

Trial Report: Watermelon Variety Evaluation 2018

Conducted by:

Timothy Coolong, PhD
Department of Horticulture
University of Georgia
2360 Rainwater Road
Tifton, GA 31793
tcoolong@uga.edu

Presented by:

Andre da Silva, PhD
Department of Horticulture
University of Georgia
2360 Rainwater Road
Tifton, GA 31793
adasilva@uga.edu

List of Tables & Figures

Table 1: Entries and seed companies for seedless melons

Table 2: Total yield data (all harvests)

Table 3: Total yield data ranked by percent 45 ct

Table 4: Total yield data ranked by percent 36 ct

Table 5: Yield of first harvest only

Table 6: Average yield of each harvest and percent of total from each harvest.

Table 7: Quality – firmness, brix, hollow heart, and hard seed.

Figure 1: Hollow Heart Ranking Scale

Production

Location: Tifton, GA

Entries: 30 varieties and advanced selections

Planting Date: Seeded on into 200 cell trays 9 Feb. Transplanted 3 April.

Plant Spacing: 6' centers black TIF plastic mulch, 42" in-row spacing (2074 per acre pop.)

Plot size: 10 plants per plot (2-row plots with 5 plants per row) with 10.5' alleys between adjacent plots, with 3 replicates of each variety. Missing plants replaced within 1 week of planting, complete stand for harvest.

Fumigation: Pic-Chlor 60 with black TIF plastic applied in Feb.

Fertilization: 500 lbs 10-10-10 under plastic when laid. Drip irrigation applied roughly 1 inch of water per week. Fertigation provided with 7-0-7 at a rate of 10-12 lbs/N/acre week for 12 weeks (approx. 170 lbs N total).

Herbicide: Row middle applications of Chateau, Curbit, and Dual Magnum.

Pest Control: Weekly fungicide and insecticide sprays according to UGA recommendations.

Pollenizer: Sp7 (Syngenta) placed after every 3rd and 5th plant in a plot (4 per plot, 2/row).

Pollination Services: 6 honeybee hives located approximately 500 feet from planting.

Data Collection

Harvest Dates: Seedless harvested on 20, 27 June and 11 July – 78, 85, and 99 days after transplant.

Fruit were harvested when tendrils had turned brown and ground-spots were yellow. Each fruit was weighed and graded into 60, 45, 36, and 30-count classes. The following classes and weights were determined by the National Watermelon Research and Development Group to be used for watermelon variety trials to aid in unifying trial results:

60 count: 9-13.5 lb, 45 count: 13.6-17.5 lb, 36 count: 17.6-21.4 lb, 30 count: 21.5+ lb
Fruit greater than 27 lb were not included in yield analysis.

Fruit from the second harvest (4 fruit per variety per replicate) were utilized for quality measurements. Average firmness was determined using an 11 mm probe with a hand-held firmness tester from 2 locations in 4 melons (8 readings) per replication. Average brix was obtained from a teaspoon sample of flesh from each of the 4 melon subset per replicate which was crushed using a hand-held lemon press and read using a hand-held refractometer. Average number of hard seed was determined by counting the total number of hard seed per 4-melon subsample. Each melon was quartered and the number of black, hard seed counted in all 4 quarters of each melon (light colored pips were not included in this rating, but black/dark brown large pips were).

Average hollow heart was rated by slicing melons in half (length-wise) and ranking melons on a 0-5 scale (See Figure 1 below). On this scale: 0= no visible cracking in melons; 1 < 0.25 inch-wide, cracking in one direction, still marketable; 2 =0.25-0.5 inch, cracking in a single or multiple directions marketable; 3= 0.5-1.0 cracking in one or multiple directions, not marketable; 4 > 1.0 inch cracking in multiple directions with fruit center still intact, not marketable; and 5 > 1.5 inch cracking with center cavity of fruit exposed. Statistics were conducted using SAS version 9.3. Proc GLM and Fisher's least significant test were conducted when appropriate. Subsampling procedures were used for firmness and hollow heart ratings.

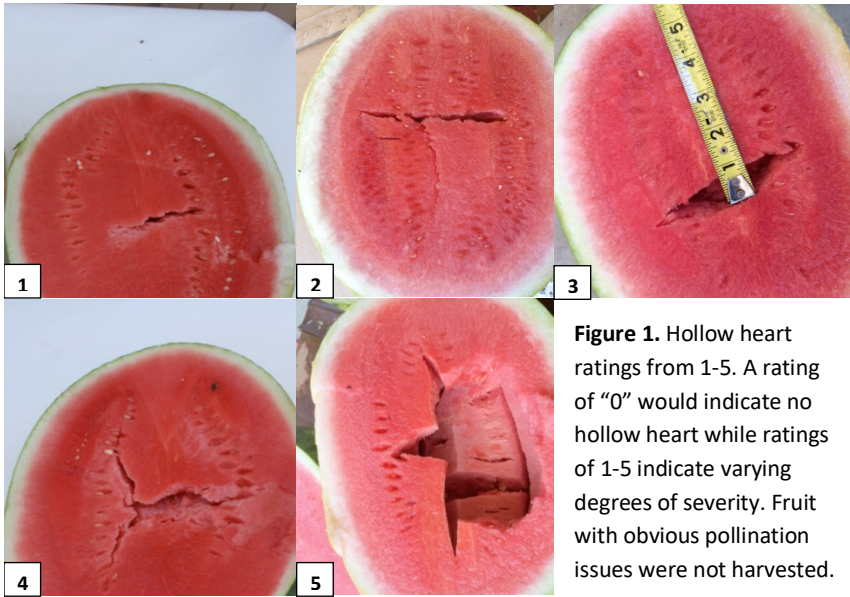


Figure 1. Hollow heart ratings from 1-5. A rating of “0” would indicate no hollow heart while ratings of 1-5 indicate varying degrees of severity. Fruit with obvious pollination issues were not harvested.

| Table 1. Entries into 2018 variety trial. | | | | | | | |
|--|-------------------|---------------------|----------------|---------------|----------------|-----------------|--------------------|
| Bayer | Enza Zaden | Harris Moran | Origene | Sakata | Seminis | Syngenta | US Seedless |
| Embassy | Red Amber | Turnpike | Maxima | Charismatic | Bottle Rocket | Captivation | USS22BC |
| 7187 HQ | Red Garnet | Troubadour | ORS6064 | Kingman | Joy Ride | Exclamation | USS1106 |
| 9651 HQ | | | ORS60599 | Secretariat | Road Trip | Excursion | |
| Warrior | | | ORS6151 | Unbridled | Summer Breeze | Fascination | |
| | | | ORS6181 | | SV0241 | | |
| | | | ORS 6203 | | Tailgate | | |

Results

Captivation was the highest yielding variety this season, but it was not significantly different from ten other varieties. Captivation had a yield that was mostly split between 36 and 45 counts with some 30 count fruit. Bottle rocket had the highest average weight at 20.1 lb per fruit, although USS22BC was a close second at 19.5 lbs/fruit. Accordingly, these varieties had high yields of 30 ct fruit. Secretariat had an average weight of 14.8 lbs/fruit with a high percentage of 60 and 45 count fruit. The varieties ORS6203 and ORS6064 had the highest percentages of 45 count fruit at 51% each. Captivation and Embassy had the highest yields of 45 count fruit at 48,250 and 41,130 lbs/acre, respectively. Captivation and Joy Ride had the highest yields of 36 count fruit, although Summer Breeze and Kingman had the highest percentage of 36 count fruit. In general, yields were delayed in this trial as with most commercial fields in S. Georgia.

Tailgate had the highest first harvest yield as well as the highest percentage of total yield on the first harvest. Conversely, varieties such as 7187 HQ, ORS6064 and ORS6203 had less than 10% of their fruit harvested on the first harvest. The third and final harvest made up the majority of the fruit harvested for many varieties. Embassy had more than 75% of the total harvest occurring on the third pick. Again, this corresponds with several commercial fields nearby. Total brix readings of nearly all varieties were higher in 2018 than in 2017, with Joy Ride having a brix reading of 14.9% and Red Garnet having a value of 14.2%. Firmness readings were highest in ORS6203 and ORS60599. Troubadour, a variety that typically has high flesh firmness readings had firmness a value of 3.52 lb force for penetration, which made it one of the firmest varieties tested. Hollow heart was significantly higher in 2018 than in 2017. Many varieties that typically have not shown hollow heart symptoms displayed at least some level of hollow heart in 2018. This seemed to be linked to poor weather during pollination and was prevalent on commercial farms in the area. Hard seed counts were elevated as well. Although no varieties averaged more than 10 per fruit there were a several fruit that exceeded the USDA standard of 10 hard seed per fruit for individual fruit that were tested.

See the proceeding tables for results.

We would like to thank participating companies for their continued support.

Table 2. Total yield and average weight for watermelons grown in Tifton, GA 2018. Ranked in descending order based on total yields.

| Variety | Average Weight | Total Yield | 60 Count | 45 Count | 36 Count | 30 Count |
|----------------------|----------------|-------------|------------|------------|------------|------------|
| | (lbs) | | | | | |
| Captivation | 17.7 c-g | 128,710 a | 6,880 d-g | 48,250 a | 49,350 a | 24,230 b-f |
| Red Amber | 18.2 b-e | 123,170 ab | 9,630 b-g | 39,000 abc | 38,780 a-d | 35,760 abc |
| Joy Ride | 19.5 abc | 115,650 abc | 1,710 g | 27,470 b-g | 48,890 a | 37,570 abc |
| Embassy | 18.0 c-g | 112,440 a-d | 9,660 b-g | 41,130 ab | 39,590 a-d | 22,070 b-g |
| Unbridled | 18.0 c-g | 109,910 a-d | 7,600 d-g | 35,490 a-e | 42,300 abc | 24,520 b-f |
| USS22BC | 19.9 ab | 104,590 a-e | 2,560 g | 22,880 b-g | 30,910 a-g | 48,250 a |
| Turnpike | 18.1 b-g | 100,070 a-f | 3,210 g | 35,260 a-f | 37,460 a-e | 24,130 b-f |
| SV0241 | 16.6 f-i | 98,920 a-f | 13,010 b-f | 38,220 a-d | 31,700 a-g | 15,980 d-h |
| Summer Breeze | 17.0 e-h | 98,170 a-f | 12,870 b-e | 25,710 b-g | 44,020 ab | 15,570 d-h |
| Warrior | 17.2 e-h | 93,920 a-f | 14,900 bcd | 21,510 c-g | 41,510 a-d | 16,000 d-h |
| Bottle Rocket | 20.1 a | 91,480 a-g | 4,390 efg | 12,990 g | 36,030 a-f | 38,080 ab |
| Maxima | 16.8 e-i | 88,230 b-g | 13,160 b-f | 30,010 a-g | 25,430 b-g | 19,640 c-h |
| Kingman | 16.8 e-i | 87,350 b-g | 11,050 b-g | 32,590 a-f | 35,800 a-f | 7,900 fgh |
| 7187 HQ | 17.7 c-g | 87,270 b-g | 5,130 efg | 34,120 a-f | 35,040 a-f | 12,980 e-h |
| Excursion | 19.0 a-d | 85,700 b-h | 3,930 fg | 17,790 efg | 36,180 a-f | 27,800 b-d |
| Road Trip | 17.0 e-h | 84,740 c-h | 7,720 d-g | 35,220 a-f | 32,020 a-g | 9,780 e-h |
| Red Garnet | 17.4 d-g | 83,760 c-h | 6,780 d-g | 28,410 b-g | 37,310 a-e | 11,260 e-h |
| Fascination | 17.2 e-h | 83,150 c-h | 7,340 d-g | 32,500 a-f | 30,080 a-g | 13,240 d-h |
| Charismatic | 16.3 g-j | 79,170 c-h | 19,000 ab | 25,750 b-g | 22,920 c-g | 11,500 e-h |
| Secretariat | 14.8 j | 74,380 d-h | 26,980 a | 30,800 a-g | 11,810 g | 4,790 gh |
| 9651 HQ | 15.6 hij | 71,010 e-h | 13,690 b-e | 37,170 a-d | 15,640 fg | 4,510 gh |
| ORS6064 | 15.2 ij | 70,400 e-h | 17,690 abc | 35,980 a-e | 13,580 g | 3,150 h |
| Exclamation | 18.4 a-e | 70,270 e-h | 7,260 d-g | 16,590 fg | 15,520 fg | 30,900 a-d |
| Troubadour | 16.6 f-i | 68,660 e-h | 8,340 c-g | 27,990 b-g | 25,630 b-g | 6,700 fgh |
| Tailgate | 18.5 a-e | 66,660 e-h | 1,660 g | 21,130 c-g | 26,630 b-g | 17,230 d-h |
| ORS60599 | 17.3 d-h | 65,750 fgh | 5,910 d-g | 23,460 b-g | 24,990 b-g | 11,390 e-h |
| ORS6151 | 16.5 f-j | 65,000 fgh | 4,950 efg | 27,430 b-g | 24,920 b-g | 7,710 fgh |
| ORS6181 | 18.0 c-g | 63,310 fgh | 7,800 d-g | 19,430 d-g | 21,200 d-g | 14,890 d-h |
| USS1106 | 17.4 d-g | 55,020 hg | 4,930 efg | 20,770 c-g | 20,850 d-g | 8,460 fgh |
| ORS6203 | 16.5 f-j | 48,360 h | 6,500 d-g | 19,830 d-g | 17,270 efg | 4,760 gh |

²Numbers within the same column followed by the same letter(s) are not significantly different according to Fisher's Protected LSD test P<0.05.

**Table 2a. Total number of fruit in each size class in 2018 in Tifton, GA.
A population of 2074 plants was used.**

| Variety | Total Yield | 60 Count | 45 Count | 36 Count | 30 Count |
|----------------------|--------------------|-----------------|-----------------|-----------------|-----------------|
| | (no./acre) | | | | |
| Captivation | 7259 | 553 | 3111 | 2558 | 1037 |
| Red Amber | 6775 | 760 | 2558 | 2005 | 1452 |
| Embassy | 6291 | 760 | 2627 | 2005 | 899 |
| Unbridled | 6153 | 622 | 2281 | 2212 | 1037 |
| Joy Ride | 5945 | 138 | 1728 | 2489 | 1590 |
| SV0241 | 5945 | 1106 | 2489 | 1659 | 691 |
| Summer Breeze | 5738 | 1106 | 1659 | 2281 | 691 |
| Turnpike | 5531 | 277 | 2281 | 1936 | 1037 |
| Warrior | 5392 | 1175 | 1383 | 2143 | 691 |
| USS22BC | 5254 | 207 | 1452 | 1590 | 2005 |
| Kingman | 5185 | 899 | 2074 | 1867 | 346 |
| Maxima | 5185 | 1106 | 1936 | 1314 | 830 |
| Secretariat | 5047 | 2212 | 2005 | 622 | 207 |
| Road Trip | 4978 | 622 | 2281 | 1659 | 415 |
| 7187 HQ | 4908 | 415 | 2143 | 1797 | 553 |
| Charismatic | 4839 | 1521 | 1659 | 1175 | 484 |
| Fascination | 4839 | 622 | 2074 | 1590 | 553 |
| Red Garnet | 4770 | 553 | 1797 | 1936 | 484 |
| Bottle Rocket | 4632 | 346 | 830 | 1867 | 1590 |
| ORS6064 | 4632 | 1452 | 2351 | 691 | 138 |
| 9651 HQ | 4563 | 1106 | 2420 | 830 | 207 |
| Excursion | 4494 | 346 | 1106 | 1867 | 1175 |
| Troubadour | 4148 | 691 | 1867 | 1314 | 277 |
| ORS6151 | 3871 | 415 | 1797 | 1314 | 346 |
| Exclamation | 3802 | 622 | 1037 | 830 | 1314 |
| ORS60599 | 3733 | 484 | 1452 | 1314 | 484 |
| ORS6181 | 3664 | 691 | 1244 | 1106 | 622 |
| Tailgate | 3595 | 138 | 1314 | 1383 | 760 |
| USS1106 | 3180 | 415 | 1314 | 1106 | 346 |
| ORS6203 | 2904 | 553 | 1244 | 899 | 207 |

Table 3. Total yield and percentage of fruit in all counts for all harvests ranked in order of percent of 45 count fruit.

| Variety | Total Yield | 60 Count | 45 Count | 36 Count | 30 Count |
|---------------|-------------|----------|----------|----------|----------|
| | (lbs/acre) | (%) | | | |
| ORS6203 | 48,360 | 11.7 | 51.2 | 31.2 | 6.0 |
| ORS6064 | 70,400 | 25.4 | 51.0 | 18.8 | 4.9 |
| 9651 HQ | 71,010 | 18.1 | 50.8 | 26.1 | 5.1 |
| ORS6151 | 65,000 | 7.6 | 44.5 | 38.6 | 9.4 |
| ORS60599 | 65,750 | 10.0 | 43.3 | 31.3 | 15.4 |
| Troubadour | 68,660 | 11.5 | 42.8 | 35.7 | 10.0 |
| Road Trip | 84,740 | 9.3 | 41.0 | 37.8 | 11.9 |
| 7187 HQ | 87,270 | 5.7 | 40.9 | 38.6 | 14.8 |
| SV0241 | 98,920 | 13.2 | 40.7 | 32.5 | 13.7 |
| Secretariat | 74,380 | 36.5 | 40.5 | 16.0 | 6.9 |
| Fascination | 83,150 | 8.8 | 39.7 | 35.7 | 15.7 |
| USS1106 | 55,020 | 8.1 | 39.4 | 37.5 | 15.0 |
| Captivation | 128,710 | 5.5 | 38.4 | 38.2 | 17.9 |
| Maxima | 88,230 | 16.5 | 37.4 | 26.1 | 20.0 |
| Kingman | 87,350 | 12.5 | 35.9 | 43.7 | 7.9 |
| Red Garnet | 83,760 | 9.1 | 35.3 | 43.5 | 12.1 |
| Embassy | 112,440 | 8.5 | 34.9 | 36.1 | 20.5 |
| Turnpike | 100,070 | 3.4 | 34.3 | 38.5 | 23.8 |
| Charismatic | 79,170 | 23.9 | 33.1 | 29.0 | 14.0 |
| Tailgate | 66,660 | 2.3 | 32.5 | 40.6 | 24.7 |
| ORS6181 | 63,310 | 9.0 | 32.0 | 31.7 | 27.3 |
| Unbridled | 109,910 | 6.5 | 31.8 | 39.2 | 22.4 |
| Red Amber | 123,170 | 7.7 | 31.6 | 31.6 | 29.1 |
| Summer Breeze | 98,170 | 13.8 | 26.1 | 45.7 | 14.5 |
| Warrior | 93,920 | 17.9 | 23.8 | 42.8 | 15.5 |
| Joy Ride | 115,650 | 1.5 | 23.4 | 42.7 | 32.4 |
| Exclamation | 70,270 | 10.9 | 22.7 | 23.3 | 43.1 |
| USS22BC | 104,590 | 2.5 | 22.0 | 29.7 | 45.8 |
| Excursion | 85,700 | 4.8 | 21.7 | 41.4 | 32.1 |
| Bottle Rocket | 91,480 | 5.0 | 12.7 | 34.8 | 47.5 |

Table 4. Total yield and percentage of fruit in all counts for all harvests ranked in order of percentage of 36 count fruit.

| Variety | Total Yield | 60 Count | 45 Count | 36 Count | 30 Count |
|---------------|-------------|----------|----------|----------|----------|
| | (lbs/acre) | (%) | | | |
| Summer Breeze | 98,170 | 13.8 | 26.1 | 45.7 | 14.5 |
| Kingman | 87,350 | 12.5 | 35.9 | 43.7 | 7.9 |
| Red Garnet | 83,760 | 9.1 | 35.3 | 43.5 | 12.1 |
| Warrior | 93,920 | 17.9 | 23.8 | 42.8 | 15.5 |
| Joy Ride | 115,650 | 1.5 | 23.4 | 42.7 | 32.4 |
| Excursion | 85,700 | 4.8 | 21.7 | 41.4 | 32.1 |
| Tailgate | 66,660 | 2.3 | 32.5 | 40.6 | 24.7 |
| Unbridled | 109,910 | 6.5 | 31.8 | 39.2 | 22.4 |
| ORS6151 | 65,000 | 7.6 | 44.5 | 38.6 | 9.4 |
| 7187 HQ | 87,270 | 5.7 | 40.9 | 38.6 | 14.8 |
| Turnpike | 100,070 | 3.4 | 34.3 | 38.5 | 23.8 |
| Captivation | 128,710 | 5.5 | 38.4 | 38.2 | 17.9 |
| Road Trip | 84,740 | 9.3 | 41.0 | 37.8 | 11.9 |
| USS1106 | 55,020 | 8.1 | 39.4 | 37.5 | 15.0 |
| Embassy | 112,440 | 8.5 | 34.9 | 36.1 | 20.5 |
| Troubadour | 68,660 | 11.5 | 42.8 | 35.7 | 10.0 |
| Fascination | 83,150 | 8.8 | 39.7 | 35.7 | 15.7 |
| Bottle Rocket | 91,480 | 5.0 | 12.7 | 34.8 | 47.5 |
| SV0241 | 98,920 | 13.2 | 40.7 | 32.5 | 13.7 |
| ORS6181 | 63,310 | 9.0 | 32.0 | 31.7 | 27.3 |
| Red Amber | 123,170 | 7.7 | 31.6 | 31.6 | 29.1 |
| ORS60599 | 65,750 | 10.0 | 43.3 | 31.3 | 15.4 |
| ORS6203 | 48,360 | 11.7 | 51.2 | 31.2 | 6.0 |
| USS22BC | 104,590 | 2.5 | 22.0 | 29.7 | 45.8 |
| Charismatic | 79,170 | 23.9 | 33.1 | 29.0 | 14.0 |
| 9651 HQ | 71,010 | 18.1 | 50.8 | 26.1 | 5.1 |
| Maxima | 88,230 | 16.5 | 37.4 | 26.1 | 20.0 |
| Exclamation | 70,270 | 10.9 | 22.7 | 23.3 | 43.1 |
| ORS6064 | 70,400 | 25.4 | 51.0 | 18.8 | 4.9 |
| Secretariat | 74,380 | 36.5 | 40.5 | 16.0 | 6.9 |

Table 5. Yield of varieties for the *first harvest only* ranked in descending order based on total yield.

| | Avg. Wt | Total | 60 ct | 45 ct | 36 ct | 30 ct |
|----------------------|----------------|-------------------|--------------|--------------|--------------|--------------|
| Variety | (lbs) | (lbs/acre) | | | | |
| Tailgate | 18.2 | 26,330 | 0 | 13,240 | 8,030 | 5,050 |
| Excursion | 18.5 | 22,680 | 1,430 | 6,710 | 6,400 | 8,140 |
| USS22BC | 20.0 | 22,570 | 880 | 3,550 | 6,810 | 11,330 |
| Kingman | 16.1 | 21,560 | 4,250 | 6,780 | 10,540 | 0 |
| Bottle Rocket | 20.2 | 21,510 | 900 | 1,050 | 13,070 | 6,490 |
| Joy Ride | 20.3 | 21,090 | 850 | 3,240 | 4,030 | 12,970 |
| Secretariat | 14.9 | 20,440 | 7,820 | 9,910 | 1,220 | 1,490 |
| Red Amber | 20.0 | 20,300 | 0 | 5,360 | 8,360 | 6,580 |
| Captivation | 16.9 | 20,130 | 1,710 | 8,560 | 6,630 | 3,240 |
| Summer Breeze | 19.3 | 19,830 | 0 | 4,350 | 12,400 | 3,080 |
| Troubadour | 16.8 | 19,270 | 4,200 | 6,170 | 5,590 | 3,320 |
| Charismatic | 16.0 | 17,630 | 5,070 | 5,520 | 5,430 | 1,600 |
| ORS6151 | 16.0 | 16,730 | 910 | 9,240 | 5,100 | 1,490 |
| ORS6181 | 19.3 | 16,320 | 920 | 3,230 | 5,570 | 6,610 |
| SV0241 | 16.1 | 15,600 | 670 | 6,860 | 6,510 | 1,570 |
| Exclamation | 18.7 | 15,530 | 830 | 3,190 | 5,070 | 6,440 |
| USS1106 | 15.6 | 14,310 | 1,560 | 7,650 | 5,100 | 0 |
| Unbridled | 16.5 | 13,850 | 3,300 | 3,230 | 4,060 | 3,270 |
| Warrior | 19.2 | 13,110 | 880 | 2,280 | 5,300 | 4,650 |
| Road Trip | 17.9 | 12,800 | 910 | 4,460 | 2,700 | 4,740 |
| Red Garnet | 14.4 | 12,210 | 3,290 | 6,460 | 2,460 | 0 |
| Fascination | 15.0 | 11,050 | 3,150 | 4,120 | 3,770 | 0 |
| Embassy | 17.3 | 10,920 | 930 | 4,400 | 5,590 | 0 |
| Turnpike | 15.8 | 9,730 | 1,500 | 4,360 | 3,880 | 0 |
| Maxima | 19.3 | 9,310 | 850 | 1,040 | 4,180 | 3,240 |
| 7187 HQ | 17.8 | 8,070 | 1,710 | 3,440 | 2,910 | 0 |
| 9651 HQ | 15.4 | 8,070 | 1,210 | 3,190 | 3,660 | 0 |
| ORS60599 | 21.1 | 7,040 | 0 | 2,170 | 0 | 4,870 |
| ORS6064 | 13.0 | 6,730 | 3,690 | 3,040 | 0 | 0 |
| ORS6203 | 17.6 | 3,650 | 0 | 0 | 3,650 | 0 |

Table 5a. Yield of varieties for the *first harvest only* ranked in descending order based on total yield.

| | Total | 60 ct | 45 ct | 36 ct | 30 ct |
|----------------------|-------------------|--------------|--------------|--------------|--------------|
| Variety | (no./acre) | | | | |
| Tailgate | 1452 | 0 | 830 | 415 | 207 |
| Secretariat | 1383 | 622 | 622 | 69 | 69 |
| Kingman | 1314 | 346 | 415 | 553 | 0 |
| Excursion | 1244 | 138 | 415 | 346 | 346 |
| Captivation | 1175 | 138 | 553 | 346 | 138 |
| Troubadour | 1175 | 346 | 415 | 277 | 138 |
| Bottle Rocket | 1106 | 69 | 69 | 691 | 277 |
| Charismatic | 1106 | 415 | 346 | 277 | 69 |
| USS22BC | 1106 | 69 | 207 | 346 | 484 |
| Joy Ride | 1037 | 69 | 207 | 207 | 553 |
| ORS6151 | 1037 | 69 | 622 | 277 | 69 |
| Red Amber | 1037 | 0 | 346 | 415 | 277 |
| Summer Breeze | 1037 | 0 | 277 | 622 | 138 |
| SV0241 | 968 | 69 | 484 | 346 | 69 |
| USS1106 | 899 | 138 | 484 | 277 | 0 |
| Exclamation | 830 | 69 | 207 | 277 | 277 |
| ORS6181 | 830 | 69 | 207 | 277 | 277 |
| Red Garnet | 830 | 277 | 415 | 138 | 0 |
| Unbridled | 830 | 277 | 207 | 207 | 138 |
| Fascination | 760 | 277 | 277 | 207 | 0 |
| Road Trip | 691 | 69 | 277 | 138 | 207 |
| Warrior | 691 | 69 | 138 | 277 | 207 |
| Embassy | 622 | 69 | 277 | 277 | 0 |
| Turnpike | 622 | 138 | 277 | 207 | 0 |
| 9651 HQ | 519 | 104 | 207 | 207 | 0 |
| ORS6064 | 519 | 311 | 207 | 0 | 0 |
| 7187 HQ | 484 | 138 | 207 | 138 | 0 |
| Maxima | 484 | 69 | 69 | 207 | 138 |
| ORS60599 | 346 | 0 | 138 | 0 | 207 |
| ORS6203 | 207 | 0 | 0 | 207 | 0 |

Table 6. Average Yield for each harvest and percentage of total yield from each harvest. Order based on yield of *third* and last harvest. First, second, and third harvests were 78, 85, and 99 days after transplanting.

| Variety | (lbs/acre) | | | (%) | | |
|---------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | 1 st Harvest | 2 nd Harvest | 3 rd Harvest | 1 st Harvest | 2 nd Harvest | 3 rd Harvest |
| Embassy | 10,920 | 17,220 | 84,290 | 9.7 | 15.3 | 75.0 |
| Captivation | 20,130 | 27,350 | 81,220 | 15.6 | 21.3 | 63.1 |
| Red Amber | 20,300 | 26,500 | 76,360 | 16.5 | 21.5 | 62.0 |
| Joy Ride | 21,090 | 23,630 | 70,930 | 18.2 | 20.4 | 61.3 |
| Unbridled | 13,850 | 26,550 | 69,510 | 12.6 | 24.2 | 63.2 |
| Turnpike | 9,730 | 24,040 | 66,300 | 9.7 | 24.0 | 66.3 |
| SV0241 | 15,600 | 17,910 | 65,410 | 15.8 | 18.1 | 66.1 |
| Maxima | 9,310 | 14,980 | 63,940 | 10.6 | 17.0 | 72.5 |
| ORS6064 | 6,730 | 920 | 62,750 | 9.6 | 1.3 | 89.1 |
| Warrior | 13,110 | 18,650 | 62,160 | 14.0 | 19.9 | 66.2 |
| Red Garnet | 12,210 | 15,680 | 55,870 | 14.6 | 18.7 | 66.7 |
| 7187 HQ | 8,070 | 26,210 | 52,990 | 9.2 | 30.0 | 60.7 |
| USS22BC | 22,570 | 31,360 | 50,660 | 21.6 | 30.0 | 48.4 |
| Road Trip | 12,800 | 22,300 | 49,640 | 15.1 | 26.3 | 58.6 |
| ORS60599 | 7,040 | 9,700 | 49,020 | 10.7 | 14.7 | 74.5 |
| Summer Breeze | 19,830 | 32,110 | 46,220 | 20.2 | 32.7 | 47.1 |
| Kingman | 21,560 | 20,450 | 45,340 | 24.7 | 23.4 | 51.9 |
| Troubadour | 19,270 | 5,300 | 44,090 | 28.1 | 7.7 | 64.2 |
| Bottle Rocket | 21,510 | 25,970 | 44,000 | 23.5 | 28.4 | 48.1 |
| Exclamation | 15,530 | 10,750 | 44,000 | 22.1 | 15.3 | 62.6 |
| Fascination | 11,050 | 29,520 | 42,590 | 13.3 | 35.5 | 51.2 |
| Charismatic | 17,630 | 21,390 | 40,150 | 22.3 | 27.0 | 50.7 |
| ORS6203 | 3,650 | 4,840 | 39,870 | 7.5 | 10.0 | 82.4 |
| ORS6181 | 16,320 | 9,790 | 37,200 | 25.8 | 15.5 | 58.8 |
| Secretariat | 20,440 | 17,190 | 36,760 | 27.5 | 23.1 | 49.4 |
| 9651 HQ | 8,070 | 26,570 | 36,370 | 11.4 | 37.4 | 51.2 |
| ORS6151 | 16,730 | 13,160 | 35,110 | 25.7 | 20.3 | 54.0 |
| Tailgate | 26,330 | 5,310 | 35,020 | 39.5 | 8.0 | 52.5 |
| USS1106 | 14,310 | 10,320 | 30,390 | 26.0 | 18.8 | 55.2 |
| Excursion | 22,680 | 34,550 | 28,480 | 26.5 | 40.3 | 33.2 |

Table 7. Average firmness, brix, hollow heart and hard seed ratings for watermelons grown in Tifton, GA in Spring 2017. Ranked from highest to lowest brix.

| Variety | Brix (%) | Firmness ^z (lbs) | Hollow Heart ^y (0-5) | Hard Seed ^x (Avg. no per fruit) |
|---------------|---------------------|-----------------------------|---------------------------------|--|
| Joy Ride | 14.9 a ^w | 3.14 b-g | 1.1 b-e | 0.00 |
| Red Garnet | 14.2 ab | 3.20 a-g | 1.8 a-d | 0.00 |
| Road Trip | 14.1 abc | 2.75 fg | 1.2 b-e | 0.33 |
| Unbridled | 13.7 a-d | 3.22 a-g | 2.8 ab | 0.25 |
| Bottle Rocket | 13.7 a-d | 2.80 fg | 1.0 b-e | 1.25 |
| Maxima | 13.7 a-d | 2.91 efg | 0.1 de | 0.25 |
| USS22BC | 13.6 a-e | 3.07 b-g | 1.5 a-e | 0.00 |
| Turnpike | 13.5 b-e | 3.32 a-f | 2.3 abc | 0.25 |
| Embassy | 13.5 b-e | 2.95 efg | 1.7 a-e | 0.25 |
| Secretariat | 13.5 b-e | 3.01 b-g | 1.2 b-e | 1.25 |
| USS1106 | 13.5 b-f | 2.96 efg | 1.0 b-e | 0.33 |
| Summer Breeze | 13.5 b-f | 3.20 a-g | 0.8 cde | 0.42 |
| 9651 HQ | 13.3 b-f | 3.33 a-f | 2.8 ab | 0.17 |
| ORS6151 | 13.3 b-f | 3.08 b-g | 1.7 a-e | 1.42 |
| Captivation | 13.3 b-f | 3.26 a-g | 1.3 a-e | 0.08 |
| ORS60599 | 13.3 b-f | 3.63 a-d | 0.1 de | 0.00 |
| ORS6203 | 13.3 b-f | 3.67 ab | 0.0 e | 2.33 |
| ORS6181 | 13.2 b-g | 2.88 efg | 1.6 a-e | 0.83 |
| Troubadour | 13.2 b-g | 3.52 a-e | 1.1 b-e | 0.83 |
| Red Amber | 13.1 b-g | 3.65 abc | 0.5 de | 0.08 |
| 7187 HQ | 13.0 b-g | 3.00 c-g | 2.8 ab | 0.25 |
| Fascination | 13.0 b-g | 3.32 a-f | 1.7 a-e | 0.33 |
| SV0241 | 12.9 b-g | 3.08 b-g | 1.4 a-e | 0.13 |
| Warrior | 12.9 b-g | 3.02 b-g | 0.2 de | 0.25 |
| Kingman | 12.8 c-g | 3.17 b-g | 1.3 a-e | 0.33 |
| Charismatic | 12.7 d-g | 2.62 g | 3.1 a | 0.42 |
| Excursion | 12.7 d-g | 2.83 fg | 0.9 cde | 0.25 |
| ORS6064 | 12.3 efg | 3.85 a | 0.1 de | 2.25 |
| Tailgate | 12.1 fg | 3.17 b-g | 0.4 de | 0.42 |
| Exclamation | 11.9 g | 2.97 d-g | 0.3 de | 0.67 |
| P value | 0.09 | 0.08 | 0.01 | NS |

^zFirmness is the average of 8 readings per replication and 3 replications (24 total readings per variety) using a Wagner hand-held firmness tester.

^yHollow Heart determined using the rating scale in Figure 1. Values represent the average of 4 fruit per replication and 3 replicates (15 fruit total).

^xHard seed counts represent the *average* number of seed counted in 4 quarters of 4 melons per replicate with 3 replicates (48 quarters of fruit).

^wNumbers within the same column followed by the same letter(s) are not significantly different according to Fisher's Protected LSD test P<0.05.