42 | 4.8 |
| WI-609 | Wannamaker Intern. | 882 | 783 | 339 | 291 | 4/6/2000 | 13 | 4.4 |
| DPS 1039 | D. Palmer Seed | 850 | 755 | 481 | 124 | 4/19/2000 | 29 | 4.5 |
| Sweet Vidalia | Rio Colorado | 916 | 749 | 292 | 328 | 4/26/2000 | 17 | 4.6 |
| Sweet Success | Sunseeds | 1,014 | 720 | 159 | 486 | 5/4/2000 | 56 | 4.0 |
| SSC 6371 F1 | Shamrock | 764 | 688 | 339 | 89 | 4/12/2000 | 20 | 4.9 |
| Granex 1035 | Seedway | 849 | 670 | 423 | 85 | 4/26/2000 | 47 | 4.7 |
| WI-3115 | Wannamaker Intern. | 746 | 658 | 344 | 91 | 4/6/2000 | 28 | 5.2 |
| Yellow Granex Imp. (Sun F1) | Sunseeds | 858 | 657 | 339 | 239 | 4/26/2000 | 29 | 4.4 |
| Sweet Melody | Rio Colorado | 860 | 656 | 342 | 190 | 4/26/2000 | 42 | 3.9 |
| DPS 1033 | D. Palmer Seed | 1,020 | 647 | 254 | 302 | 5/11/2000 | 50 | 4.1 |
| PS 7092 | Petoseed | 752 | 631 | 316 | 88 | 4/19/2000 | 58 | 4.3 |
| Granex 33 (Y33) | Asgrow | 891 | 612 | 291 | 244 | 5/4/2000 | 77 | 3.5 |
| SSC 6436 F1 | Shamrock | 711 | 606 | 287 | 36 | 4/12/2000 | 55 | 5.1 |
| XP 6995 | Asgrow | 953 | 579 | 228 | 265 | 5/4/2000 | 74 | 3.1 |
| Georgia Pride F1 | Shamrock | 663 | 563 | 252 | 83 | 4/6/2000 | 18 | 5.4 |
| RCS 1919 | Rio Colorado | 622 | 556 | 243 | 12 | 4/12/2000 | 70 | 5.0 |
| DPS 1058 | D. Palmer Seed | 611 | 547 | 199 | 21 | 4/12/2000 | 30 | 4.7 |
| SSC 6372 F1 | Shamrock | 554 | 481 | 169 | 17 | 4/12/2000 | 33 | 5.0 |
| Sweet Sun | Sunseeds | 697 | 472 | 243 | 64 | 5/4/2000 | 71 | 2.4 |
| Nikita | Rio Colorado | 560 | 362 | 135 | 107 | 5/4/2000 | 187 | 3.7 |
| 1015Y | Asgrow | 815 | 204 | 78 | 83 | 5/11/2000 | 50 | 3.1 |
| Pegasus | Asgrow | 967 | 197 | 93 | 74 | 5/11/2000 | 131 | 2.5 |
| Evita F1 | Shamrock | 1,045 | 160 | 54 | 66 | 5/11/2000 | 41 | 4.3 |
| Centaur | Asgrow | 880 | 15 | 10 | 4 | 5/11/2000 | 131 | 3.3 |
| R² | | 0.769 | 0.865 | | | | 0.720 | 0.741 |
| CV | | 21% | 41% | | | | 90% | 23% |
| lsd | | 140 | 142 | | | | 42.4 | 0.8 |

TABLE 3. THE 2000 VIDALIA ONION VARIETY TRIAL, TATTNALL COUNTY

| Entry | Seed source | Yield 50-lb bags/ac | Post cure yield 50-lb bags/ac | First harvest date | Large <3.5 in. | Jumbo >3.5 in. | Bacterial diseases no/50-ft plot | Pungency um/gfw |
|--------------------------------|--------------------|------------------------|----------------------------------|-----------------------|-------------------|-------------------|--|--------------------|
| DPS 1033 | D. Palmer Seed | 1,164 | 916 | 5/3/2000 | 194 | 660 | 10 | 3.2 |
| DPS 1039 | D. Palmer Seed | 1,027 | 880 | 4/20/2000 | 348 | 444 | 13 | 3.5 |
| Sweet Vidalia | Rio Colorado | 972 | 813 | 4/20/2000 | 234 | 483 | 11 | 3.0 |
| Sweet Success | Sunseeds | 973 | 787 | 4/27/2000 | 240 | 471 | 11 | 3.5 |
| SSC 6436 F1 | Shamrock | 818 | 715 | 4/13/2000 | 380 | 191 | 12 | 3.4 |
| WI-609 | Wannamaker Intern. | 735 | 688 | 4/6/2000 | 220 | 327 | 4 | 3.5 |
| Granex 33 (Y33) | Asgrow | 955 | 682 | 5/3/2000 | 193 | 428 | 38 | 3.4 |
| SXO 1519 | Sunseeds | 1,034 | 679 | 4/27/2000 | 190 | 370 | 6 | 3.2 |
| WI-3115 | Wannamaker Intern. | 740 | 650 | 4/6/2000 | 275 | 260 | 3 | 3.2 |
| Granex 1035 | Seedway | 838 | 638 | 4/27/2000 | 318 | 184 | 11 | 3.5 |
| Savannah Sweet | Petoseed | 1,015 | 623 | 4/27/2000 | 251 | 325 | 20 | 3.1 |
| XP 6995 | Asgrow | 1,013 | 621 | 5/3/2000 | 159 | 427 | 15 | 3.0 |
| SSC 6371 F1 | Shamrock | 711 | 610 | 4/13/2000 | 271 | 191 | 4 | 3.5 |
| SSC 6372 F1 | Shamrock | 726 | 605 | 4/13/2000 | 325 | 90 | 19 | 3.9 |
| Yellow Granex Imp. (Sun F1) | Sunseeds | 896 | 568 | 4/27/2000 | 198 | 281 | 18 | 3.4 |
| PS 7092 | Petoseed | 888 | 557 | 4/27/2000 | 234 | 232 | 17 | 3.2 |
| Georgia Pride F1 | Shamrock | 591 | 483 | 4/6/2000 | 203 | 137 | 8 | 3.5 |
| Sweet Melody | Rio Colorado | 921 | 451 | 5/3/2000 | 118 | 284 | 27 | 3.2 |
| DPS 1058 | D. Palmer Seed | 508 | 432 | 4/13/2000 | 135 | 37 | 7 | 2.9 |
| Pegasus | Asgrow | 979 | 64 | 5/10/2000 | 14 | 42 | 20 | 3.1 |
| Evita F1 | Shamrock | 717 | 9 | 5/10/2000 | 2 | 3 | 13 | 4.0 |
| Centaur | Asgrow | 914 | 0 | 5/10/2000 | 0 | 0 | 45 | 2.1 |
| R² | | 0.786 | 0.818 | | | | 0.710 | 0.407 |
| CV | | 21% | 49% | | | | 84% | 18% |
| lsd | | 139 | 197 | | | | 11 | 0.8 |



Strawberry Cultivars 'Camarosa' and 'Chandler' Still Best



Kent Cushman and Thomas Horgan

Eight strawberry cultivars were planted in a plasticulture production system at the North Mississippi Research and Extension Center located in Verona. Soil type was a Quitman silt loam soil and the experimental design was a randomized complete block design with four replications. Yield data from only six of the entries were analyzed due to the extremely poor performance of two entries: 'Gaviota' and 'Cardinal'.

Plant beds were formed six inches high and 30 inches across the top with a press-pan-type bed shaper. Beds were spaced five feet apart, center to center. Black plastic mulch and drip irrigation tubing were applied immediately after bedding.

Fresh-dug, bare-rooted runners of 'Chandler', 'Camarosa', 'Diamante', 'Gaviota', and 'Seascape' were obtained from Norcal Nursery Inc. of Red Bluff, California. Fresh-dug, bare-rooted runners of 'Sweet Charlie', 'Earliglow', and 'Cardinal' were obtained from Lewis Nursery and Farms Inc. of Rocky Point, North Carolina. All plants were planted through the plastic by hand November 4, 1999. Two rows were planted on top of each bed. Plants were spaced 12 inches apart within rows and between rows. Plots were 15 feet long and contained 30 plants. Sprinkler irrigation was applied daily for a week to establish plants.

Preplant fertilizer was broadcast before bed formation at the rate of 50 pounds N, 100 pounds P₂O₅, and 60 pounds K₂O per acre. Soluble fertilizer was applied throughout the spring growing season via the drip (trickle) irrigation system. Soluble fertilizers contributed an additional 70 pounds N and 70 pounds K₂O per acre. Frost protection was provided once, on April 9, during this study. Pesticides were not used due to low levels of insect damage or disease.

Harvest began April 4 and ended May 31 for a total of 22 harvests. Fruit were normally picked on Monday, Wednesday, and Friday. Fruit from each plot was separated into marketable and cull and then counted and weighed. Cull categories were established as small, diseased, misshapen, and insect or bird damage. Most culls were in the small category.

'Camarosa' and 'Chandler' again produced the greatest total marketable yields in trials located in northern Mississippi (see table). 'Camarosa' and 'Chandler' were also the highest yielding cultivars in the 1999 trial. 'Diamante' and 'Seascape' were included for the first time, but yields were low for both of these new cultivars. Percent marketable yield and average fruit weight, however, were significantly greater for 'Diamante' compared to 'Camarosa' or 'Chandler'. The 1999 trial did not include 'Seascape', 'Diamante', or 'Earliglow'. 'Sweet Charlie' and 'Earliglow' performed poorly in the 2000 trial. The cultivars 'Gaviota' and 'Cardinal' were also included in this trial, but yields were so poor that they were not included in the analysis of yield data.

STRAWBERRY MARKETABLE YIELD

| Entry | Total marketable yield ¹ lbs/ac | Average weight ² | |
|-----------------------|---|-----------------------------|--------------|
| | | % ³ | oz |
| Camarosa | 18,400 | 89 | 0.93 |
| Chandler | 17,800 | 85 | 0.93 |
| Seascape | 13,800 | 85 | 0.69 |
| Diamante | 13,000 | 90 | 1.08 |
| Sweet Charlie | 5,800 | 82 | 0.62 |
| Earliglow | 3,200 | 58 | 0.53 |
| <i>R</i> ² | <i>0.90</i> | <i>0.97</i> | <i>0.87</i> |
| <i>CV</i> | <i>20</i> | <i>3</i> | <i>12</i> |
| <i>lsd</i> | <i>3,600</i> | <i>4</i> | <i>0.144</i> |

¹ Total marketable yield of 22 harvests.

² Average weight per marketable fruit.

³ Relative number of marketable fruit as percent of total harvested (marketable plus culls).



Tomato Varieties Produce High Yields in North Alabama



Joe Kemble, Edgar Vinson, and Arnold Caylor

A tomato variety trial was conducted at the North Alabama Horticulture Research Center (NAHRC) in Cullman, Alabama (Tables 1 and 2).

Five-week-old tomato plants were transplanted on May 9 on to raised beds covered with silver plastic mulch. Drip irrigation was used. Plots were 12 feet long and five feet wide. Within-row spacing was 18 inches which created a stand of approximately 5,800 plants per acre. Plants were staked and tied.

Preplant fertilizaion consisted of 80 pounds per acre of N as ammonium nitrate. Fertilization consisted of weekly injections of ammonium nitrate at a rate of 10 pounds per acre. Insects were controlled by applications of Spintor (at a rate of three ounces per acre), Mattach (at a rate of two quarts per acre), and Asana XL (at a rate of 9.6 ounces per acre). Fungicides used were Bravo (at a rate of three pints per acre), Ridomil (at a rate of 2.5 pounds per acre), and Man-Kocide (at a rate of 2.5 pounds per acre).

Tomatoes were harvested once per week beginning July 25 and ending August 14 for a total of five harvests. 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*

TABLE 1. RATINGS OF 2000 TOMATO VARIETY TRIAL¹

| Location | NAHRC |
|------------|-------|
| Weather | 4 |
| Fertility | 5 |
| Irrigation | 5 |
| Pests | 5 |
| Overall | 5 |

¹See introduction for a description of rating scales.

Grader's Guide (Circular ANR 643 from the Alabama Cooperative Extension System) and were Jumbo (D>3.5 inch), Extra-large (D>2.9 inch), Large (D>2.5 inch) or Medium, (D>2.3 inch). Marketable yield was calculated by combining the Jumbo, Extra-large, and Large grades (Tables 3 and 4).

There was very little difference in yield overall. The experimental varieties 'PS861894' and 'PS870494' performed as well as standard varieties such as 'Sunpride'. 'Floralina', a variety developed from a collaboration between the University of Florida and the University of North Carolina, did not perform as well as most other varieties in the early season but performed well overall.

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

| Variety | Type ¹ | Seed source | Plant habit ² | Fruit color | Days to harvest | Disease claims ³ | Years evaluated |
|-----------|-------------------|-------------|--------------------------|-------------|-----------------|-----------------------------|-----------------|
| Floralina | OP, FM | PetoSeed | Det. | Red | 74 | FW,VW | 00 |
| Marina | F1, RO | Sakata | Det | Red | - | ASC,FW,ST,VW | 00 |
| PS864894 | F1, FM | PetoSeed | Det | Red | - | - | 00 |
| PS870494 | F1, FM | PetoSeed | Det | Red | - | - | 00 |
| Sunguard | F1, FM | Asgrow | Det | Red | - | - | 00 |
| Sunpride | F1, FM | Sunpride | Det | Red | 80 | ASC,FW,ST,VW | 94-00 |

- = not available from seed catalogues.

¹Type: F1 = Hybrid; OP = Open pollinated; FM = Fresh Market; RO = Roma (Elongated Fruits);

²Plant habit: Det = Determinate

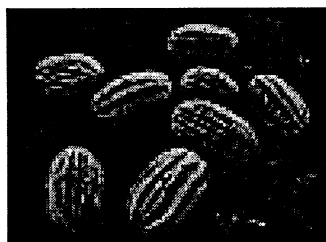
³Disease claims: FW = Fusarium Wilt; VW = Verticillium Wilt; ASC = Alternaria Stem Canker; ST = Stemphyllium (gray leaf spot).

TABLE 3. EARLY PRODUCTION AND GRADE DISTRIBUTION OF SELECTED FRESH-MARKET TOMATO VARIETIES GROWN AT THE NORTH ALABAMA HORTICULTURE RESEARCH CENTER

| Variety | Early marketable weight <i>lbs/a</i> | Early jumbo weight <i>lbs/a</i> | Early jumbo number <i>#/a</i> | Early extra-large weight <i>lbs/a</i> | Early extra-large number <i>#/a</i> | Early large weight <i>lbs/a</i> | Early large number <i>#/a</i> | Early medium weight <i>lbs/a</i> | Early medium number <i>#/a</i> |
|-----------------------|---|------------------------------------|----------------------------------|--|--|------------------------------------|----------------------------------|-------------------------------------|-----------------------------------|
| PS861894 | 20,258 | 12,013 | 20,873 | 6,755 | 16,517 | 1,491 | 5,445 | 5,196 | 16,517 |
| Sunpride | 17,646 | 12,841 | 19,330 | 4,115 | 10,255 | 691 | 2,450 | 3,614 | 9,347 |
| Sunguard | 14,616 | 9,780 | 16,880 | 3,793 | 9,983 | 1,043 | 3,630 | 2,764 | 9,166 |
| PS870494 | 13,493 | 10,688 | 17,424 | 2,517 | 5,354 | 288 | 1,089 | 3,545 | 9,166 |
| Floralina | 12,660 | 9,981 | 17,333 | 2,246 | 5,990 | 433 | 2,178 | 2,451 | 6,262 |
| Marina | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 485 | 2,269 |
| <i>R</i> ² | <i>0.70</i> | <i>0.53</i> | | | | | | | |
| <i>CV</i> | <i>38</i> | <i>50</i> | | | | | | | |
| <i>lsd</i> | <i>7,441</i> | <i>6,791</i> | | | | | | | |

TABLE 4. TOTAL PRODUCTION AND GRADE DISTRIBUTION OF SELECTED FRESH-MARKET TOMATO VARIETIES GROWN AT THE NORTH ALABAMA HORTICULTURE RESEARCH CENTER

| Variety | Total marketable weight <i>lbs/a</i> | Total jumbo weight <i>lbs/a</i> | Total jumbo number <i>#/a</i> | Total extra-large weight <i>lbs/a</i> | Total extra-large number <i>#/a</i> | Total large weight <i>lbs/a</i> | Total large number <i>#/a</i> | Total medium weight <i>lbs/a</i> | Total medium number <i>#/a</i> |
|-----------------------|---|------------------------------------|----------------------------------|--|--|------------------------------------|----------------------------------|-------------------------------------|-----------------------------------|
| PS870494 | 41,928 | 26,757 | 28,949 | 8,030 | 20,328 | 1,832 | 6,534 | 5,309 | 12,977 |
| Sunpride | 36,701 | 18,480 | 29,222 | 11,804 | 29,131 | 2,254 | 8,258 | 4,163 | 10,890 |
| PS861894 | 34,986 | 14,780 | 27,407 | 11,540 | 28,314 | 2,654 | 9,529 | 6,013 | 17,969 |
| Sunguard | 31,633 | 15,564 | 27,951 | 9,962 | 25,501 | 2,542 | 9,983 | 3,566 | 12,614 |
| Floralina | 30,516 | 17,062 | 29,131 | 8,323 | 20,963 | 1,871 | 8,258 | 3,261 | 8,621 |
| Marina | 12,400 | 415 | 3,721 | 5,015 | 9,801 | 6,486 | 16,244 | 485 | 2,269 |
| <i>R</i> ² | <i>0.40</i> | <i>0.41</i> | | | | | | | |
| <i>CV</i> | <i>46</i> | <i>70</i> | | | | | | | |
| <i>lsd</i> | <i>20,473</i> | <i>16,055</i> | | | | | | | |



Watermelon and Cantaloupe Variety Trials in Southeast Georgia



George E. Boyhan, Darbie M. Granberry, and C. Randy Hill

Two watermelon variety trials and one cantaloupe trial were held at the Vidalia Onion and Vegetable Research Center (VOVRC) in Toombs County, Georgia. Thirty-nine watermelon varieties and seven cantaloupe varieties were included in the trials. Initially, 33 varieties were to be tested, but four of the varieties had insufficient germination to be included in the trial. These varieties included ‘Revolution (4034)’, ‘EX 4590339’, ‘EX 4590249’, and ‘AU-Sweet Scarlet SS’. Three of the four, ‘Revolution (4034)’, ‘EX 4590339’, and ‘EX 4590249’ were triploid varieties, which are known to be difficult to germinate.

Watermelon plants for the first trial and the cantaloupe plants were started in the greenhouse on April 14 in a peatlite mix. All trials were arranged in a randomized complete block design with four replications. Each plot within the trials consisted of ten hills planted five feet apart in the row with six feet between rows. A 10-10-10 fertilizer was applied on May 15 at a rate of 800 pounds per acre. Transplants for the first watermelon trial and the cantaloupe trial were planted on May 15. On May 26 Sonolan herbicide was applied at a rate of one quart per acre to the first watermelon and the cantaloupe trials. In addition, Poast was applied on June 1 (at a rate of one pint per acre), Basagran was applied on June 9 (at a rate of 1.5 pints per acre), and Alanap was applied on June 13 (at a rate of five quarts per acre). Hand weeding was also done as needed. Finally, 400 pounds per acre of 15-0-14 was applied on June 14.

The second watermelon trial was seeded in the greenhouse on May 3 and transplanted to the field on May 31. The second watermelon trial had 800 pounds of 10-10-10 broadcast preplant. In addition 400 pounds of 15-0-14 was sidedressed on the crop one month after transplanting. Weed control consisted of Sonolan herbicide applied as a preemergent herbicide applied at one quart per acre directly after transplanting. In addition, hand weeding was done as necessary. Herbicide selection and application rates and timing for all these trials do not reflect current accepted practices for Georgia.

TABLE 1. RATINGS OF 2000 WATERMELON VARIETY TRIALS¹

| Location | All locations |
|------------|---------------|
| Weather | 5 |
| Fertility | 5 |
| Irrigation | 5 |
| Pests | 5 |
| Overall | 5 |

¹See introduction for a description of rating scales.

Three harvests were made on the first watermelon trial and two harvests on the cantaloupe trial. The first harvest was on July 24 and the second on July 27 as the melons ripened. The number of fruit and the total weight was recorded for each plot. In addition, two representative fruit from each plot were cut and measured for length, width, rind thickness, and soluble solids (percent sugar). In addition, melon type and flesh color was noted. Melon types are indicated by representative varieties, which help describe the melon types. ‘Jubilee’ is a relatively large oblong melon with a dark green stripe on a light green background. ‘Crimson Sweet’ is a round, medium-sized melon with a stripe pattern similar to ‘Jubilee’. ‘Allsweet’ is a medium-sized oblong melon with a light stripe on a dark green background. ‘Sugar Baby’ is a small dark green melon usually weighting less than 10 pounds. Seedless melons are not really seedless, but have a 3n (triploid) number of chromosomes. This prevents the development of hard, mature seed, which instead remain soft and edible. The second watermelon trial was harvested on August 14 and the same data as mentioned previously was collected.

In the first watermelon trial, the range of yields was from 48,627 pounds per acre for ‘Stars n Stripes’ to 12,828 pounds per acre for ‘WX 57’ with a least significant difference (lsd) of 17,910 pounds per acre (Table 1). The highest yield for a seedless variety was 39,229 pounds per acre for Asgrow’s experimental variety ‘EX 4203337’. Seedless varieties performed much better in

these trials compared to previous years. In the 1998 trials, for example, all of the seedless varieties had yields at least 5,000 pounds per acre less than the lowest yielding F_1 hybrid. In contrast, in this year's trial two of the five top-yielding varieties were seedless varieties.

The second watermelon trial consisted primarily of varieties from D. Palmer Seed Company, which arrived late for the first trial. Included in this trial were 'Piñata' and 'Stars n Strips' both of which are good yielding F_1 hybrid varieties. The range of yields for this trial was from 30,401 pounds per acre to 4,622 pounds per acre with an *lsd* of 11,126 pounds per acre (Table 2). The best yielding D. Palmer variety was 'Buttercup' a yellow-fleshed, small, Crimson Sweet type melon. This trial in-

cluded several Sugar Baby seedless types. These varieties yielded significantly lower than the top performing varieties in this trial. Of the top five yielders in this trial, two were seedless varieties. The trend to seedless watermelons in the Southeast continues with an increase in performance overall for these varieties.

The cantaloupe trial consisted of seven varieties. Four of these varieties were actually seed saved from specific melon types and are indicated as open-pollinated in Table 3. The other three varieties, 'Vienna', 'Athena', and 'SXM 7119' are Eastern types from their respective companies. The range of yields was from 18,263 pounds per acre to 8,770 pounds per acre; however, the difference was not significant.

TABLE 1. FIRST WATERMELON VARIETY TRIAL, VIDALIA ONION AND VEGETABLE RESEARCH CENTER¹

| Variety | Seed source | Yield <i>lbs/ac</i> | Sugar content % | Fruit length <i>in</i> | Fruit width <i>in</i> | Rind thickness <i>in</i> | Fruit weight <i>lbs</i> | Melon type | Flesh color |
|-----------------------|-----------------|------------------------|--------------------|---------------------------|--------------------------|-----------------------------|----------------------------|------------|-------------|
| Stars n Stripes | Asgrow | 48,627 | 9.9 | 17.4 | 8.2 | 1.0 | 15.6 | 1 | Red |
| AU-Jubilant | Hollar Seed Co. | 43,549 | 9.4 | 16.9 | 8.4 | 0.9 | 19.4 | 1 | Red |
| WX55 | Willhite Seed | 30,242 | 10.7 | 10.3 | 9.2 | 0.9 | 12.6 | 1 | Red |
| WX22 | Willhite Seed | 47,956 | 10.4 | 14.1 | 9.4 | 0.7 | 17.9 | 2 | Red |
| EX 4203337 | Asgrow | 39,229 | 9.8 | 10.8 | 8.7 | 0.9 | 11.7 | 3 | Red |
| W 5036 | Sunseeds | 39,160 | 10.1 | 15.5 | 8.2 | 0.9 | 15.6 | 3 | Red |
| EX 4510759 | Asgrow | 38,434 | 10.6 | 11.5 | 8.9 | 0.9 | 13.9 | 3 | Red |
| Slice N Serve 830 | Southwestern | 27,824 | 10.3 | 10.7 | 8.5 | 0.9 | 11.8 | 3 | Red |
| W 5052 | Sunseeds | 26,169 | 10.4 | 10.7 | 8.5 | 0.8 | 12.6 | 3 | Red |
| Premiere F1 | Southwestern | 22,800 | 10.6 | 10.9 | 8.5 | 0.7 | 10.8 | 3 | Red |
| WX57 | Willhite Seed | 12,828 | 9.9 | 11.6 | 8.7 | 0.9 | 13.1 | 3 | Red |
| Dumara | Sunseeds | 38,355 | 10.3 | 14.0 | 9.2 | 0.8 | 16.0 | 4 | Red |
| EX 4569319 | Asgrow | 37,981 | 10.0 | 15.3 | 8.5 | 0.9 | 16.9 | 4 | Red |
| WX15 | Willhite Seed | 37,175 | 10.0 | 12.6 | 9.3 | 0.8 | 15.8 | 4 | Red |
| Legacy | Willhite Seed | 35,044 | 9.7 | 16.2 | 8.6 | 0.8 | 19.3 | 4 | Red |
| Athens (5025) | Sunseeds | 34,478 | 10.0 | 14.2 | 8.9 | 0.9 | 15.8 | 4 | Red |
| Festival | Willhite Seed | 32,975 | 9.6 | 13.8 | 8.2 | 0.8 | 17.1 | 4 | Red |
| Piñata | Willhite Seed | 31,704 | 9.1 | 15.1 | 9.2 | 0.8 | 16.8 | 4 | Red |
| WX8 | Willhite Seed | 31,164 | 10.1 | 14.5 | 8.9 | 0.8 | 15.9 | 4 | Red |
| SXW 5023 | Sunseeds | 29,138 | 10.7 | 15.3 | 8.9 | 0.9 | 15.1 | 4 | Red |
| AU-Allsweet BL | Auburn Univ. | 19,947 | 10.6 | 15.1 | 9.7 | 0.8 | 16.2 | 4 | Red |
| W 5051 | Sunseeds | 15,863 | 10.3 | 12.5 | 8.2 | 0.9 | 13.2 | 4 | Red |
| AU-Golden Producer | Hollar Seed Co. | 37,552 | 10.7 | 11.1 | 9.6 | 0.9 | 15.0 | 5 | Yellow |
| AU Producer ZYMV | Auburn Univ. | 37,066 | 9.7 | 11.0 | 9.7 | 0.8 | 14.4 | 5 | Red |
| AU Sweet Scarlet | Hollar Seed Co. | 35,465 | 10.3 | 11.3 | 9.8 | 0.6 | 14.6 | 5 | Red |
| Lady | Sunseeds | 34,129 | 9.6 | 12.3 | 8.9 | 0.9 | 15.4 | 6 | Red |
| WX30 | Southwestern | 32,176 | 9.9 | 13.4 | 9.0 | 0.9 | 15.0 | 6 | Red |
| Freedom (3022) | Sunseeds | 23,512 | 11.1 | 12.5 | 8.2 | 0.9 | 17.5 | 7 | Red |
| XP 452547 | Asgrow | 20,441 | 10.5 | 16.1 | 8.0 | 0.6 | 13.1 | 8 | Red |
| <i>R</i> ² | | 0.429 | 0.371 | | | | | | |
| <i>CV</i> | | 44% | 8% | | | | | | |
| <i>lsd</i> | | 17,910 | NS | | | | | | |

¹ Harvested July 24, July 27, and August 2. ² Melon type: 1=Jubilee, 2=Blocky Crimson Sweet, 3=Crimson Sweet Seedless, 4=Allsweet, 5=Crimson Sweet, 6=Blocky Jubilee, 7=Seedless Jubilee, 8=Smokey Jubilee.

TABLE 2. SECOND WATERMELON VARIETY TRIAL, VIDALIA ONION AND VEGETABLE RESEARCH CENTER¹

| Variety | Seed source | Yield <i>lbs/ac</i> | Sugar content % | Fruit length <i>in</i> | Fruit width <i>in</i> | Rind thickness <i>in</i> | Fruit weight <i>lbs</i> | Melon type ² | Flesh color |
|-----------------------|-------------|------------------------|--------------------|---------------------------|--------------------------|-----------------------------|----------------------------|-------------------------|-------------|
| Piñata | Willhite | 30,401 | 9.2 | 13.7 | 8.2 | 0.7 | 15.0 | 4 | Red |
| Sweet Amigo | D. Palmer | 11,986 | 9.3 | 16.2 | 8.3 | 0.4 | 16.5 | 4 | Red |
| Buttercup | D. Palmer | 28,085 | 10.4 | 10.7 | 8.5 | 0.5 | 11.5 | 5 | Yellow |
| DPS 4571 | D. Palmer | 27,791 | 10.1 | 11.6 | 8.8 | 0.5 | 12.6 | 3 | Red |
| Big Charlie | D. Palmer | 24,216 | 10.5 | 10.8 | 9.3 | 1.0 | 12.1 | 3 | Red |
| Sweet Caroline Imp | D. Palmer | 19,410 | 10.9 | 9.4 | 8.7 | 0.5 | 10.3 | 3 | Red |
| Enchantment | D. Palmer | 19,097 | 10.9 | 11.6 | 9.3 | 0.6 | 13.2 | 3 | Red |
| DPS 4586 | D. Palmer | 12,084 | 11.5 | 10.5 | 7.9 | 0.5 | 10.7 | 3 | Red |
| Stars n Stripes | Asgrow | 20,797 | 10.4 | 15.5 | 7.4 | 0.4 | 12.6 | 1 | Red |
| DPSX 4599 | D. Palmer | 7,560 | 10.9 | 7.6 | 7.3 | 0.8 | 6.5 | 9 | Red |
| DPSX 4598 | D. Palmer | 5,496 | 11.9 | 8.2 | 7.4 | 0.5 | 7.2 | 9 | Red |
| WT-1 | D. Palmer | 4,622 | 10.4 | 7.6 | 6.9 | 0.5 | 6.4 | 9 | Red |
| <i>R</i> ² | | 0.667 | 0.672 | | | | | | |
| <i>CV</i> | | 61% | 10% | | | | | | |
| <i>lsd</i> | | 11,126 | 1.0 | | | | | | |

¹ Harvested August 14. ² Melon type: 1=Jubilee, 2=Blocky Crimson Sweet, 3=Crimson Sweet Seedless, 4=Allsweet, 5=Crimson Sweet, 6=Blocky Jubilee, 7=Seedless Jubilee, 8=Smokey Jubilee 9=Sugar Baby Seedless.

TABLE 3. CANTALOUPE VARIETY TRIAL, VIDALIA ONION AND VEGETABLE RESEARCH CENTER¹

| Variety | Seed source | Yield <i>lbs/ac</i> | Sugar content % | Fruit length <i>in</i> | Fruit width <i>in</i> | Rind thickness <i>in</i> | Fruit weight <i>lbs</i> | Melon type | Flesh color |
|-----------------------|-----------------|------------------------|--------------------|---------------------------|--------------------------|-----------------------------|----------------------------|-------------|-------------|
| Vienna | Asgrow | 18,263 | 7.9 | 7.5 | 7.1 | 2.0 | 5.2 | Eastern | Orange |
| Athena | Rogers | 13,914 | 9.3 | 6.9 | 6.4 | 1.9 | 4.1 | Eastern | Orange |
| SXM 7119 | Sunseeds | 13,449 | 7.2 | 7.4 | 6.9 | 1.9 | 4.3 | Eastern | Orange |
| Santa Claus | Open-pollinated | 14,353 | 6.2 | 10.3 | 6.3 | 2.1 | 4.9 | Santa Claus | Green |
| Western Shipping | Open-pollinated | 11,514 | 8.4 | 6.0 | 5.6 | 1.6 | 2.3 | Western | Orange |
| Juan Canary | Open-pollinated | 10,222 | 8.0 | 8.2 | 5.7 | 1.6 | 3.6 | Juan Canary | Green |
| Crenshaw | Open-pollinated | 8,770 | 8.3 | 8.1 | 7.1 | 2.0 | 5.7 | Crenshaw | Salmon |
| <i>R</i> ² | | 0.367 | 0.530 | | | | | | |
| <i>CV</i> | | 40% | 22% | | | | | | |
| <i>lsd</i> | | NS | NS | | | | | | |

¹ Harvested July 24.



Several New Watermelon Varieties In 2000



Joe Kemble, Edgar Vinson, Ron McDaniel, Malcomb Pegues,
Larry Wells, Brian Gamble, and Arnold Caylor

Watermelon trials were conducted at the Gulf Coast Research and Extension Center (GCREC) in Fairhope, Alabama, the Wiregrass Research and Extension Center (WREC) in Headland, Alabama, and the North Alabama Horticulture Research Center (NAHRC) in Cullman, Alabama. A watermelon trial was also conducted at the Lower Coastal Plain Research Station in Camden (Tables 1 and 2). Low yields due to excessive predation led to the termination of the study.

TABLE 1. RATINGS OF 2000 WATERMELON VARIETY TRIALS¹

| Location | GCREC | WREC | NAHRC |
|------------|-------|------|-------|
| Weather | 3 | 3 | 4 |
| Fertility | 5 | 5 | 5 |
| Irrigation | 5 | 5 | 5 |
| Pests | 5 | 5 | 5 |
| Overall | 4 | 4 | 5 |

¹See introduction for a description of rating scales.

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

| Variety | Type ¹ | Seed source | Fruit shape | Flesh color | Days to harvest | Disease claims ² | Years eval. |
|-----------------|-------------------|---------------|-------------|-------------|-----------------|-----------------------------|-------------|
| Athens | AS | Sunseeds | Blocky | Red | – | – | 00 |
| Big Stripe | AS, F1 | Willhite | Oblong | Red | 85 | FW | 99 |
| Carnival | AS, F1 | Novartis | Blocky | Red | 86 | ANT,FW | 97 |
| Crimson Glory | CS, F1 | Petoseed | Round | Red | 82 | FW | 96,97 |
| Dumara | AS | Sunseeds | Elongated | Red | – | – | 00 |
| Festival | IB, F1 | Johnny's | Round | Red | 75 | – | 99 |
| Fiesta | AS, F1 | Novartis | Elongated | Red | 85 | – | 97 |
| Jubilee II | JU, OP | Asgrow | Elongated | Red | 90 | *ANT, *FW | 94,97,98 |
| Pinata | AS, F1 | Willhite | – | Red | 85 | – | 99 |
| Royal Sweet | AS, F1 | Petoseed | Elongated | Red | 85 | ANT,FW | 94,96,97 |
| Stars'N Stripes | AS, F1 | Asgrow | Elongated | Red | 85 | *ANT, *FW | 97-99 |
| Starbrite | JU, F1 | Asgrow | Oblong | Red | 85 | FW | 97 |
| StarGazer | AS, F1 | Asgrow | Elongated | Red | 85 | *ANT, *FW | 98,99 |
| SWD 7303 | AS | Sakata | Elongated | Red | 85 | – | 00 |
| Sweet Favorite | JU | Sakata | Oblong | Red | 83 | – | 00 |
| SXW 5040 | CS | Sunseeds | Oblong | Red | – | *FW | 00 |
| Tigar Baby | CS | Petoseeds | Round | Yellow | 80 | *ANT,*FW | 00 |
| Variety #800 | AS | Abbott & Cobb | Oblong | Red | – | – | 00 |
| WX8 | IB | Willhite | Round | Red | – | – | 00 |
| WX22 | AS | Southwest | – | – | – | – | 00 |
| WX30 | AS | Southwest | – | – | – | – | 00 |
| Yellow Doll | IB | Petoseed | Oval | Yellow | 68 | – | 00 |

*Race 1 only. – = not available from seed catalogues.

Disease claims: ANT = Anthracnose; FW = Fusarium Wilt; AS = Allsweet.

CS = Crimson Sweet; IB = Icebox; JU = Jubilee; xxx = Triploid (seedless).

At all locations, watermelons were direct seeded on five foot by 60 foot plots. At NAHRC watermelons were grown on silver plastic mulch with a five-foot within row spacing. At WREC and GCREC plants were grown on bare ground with a within row spacing six feet and were planted on April 26 and April 10, respectively.

At NAHRC, 55 pounds per acre of ammonium nitrate was applied on May 9. Fertilization consisted of weekly injections of six pounds of nitrogen per acre until harvest. Alnap 4L fertilizer was applied on June 1 at a rate of eight quarts per acre. Other herbicides used were Round-Up Ultra on July 29 at a rate of 4.7 pints per acre and Gramoxzone at a rate of three pints per acre on June 1. Fungicides used were Bravo Weather Stik at a rate of three pints per acre on June 9, June 26, and July 10. Insecticides used were Adios (at a rate of 1.5 pints per acre) on June 9 and Asana XL (at a rate of six ounces per acre) on June 19, June 26, and July 10.

At GCREC, 500 pounds per acre of 10-10-10 were applied preplant on March 23. Fertilization consisted of 220 pounds per acre of ammonium nitrate on May 16

and May 24. Preemergence herbicides used were Curbit (at a rate of three pints per acre) and Roundup (at a rate of 1.5 pints per acre) on April 10. Bravo fungicide was applied weekly between May 25 and June 30 at a rate of 1.5 pints per acre.

At WREC, 50 pounds per acre of nitrogen, phosphorus, and potassium were applied preplant on April 17 to meet soil test recommendations. Fertilization consisted of one application of ammonium nitrate (at a rate of 60 pounds nitrogen per acre) on May 26. Fungicides used were Bravo 720 (at a rate of three pints per acre) on June 2, and Bravo Ultrex (at a rate of 2.8 pounds per acre) on June 16 and 26. Weeds were controlled with one application of Sonalan (at a rate of three pints per acre) on April 26.

High yields were observed at all locations despite this year's drought. At GCREC and NAHS there were little or no differences among all sweet types. At WREC several types of varieties were included in the trial. 'Sweet Favorite' (a jubilee type) had the highest yield though not significantly higher than that of the experimental variety 'WX8'.

TABLE 3. THE 2000 DIPLOID WATERMELON VARIETY TRIAL

| Variety | Type | Stand % | Marketable yield lbs/a | Marketable fruits #/a | Cull weight lbs/a | Cull number #/a | Individual fruit wt. lbs | Soluble solids °Brix | Hollow heart in |
|---|------|---------|------------------------|-----------------------|-------------------|-----------------|--------------------------|----------------------|-----------------|
| Gulf Coast Research and Extension Center | | | | | | | | | |
| Starbrite | AS | • | 61,050 | 3,330 | • | • | 18 | 11.0 | 4 |
| Stars and Stripes | AS | • | 59,977 | 3,312 | • | • | 18 | 10.9 | 4 |
| Variety #800 | AS | • | 48,803 | 2,831 | • | • | 17 | 10.9 | 2 |
| Pinata | AS | • | 47,397 | 2,424 | • | • | 20 | 11.1 | 2 |
| WX22 | AS | • | 46,472 | 2,590 | • | • | 18 | 10.8 | 2 |
| Royal Sweet | AS | • | 46,102 | 2,720 | • | • | 17 | 10.6 | 1 |
| Stargazer | AS | • | 45,769 | 2,757 | • | • | 17 | 11.1 | 2 |
| Fiesta | AS | • | 42,106 | 2,923 | • | • | 15 | 11.1 | 1 |
| Dumara | AS | • | 41,588 | 2,590 | • | • | 16 | 10.8 | 0 |
| WX30 | AS | • | 41,070 | 2,276 | • | • | 18 | 11.2 | 0 |
| Athens | AS | • | 40,626 | 2,276 | • | • | 18 | 10.3 | 0 |
| SWD7303 | AS | • | 36,075 | 2,442 | • | • | 15 | 11.0 | 1 |
| <i>R</i> ² | | | <i>0.59</i> | | | | <i>0.55</i> | <i>0.15</i> | <i>0.30</i> |
| <i>CV</i> | | | <i>15</i> | | | | <i>9</i> | <i>6</i> | <i>158</i> |
| <i>Isd</i> | | | <i>19,363</i> | | | | <i>2.09</i> | <i>0.96</i> | <i>3</i> |
| Wiregrass Research and Extension Center | | | | | | | | | |
| Sweet Favorite | JU | 100 | 53,056 | 2,719 | 2,422 | 181 | 19 | • | • |
| WX8 | JU | 73 | 45,907 | 1,921 | 2,610 | 145 | 24 | • | • |
| Jubilee II | JU | 100 | 39,668 | 1,740 | 4,133 | 145 | 27 | • | • |
| Yellow Doll | IB | 100 | 20,238 | 2,864 | 0 | 0 | 7 | • | • |
| Tiger Baby | CS | 93 | 51,345 | 5,836 | 0 | 0 | 9 | • | • |
| SXW 5023 | CS | 100 | 47,890 | 2,719 | 2,001 | 109 | 18 | • | • |
| Crimson Glory | CS | 100 | 40,495 | 2,465 | 1,646 | 73 | 18 | • | • |
| TWC-7 | CS | 93 | 36,395 | 2,538 | 2,066 | 145 | 14 | • | • |
| TWC-9 | CS | 100 | 33,771 | 1,921 | 964 | 73 | 18 | • | • |
| TWC-5 | CS | 100 | 25,669 | 2,501 | 355 | 36 | 10 | • | • |
| Festival | AS | 100 | 45,639 | 2,429 | 3,745 | 181 | 19 | • | • |
| <i>R</i> ² | | | <i>0.50</i> | | <i>0.27</i> | | <i>0.76</i> | | |
| <i>CV</i> | | | <i>30</i> | | <i>140</i> | | <i>20</i> | | |
| <i>Isd</i> | | | <i>17,110</i> | | <i>3,669</i> | | <i>7</i> | | |
| North Alabama Horticulture Research Center | | | | | | | | | |
| Pinata | AS | • | 46,546 | • | • | • | • | 8.0 | • |
| Starbrite | AS | • | 43,000 | • | • | • | • | 11.2 | • |
| Royal Sweet | AS | • | 42,547 | • | • | • | • | • | • |
| WX22 | AS | • | 36,510 | • | • | • | • | • | • |
| Fiesta | AS | • | 35,268 | • | • | • | • | • | • |
| Dumara | AS | • | 34,443 | • | • | • | • | 11.3 | • |
| SWD7303 | AS | • | 34,414 | • | • | • | • | 10.5 | • |
| Stars and Stripes | AS | • | 33,638 | • | • | • | • | 11.0 | • |
| Variety #800 | AS | • | 32,099 | • | • | • | • | 11.2 | • |
| Stargazer | AS | • | 30,973 | • | • | • | • | 11.2 | • |
| WX30 | AS | • | 30,035 | • | • | • | • | • | • |
| Athens | AS | • | 29,051 | • | • | • | • | 11.0 | • |
| <i>R</i> ² | | | <i>0.13</i> | | | | | <i>0.93</i> | |
| <i>CV</i> | | | <i>45</i> | | | | | <i>22</i> | |
| <i>Isd</i> | | | <i>18,780</i> | | | | | <i>3</i> | |

• = not available.



'Gold Slice' Squash Outperforms Standard Varieties Early



Joe Kemble, Edgar Vinson, and Randy Akridge

A yellow summer squash variety trial was conducted at the Brewton Research Field (BRF) in Brewton, Alabama (Tables 1 and 2). Squash varieties were direct seeded at a one inch depth in single row plots, five feet wide and 20 feet long. In-row spacing was 18 inches, which provided a stand of approximately 6,000 plants per acre. Beds were drip irrigated and covered with plastic mulch.

Preplant fertilization consisted of 60 pounds of nitrogen per acre. Insect control was provided by Sevin at a rate of two quarts per acre on June 17. To control weeds, atrazine was applied at a rate of two quarts per acre on May 9.

Squash were harvested eight times between June 7 and June 23. In order to be graded as US#1, summer squash must be harvested frequently while they are fairly young and tender. Fruits were graded as US#1, US#2, or cull according to the United States Standards for

TABLE 1. RATINGS OF 2000 SUMMER SQUASH VARIETY TRIAL¹

| Location | BRF |
|------------|-----|
| Weather | 3 |
| Fertility | 5 |
| Irrigation | 5 |
| Pests | 5 |
| Overall | 5 |

¹See introduction for a description of rating scales.

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. Early yields were determined by combing the yields of the first four harvests.

During the early harvests (Table 3) there were no significant differences between the standard variety 'Prelude II' and other varieties

such as 'Gold Slice', 'HMX8714' and 'General Patton'. Total production (Table 4) reveals that "Gold Slice and 'HMX8714' out performed 'Prelude II'.

TABLE 2. SEED SOURCE, FRUIT TYPE, AND RELATIVE EARLINESS OF SELECTED SQUASH VARIETIES

| Variety | Type ¹ | Seed source | Days to harvest | Disease claims ² | Years evaluated |
|---------------------|-------------------|--------------|-----------------|-----------------------------|-----------------|
| Destiny III* | F1 | Asgrow | - | CMV,WMV,ZYMV | 97-00 |
| Dixie | F1 | Asgrow | 41 | - | 94-96,98,00 |
| General Patton | F1 | Asgrow | 41 | PYG | 00 |
| Gold Slice | F1 | Petoseed | 45 | - | 00 |
| HMX 8714 | F1 | Harris Moran | 45 | WMV,ZYMV,PRSV | 00 |
| Hurricane (Z) | F1 | Sunseed | 42 | | 00 |
| Independence II (Z) | F1 | Asgrow | 43 | WMV,ZYMV | 00 |
| Meigs(Z) | F1 | Asgrow | 41 | PYG | 00 |
| Midas | F1 | Willhite | 53 | PM | 00 |
| Pic-N-Pic | - | Seedway | 50 | - | 00 |
| Prelude II | F1 | Asgrow | 40 | PM,WMV,ZYMV | 97,98,00 |
| Suwannee | F1 | Sunseed | 42 | | 00 |
| Sundance | F1 | Petoseed | 45 | - | 00 |

* Precocious Variety; - = none; from seed catalogues

PYG = Precocious Yellow Gene, masks symptoms of some viruses

Disease claims: PM = Powdery Mildew; CMV= Cucumber Mosaic Virus; ZYMV = Zucchini Yellow Mosaic Virus; WMV = Watermelon Mosaic Virus; PRSV=Papaya Ringspot Virus

TABLE 3. EARLY PRODUCTION AND GRADE DISTRIBUTION OF SELECTED SUMMER SQUASH VARIETIES GROWN AT BREWTON RESEARCH FIELD

| Variety | Stand % | Early marketable wt. lbs/a | Early US#1 wt. lbs/a | Early US#2 wt. lbs/a | Early US#1 no. #/a | Early US#2 no. #/a |
|-------------------------|---------|----------------------------|----------------------|----------------------|--------------------|--------------------|
| Yellow Crookneck | | | | | | |
| Gold Slice | 100 | 6,922 | 3,268 | 3,654 | 11,745 | 7,939 |
| HMX8714 | 98 | 6,128 | 2,876 | 3,252 | 6,308 | 4,350 |
| Prelude II | 100 | 6,030 | 2,795 | 3,235 | 15,986 | 7,721 |
| General Patton | 100 | 5,579 | 3,105 | 2,474 | 12,398 | 5,220 |
| Sundance | 100 | 5,476 | 2,648 | 2,828 | 15,116 | 7,721 |
| Suwanne | 100 | 5,019 | 2,327 | 2,692 | 11,854 | 8,265 |
| Dixie | 75 | 4,829 | 2,354 | 2,474 | 12,289 | 6,416 |
| Destiny III | 100 | 4,627 | 2,398 | 2,229 | 11,963 | 7,504 |
| Midas | 100 | 4,366 | 1,604 | 2,762 | 6,416 | 7,178 |
| Zucchini | | | | | | |
| Hurricane | 100 | 5,410 | 2,811 | 2,599 | 6,199 | 3,480 |
| Meigs | 100 | 4,709 | 2,485 | 2,224 | 15,008 | 6,525 |
| Independence II | 100 | 4,187 | 1,577 | 2,610 | 3,371 | 3,589 |
| <i>R</i> ² | | 0.47 | 0.41 | | | |
| <i>CV</i> | | 18 | 28 | | | |
| <i>lsd</i> | | 1,354 | 993 | | | |

TABLE 4. TOTAL PRODUCTION AND GRADE DISTRIBUTION OF SELECTED SUMMER SQUASH VARIETIES GROWN AT BREWTON RESEARCH FIELD

| Variety | Stand % | Total marketable wt. lbs/a | Total US#1 wt. lbs/a | Total US#2 wt. lbs/a | Total Cull lbs/a | Total US#1 no. #/a | Total US#2 no. #/a | Individual US#1 fruit wt. lb |
|-------------------------|---------|----------------------------|----------------------|----------------------|------------------|--------------------|--------------------|------------------------------|
| Yellow Crookneck | | | | | | | | |
| Gold Slice | 100 | 13,806 | 6,840 | 6,965 | 2,267 | 23,490 | 13,594 | 0.29 |
| HMX8714 | 98 | 12,474 | 4,671 | 7,803 | 7,058 | 11,419 | 9,135 | 0.41 |
| Prelude II | 100 | 11,707 | 6,199 | 5,508 | 3,485 | 30,015 | 12,724 | 0.21 |
| General Patton | 100 | 13,077 | 7,047 | 6,030 | 2,789 | 26,861 | 11,854 | 0.27 |
| Sundance | 100 | 11,098 | 5,851 | 5,247 | 2,577 | 29,689 | 13,050 | 0.20 |
| Suwanne | 100 | 8,961 | 4,709 | 4,252 | 2,659 | 23,708 | 12,071 | 0.20 |
| Dixie | 75 | 8,488 | 4,676 | 3,812 | 3,703 | 26,100 | 8,809 | 0.18 |
| Destiny III | 100 | 10,271 | 5,274 | 4,997 | 3,154 | 27,079 | 13,811 | 0.20 |
| Midas | 100 | 9,015 | 3,899 | 5,117 | 2,909 | 17,618 | 12,180 | 0.22 |
| Zucchini | | | | | | | | |
| Hurricane | 100 | 9,923 | 4,100 | 5,824 | 8,928 | 10,331 | 7,178 | 0.40 |
| Meigs | 100 | 9,701 | 5,644 | 4,056 | 2,251 | 32,734 | 10,331 | 0.17 |
| Independence II | 100 | 6,617 | 1,892 | 4,725 | 10,391 | 4,785 | 6,199 | 0.40 |
| <i>R</i> ² | | 0.72 | 0.73 | | | | | |
| <i>CV</i> | | 14 | 19 | | | | | |
| <i>lsd</i> | | 2,074 | 1,357 | | | | | |

Seed Sources

Abbott and Cobb, Inc.

To order: (800)-345-SEED
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 4517 Tillman Bluff Rd.
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 Ph: (912) 249-8135

Asgrow Seed Co.

To order: (800) 234-1056
 Tech. Rep: Duaine E. Kief
 412 Holly Hill Ct.
 Tallahassee, FL 32312
 Ph: (805) 570-1791
 E-mail: duaine.kief@svseed.com

Tech Rep: Rusty Autry
 2221 North Park Ave.
 Tifton, GA 31796
 Ph: (912) 392-0255

Tifton Seed Distribution Center
 Tech. Rep: Van Lindsey
 Ph: (912) 382-1815

Ferry-Morse Seed Co.

To order: (608) 837-6574
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 Ph: (608) 837-6574

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 Rochester, NY 14692-2960
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 Fax: (716) 442-9386

Tech Rep: John Kemery
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 Walland, TN 37886-2010
 Ph: (423) 681-3509
 Fax: (423) 983-7034
 E-mail: jkemery998@aol.com

Harry Moran Seed Co.

To order: (209) 579-7333
 Tech. Rep: Laura Isaac
 P. O. Box 4938
 Modesto, CA 95352
 Ph: (209) 579-7333
 Fax: (209) 527-8674

Hollar Seeds

To order: (719) 254-7411
 P.O. Box 106
 Rocky Ford, CO 81067-0106
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 Fax: (719) 254-3539
 Website: www.hollarseeds.com

Johnny's Select Seeds

To order: (207) 437-4395
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 Albion, ME 04910-9731
 Fax: (800) 437-4290

Kelly Seed Company

To order: (800) 654-0726
 Tech. Rep: Jack Stuckey
 100 Shilo Rd
 P.O. Box 370
 Hartford, AL 36344
 Fax: (334) 588-6144

Lewis Taylor Farms

Bill Brim
 P.O. Box 822
 Tifron, GA 31793
 Ph: (912) 382-4454
 (Produced transplants for Alabama trials)

Liberty Seed Co.

To order: (800) 541-6022
 New Philadelphia, OH 44663-0806
 Ph: (330) 364-1611
 Fax: (330) 364-6415

Petoseed

To order: (850) 894-8026
 Tech. Rep: Cameron Sutherland
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 Tallahassee, FL 32308-1643
 Ph:(850) 894-8026
 Fax: (850) 894-8036

Rupp Seeds

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 Fax: (419) 337-5491

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Sakata Seed America, Inc.

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Tech. Rep: Atlee Burpee
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Lehigh, FL 33970-1103
Ph: (941) 369-0032

Sandoz Rogers/Novartis

To order: (912) 560-1863
Tech. Rep: Curt Pollard
Ph: (912) 560-1863, (912) 244-2922
E-mail: curt.pollar@seeds.novartis.com

Seedway

To order: (800) 952-7333
Tech. Rep: James J. Pullins
1225 Zeager Rd.
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Ph: (717) 367-1075
Fax: (717) 367-0387
E-mail: info@seedway.com

Shamrock Seed Co., Inc

To order: (408) 351-4443
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3 Harris Place
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Ph: (800) 351-4443
Fax: (408) 771-1517

Stokes Seeds Inc.

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Tech. Rep: Joe Butwin
P.O. Box 548
Buffalo, NY 14240-0548
Fax: (905) 684-8499

Willhite

To order: (800) 828-1840
Tech Rep: Don Dobbs
P.O. Box 23
Poolville, TX 76487
Fax: (817) 599-5843

Guidelines for Contributions to the Vegetable Variety Regional Bulletin

Vegetable variety evaluation and selection is an essential part of production horticulture. The vegetable variety regional bulletin is intended to report results of variety trials conducted by research institutions in the Southeast in a timely manner. Its intended audience includes growers, research/extension personnel, and members of the seed industry.

Timeliness and rapid turnaround are essential to better serve our audience. Hence, two bulletins are printed each year: one in November with results from spring crops, and another one in April with results from summer and fall crops. It is essential that trial results are available before variety decisions for the next growing season are made.

Here are a few useful guidelines to speed up the publication process for the next regional bulletin (fall 2000).

When: March 29, 2001

Deadline for fall 2000 variety trial report submissions.

What: Results pertaining to variety evaluation in a broad sense. This includes field performance, quality evaluation, and disease resistance. Here are a few tips:

- Follow the format used in the first five regional bulletins.
- Include author's complete mailing address, e-mail address, and phone number.
- Follow your own unit's internal review process. Contributions will be edited, but not formally reviewed.

How: Send a disk and hard copy to:

Edgar Vinson or Joe Kemble
Department of Horticulture
101 Funchess Hall
Auburn University, AL 36849-5408

Or send e-mail to:
evinson@acesag.auburn.edu, or
jkemble@acesag.auburn.edu



MISSISSIPPI STATE UNIVERSITY

1. North Mississippi Research and Extension Center, Verona, MS

THE UNIVERSITY OF FLORIDA

2. North Florida Research and Extension Center*Suwannee Valley, Live Oak, FL

THE UNIVERSITY OF GEORGIA

- On-farm locations in 3. Brantley, 4. Toombs, 5. Tattnall, and 6. Screven counties, GA
7. Vidalia Onion and Vegetable Research Farm, Reidsville, GA

NORTH CAROLINA STATE UNIVERSITY

8. North Carolina Cooperative Extension Service Granville County Center, Oxford, NC

AUBURN UNIVERSITY

9. Gulf Coast Research and Extension Center, Fairhope, AL
10. Brewton Research Field, Brewton, AL
11. Wiregrass Research and Extension Center, Headland, AL
12. Chilton Area Research and Extension Center, Clanton, AL
13. North Alabama Horticulture Research Center, Cullman, AL
14. Sand Mountain Research and Extension Center, Crossville, AL