

# Trial Report: Watermelon Variety Evaluation 2016

Conducted by:

Timothy Coolong, PhD

Department of Horticulture

University of Georgia

2360 Rainwater Road

Tifton, GA 31793

[tcoolong@uga.edu](mailto:tcoolong@uga.edu)

## List of Tables & Figures

**Table 1: Entries and seed companies for seedless melons**

**Table 2: Entries and seed companies for seeded melons**

**Table 3: Total Yield Data (all harvests)**

**Table 4: Yield Data Harvest 1**

**Table 5: Yield Data Harvest 2**

**Table 6: Yield Data Harvest 3**

**Table 7: Melon Weight by Harvest**

**Table 8: Percentage 30, 36, 45, and 60 count fruit by harvest**

**Table 9: Quality Data Including, Brix, Firmness, Hollow Heart, and Hard Seed**

**Table 10 Yield Data by 45 Count**

**Table 11: Yield Data by 36 Count**

**Table 12: Total Yield and Quality Data for Seeded Melons**

**Figure 1: Hollow Heart Ranking Scale**

## Production

Location: Tifton, GA

Entries: 34 varieties and advanced selections, 2 observational varieties and 7 seeded varieties

Planting Date: Seeded on into 200 cell trays 16 Feb. Transplanted 29 March.

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 14' alleys between adjacent plots.

Fumigation: Pic-Clor 60 applied in Feb. when plastic laid.

Fertility: 1000 lbs/acre 5-10-15 preplant under plastic with weekly fertigations with 7-0-7 of 12 lbs/N acre for a total of 170 lb/acre N. Magnesium sulfate applied through drip at fruit set at a rate of 3 lb/acre Mg.

Irrigation: 1 inch per week until full vine, then 2 inches per week, reduced to 1 inch per week in early June.

Herbicide: Between rows: Dual Magnum + Curbit + Valor.

Pest Control: Weekly fungicide sprays according to UGA recommendations (+ copper for *Pseudomonas* after transplant).

Imidacloprid at planting followed by bifenthrin + Lannate (squash bug), Agrimek (mites), and Venom during growth.

Pollenizer: Wildcard (Sakata) placed after every 3<sup>rd</sup> and 5<sup>th</sup> plant in a plot (4 per plot, 2/row).

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

## Data Collection

Missing plants replaced within 1 week of planting, complete stand for harvest.

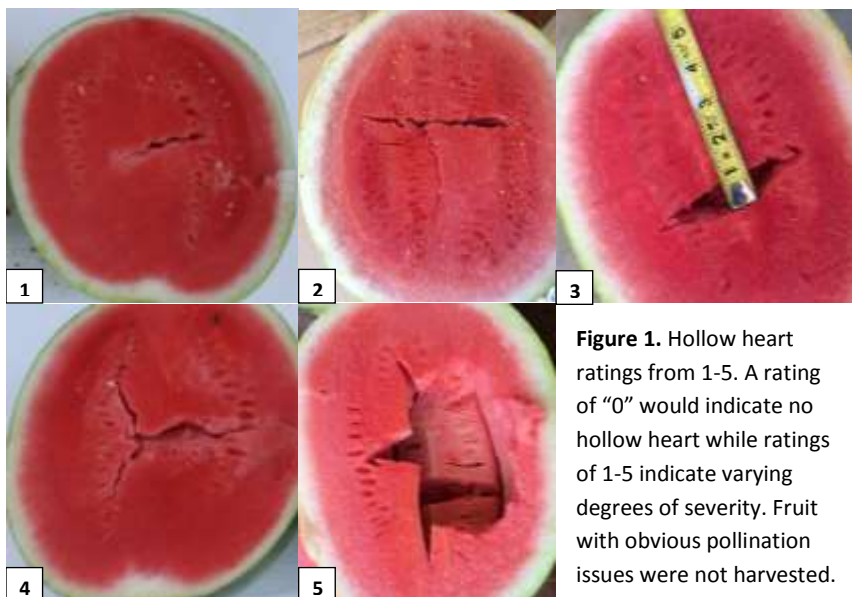
Harvest Dates: Seedless harvested on: 13 (Sweet Dawn Only) 22, 30 June and 6 July. Seeded harvested on: 27 June and 8 July. Because only 1 variety was harvested on 14 June those fruit were included in the first (22 June) harvest for data analysis.

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 from the second harvest (5 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 5 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 5-melon subsample. Each melon was quartered and the number of black, hard seed counted in all 4 quarters of each melon (pips were not included in this rating).

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. Seedless entries in the Spring 2016 Variety Trial.**

Harris Moran	High Mark	Nunhems	Origene	Sakata	Seminis	Siegers	Syngenta	Tri-Hishtil	US Agriseeds
Troubadour	Razorback	9601 HQ	Maxima	Affirmed	SV0241WA	Sweet Polly	Captivation	Grafted Fascination	USAWX90020
Traveler	Wolverine	7187 HQ	Talca	Charismatic	SV7112WA		Exclamation		USAWR15916 (observation)
HMX63T5636		7197 HQ	ORS12.154a	Kingman	Joy Ride		Excursion		
		ACX 6177	ORS6064B	Secretariat	Road Trip		Fascination		
		Embassy	ORS6227 (observation)	Unbridled	Summer Breeze		Sugar Fresh		
		Warrior					Sweet Dawn		

**Table 2. Seeded entries in the Spring 2016 Variety Trial.**

Bejo Seeds	Champion Seeds	Harris Moran	Seminis
BSS945	Sweetheart	Pathfinder	SV8443WL
			Santa Matilde
			Regency
			Sentinel

## Results

Tables 3-12 show results for yield and quality data. Overall there were high numbers of 30-count melons this season. Fruit were harvested at roughly the same maturity date (with the exception of the first harvest of Sweet Dawn) as in 2015; however fruit was significantly larger overall than last season. Yields were slightly higher overall in 2016 compared to 2015 and most of this was due to more 30-ct fruit. In a commercial setting many of these large fruit may not be marketable and therefore while these varieties that had an abundance of large fruit and subsequently had a large yield, may not be as profitable as those that may yield less, but have more fruit in the 45 and 36 ct categories. ‘Kingman’, a new entry from Sakata was the highest yielding, with large numbers of 36 ct fruit. This variety had a majority of fruit harvested on the third pick. ‘Sweet Dawn’, by far the earliest maturing melon (initial harvest was at 76 days after transplant) had an early concentrated fruit set with very large fruit, but had very few fruit remaining for 3<sup>rd</sup> and 4<sup>th</sup> picks (2<sup>nd</sup> and 3<sup>rd</sup> for reporting purposes) and subsequently had a lower yield. The largest fruit on average were produced by ‘Talca’ and ‘Joy Ride’. Similar results were observed on 2015. ‘SV0241’ had the highest yield of 45 ct fruit, with ‘Kingman’ having the highest yields of 36 ct fruit. ‘Joy Ride’ had the highest overall yield of 30 ct fruit and ‘ORS12.154a’ had the highest yields of 60 ct fruit.

‘Summer Breeze’ had the highest brix on average and ‘Troubadour’ had the highest firmness rating. Hollow heart was low overall, with ‘Affirmed’ having the highest degree of hollow heart, though overall would still on average have fallen into a marketable category. Hard seed were significantly higher in 2016 than in any other previous trial year. In some instances varieties had 1 or 2 fruit of 20 with a large number of hard seed. In the case of ‘Wolverine’, 1 melon had 100 seed that were hard, but the remaining 19 fruit had few. In several other instances, in particular with Fascination (both grafted and non-grafted) there were large numbers of small hard seeds.

A small number of seeded melons were also trialed in 2016. These plants were placed in a separate block to avoid affecting pollination in the seeded trial. Plants were spaced on a normal spacing for seedless melons (3.5-ft)- we were unable to space them as a typical grower would as pollenizers due to limited space. Therefore overall weights of seeded melons were high. However, the large weights of the harvested melons should not be discounted as some were used as pollenizers in other trials conducted on the research station and, while smaller they overall had weights in excess of 25 pounds each. The seeded melon trial had average fruit weights of 21.7 to 35.6 pounds (Table 12).

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

**Table 3. Total yield and average weight for watermelons grown in Tifton, GA 2016.**

Variety	Average Weight	Total Yield	60 Count	45 Count	36 Count	30 Count
	(lbs)	(lbs/acre)				
Kingman	17.4 f-k <sup>2</sup>	152,710 a	25,260 bc	35,680 a-h	57,120 a	34,600 b-j
Embassy	18.1 d-j	142,440 ab	14,690 d-j	38,840 a-f	41,040 a-g	47,870 a-f
Summer Breeze	18.5 b-g	141,350 abc	14,280 d-j	33,410 b-i	40,100 b-g	53,560 abc
Warrior	18.7 a-f	136,320 a-d	9,750 f-k	33,970 b-i	53,600 ab	39,000 a-h
9601	18.2 c-i	135,600 a-d	10,510 f-k	41,430 a-d	45,590 a-d	38,070 a-i
Wolverine	19.1 a-e	134,130 a-d	10,760 e-k	35,280 a-i	33,400 c-h	54,680 ab
Charismatic	18.1 d-j	133,660 a-d	10,230 f-k	39,740 a-e	40,380 b-g	43,310 a-g
ACX6177	19.0 a-e	131,970 a-e	9,790 f-k	29,060 c-j	40,630 a-g	52,490 a-d
SV0241	17.0 ijk	130,540 a-e	16,170 c-i	50,270 a	40,870 a-g	23,240 g-l
7197 HQ	19.6 abc	127,660 b-f	7,580 g-k	22,980 f-l	43,480 a-e	53,630 abc
Unbridled	18.9 a-e	124,860 b-g	8,720 g-k	25,730 d-l	47,360 abc	43,050 a-g
Affirmed	17.3 g-k	123,680 b-h	14,670 d-j	41,210 a-d	44,930 a-d	22,880 g-l
Razorback	19.0 a-e	123,210 b-h	6,690 ijk	26,080 d-l	44,870 a-d	45,570 a-g
Sweet Polly	18.4 c-h	122,470 b-h	8,360 g-k	33,710 b-i	43,070 a-f	37,330 a-i
Sugar Fresh	18.0 e-j	122,430 b-h	10,090 f-k	33,060 b-j	47,990 abc	31,290 c-j
Troubadour	15.5 l	121,460 b-j	29,670 b	46,610 ab	32,200 c-h	12,980 jkl
7187 HQ	17.1 h-k	119,830 b-j	17,430 c-g	35,250 a-i	37,270 b-g	29,880 d-j
Captivation	17.7 e-j	118,700 b-k	11,570 d-k	37,830 a-g	40,270 b-g	29,030 e-j
Exclamation	18.7 a-g	116,820 c-k	11,950 d-k	24,930 e-l	43,410 a-e	36,540 a-i
Joy Ride	20.0 a	115,200 d-k	8,980 g-k	19,620 i-l	28,840 d-h	57,760 a
Maxima	18.7 a-f	113,060 d-k	11,050 d-k	27,960 c-j	19,050 hij	55,000 ab
Road Trip	19.4 a-d	111,800 d-k	6,430 ijk	21,890 g-l	33,800 c-h	46,680 a-e
Fascination	18.2 d-i	108,170 e-l	17,210 c-h	20,490 h-l	29,420 d-h	41,040 a-h
USAW90020	16.7 jkl	105,630 g-l	19,480 c-f	27,170 c-k	35,540 c-h	23,450 g-l
Excursion	19.9 a	104,560 g-l	6,880 ijk	17,320 jkl	31,940 c-h	48,420 a-f
Grft. Fascination	16.1 kl	103,420 g-l	20,643 b-e	36,280 a-h	33,390 c-h	13,120 jkl
Traveler	16.1 kl	102,480 g-l	20,980 bcd	35,590 a-i	26,550 fgh	19,360 h-l
Secretariat	16.8 jkl	101,600 g-l	10,080 f-k	48,170 ab	27,740 e-h	15,610 i-l
ORS6064b	13.4 m	99,940 h-l	47,340 a	42,640 abc	6,750 j	3,210 kl
SV7112WA	19.8 ab	97,350 i-m	3,570 k	21,340 h-l	25,200 ghi	47,240 a-f
ORS12.154a	13.2 m	96,620 j-m	51,100 a	35,690 a-h	8,690 ij	1,140 l
HMX63T5636	18.5 b-g	94,740 klm	7,300 h-k	24,850 e-l	37,110 b-g	25,480 f-k
Talca	20.0 a	83,980 lm	6,080 jk	11,680 kl	25,730 gh	40,500 a-h
Sweet Dawn	18.7 a-f	72,940 m	7,820 g-k	10,310 l	26,330 fgh	28,480 e-j

<sup>2</sup>Numbers 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 4. Yield in pounds and bins per acre for the *first* watermelon harvest. Varieties ranked in descending order based on total yield in lb/acre.**

Variety	Total Yield (lb/acre)	60 Count		45 Count		36 Count		30 Count	
		(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)
Road Trip	35,548	2	1,784	5	3,263	23	16,315	21	14,186
Joy Ride	32,634	2	1,172	6	4,210	16	11,345	21	15,908
Sweet Polly	31,960	1	684	3	2,655	24	17,235	16	11,386
Unbridled	31,774	1	633	5	3,235	20	14,103	19	13,802
Maxima	27,398	1	674	7	5,102	13	9,126	17	12,496
SV7112WA	27,128	0	0	6	4,272	10	6,595	21	16,260
Grafted Fascination	25,718	9	6,982	14	9,374	12	7,729	2	1,632
Razorback	25,505	0	0	5	3,443	17	11,998	14	10,064
SV0241	25,023	0	0	12	8,410	19	13,097	5	3,515
Exclamation	24,821	1	674	5	3,308	10	7,285	19	13,554
7197 HQ	23,908	0	0	5	3,267	14	10,235	14	10,406
Embassy	22,980	2	1,203	7	4,864	10	6,969	14	9,945
Sugar Fresh	22,835	0	0	2	1,690	22	15,234	9	5,911
7187 HQ	22,513	1	633	5	3,101	12	7,954	16	10,826
Talca	20,740	0	0	5	3,401	14	10,329	10	7,010
Sweet Dawn	20,683	1	684	0	0	14	10,380	14	9,618
ACX6177	20,159	0	0	3	2,665	9	6,232	16	11,262
Warrior	20,021	0	0	8	5,475	15	11,117	5	3,429
USAW90020	19,910	2	1,576	8	5,669	12	7,909	7	4,756
Wolverine	19,844	0	0	3	2,292	10	6,844	14	10,708
Charismatic	19,827	0	0	9	6,741	10	7,135	9	5,952
9601 HQ	19,426	0	0	3	2,309	12	8,199	12	8,918
Excursion	19,399	1	871	2	1,203	4	2,655	18	14,670
HMX63T5636	18,096	1	684	1	871	13	9,343	10	7,197
Affirmed	17,857	0	0	7	4,864	10	6,927	9	6,066
Captivation	16,606	1	802	8	5,531	10	6,872	5	3,401
Fascination	16,233	0	0	2	1,065	10	6,941	12	8,227
Secretariat	16,229	1	653	10	7,238	10	7,083	2	1,255
Kingman	15,545	0	0	2	1,607	12	7,975	9	5,963
Summer Breeze	15,168	0	0	3	2,378	12	8,033	7	4,756
Traveler	13,471	2	1,203	5	3,173	10	6,772	3	2,323
Troubadour	13,180	2	1,213	8	5,527	7	5,185	2	1,255
ORS12.154a	8,614	6	3,968	5	3,263	2	1,383	0	0
ORS6064b	3,858	3	2,447	2	1,410	0	0	0	0

**Table 5. Yield in pounds and bins per acre for the *second* watermelon harvest. Varieties ranked in descending order based on total yield in lb/acre.**

Variety	Total Yield (lb/acre)	60 Count		45 Count		36 Count		30 Count	
		(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)
<b>7197 HQ</b>	47,453	1	695	9	6,274	27	19,091	29	21,393
<b>9601 HQ</b>	44,995	1	684	12	8,130	33	23,706	17	12,475
<b>Wolverine</b>	44,394	2	1,348	12	7,840	16	11,542	31	23,664
<b>Summer Breeze</b>	44,066	5	3,567	6	4,438	17	11,905	32	24,155
<b>Kingman</b>	41,770	4	3,101	10	7,321	26	17,971	19	13,377
<b>Embassy</b>	41,267	0	0	12	8,146	23	16,312	22	16,810
<b>Captivation</b>	39,890	5	3,443	12	8,158	15	10,619	25	17,670
<b>Charismatic</b>	39,598	3	1,784	17	11,858	23	15,897	14	10,059
<b>Exclamation</b>	39,344	0	0	14	10,100	26	18,282	16	10,961
<b>Troubadour</b>	38,592	6	4,490	15	10,448	23	15,991	10	7,663
<b>Razorback</b>	37,669	0	0	6	3,899	29	19,755	19	14,015
<b>Sweet Polly</b>	37,135	3	2,427	5	3,142	20	13,834	24	17,733
<b>SV0241</b>	35,569	3	1,970	17	12,517	14	9,852	16	11,231
<b>Warrior</b>	35,203	5	3,636	8	5,641	21	14,394	16	11,531
<b>Fascination</b>	35,092	1	871	9	6,609	13	9,139	25	18,472
<b>Traveler</b>	34,657	6	4,366	21	14,798	7	4,967	16	10,526
<b>SV7112WA</b>	34,314	0	0	5	3,298	17	12,403	26	18,614
<b>HMX63T5636</b>	33,588	3	2,022	13	9,302	19	12,973	12	9,292
<b>Joy Ride</b>	33,464	1	633	5	3,401	13	9,489	28	19,942
<b>Affirmed</b>	32,904	2	1,338	13	9,395	20	14,051	12	8,120
<b>Unbridled</b>	32,458	1	674	6	3,899	22	15,140	17	12,745
<b>ACX6177</b>	31,846	1	664	15	10,754	16	11,314	12	9,115
<b>Excursion</b>	29,824	2	1,673	8	5,254	15	10,647	16	12,250
<b>Road Trip</b>	28,276	2	1,797	8	5,724	8	5,558	21	15,196
<b>Sugar Fresh</b>	28,186	1	622	14	9,748	14	10,235	10	7,580
<b>Talca</b>	27,802	1	684	7	5,258	13	9,177	17	12,683
<b>Secretariat</b>	27,133	3	2,012	13	9,198	13	8,897	10	7,026
<b>7187 HQ</b>	26,713	1	622	13	8,773	13	9,198	12	8,120
<b>USAW90020</b>	25,939	1	816	11	7,466	13	9,444	12	8,213
<b>Sweet Dawn</b>	22,845	3	1,721	5	3,298	12	7,778	14	10,049
<b>Grafted Fascination</b>	20,463	3	2,461	15	10,854	8	5,600	2	1,549
<b>Maxima</b>	20,439	3	2,561	5	3,152	3	1,908	17	12,817
<b>ORS12.154a</b>	17,059	9	6,170	13	8,929	3	1,960	0	0
<b>ORS6064b</b>	12,776	8	5,890	8	5,240	0	0	2	1,645

**Table 6. Yield in pounds and bins per acre for the *third* watermelon harvest. Varieties ranked in descending order based on total yield in lb/acre.**

Variety	Total Yield (lb/acre)	60 Count		45 Count		36 Count		30 Count	
		(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)	(bin/acre)	(lb/acre)
Kingman	95,394	31	22,161	38	26,749	45	31,224	21	15,259
Summer Breeze	82,117	15	10,716	38	26,589	29	20,166	35	24,646
Warrior	81,093	8	6,111	32	22,855	40	28,089	32	24,038
ACX6177	79,963	13	9,126	23	15,643	33	23,084	45	32,111
Embassy	78,195	19	13,486	38	25,832	26	17,759	29	21,119
9601 HQ	76,038	14	9,826	46	31,571	23	15,736	26	18,905
Charismatic	74,239	13	8,446	30	21,144	24	17,349	38	27,299
ORS6064b	73,433	54	37,346	43	29,167	8	5,358	2	1,562
ORS12.154a	73,103	61	41,957	36	24,318	9	5,688	2	1,141
Affirmed	72,922	19	13,331	38	26,946	35	23,955	12	8,690
USAW90020	71,809	29	19,447	18	12,340	36	24,833	21	15,189
Sugar Fresh	71,408	14	9,463	31	21,621	33	22,524	24	17,800
7187 HQ	70,599	23	16,172	33	23,379	29	20,118	16	10,930
SV0241	69,951	21	14,197	43	29,342	26	17,919	12	8,493
Wolverine	69,889	13	9,416	36	25,147	22	15,016	28	20,310
Troubadour	69,692	35	23,970	45	30,633	16	11,028	5	4,060
Maxima	65,222	11	7,819	29	19,703	12	8,016	41	29,684
Captivation	62,206	10	7,328	35	24,141	33	22,779	12	7,957
Unbridled	60,623	10	7,409	27	18,599	26	18,111	22	16,504
Razorback	60,032	10	6,694	28	18,733	19	13,118	29	21,487
Secretariat	58,238	10	7,415	46	31,737	17	11,754	10	7,332
Grafted Fascination	57,242	16	11,200	23	16,053	29	20,056	14	9,934
Fascination	56,841	23	16,336	18	12,817	19	13,343	18	14,345
7197 HQ	56,299	10	6,880	20	13,440	20	14,150	29	21,829
Excursion	55,334	6	4,335	15	10,861	27	18,638	30	21,500
Traveler	54,349	22	15,415	25	17,613	22	14,808	9	6,512
Sweet Polly	53,369	8	5,247	40	27,911	17	11,998	12	8,213
Exclamation	52,659	16	11,272	16	11,516	26	17,847	16	12,024
Joy Ride	49,097	10	7,176	17	12,003	12	8,011	28	21,907
Road Trip	47,972	5	2,848	18	12,900	17	11,926	28	20,298
Talca	45,809	8	5,398	7	4,718	16	11,386	33	24,307
HMX63T5636	43,051	7	4,589	21	14,674	22	14,798	12	8,991
SV7112WA	42,693	5	3,572	21	14,834	12	7,855	22	16,431
Sweet Dawn	29,409	8	5,418	10	7,010	12	8,172	12	8,809



**Table 7. Average fruit weight at each harvest and average percent per count for watermelons grown in Tifton, GA in Spring 2015.**

Variety	Avg. Fruit Weight (total)	Avg. Fruit Wt. (harvest 1)	Avg. Fruit Wt. (harvest 2)	Avg. Fruit Wt. (harvest 3)	60 count	45 count	36 count	30 count
	(lbs)				%			
Joy Ride	20.0	20.9	21.7	18.7	8	17	25	50
Talca	20.0	20.1	20.8	19.6	7	14	31	48
Excursion	19.9	24.2	20.4	19.1	7	17	31	46
SV7112WA	19.8	20.5	20.9	18.3	4	22	26	49
7197 HQ	19.6	21.8	20.5	17.8	6	18	34	42
Road Trip	19.4	19.5	20.4	18.1	6	20	31	43
Wolverine	19.1	22.5	20.8	17.6	8	26	25	41
ACX6177	19.0	21.1	19.6	18.2	7	22	31	40
Razorback	19.0	21.1	20.3	17.7	5	21	36	37
Unbridled	18.9	20.8	20.2	17.7	7	21	38	34
Exclamation	18.7	20.8	19.5	17.3	7	25	39	29
Maxima	18.7	20.5	20.0	17.9	10	21	37	31
Sweet Dawn	18.7	21.2	19.4	17.9	10	25	17	49
Warrior	18.7	19.2	19.1	18.5	11	14	36	39
HMX63T5636	18.5	21.6	18.6	17.2	10	24	28	38
Summer Breeze	18.5	20.1	20.4	17.5	8	26	39	27
Sweet Polly	18.4	20.7	19.9	16.4	7	28	35	30
9601 HQ	18.2	21.9	19.8	17.0	8	31	34	28
Fascination	18.2	21.2	20.6	16.4	16	19	27	38
Charismatic	18.1	19.6	18.0	17.8	10	27	29	34
Embassy	18.1	19.2	20.4	16.6	8	30	30	32
Sugar Fresh	18.0	19.9	19.1	17.2	8	27	39	26
Captivation	17.7	19.2	18.7	16.8	10	32	34	24
Kingman	17.4	20.1	19.6	16.4	17	23	37	23
Affirmed	17.3	19.8	18.6	16.3	12	33	36	18
7187 HQ	17.1	19.5	18.4	15.9	15	29	31	25
SV0241	17.0	18.8	19.0	15.7	12	39	31	18
Secretariat	16.8	17.8	18.7	16.0	10	47	27	15
USAW90020	16.7	18.7	19.7	16.3	18	26	34	22
Grafted Fascination	16.1	16.1	15.6	16.1	20	35	32	13
Traveler	16.1	18.0	17.5	15.2	20	35	26	19
Troubadour	15.5	16.3	16.8	14.3	24	38	27	11
ORS6064b	13.4	12.7	14.0	13.3	47	43	7	3
ORS12.154a	13.2	14.2	14.3	13.0	53	37	9	1

**Table 8. Percent count for harvests 1-3. Ranked in descending order based on percentage 30 ct in harvest 1.**

Variety	Harvest 1				Harvest 2				Harvest 3			
	(%)											
	60 ct	45 ct	36 ct	30 ct	60 ct	45 ct	36 ct	30 ct	60 ct	45 ct	36 ct	30 ct
Excursion	4	6	14	76	6	18	36	41	8	20	34	39
SV7112WA	0	16	24	60	0	10	36	54	8	35	18	38
ACX6177	0	13	31	56	2	34	36	29	11	20	29	40
Exclamation	3	13	29	55	0	26	46	28	21	22	34	23
Wolverine	0	12	34	54	3	18	26	53	13	36	21	29
Fascination	0	7	43	51	2	19	26	53	29	23	23	25
Joy Ride	4	13	35	49	2	10	28	60	15	24	16	45
7187 HQ	3	14	35	48	2	33	34	30	23	33	28	15
Sweet Dawn	3	0	50	47	8	14	34	44	18	24	28	30
9601 HQ	0	12	42	46	2	18	53	28	13	42	21	25
Maxima	2	19	33	46	13	15	9	63	12	30	12	46
7197 HQ	0	14	43	44	1	13	40	45	12	24	25	39
Embassy	5	21	30	43	0	20	40	41	17	33	23	27
Unbridled	2	10	44	43	2	12	47	39	12	31	30	27
HMX63T5636	4	5	52	40	6	28	39	28	11	34	34	21
Road Trip	5	9	46	40	6	20	20	54	6	27	25	42
Razorback	0	13	47	39	0	10	52	37	11	31	22	36
Kingman	0	10	51	38	7	18	43	32	23	28	33	16
Sweet Polly	2	8	54	36	7	8	37	48	10	52	22	15
Affirmed	0	27	39	34	4	29	43	25	18	37	33	12
Talca	0	16	50	34	2	19	33	46	12	10	25	53
Summer Breeze	0	16	53	31	8	10	27	55	13	32	25	30
Charismatic	0	34	36	30	5	30	40	25	11	28	23	37
Sugar Fresh	0	7	67	26	2	35	36	27	13	30	32	25
USAW90020	8	28	40	24	3	29	36	32	27	17	35	21
Captivation	5	33	41	20	9	20	27	44	12	39	37	13
Traveler	9	24	50	17	13	43	14	30	28	32	27	12
Warrior	0	27	56	17	10	16	41	33	8	28	35	30
SV0241	0	34	52	14	6	35	28	32	20	42	26	12
Troubadour	9	42	39	10	12	27	41	20	34	44	16	6
Secretariat	4	45	44	8	7	34	33	26	13	54	20	13
Grafted Fascination	27	36	30	6	12	53	27	8	20	28	35	17
ORS12.154a	46	38	16	0	36	52	11	0	57	33	8	2
ORS6064b	63	37	0	0	46	41	0	13	51	40	7	2

**Table 9. Average firmness, brix, hollow heart and hard seed ratings for watermelons grown in Tifton, GA in Spring 2016.**

Variety	Brix (%)	Firmness <sup>z</sup> (lbs)	Hollow Heart <sup>y</sup> (0-5)	Hard Seed <sup>x</sup> (Avg. no per fruit)
Summer Breeze	12.0 a	2.64 ij	0.05 fg	0.4
Charismatic	11.9 a	2.80 g-j	0.95 a-d	0.6
7197 HQ	11.8 ab	3.61 a-d	0.45 b-g	1.4
Joy Ride	11.8 abc	3.12 c-i	0.30 d-g	0.3
9601 HQ	11.7 a-d	3.63 abc	0.65 b-g	0.5
Unbridled	11.7 a-d	3.09 d-i	1.15 abc	0.2
7187 HQ	11.6 a-e	2.87 g-j	0.75 a-g	2.5
Affirmed	11.5 a-f	2.56 j	1.50 a	0.4
Maxima	11.5 a-g	3.40 b-f	0.15 d-g	0.3
SV0241	11.5 a-g	3.03 e-j	0.60 b-g	0.5
Fascination	11.4 a-h	3.18 c-h	0.25 d-g	4.4 <sup>w</sup>
Kingman	11.4 a-h	3.03 e-j	0.90 a-e	0.5
Secretariat	11.4 a-h	3.17 c-h	0.85 a-f	2.0
Sugar Fresh	11.4 a-h	3.04 e-j	0.00 g	3.3
Embassy	11.3 a-i	3.20 c-h	0.33 c-g	1.5
SV7112WA	11.3 a-i	2.73 hij	0.10 efg	1.6
Sweet Polly	11.3 a-i	2.89 f-j	1.25 abc	0.3
Warrior	11.2 a-j	2.72 hij	0.45 b—g	0.4
Sweet Dawn	11.0 c-j	3.10 d-i	0.05 fg	3.2
Traveler	11.0 b-j	3.15 c-i	0.20 d-g	1.1
Troubadour	11.0 b-j	4.12 a	0.00 g	0.8
USAW90020	11.0 b-j	2.64 ij	0.67 a-g	0.3
Exclamation	10.9 d-j	3.46 b-e	0.05 fg	1.9
Road Trip	10.9 c-j	3.40 b-f	0.25 d-g	0.8
Wolverine	10.9 c-j	3.78 ab	0.40 c-g	5.5 <sup>v</sup>
ACX6177	10.8 e-j	3.54 b-e	0.25 d-g	2.1
Talca	10.8 e-j	2.83 g-j	0.00 g	0.6
ORS6064b	10.7 f-j	3.44 b-e	0.05 fg	0.5
Razorback	10.7 g-j	3.46 b-e	0.00 g	0.5
HMX63T5636	10.6 hij	3.12 c-i	0.07 efg	0.7
Captivation	10.5 ij	3.16 c-h	0.00 g	0.9
Grafted Fascination	10.5 ij	3.30 b-g	0.55 b-g	9.1 <sup>w</sup>
ORS12.154a	10.5 ij	3.21 c-h	0.00 g	0.7
Excursion	10.4 j	2.88 f-j	0.00 g	1.0

<sup>z</sup>Firmness is the average of 10 readings per replication and 4 replications (40 total readings per variety) using a Wagner hand-held firmness tester.

<sup>y</sup>Hollow Heart determined using the rating scale in Figure 1. Values represent the average of 5 fruit per replication and 4 replicates (20 fruit total).

<sup>x</sup>Hard seed counts represent the *total* number of seed counted in 4 quarters of 5 melons per replicate with 4 replicates (80 quarters of fruit).

<sup>w</sup>Fascination, both grafted and non, had large numbers of small hard seeds.

<sup>v</sup>'Wolverine' had 1 fruit with 100 hard seeds, while the remaining 19 analyzed had 10.

**Table 10 Total yield and average weight for watermelons grown in Tifton, GA 2016. Based on yield of 45 count fruit.**

Variety	Average Weight	Total Yield	60 Count	45 Count	36 Count	30 Count
	(lbs)	(lbs/acre)				
SV0241	17.0 ijk	130,540 a-e	16,170 c-i	50,270 a	40,870 a-g	23,240 g-l
Secretariat	16.8 jkl	101,600 g-l	10,080 f-k	48,170 ab	27,740 e-h	15,610 i-l
Troubadour	15.5 l	121,460 b-j	29,670 b	46,610 ab	32,200 c-h	12,980 jkl
ORS6064b	13.4 m	99,940 h-l	47,340 a	42,640 abc	6,750 j	3,210 kl
9601 HQ	18.2 c-i	135,600 a-d	10,510 f-k	41,430 a-d	45,590 a-d	38,070 a-i
Affirmed	17.3 g-k	123,680 b-h	14,670 d-j	41,210 a-d	44,930 a-d	22,880 g-l
Charismatic	18.1 d-j	133,660 a-d	10,230 f-k	39,740 a-e	40,380 b-g	43,310 a-g
Embassy	18.1 d-j	142,440 ab	14,690 d-j	38,840 a-f	41,040 a-g	47,870 a-f
Captivation	17.7 e-j	118,700 b-k	11,570 d-k	37,830 a-g	40,270 b-g	29,030 e-j
Grft. Fascination	16.1 kl	103,420 g-l	20,643 b-e	36,280 a-h	33,390 c-h	13,120 jkl
ORS12.154a	13.2 m	96,620 j-m	51,100 a	35,690 a-h	8,690 ij	1,140 l
Kingman	17.4 f-k <sup>2</sup>	152,710 a	25,260 bc	35,680 a-h	57,120 a	34,600 b-j
Traveler	16.1 kl	102,480 g-l	20,980 bcd	35,590 a-i	26,550 fgh	19,360 h-l
Wolverine	19.1 a-e	134,130 a-d	10,760 e-k	35,280 a-i	33,400 c-h	54,680 ab
7187 HQ	17.1 h-k	119,830 b-j	17,430 c-g	35,250 a-i	37,270 b-g	29,880 d-j
Warrior	18.7 a-f	136,320 a-d	9,750 f-k	33,970 b-i	53,600 ab	39,000 a-h
Sweet Polly	18.4 c-h	122,470 b-h	8,360 g-k	33,710 b-i	43,070 a-f	37,330 a-i
Summer Breeze	18.5 b-g	141,350 abc	14,280 d-j	33,410 b-i	40,100 b-g	53,560 abc
Sugar Fresh	18.0 e-j	122,430 b-h	10,090 f-k	33,060 b-j	47,990 abc	31,290 c-j
ACX6177	19.0 a-e	131,970 a-e	9,790 f-k	29,060 c-j	40,630 a-g	52,490 a-d
Maxima	18.7 a-f	113,060 d-k	11,050 d-k	27,960 c-j	19,050 hij	55,000 ab
USAW90020	16.7 jkl	105,630 g-l	19,480 c-f	27,170 c-k	35,540 c-h	23,450 g-l
Razorback	19.0 a-e	123,210 b-h	6,690 ijk	26,080 d-l	44,870 a-d	45,570 a-g
Unbridled	18.9 a-e	124,860 b-g	8,720 g-k	25,730 d-l	47,360 abc	43,050 a-g
Exclamation	18.7 a-g	116,820 c-k	11,950 d-k	24,930 e-l	43,410 a-e	36,540 a-i
HMX63T5636	18.5 b-g	94,740 klm	7,300 h-k	24,850 e-l	37,110 b-g	25,480 f-k
7197 HQ	19.6 abc	127,660 b-f	7,580 g-k	22,980 f-l	43,480 a-e	53,630 abc
Road Trip	19.4 a-d	111,800 d-k	6,430 ijk	21,890 g-l	33,800 c-h	46,680 a-e
SV7112WA	19.8 ab	97,350 i-m	3,570 k	21,340 h-l	25,200 ghi	47,240 a-f
Fascination	18.2 d-i	108,170 e-l	17,210 c-h	20,490 h-l	29,420 d-h	41,040 a-h
Joy Ride	20.0 a	115,200 d-k	8,980 g-k	19,620 i-l	28,840 d-h	57,760 a
Excursion	19.9 a	104,560 g-l	6,880 ijk	17,320 jkl	31,940 c-h	48,420 a-f
Talca	20.0 a	83,980 lm	6,080 jk	11,680 kl	25,730 gh	40,500 a-h
Sweet Dawn	18.7 a-f	72,940 m	7,820 g-k	10,310 l	26,330 fgh	28,480 e-j

<sup>2</sup>Numbers 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 11. Total yield and average weight for watermelons grown in Tifton, GA 2016. Based on yield of 36 count fruit.**

Variety	Average Weight	Total Yield	60 Count	45 Count	36 Count	30 Count
	(lbs)	(lbs/acre)				
Kingman	17.4 f-k <sup>2</sup>	152,710 a	25,260 bc	35,680 a-h	57,120 a	34,600 b-j
Warrior	18.7 a-f	136,320 a-d	9,750 f-k	33,970 b-i	53,600 ab	39,000 a-h
Sugar Fresh	18.0 e-j	122,430 b-h	10,090 f-k	33,060 b-j	47,990 abc	31,290 c-j
Unbridled	18.9 a-e	124,860 b-g	8,720 g-k	25,730 d-l	47,360 abc	43,050 a-g
9601 HQ	18.2 c-i	135,600 a-d	10,510 f-k	41,430 a-d	45,590 a-d	38,070 a-i
Affirmed	17.3 g-k	123,680 b-h	14,670 d-j	41,210 a-d	44,930 a-d	22,880 g-l
Razorback	19.0 a-e	123,210 b-h	6,690 ijk	26,080 d-l	44,870 a-d	45,570 a-g
7197 HQ	19.6 abc	127,660 b-f	7,580 g-k	22,980 f-l	43,480 a-e	53,630 abc
Exclamation	18.7 a-g	116,820 c-k	11,950 d-k	24,930 e-l	43,410 a-e	36,540 a-i
Sweet Polly	18.4 c-h	122,470 b-h	8,360 g-k	33,710 b-i	43,070 a-f	37,330 a-i
Embassy	18.1 d-j	142,440 ab	14,690 d-j	38,840 a-f	41,040 a-g	47,870 a-f
SV0241	17.0 ijk	130,540 a-e	16,170 c-i	50,270 a	40,870 a-g	23,240 g-l
ACX6177	19.0 a-e	131,970 a-e	9,790 f-k	29,060 c-j	40,630 a-g	52,490 a-d
Charismatic	18.1 d-j	133,660 a-d	10,230 f-k	39,740 a-e	40,380 b-g	43,310 a-g
Captivation	17.7 e-j	118,700 b-k	11,570 d-k	37,830 a-g	40,270 b-g	29,030 e-j
Summer Breeze	18.5 b-g	141,350 abc	14,280 d-j	33,410 b-i	40,100 b-g	53,560 abc
7187 HQ	17.1 h-k	119,830 b-j	17,430 c-g	35,250 a-i	37,270 b-g	29,880 d-j
HMX63T5636	18.5 b-g	94,740 klm	7,300 h-k	24,850 e-l	37,110 b-g	25,480 f-k
USAW90020	16.7 jkl	105,630 g-l	19,480 c-f	27,170 c-k	35,540 c-h	23,450 g-l
Road Trip	19.4 a-d	111,800 d-k	6,430 ijk	21,890 g-l	33,800 c-h	46,680 a-e
Wolverine	19.1 a-e	134,130 a-d	10,760 e-k	35,280 a-i	33,400 c-h	54,680 ab
Grft. Fascination	16.1 kl	103,420 g-l	20,643 b-e	36,280 a-h	33,390 c-h	13,120 jkl
Troubadour	15.5 l	121,460 b-j	29,670 b	46,610 ab	32,200 c-h	12,980 jkl
Excursion	19.9 a	104,560 g-l	6,880 ijk	17,320 jkl	31,940 c-h	48,420 a-f
Fascination	18.2 d-i	108,170 e-l	17,210 c-h	20,490 h-l	29,420 d-h	41,040 a-h
Joy Ride	20.0 a	115,200 d-k	8,980 g-k	19,620 i-l	28,840 d-h	57,760 a
Secretariat	16.8 jkl	101,600 g-l	10,080 f-k	48,170 ab	27,740 e-h	15,610 i-l
Traveler	16.1 kl	102,480 g-l	20,980 bcd	35,590 a-i	26,550 fgh	19,360 h-l
Sweet Dawn	18.7 a-f	72,940 m	7,820 g-k	10,310 l	26,330 fgh	28,480 e-j
Talca	20.0 a	83,980 lm	6,080 jk	11,680 kl	25,730 gh	40,500 a-h
SV7112WA	19.8 ab	97,350 i-m	3,570 k	21,340 h-l	25,200 ghi	47,240 a-f
Maxima	18.7 a-f	113,060 d-k	11,050 d-k	27,960 c-j	19,050 hij	55,000 ab
ORS12.154a	13.2 m	96,620 j-m	51,100 a	35,690 a-h	8,690 ij	1,140 l
ORS6064b	13.4 m	99,940 h-l	47,340 a	42,640 abc	6,750 j	3,210 kl

<sup>2</sup>Numbers 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 12. Total yield and average weight for seeded watermelons grown in Tifton, GA 2016.**

Variety	Average Weight	Total Yield	Total Yield	Range (Min-Max)	Brix	Internal Splitting
	(lbs)	(lbs/acre)	(no./acre)	(lbs)	(%)	(0-5) <sup>y</sup>
<b>SV8443WL</b>	29.6 bc	129,360 a	4,360 a	14.9 - 56.8	11.9 ab	1.1 a
<b>Sweetheart</b>	35.6 a	122,380 a	3,460 a	19.8 - 56.7	11.3 b	0.9 a
<b>Santa Matilde</b>	31.6 ab	121,120 a	3,790 a	16.8 - 58.8	11.9 ab	0.6 a
<b>Pathfinder</b>	26.8 cd	114,080 ab	4,250 a	15.2 - 39.6	11.7 ab	0.5 a
<b>Regency</b>	26.1 cd	99,280 ab	3,890 a	14.7 - 39.9	12.0 ab	1.1 a
<b>Sentinel</b>	25.1 de	98,740 ab	3,940 a	13.7 - 44.6	12.7 a	1.1 a
<b>BSS945</b>	21.7 e	81,380 b	3,870 a	14.8 - 35.4	12.3 ab	0.8 a

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

<sup>y</sup>Internal splitting evaluated on the same scale as hollow heart in seeded melons. Most melons of large size had some splitting when cut open.