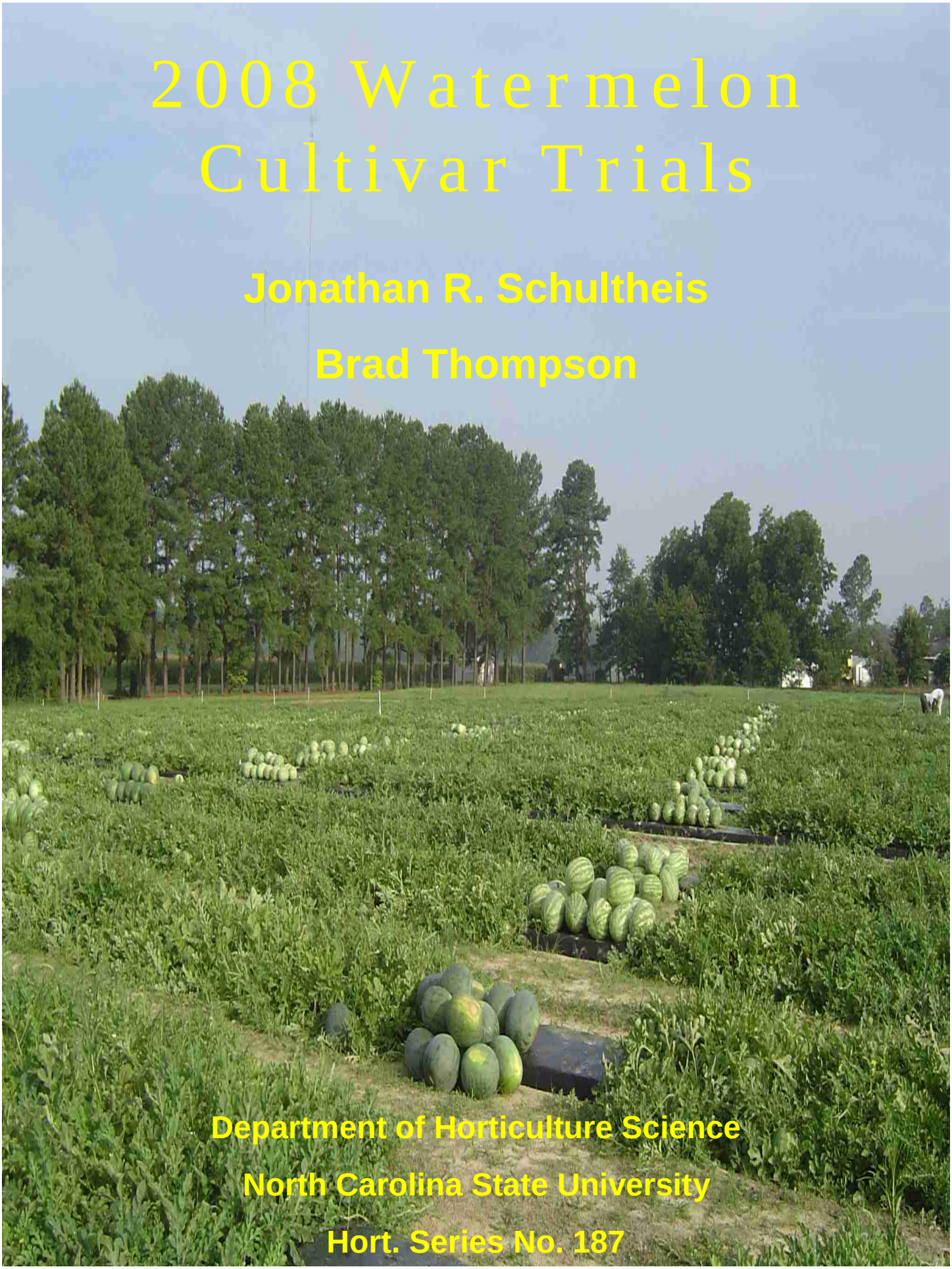
2008 Watermelon Cultivar Trials

Jonathan R. Schultheis

Brad Thompson



Department of Horticulture Science

North Carolina State University

Hort. Series No. 187

2008
Watermelon
Cultivar Trials

Principle Investigators

Jonathan R. Schultheis
Professor and Extension Specialist,
Vegetables
Department of Horticultural Science
N.C. State University
Raleigh, NC 27695-7609

W. Bradfred Thompson
Research Specialist
Department of Horticultural Science
N.C. State University
Raleigh, NC 27695-7609

General Cultural Practices

The watermelon trials were grown on black plastic mulch and fertigated with drip irrigation. Pesticides used on all plots were chemicals labeled for that crop, (2008 North Carolina Agricultural Chemicals Manual, (http://ipm.ncsu.edu/Agchem/agchem.html).

Acknowledgments

We gratefully acknowledge the assistance of Reid Evans (Superintendent) and Kirby Jones (Horticulture Supervisor), Central Crops Research Station, Clayton, NC, as well as, the personnel at the research station for their help in establishing, maintaining, and harvesting the cultivar evaluation trials. We want to acknowledge the following for their assistance with the trials: Dennis Adams, Jake Walgenbach, David Wilson, and Chelsie Jarvis. Also, we want to thank Joy Smith for her statistical analysis assistance.
The cooperation and support of Abbott & Cobb, Inc.; Clifton Seed Company; D.L. Palmer; Harris-Moran Seed Company; Hollar Seed; Nunhems; Sakata Seed Company; Seedway Seed Company; Syngenta Seeds, Inc.; United Genetics Seed Company; Willhite Seed, Inc.; and Zeraim Gedera Seed were also appreciated.

Disclaimer
This publication presents data from the cultivar evaluation trials conducted during 2008. Information in this report is believed to be reliable but should **not** be relied upon as a sole source of information. Limited accompanying detail is included but excludes some pertinent information, which may aid interpretation.

TABLE OF CONTENTS

CONTENT

Diploid and Triploid Watermelon Cultural Practices for 2008 Cultivar Trials, Central Crops Research Station, Clayton, NC

Introduction

Watermelon is an important crop grown in North Carolina as the state was ranked seventh in production among U.S. states nationally in 2007. Approximately 7,400 acres valued at nearly $12.42 million were produced in 2007. Growers in NC need to remain competitive in the market place and must grow and sell the best cultivars. More recently, in addition to yields, seed companies and markets have focused on specific traits such as lycopene content, hollow heart incidence, seed trace size and flesh firmness. We have committed more of our resources to the evaluation of many of these traits. In the tables that follow, the adaptability of the various red-flesh watermelons is evaluated, both for yields and quality. This should help the watermelon industry make informed decisions regarding newly released red-flesh cultivars or those that are being considered for release.

Materials and Methods

We have evaluated red-flesh watermelon types annually since 1989. Before the growing season, companies which sell watermelon seeds were contacted to obtain seed for the watermelon cultivar trials.

Once all seed were obtained, they were planted into LE 1803 transplant trays (Landmark Plastics Corp.; Akron, OH). Seeds of triploid and diploid cultigens were sown on 14 and 16 April, 2008, respectively. The planting medium used was Fafard Super-Fine Germinating Mix, a commercial soil less mix (Conrad Fafard, Inc.; Agawam, ME). Approximately 3 to 4 weeks after seeding, the plants were placed in a cold frame and hardened before being established in the field. Diploids were established in the field on 14 May 2008 and triploids were established on 21 May 2008. Fertilizer, 30 lb/acre N and 80 lb/acre K_20, was incorporated into the bed on 18 April prior to the laying of black polyethylene plastic (0.70 mil thick high density plastic film, 48 inches wide; B.B. Hobbs, Clinton, NC) on 23 April. Fumigant (Telone C-17) was injected on 23 April at 12 gallons/acre when the plastic was laid. Herbicides, Curbit at 4 pints/acre, Buccaneer at 1 qt/acre, and Alanap L at 6 quarts/acre were applied between the plastic beds for weed control on 8-9 May. Sandia at 0.75 oz/acre was applied to row middles on 5 June. Gramaxone at 3 pints/acre was applied on 6 June for weed control between row middles and Poast at 5 oz/gal was applied between the plastic beds for weed control on 3 July. Spacing between row middles was 10 feet and in-row spacing was 2.5 feet. Plot size was one row, 10 plants per plot, 25 feet long with 8 feet alleys between plots. At time of transplant, a starter solution was applied using 20-20-20 (0.5 lb/50 gallons water) and 0.5 lb Diazinon per 50 gallons water for insect control. Plots with missing plants were replanted approximately 7 days after planting to achieve 100% stand in most cases. SP-4 pollinizer plants were interplanted in triploid plots after plants 1, 4, and 7. Trickle irrigation was utilized (NETAFIM, 12 inch spacing, 0.24 gph; NETAFIM, Tel Aviv, Israel) over the growing season. Fertigation was initiated two weeks after planting and applied weekly during the planting season. A total of 80 lb/acre N and 160 lb/acre K_2O was drip applied through the season using a 4-0-8 liquid fertilizer. Cumulative amount of fertilizer applied for the season was 110, 0, and 240 lb/acre of N, P_2O_5, and K_2O,

respectively. Insecticides were applied every week as a preventative measure beginning 5 June and on the following dates (11, 19, 25 June; 2, 9, 16, 23, and 30 July; and 6, 14, and 28 August). The following products were alternated during consecutive spray applications to avoid insect resistance: Asana XL, Perm Up, Sniper, Thiomax, and Abomectin. Similarly, the following fungicide products were used: Kocide, Previcur Flex, Maneb 75DF, Cabrio, Nova, Procure, Pristine, and Bravo Weather Stik, and Quintec; and applied on the following dates: 5, 11, 19, 25, and 26 June; 2, 9, 16, 23, and 30 July; and 14 August.

There were four diploid harvests and four triploid harvests. The first harvest for the diploid test was 17 July, and subsequent harvests were 25 July; 4 and 20 August. The first harvest date for the triploid test was 28 July; subsequent harvests were 8 and 20 August, and 3 September. Each fruit was harvested when ripe, weighed and categorized statistically by size category. For the diploid watermelon test, fruits were placed in the following categories; < 8 lb, 8-15.9 lb, 16-23.9 lb, and 24 + lb. Fruit less than 8 lbs or 24 or more pounds were considered not marketable. For the triploid trial, fruits were placed in the following weight categories; < 7.9 lb, 8-9.9 lb, 10-11.9 lb, 12-15.9 lb, 16-17.9 lb, and 18 + lb. Fruits were considered marketable if they weighed at least 10 pounds. Smaller sized triploid fruit are increasing in demand with the most popular standard triploid fruit size being 12-16 lb. Evaluations of each watermelon entry included yield, fruit size, production earliness, soluble solids using a hand held digital refractometer, fruit shape and size, exterior and interior descriptions (rind pattern, length/width ratio, seed trace size, occurrence of hard seeds, hollow heart incidence and severity, and flesh color), and interior flesh firmness. Flesh firmness was taken by using a Penetrometer FT 011 with a 7/16” plunger tip, (QA Supplies LLC, Norfolk, Va.), and recorded in pounds. Samples were obtained by cutting the center of the fruit from the stem to blossom end. Pressure was then taken in five areas of the fruit; stem end, top side, ground spot side, blossom end, and center. Pressure was not taken on fruit with hollow heart. The reported measures on flesh firmness are an average of the five sample areas. Most of the quality measurements were taken at first harvest.

Financial Support

In addition to seed companies, this program has been supported by the College of Life & Agricultural Sciences, North Carolina Agricultural Research Service, and the North Carolina Cooperative Extension Service.

Table 1. Diploid Red-Flesh Watermelon Cultivar Descriptions and Seed Sources; Clayton, N.C., 2008.

Entry No.	Cultigen	Company	Description
1	Big Mara	United Genetics	Indistinct, very wide, medium to dark green stripes on light green background; elongated; uniform shape and size; average rind thickness
2	Crimson Sweet	Hollar	Distinct, medium width, medium to dark green stripes on light green background; round to slightly oval; blocky shape; uniform fruit size and shape; thick rind
3	Early Florida	United Genetics	Solid, medium to dark green rind; elongated; oblong to blocky; variation in shape and size; average rind thickness
4	Ole	Willhite	Indistinct, wide, medium to dark green stripes on light green background; elongated fruit; uniform shape with some variation in size; average to thick rind; excellent red flesh color
5	Plantation Pride	D. Palmer	Indistinct, wide, medium to dark green stripes on light green background; elongated; uniform shape and size; average rind thickness
6	PS 8330	Seminis	Indistinct, medium width, medium to dark green stripes on light green background; blocky; uniform shape; some variation in size; average rind thickness
7	Summer Flavor 800	Abbott & Cobb	Indistinct, very wide, medium to dark green stripes on light green background; blocky fruit shape; fairly uniform shape and size; very thick rind
8	Tropical	Harris Moran	Indistinct, wide, medium to dark green stripes on light green background; elongated; some bottle nosing at stem end; uniform size; average to thick rind

Figure 1. Diploid Watermelon Pictures

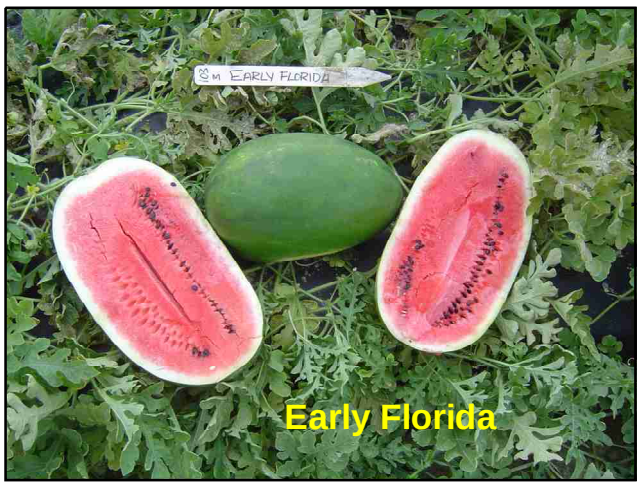
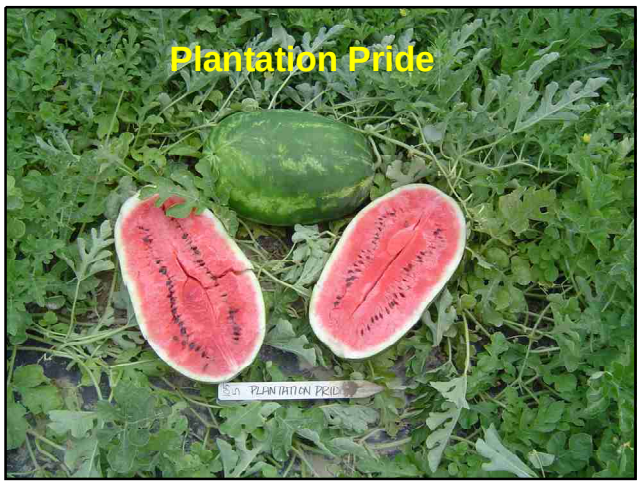


Figure 1. Diploid Watermelon Pictures



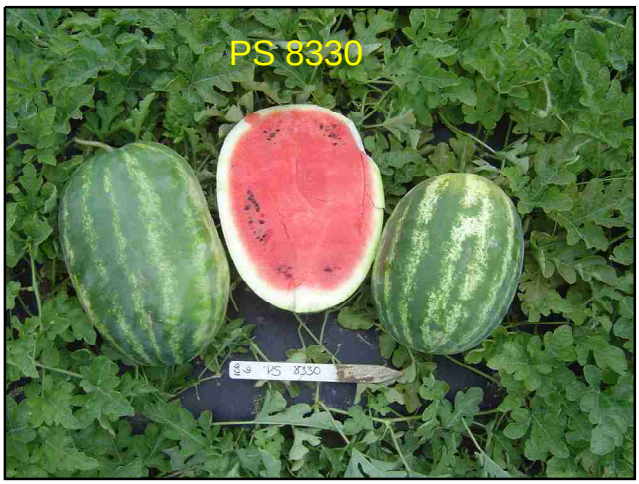


Table 2. Diploid Red-Flesh watermelon hybrid cultivar trial**. Number** of fruit harvested during **first harvest** by various weight classes (per acre) plus average fruit size. **Clayton, N.C., 2008.**

		Fruit size category (lb)					Total	Avg. Wt.
Cultivar	**Rank[1]**	**<8**	**8-15.9**	**16-23.9**	**24 +**	**Total**	**Mkt[2]**	**(lb)**
Big Mara	5	0	0	174	261	436	174	25.8
Crimson Sweet	2	0	44	523	436	1002	566	22.5
Early Florida	1	0	131	523	174	828	653	20.9
Ole	5	0	87	87	566	741	174	25.3
Plantation Pride	3	0	87	174	131	392	261	21.7
PS 8330	5	0	0	174	828	1002	174	29.0
Summer Flavor 800	3	0	0	261	392	653	261	25.9
Tropical	5	0	44	131	44	218	174	19.0
Average	- -	0	49	256	354	659	305	23.8
LSD(0.05)	**- -**	**0**	**114**	**370**	**364**	**432**	**354**	**5.6**

[1] Ranked according to total marketable weight.

[2] Includes fruit 8 - 23.9 lb.

Table 3. Diploid Red-Flesh watermelon hybrid cultivar trial. Percentage fruit harvested by **number** within each size category for **harvest 1**. **Clayton, N.C., 2008**

	Percentages[1] (%) by Fruit Size Category (lb)			
Cultivar	**<8**	**8-15.9**	**16-23.9**	**24+**
Big Mara	0	0	44	56
Crimson Sweet	0	6	52	42
Early Florida	0	21	55	24
Ole	0	10	8	81
Plantation Pride	0	30	28	43
PS 8330	0	0	22	78
Summer Flavor 800	0	0	34	66
Tropical	0	25	63	13
Average	0	12	38	50
LSD (0.05)	**0**	**40**	**51**	**46**

[1] Fruit weight (per cultivar weight class) divided by the total weight (per cultivar) times 100. Percentages are rounded to the nearest whole number.

Table 4. Diploid Red-Flesh watermelon hybrid cultivar trial**. Number** of fruit harvested during **second harvest** by various weight classes (per acre) plus average fruit size. **Clayton, N.C., 2008.**

		Fruit size category (lb)					Total	Avg. Wt.
Cultivar	**Rank[1]**	**≤8**	**8-15.9**	**16-23.9**	**24 +**	**Total**	**Mkt[2]**	**(lb)**
Big Mara	7	0	87	305	610	1002	392	23.9
Crimson Sweet	6	0	218	436	44	697	653	18.6
Early Florida	2	0	305	653	44	1002	958	17.5
Ole	3	0	218	610	566	1394	828	21.9
Plantation Pride	5	0	261	479	305	1045	741	20.1
PS 8330	8	0	0	305	392	697	305	27.1
Summer Flavor 800	1	0	174	871	174	1220	1045	20.4
Tropical	3	44	436	392	174	1045	828	18.0
Average	- -	5	212	506	289	1013	719	20.9
LSD(0.05)	**- -**	**45**	**243**	**440**	**317**	**459**	**483**	**4.4**

[1] Ranked according to total marketable weight.

[2] Includes fruit 8 - 23.9 pounds.

Table 5. Diploid Red-Flesh watermelon hybrid cultivar trial. Percentage fruit harvested by **number** within each size category for **harvest 2**. **Clayton, N.C., 2008**

	Percentages[1] (%) by Fruit Size Category (lb)			
Cultivar	**<8**	**8-15.9**	**16-23.9**	**24+**
Big Mara	0	10	32	58
Crimson Sweet	0	36	51	13
Early Florida	0	33	62	5
Ole	0	16	44	40
Plantation Pride	0	23	49	27
PS 8330	0	0	40	60
Summer Flavor 800	0	16	71	15
Tropical	3	44	33	20
Average	0	22	48	30
LSD (0.05)	**3**	**26**	**37**	**33**

[1] Fruit weight (per cultivar weight class) divided by the total weight (per cultivar) times 100. Percentages are rounded to the nearest whole number.

Table 6. Diploid Red-Flesh watermelon hybrid cultivar trial**. Number** of fruit harvested during **third harvest** by various weight classes (per acre) plus average fruit size. **Clayton, N.C., 2008.**

		Fruit size category (lb)					Total	Avg. Wt.
Cultivar	**Rank[1]**	**<8**	**8-15.9**	**16-23.9**	**24 +**	**Total**	**Mkt[2]**	**(lb)**
Big Mara	4	44	305	392	261	1002	697	20.0
Crimson Sweet	6	0	174	392	174	741	566	20.8
Early Florida	1	0	566	392	0	958	958	16.4
Ole	7	0	87	174	174	436	261	20.0
Plantation Pride	1	44	392	566	261	1263	958	18.1
PS 8330	8	0	44	131	44	218	174	18.9
Summer Flavor 800	5	87	218	392	218	915	610	19.5
Tropical	1	44	218	741	261	1263	958	20.3
Average	- -	27	250	397	174	849	648	19.2
LSD(0.05)	**- -**	**95**	**350**	**307**	**252**	**528**	**461**	**4.8**

[1] Ranked according to total marketable weight.

[2] Includes fruit 8 - 23.9 pounds.

Table 7. Diploid Red-Flesh watermelon hybrid cultivar trial. Percentage fruit harvested by **number** within each size category for **harvest 3**. **Clayton, N.C., 2008.**

	Percentages[1] (%) by Fruit Size Category (lb)			
Cultivar	**<8**	**8-15.9**	**16-23.9**	**24+**
Big Mara	6	25	42	27
Crimson Sweet	0	18	56	26
Early Florida	0	56	44	0
Ole	0	25	48	27
Plantation Pride	3	39	42	17
PS 8330	0	13	75	13
Summer Flavor 800	7	23	44	25
Tropical	3	17	57	22
Average	2	27	51	20
LSD (0.05)	**9**	**35**	**36**	**27**

[1] Fruit weight (per cultivar weight class) divided by the total weight (per cultivar) times 100. Percentages are rounded to the nearest whole number.

Table 8. Diploid Red-Flesh watermelon hybrid cultivar trial**. Number** of fruit harvested during **fourth harvest** by various weight classes (per acre) plus average fruit size. **Clayton, N.C., 2008.**

		Fruit size category (lb)					Total	Avg. Wt.
Cultivar	**Rank[1]**	**≤8**	**8-15.9**	**16-23.9**	**24 +**	**Total**	**Mkt[2]**	**(lb)**
Big Mara	6	0	218	523	218	958	741	22.0
Crimson Sweet	4	44	436	479	174	1133	915	17.8
Early Florida	1	87	784	305	44	1220	1089	13.7
Ole	7	87	349	349	131	915	697	17.0
Plantation Pride	3	44	392	610	87	1133	1002	17.2
PS 8330	1	44	784	305	87	1220	1089	15.5
Summer Flavor 800	7	0	218	479	87	784	697	18.3
Tropical	5	0	392	436	0	828	828	16.3
Average	- -	38	446	436	103	1024	882	17.2
LSD(0.05)	**- -**	**155**	**476**	**378**	**233**	**654**	**582**	**5.2**

[1] Ranked according to total marketable weight.

[2] Includes fruit 8 - 23.9 pounds.

Table 9. Diploid Red-Flesh watermelon hybrid cultivar trial. Percentage fruit harvested by **number** within each size category for **harvest 4**. **Clayton, N.C., 2008.**

	Percentages[1] (%) by Fruit Size Category (lb)			
Cultivar	**<8**	**8-15.9**	**16-23.9**	**24+**
Big Mara	0	18	49	33
Crimson Sweet	3	41	42	14
Early Florida	7	65	25	3
Ole	5	28	55	13
Plantation Pride	3	33	57	8
PS 8330	3	63	28	6
Summer Flavor 800	0	26	63	11
Tropical	0	51	49	0
Average	3	40	46	11
LSD (0.05)	**11**	**31**	**38**	**31**

[1] Fruit weight (per cultivar weight class) divided by the total weight (per cultivar) times 100. Percentages are rounded to the nearest whole number.

Table 10. Diploid Red-Flesh watermelon hybrid cultivar trial. Cumulative **fruit number** over four harvests by various weight classes (per acre). **Clayton, N.C.**, **2008.**

		Fruit size category (lb)					
Cultivar	**Rank[1]**	**<8**	**8-15.9**	**16-23.9**	**24+**	**Total**	**Total Mkt[2]**
Big Mara	6	44	610	1394	1350	3398	2004
Crimson Sweet	4	44	871	1830	828	3572	2701
Early Florida	1	87	1786	1873	261	4008	3659
Ole	7	87	741	1220	1438	3485	1960
Plantation Pride	2	87	1133	1830	784	3833	2962
PS 8330	8	44	828	915	1350	3136	1742
Summer Flavor 800	5	131	610	2004	828	3572	2614
Tropical	3	87	1089	1699	479	3354	2788
Average	- -	76	958	1595	915	3545	2554
LSD (0.05)	**- -**	**189**	**664**	**709**	**644**	**954**	**916**

[1] Ranked according to total marketable number.

[2] Includes fruit 8 - 23.9lb.

Table 11. Diploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by **number** over four harvests within each fruit size category. **Clayton, NC., 2008.**

	Percentages[1] (%) by Fruit Size Category (lb)			
Cultivar	**<8**	**8-15.9**	**16-23.9**	**24+**
Big Mara	1	18	40	40
Crimson Sweet	1	26	50	23
Early Florida	2	45	46	7
Ole	2	19	36	43
Plantation Pride	2	32	47	19
PS 8330	1	26	30	43
Summer Flavor 800	4	18	56	22
Tropical	2	32	51	15
Average	2	27	45	26
LSD (0.05)	**5**	**17**	**15**	**17**

[1] Fruit number (per cultivar and weight class) divided by the total number (per cultivar) times 100. Percentages are rounded to the nearest whole number.

Table 12. Diploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by harvest in **total** and **total marketable** categories. **Clayton, NC, 2008.**

	Percentages[1] (%) by Harvest for Total and Total Marketable fruit							
	Harvest 1		Harvest 2		Harvest 3		Harvest 4	
Cultivar	Total	Total Mkt.	Total	Total Mkt.	Total	Total Mkt.	Total	Total Mkt.
Big Mara	13	9	29	20	29	35	28	37
Crimson Sweet	28	21	20	24	21	21	32	34
Early Florida	21	18	25	26	24	26	30	30
Ole	21	9	40	42	13	13	26	36
Plantation Pride	10	9	27	25	33	32	30	34
PS 8330	32	10	22	17	7	10	39	63
Summer Flavor 800	18	10	34	40	26	23	22	27
Tropical	6	6	31	30	38	34	25	30
Average	19	11	29	28	24	24	29	36

[1] Fruit weight (per cultivar total and total marketable weight classes) divided by the cumulative total and total marketable number (per cultivar) times 100. Percentages are rounded to the nearest whole number.

Table 13. Diploid Red-Flesh watermelon hybrid cultivar trial**.** Cumulative **weight** (x 100) of fruit harvested over four harvests by various weight classes (per acre) plus average fruit size. **Clayton, N.C., 2008.**

		Fruit size category (lb)					Total	Avg. Wt.
Cultivar	**Rank[1]**	**<8**	**8-15.9**	**16-23.9**	**24 +**	**Total**	**Mkt[2]**	**(lb)**
Big Mara	6	3	81	271	393	748	353	22.1
Crimson Sweet	5	3	118	356	228	706	475	19.7
Early Florida	1	4	228	363	69	664	591	16.7
Ole	7	6	99	237	397	738	335	21.4
Plantation Pride	2	5	147	353	219	723	499	18.6
PS 8330	8	3	102	187	417	709	289	22.7
Summer Flavor 800	4	9	78	402	244	733	480	20.3
Tropical	3	4	153	329	132	618	482	18.5
Average	- -	5	126	312	262	705	438	20
LSD(0.05)	**- -**	**11**	**84**	**138**	**181**	**189**	**147**	**3.0**

[1] Ranked according to total marketable weight.

[2] Includes fruit 8 - 23.9 lb.

Table 14. Diploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by **weight** over **four harvests** within each fruit size category. **Clayton, NC., 2008.**

	Percentages[1] (%) by Fruit Size Category (lb)			
Cultivar	**<8**	**8-15.9**	**16-23.9**	**24+**
Big Mara	0	11	36	53
Crimson Sweet	0	18	50	32
Early Florida	1	35	53	11
Ole	1	13	33	53
Plantation Pride	1	23	49	28
PS 8330	0	15	27	57
Summer Flavor 800	1	12	56	31
Tropical	1	25	54	20
Average	1	19	45	36
LSD (0.05)	**2**	**13**	**15**	**18**

[1] Fruit weight (per cultivar weight class) divided by the total weight (per cultivar) times 100. Percentages are rounded to the nearest whole number.

Table 15. Diploid Red-Flesh watermelon hybrid cultivar trial. Interior fruit quality. **Clayton, NC, 2008.**[1]

Cultivar	SS[2]	Color[3]	Seed Size[4]	Flesh Pressure[5]	LD[6]	Rind[7]	Hollow Heart Ratings[8]				
							HH0	HH1	HH2	HH3	HH4
Big Mara	11.6	3.9	3.2	2.2	1.5	1.6	60	25	0	15	0
Crimson Sweet	11.7	3.0	3.0	2.2	1.2	2.1	80	15	5	0	0
Early Florida	11.5	3.9	3.5	2.1	1.8	1.5	70	20	10	0	0
Ole	11.9	3.9	3.6	2.4	1.9	1.8	70	30	0	0	0
Plantation Pride	11.1	4.0	3.2	2.3	1.8	1.6	95	0	5	0	0
PS 8330	11.0	3.5	3.3	2.6	1.3	1.8	95	5	0	0	0
Summer Flavor 800	12.1	3.6	3.3	2.3	1.8	2.0	75	5	20	0	0
Tropical	11.9	3.8	3.1	2.0	2.1	1.7	65	30	5	0	0
Average	11.6	3.7	3.3	2.3	1.7	1.8	76	16	6	2	0
LSD(0.05)	**0.7**	**0.5**	**0.5**	**0.2**	**0.3**	**0.3**	**38**	**29**	**20**	**16**	**- -**

[1] Most measurements were obtained from fruits in harvest 1.

[2] SS = Soluble solids indicates sweetness, average of 5 melons per replication (20 total).

[3] Rating: 1 = white, 2 = pink, 3 = red, 4 = medium-dark red, 5 = blood red.

[4] Rating: 1 = small, 3 = medium (i.e. Crimson Sweet), 5 = large (i.e. Jubilee).

[5] Pressure was taken from 2 sides of fruit flesh on 5 fruit per replication.

[6] LD = Length and diameter ratio, average of 5 melons per replication (20 total).

[7] Rind = Rind thickness (mm), measured from rind to where white and colored flesh meet, average of 5 melons per replication (20 total).

[8] Five fruits per replication were rated for hollow heart incidence and severity (20 total).

Hollow Heart Ratings (Percentage occurrence in each category).

HH0 = Fruit with no hollow heart, (Marketable fruit).

HH1 = Fruit with minimal / hairline crack in flesh; (Marketable fruit).

HH2 = Fruit with small crack in flesh; (Marketable fruit).

HH3 = Fruit with medium to large flesh separations; (Non marketable fruit).

HH4 = Fruit with flesh separation to rind; (Non marketable fruit).

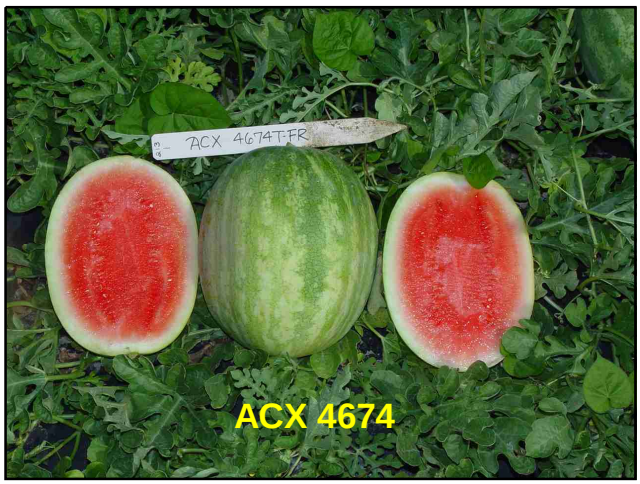
Table 16. Triploid Red-Flesh Watermelon Seed Sources and Descriptions; 2008.

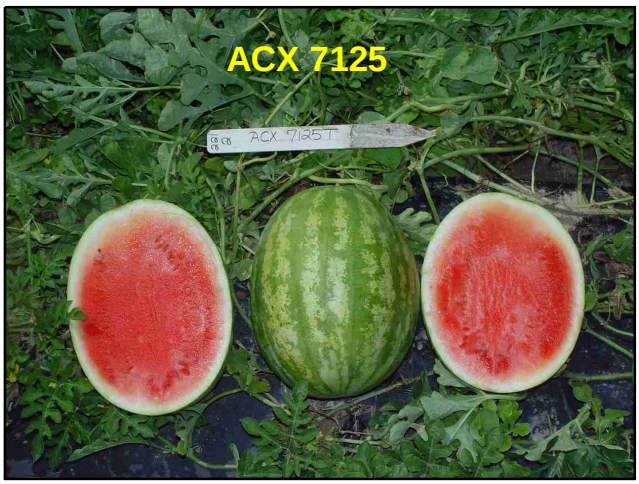
Entry No.	Cultigen	Company	Description
1	ACX 4674	Abbott & Cobb	Indistinct, medium wide, medium green stripes on light green background; mainly long oval to blocky; uniform shape and size; mainly medium to large size
2	Firm N' Red (ACX 7125)	Abbott & Cobb	Indistinct, medium wide, medium green stripes on light green background; oval to long oval; uniform shape, but variable size
3	Constitution	Nunhems	Indistinct, medium wide, dark green stripes on medium green background; oval; uniform shape and size; medium to large fruit
4	Crunchy Red	Harris-Moran	Indistinct, medium to wide dark green stripes on light to medium green background; mainly blocky; large size fruit
5	CS 48705	Clifton Seed	Distinct, narrow, dark green stripes on light green background; mainly round with some short oval fruit; small to medium size
6	Cut Master ESL	Willhite	Solid, very dark green ring with very narrow, very dark green stripes; blocky fruit; mainly medium to large fruit size
7	Fresh Cut ESL	Willhite	Solid medium to dark green rind; mainly short blocky fruit; medium to large size
8	Harmony	Seedway	Indistinct, medium width, medium green stripes on a light green background; oval; mainly blocky fruit; medium and large size
9	Imagination	Syngenta	Solid, very dark green rind; round; small to medium size
10	Liberty	Nunhems	Indistinct, medium wide, medium green stripes on light green background; mainly blocky with some oval; medium and large sizes
11	Matrix	Syngenta	Indistinct, very wide, dark green stripes on a medium green background; elongated; large sized fruit
12	Melody (RWT 8207)	Syngenta	Indistinct, medium wide, dark green stripes on medium green background; round; very uniform; medium sized fruit
13	NUN 6032	Nunhems	Indistinct, medium wide, medium green stripes on light green background; oval; mainly medium size
14	NUN 6033	Nunhems	Indistinct, medium wide, medium green stripes on light green background; a few round, some oval, and some blocky as shape is variable; medium and large size fruit
15	Ovalita	United Genetics	Indistinct, medium wide, medium green stripes on light green background; elliptical and oval shape; small to large size; variable size
16	Palomar	Syngenta	Distinct, narrow, dark green stripes on medium to dark green background; mainly round; uniform shape and size; mainly medium size
17	PX 8032-8133	Seminis	Indistinct, very wide, dark green stripes on a light green background; elongated; large fruit size
18	PX 8134	Seminis	Indistinct, wide stripes on light green background; blocky; uniform shape and size; medium size fruit
19	Revolution	Nunhems	Indistinct, wide stripes on a light green background; elongated; uniform shape and size; large size fruit
20	Ruby	Hollar	Fairly distinct, narrow, very dark green stripes shadowed by medium to dark green on a medium green background; a few round; variable shape as some fruit were round, some were long oval, most were oval; size was variable as fruit ranged from small to large size

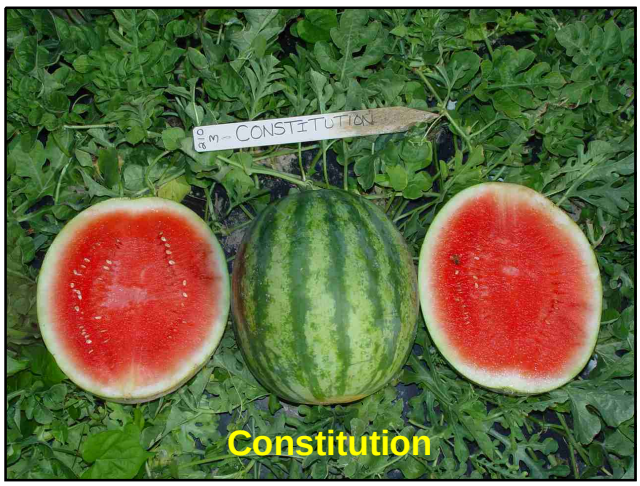
Table 16. Cont.

Entry No.	Cultigen	Company	Description
21	RWT 8173	Syngenta	Distinct, narrow, very dark green stripes on a medium to dark green background; blocky; uniform shape and size; large size fruit
22	Obsession (RWT 8174)	Syngenta	Appears as solid medium to dark green rind, but has distinct, very narrow dark green stripes; blocky; mainly medium to large size fruit
23	Summer King (RWT 8203)	Syngenta	Indistinct, medium wide, medium green stripes on a light green background; smaller fruit tended to be oval while large fruit were more blocky
24	SSX 7401	Sakata	Indistinct, medium wide, medium green stripes on a light green background; oval to blocky; medium to large size
25	SSX 7436	Sakata	Indistinct, medium wide, medium green stripes on a light green background; blocky; medium to large size fruit
26	SSX 7609	Sakata	Indistinct, medium wide, medium green stripes on a light green background; mainly oval; fruit size ranged from small to medium
27	Super Seedless 7167	Abbott & Cobb	Indistinct, medium wide, medium green stripes on a light green background; oval to blocky; medium and large size fruit
28	Super Seedless 7187	Abbott & Cobb	Indistinct, medium wide, medium green stripes on a light green background; oval to blocky; uniform size; medium to large size fruit
29	Super Seedless 9651	Abbott & Cobb	Solid medium to dark green rind; mainly round to short oval; mainly medium size fruit
30	Sweet Delight	Syngenta	Indistinct, medium wide, medium green stripes on a light green background; oval; medium to large size fruit
31	Sweet Slice Plus	Willhite	Indistinct, medium wide, medium green stripes on light green background; variable shape and size as small fruit tended to be round and medium to large size fruit tended to be oval
32	Tri-X-212	Syngenta	Indistinct, medium width, medium green stripes on light green background; mainly oval; mainly medium size
33	Tri-X-313	Syngenta	Indistinct, medium width, medium green stripes on light green background; oval; uniform shape; medium to large size fruit
34	Tri-X-Triple Threat	Syngenta	Distinct, narrow, dark green stripes on a medium green background; round to short oval; mainly medium size; uniform shape and size
35	Vagabond	Harris-Moran	Indistinct, medium width, dark green stripes on a medium green background; oval; variable size from small to large; uniform shape
36	Verde Roo	D. Palmer	Solid, medium to dark green rind; oval shape; small to medium size
37	WT-04-70	D. Palmer	Indistinct, medium wide, medium green stripes on a light green background; round to short oval; uniform shape and size; mainly medium size fruit
38	WTC-9006	Zeraim Gedera	Indistinct, medium wide, medium to dark green stripes on a light green background; mainly blocky; large size fruit
39	WTC-9135	Zeraim Gedera	Indistinct, medium to wide, medium green stripes on a light green background; variable shape and size as small to medium size fruit tend to be oval and large size fruit tend to be blocky
40	WTC-9139	Zeraim Gedera	Indistinct, medium wide, medium green stripes on a light green background; mainly large fruit which are blocky with a few medium size fruit that are oval

Figure 2. Triploid Watermelon Pictures







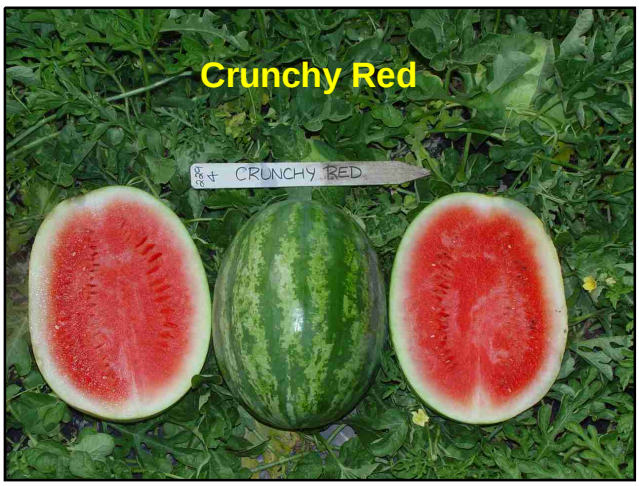


Figure 2. Triploid Watermelon Pictures

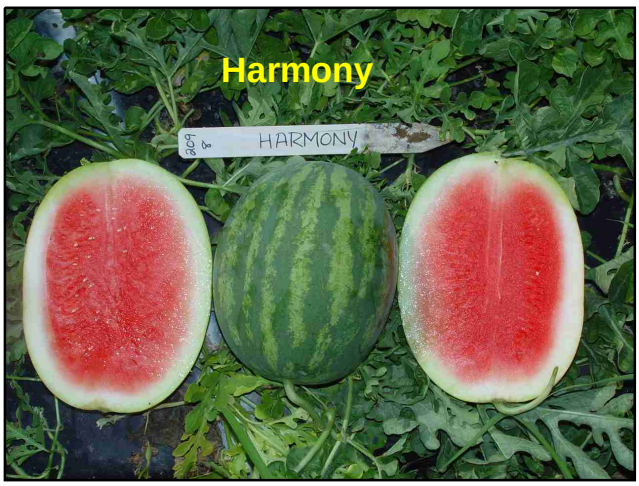
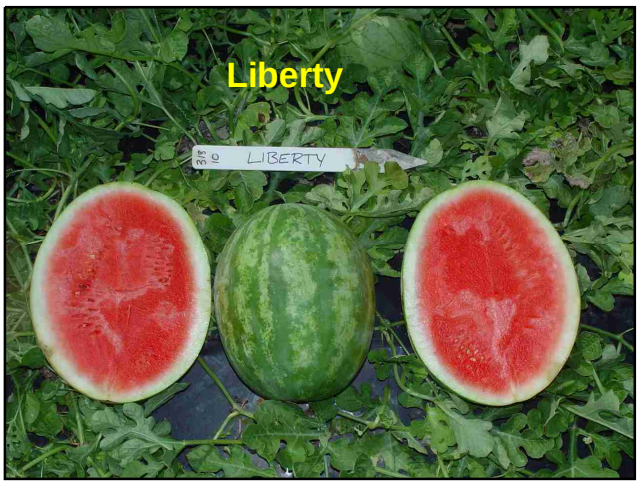


Figure 2. Triploid Watermelon Pictures



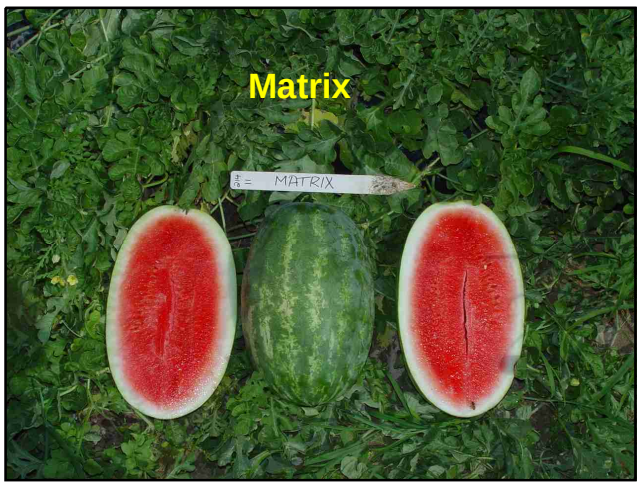
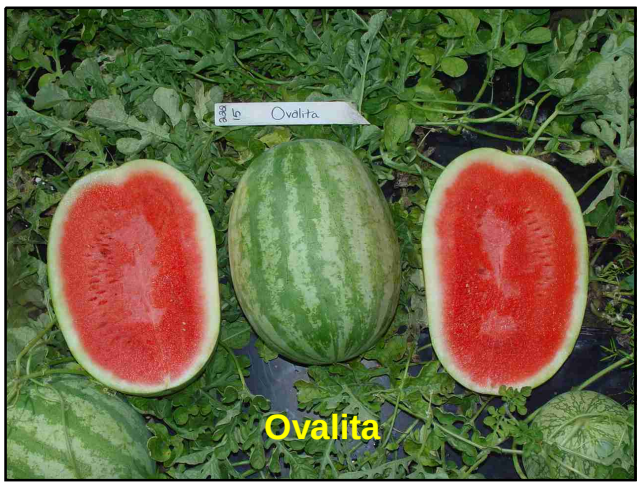


Figure 2. Triploid Watermelon Pictures



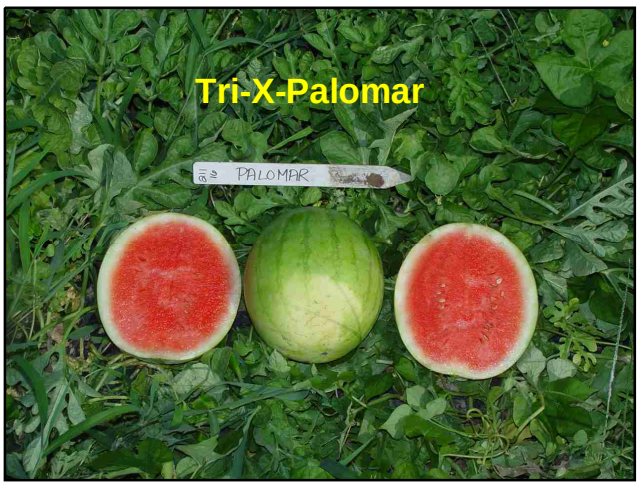
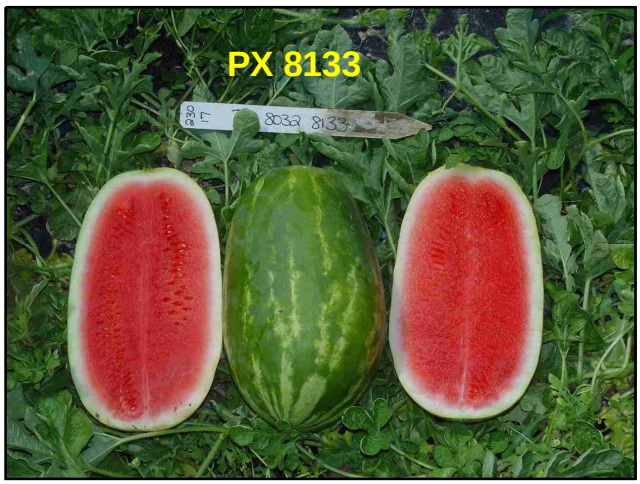
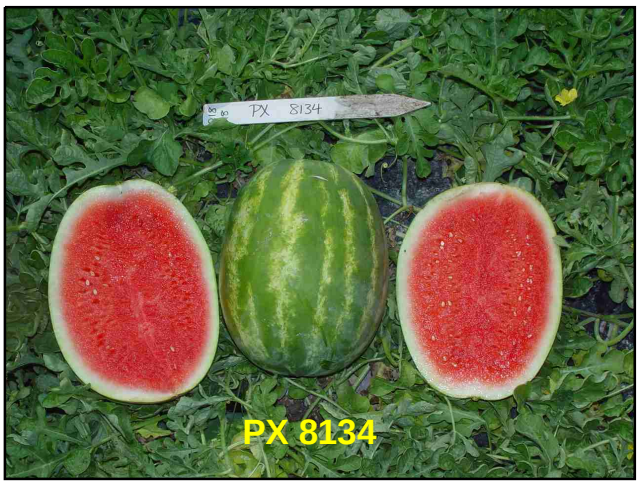
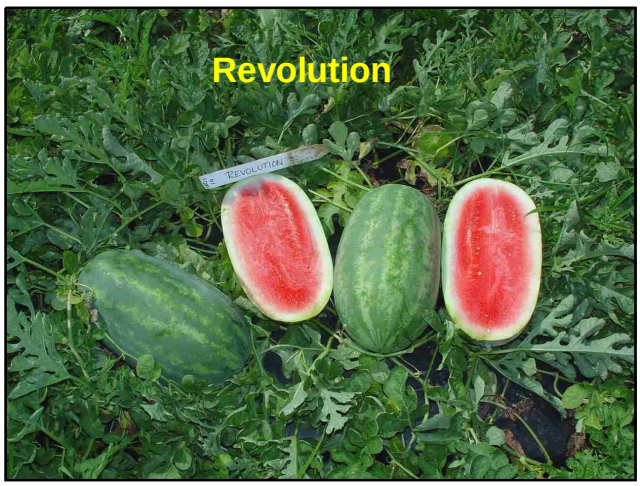


Figure 2. Triploid Watermelon Pictures







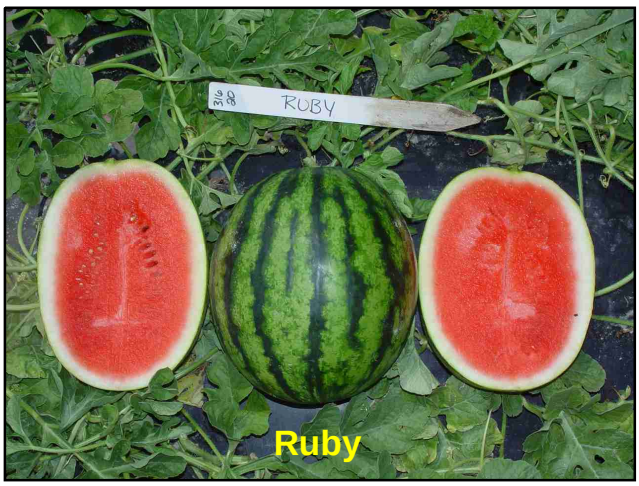


Figure 2. Triploid Watermelon Pictures

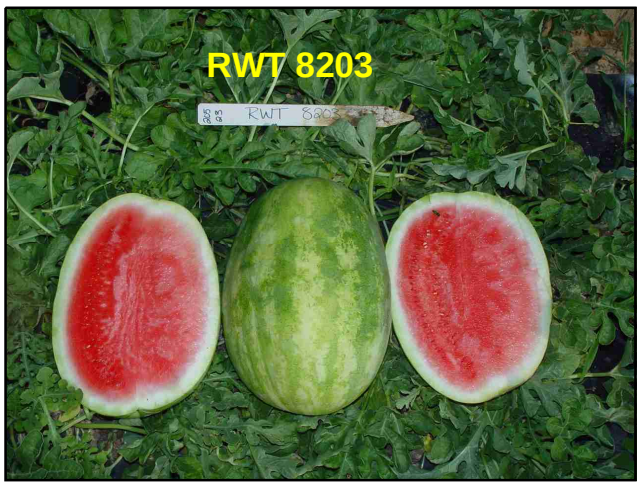


Figure 2. Triploid Watermelon Pictures

Figure 2. Triploid Watermelon Pictures

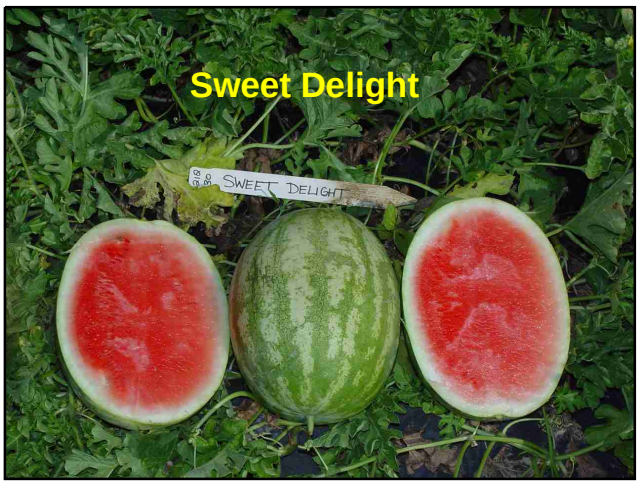
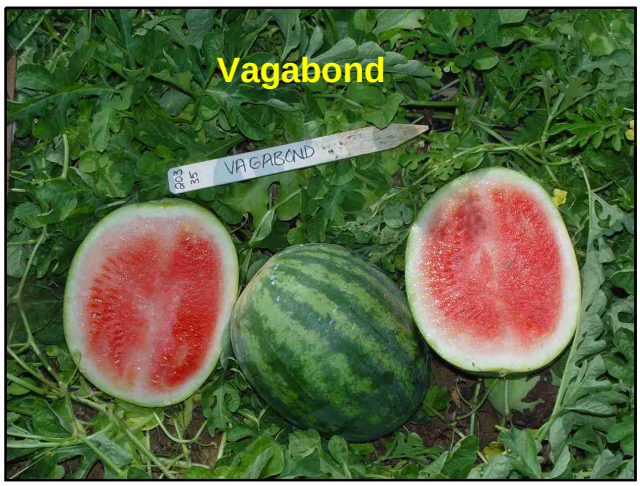


Figure 2. Triploid Watermelon Pictures



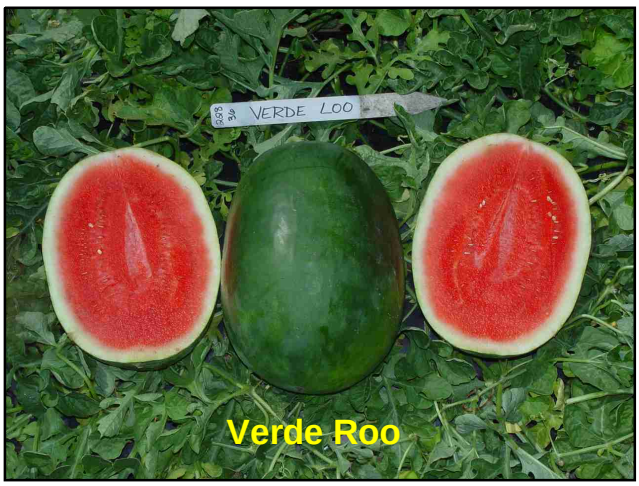


Figure 2. Triploid Watermelon Pictures

Table 17. Triploid Red-Flesh watermelon hybrid cultivar trial. **Fruit number** for **first** harvest by various weight classes, (per acre), including average fruit size[1]. **Clayton, N.C. 2008.**

Cultivar	Seed Company	Rank[2]	Fruit size category (lb) <7.9	8-9.9	10-11.9	12-15.9	16-17.9	18 +	Total No./ Acre	Mkt No./ Acre[3]	Avg wt.
ACX 4674	Abbott & Cobb	32	87	392	523	871	131	0	2004	1525	12.1
Firm N' Red	Abbott & Cobb	23	87	44	174	915	479	261	1960	1830	15.0
Constitution	Nunhems	36	44	349	610	741	87	0	1830	1438	11.7
Crunchy Red	Harris-Moran	18	0	0	261	1220	218	392	2091	2091	14.7
CS 48705	Clifton Seed	38	0	131	392	653	218	131	1525	1394	13.3
Cut Master ESL	Willhite	12	174	131	697	1307	218	0	2570	2265	12.7
Fresh Cut ESL	Willhite	32	44	44	174	958	392	44	1612	1525	13.9
Harmony	Seedway	29	131	261	392	958	174	131	2047	1655	12.8
Imagination	Syngenta	39	131	479	523	828	0	0	1960	1350	11.4
Liberty	Nunhems	9	0	218	349	1307	523	261	2657	2439	14.4
Matrix	Syngenta	21	0	44	174	392	436	958	2004	1960	17.2
Melody	Syngenta	18	0	218	741	1176	87	87	2309	2091	12.4
NUN 6032	Nunhems	12	0	261	610	1089	305	261	2527	2265	13.5
NUN 6033	Nunhems	22	44	261	436	828	436	218	2222	1917	13.6
Ovalita	United Genetics	15	87	349	741	1220	174	87	2657	2222	12.5
Palomar	Syngenta	20	0	261	479	1263	218	44	2265	2004	12.8
PX 8133	Seminis	40	0	131	261	523	131	261	1307	1176	14.2
PX 8134	Seminis	35	131	174	436	828	174	44	1786	1481	12.6
Revolution	Nunhems	26	0	44	131	784	392	436	1786	1742	16.0
Ruby	Hollar	25	0	261	479	1045	174	87	2047	1786	12.9
RWT 8173	Syngenta	5	44	131	174	1176	741	479	2744	2570	15.1
Obsession	Syngenta	32	44	131	305	871	349	0	1699	1525	13.4
Summer King	Syngenta	16	0	87	436	958	523	261	2265	2178	14.4
SSX 7401	Sakata	31	131	174	436	915	218	44	1917	1612	12.6
SSX 7436	Sakata	29	174	131	523	915	174	44	1960	1655	12.0
SSX 7609	Sakata	26	0	261	349	1089	261	44	2047	1742	13.3
Super Seedless 7167	Abbott & Cobb	2	44	0	610	1438	261	349	2701	2657	14.1
Super Seedless 7187	Abbott & Cobb	2	0	305	566	1481	392	218	2962	2657	13.5
Super Seedless 9651	Abbott & Cobb	9	44	305	218	1394	479	349	2788	2439	14.3
Sweet Delight	Syngenta	5	87	218	349	1394	610	218	2875	2570	14.3
Sweet Slice Plus	Willhite	1	44	0	436	1350	566	392	2788	2744	14.8
Tri-X-212	Syngenta	36	44	261	174	1002	174	87	1724	1438	13.5
Tri-X-313	Syngenta	2	0	44	392	1525	479	261	2701	2657	14.6
Tri-X-Triple Threat	Syngenta	26	261	479	784	871	87	0	2483	1742	11.2
Vagabond	Harris-Moran	16	44	131	349	1525	218	87	2352	2178	13.5
Verde Roo	D. Palmer	11	261	741	653	1133	349	218	3354	2352	12.7
WT-04-70	D. Palmer	12	174	261	392	1612	218	44	2701	2265	12.8
WTC-9006	Zeraim Gedera	7	174	218	479	1438	349	218	2875	2483	13.5
WTC-9135	Zeraim Gedera	7	0	174	392	915	653	523	2657	2483	14.9
WTC-9139	Zeraim Gedera	23	44	44	218	1045	349	218	1917	1830	14.4
Average		- -	**64**	**204**	**420**	**1074**	**310**	**194**	**2267**	**1998**	**13.6**
LSD (0.05)		**- -**	**144**	**314**	**399**	**694**	**347**	**302**	**925**	**886**	**1.5**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 plants were interplanted after the triploid plants, 1, 4, and 7 within the plot.

[2] Ranked according to total marketable weight.

[3] Includes fruit 10 - 18 + pounds.

Table 18. Triploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by **number** within each fruit size category for **first harvest**. **Clayton, NC, 2008.**

	Percentages[1] (%) by Fruit Size Category					
Cultivar	**<7.9**	**8-9.9**	**10-11.9**	**12-15.9**	**16-17.9**	**18 +**
ACX 4674	4	20	26	43	7	0
Firm N' Red	4	2	9	47	24	13
Constitution	2	19	33	40	5	0
Crunchy Red	0	0	13	58	10	19
CS 48705	0	9	26	43	14	9
Cut Master ESL	7	5	27	51	8	0
Fresh Cut ESL	3	3	11	59	24	3
Harmony	6	13	19	47	9	6
Imagination	7	24	27	42	0	0
Liberty	0	8	13	49	20	10
Matrix	0	2	9	20	22	48
Melody	0	9	32	51	4	4
NUN 6032	0	10	24	43	12	10
NUN 6033	2	12	20	37	20	10
Ovalita	3	13	28	46	7	3
Palomar	0	12	21	56	10	2
PX 8133	0	10	20	40	10	20
PX 8134	7	10	24	46	10	2
Revolution	0	2	7	44	22	24
Ruby	0	13	23	51	9	4
RWT 8173	2	5	6	43	27	17
Obsession	3	8	18	51	21	0
Summer King	0	4	19	42	23	12
SSX 7401	7	9	23	48	11	2
SSX 7436	9	7	27	47	9	2
SSX 7609	0	13	17	53	13	2
Super Seedless 7167	2	0	23	53	10	13
Super Seedless 7187	0	10	19	50	13	7
Super Seedless 9651	2	11	8	50	17	13
Sweet Delight	3	8	12	48	21	8
Sweet Slice Plus	2	0	16	48	20	14
Tri-X-212	3	15	10	58	10	5
Tri-X-313	0	2	15	56	18	10
Tri-X-Triple Threat	11	19	32	35	4	0
Vagabond	2	6	15	65	9	4
Verde Roo	8	22	19	34	10	6
WT-04-70	6	10	15	60	8	2
WTC-9006	6	8	17	50	12	8
WTC-9135	0	7	15	34	25	20
WTC-9139	2	2	11	55	18	11
Average	3	9	19	47	14	9

[1] Fruit number (per cultivar and weight class) divided by the total number (per cultivar) times 100.

Table 19. Triploid Red-Flesh watermelon hybrid cultivar trial. **Fruit number** for **second** harvest by various weight classes, (per acre), including average fruit size[1]. **Clayton, N.C. 2008.**

Cultivar	Seed Company	Rank [2]	Fruit size category (lb)						Total No./ Acre	Mkt No./ Acre[3]	Avg wt.
			<7.9	8-9.9	10-11.9	12-15.9	16-17.9	18 +			
ACX 4674	Abbott & Cobb	2	0	174	305	828	87	0	1394	1220	12.9
Firm N' Red	Abbott & Cobb	18	44	44	131	392	174	218	1002	915	14.9
Constitution	Nunhems	9	44	174	261	566	131	87	1263	1045	12.7
Crunchy Red	Harris-Moran	9	44	87	218	479	44	305	1176	1045	15.6
CS 48705	Clifton Seed	1	87	218	261	958	349	0	1873	1568	13.0
Cut Master ESL	Willhite	38	261	218	261	218	0	0	958	479	10.6
Fresh Cut ESL	Willhite	7	0	87	305	305	392	87	1176	1089	14.2
Harmony	Seedway	2	0	174	218	741	131	131	1394	1220	13.8
Imagination	Syngenta	39	174	131	174	174	0	0	653	349	9.9
Liberty	Nunhems	23	44	87	218	349	44	174	915	784	13.6
Matrix	Syngenta	4	0	44	87	436	261	392	1220	1176	17.2
Melody	Syngenta	13	0	174	392	392	218	0	1176	1002	12.6
NUN 6032	Nunhems	14	0	44	218	523	44	174	1002	958	14.2
NUN 6033	Nunhems	23	0	87	87	305	131	261	871	784	16.2
Ovalita	United Genetics	29	261	131	305	261	87	0	1045	653	10.5
Palomar	Syngenta	23	87	44	87	523	87	87	915	784	13.4
PX 8133	Seminis	19	0	87	131	261	261	218	958	871	15.6
PX 8134	Seminis	34	0	44	218	305	87	0	653	610	12.8
Revolution	Nunhems	21	0	87	0	218	174	436	915	828	16.3
Ruby	Hollar	14	44	261	218	436	218	87	1263	958	12.9
RWT 8173	Syngenta	40	0	87	0	87	261	0	436	349	14.0
Obsession	Syngenta	19	44	44	218	392	218	44	958	871	13.9
Summer King	Syngenta	9	0	44	87	828	87	44	1089	1045	13.7
SSX 7401	Sakata	21	0	87	131	523	87	87	915	828	14.1
SSX 7436	Sakata	26	44	218	305	392	0	44	1002	741	12.1
SSX 7609	Sakata	9	44	131	131	697	131	87	1220	1045	14.5
Super Seedless 7167	Abbott & Cobb	26	0	174	131	479	44	87	915	741	12.6
Super Seedless 7187	Abbott & Cobb	14	87	87	174	653	131	0	1133	958	13.1
Super Seedless 9651	Abbott & Cobb	7	87	261	131	523	131	305	1438	1089	12.4
Sweet Delight	Syngenta	29	44	131	131	305	87	131	828	653	13.8
Sweet Slice Plus	Willhite	29	44	87	87	523	0	44	784	653	13.0
Tri-X-212	Syngenta	4	44	218	349	436	261	131	1438	1176	13.4
Tri-X-313	Syngenta	26	0	0	131	218	131	261	741	741	16.9
Tri-X-Triple Threat	Syngenta	34	87	174	44	436	131	0	871	610	12.1
Vagabond	Harris-Moran	6	87	174	349	610	131	44	1394	1133	12.8
Verde Roo	D. Palmer	34	218	87	261	218	44	87	915	610	11.6
WT-04-70	D. Palmer	37	0	44	87	349	87	0	566	523	13.4
WTC-9006	Zeraim Gedera	29	44	0	87	305	174	87	697	653	14.2
WTC-9135	Zeraim Gedera	14	131	0	218	218	174	349	1089	958	14.5
WTC-9139	Zeraim Gedera	29	0	87	0	218	87	349	741	653	12.4
Average		- -	**52**	**113**	**179**	**427**	**133**	**121**	**1025**	**859**	**13.5**
LSD (0.05)		- -	**129**	**210**	**253**	**401**	**211**	**224**	**667**	**616**	**2.9**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 plants were interplanted after the triploid plants, 1, 4, and 7 within the plot.

[2] Ranked according to total marketable weight.

[3] Includes fruit 10 - 18 + pounds.

Table 20. Triploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by **number** within each fruit size category for **second harvest**. **Clayton, NC, 2008.**

	Percentages[1] (%) by Fruit Size Category					
Cultivar	**<7.9**	**8-9.9**	**10-11.9**	**12-15.9**	**16-17.9**	**18 +**
ACX 4674	0	12	22	59	6	0
Firm N' Red	4	4	13	39	17	22
Constitution	3	14	21	45	10	7
Crunchy Red	4	7	19	41	4	26
CS 48705	5	12	14	51	19	0
Cut Master ESL	27	23	27	23	0	0
Fresh Cut ESL	0	7	26	26	33	7
Harmony	0	12	16	53	9	9
Imagination	27	20	27	27	0	0
Liberty	5	10	24	38	5	19
Matrix	0	4	7	36	21	32
Melody	0	15	33	33	19	0
NUN 6032	0	4	22	52	4	17
NUN 6033	0	10	10	35	15	30
Ovalita	25	13	29	25	8	0
Palomar	10	5	10	57	10	10
PX 8133	0	9	14	27	27	23
PX 8134	0	7	33	47	13	0
Revolution	0	10	0	24	19	48
Ruby	3	21	17	34	17	7
RWT 8173	0	20	0	20	60	0
Obsession	5	5	23	41	23	5
Summer King	0	4	8	76	8	4
SSX 7401	0	10	14	57	10	10
SSX 7436	4	22	30	39	0	4
SSX 7609	4	11	11	57	11	7
Super Seedless 7167	0	19	14	52	5	10
Super Seedless 7187	8	8	15	58	12	0
Super Seedless 9651	6	18	9	36	9	21
Sweet Delight	5	16	16	37	11	16
Sweet Slice Plus	6	11	11	67	0	6
Tri-X-212	3	15	24	30	18	9
Tri-X-313	0	0	18	29	18	35
Tri-X-Triple Threat	10	20	5	50	15	0
Vagabond	6	12	25	44	9	3
Verde Roo	24	10	29	24	5	10
WT-04-70	0	8	15	62	15	0
WTC-9006	6	0	12	44	25	12
WTC-9135	12	0	20	20	16	32
WTC-9139	0	12	0	29	12	47
Average	5	11	17	41	13	12

[1] Fruit number (per cultivar and weight class) divided by the total number (per cultivar) times 100.

Table 21. Triploid Red-Flesh watermelon hybrid cultivar trial. **Fruit number** for **third** harvest by various weight classes, (per acre), including average fruit size[1]. **Clayton, N.C. 2008.**

Cultivar	Seed Company	Rank[2]	Fruit size category (lb)						Total No./ Acre	Mkt No./ Acre[3]	Avg wt.
			<7.9	8-9.9	10-11.9	12-15.9	16-17.9	18 +			
ACX 4674	Abbott & Cobb	2	87	610	349	915	87	44	2091	1394	12.1
Firm N' Red	Abbott & Cobb	9	44	44	392	392	174	131	1176	1089	13.3
Constitution	Nunhems	9	131	0	349	610	131	0	1220	1089	12.0
Crunchy Red	Harris-Moran	7	44	0	174	305	392	392	1307	1263	15.8
CS 48705	Clifton Seed	9	87	131	479	436	174	0	1307	1089	12.8
Cut Master ESL	Willhite	39	44	436	261	131	0	0	871	392	11.2
Fresh Cut ESL	Willhite	19	0	305	174	610	87	131	1307	1002	14.0
Harmony	Seedway	38	174	349	131	305	44	0	1002	479	11.0
Imagination	Syngenta	40	261	261	87	131	0	0	741	218	8.4
Liberty	Nunhems	4	44	131	305	566	305	174	1525	1350	14.3
Matrix	Syngenta	29	0	174	87	349	87	305	1002	828	15.9
Melody	Syngenta	35	131	87	218	174	261	44	915	697	12.9
NUN 6032	Nunhems	31	44	218	174	479	87	44	1045	784	13.0
NUN 6033	Nunhems	31	0	44	392	349	44	0	828	784	11.9
Ovalita	United Genetics	9	87	218	436	523	131	0	1394	1089	11.5
Palomar	Syngenta	23	174	174	523	349	44	0	1263	915	11.5
PX 8133	Seminis	19	0	44	261	566	131	44	1045	1002	14.5
PX 8134	Seminis	19	87	392	349	479	87	87	1481	1002	11.7
Revolution	Nunhems	31	0	174	44	305	261	174	958	784	14.3
Ruby	Hollar	37	87	44	0	349	218	0	697	566	11.5
RWT 8173	Syngenta	22	131	87	87	349	305	218	1176	958	14.8
Obsession	Syngenta	16	174	174	174	566	131	174	1394	1045	13.2
Summer King	Syngenta	29	87	131	44	479	174	131	1045	828	14.4
SSX 7401	Sakata	2	87	87	349	784	131	131	1568	1394	13.5
SSX 7436	Sakata	9	44	174	261	479	261	87	1307	1089	13.6
SSX 7609	Sakata	23	87	305	261	436	44	174	1307	915	9.3
Super Seedless 7167	Abbott & Cobb	9	131	261	305	392	261	131	1481	1089	12.7
Super Seedless 7187	Abbott & Cobb	31	44	131	392	349	44	0	958	784	12.0
Super Seedless 9651	Abbott & Cobb	36	44	261	174	305	44	87	915	610	12.4
Sweet Delight	Syngenta	23	131	305	305	392	131	87	1350	915	12.1
Sweet Slice Plus	Willhite	8	131	44	305	610	87	131	1307	1133	12.9
Tri-X-212	Syngenta	16	174	305	349	566	87	44	1525	1045	12.0
Tri-X-313	Syngenta	9	44	0	131	523	174	261	1133	1089	15.5
Tri-X-Triple Threat	Syngenta	6	0	218	479	697	44	87	1525	1307	12.7
Vagabond	Harris-Moran	23	131	305	131	610	87	87	1350	915	12.4
Verde Roo	D. Palmer	23	131	261	261	523	131	0	1307	915	11.7
WT-04-70	D. Palmer	1	218	261	218	958	131	131	1917	1438	13.5
WTC-9006	Zeraim Gedera	28	87	131	218	436	87	131	1089	871	13.0
WTC-9135	Zeraim Gedera	16	44	44	218	436	87	305	1133	1045	14.8
WTC-9139	Zeraim Gedera	4	0	0	305	523	218	305	1350	1350	15.4
Average		- -	**86**	**183**	**254**	**468**	**135**	**107**	**1233**	**964**	**12.9**
LSD (0.05)		**- -**	**200**	**304**	**323**	**413**	**246**	**201**	**775**	**647**	**2.9**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 plants were interplanted after the triploid plants, 1, 4, and 7 within the plot.

[2] Ranked according to total marketable weight.

[3] Includes fruit 10 - 18 + pounds.

Table 22. Triploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by **number** within each fruit size category for **third harvest**. **Clayton, NC, 2008.**

	Percentages[1] (%) by Fruit Size Category					
Cultivar	**<7.9**	**8-9.9**	**10-11.9**	**12-15.9**	**16-17.9**	**18 +**
ACX 4674	4	29	17	44	4	2
Firm N' Red	4	4	33	33	15	11
Constitution	11	0	29	50	11	0
Crunchy Red	3	0	13	23	30	30
CS 48705	7	10	37	33	13	0
Cut Master ESL	5	50	30	15	0	0
Fresh Cut ESL	0	23	13	47	7	10
Harmony	17	35	13	30	4	0
Imagination	35	35	12	18	0	0
Liberty	3	9	20	37	20	11
Matrix	0	17	9	35	9	30
Melody	14	10	24	19	29	5
NUN 6032	4	21	17	46	8	4
NUN 6033	0	5	47	42	5	0
Ovalita	6	16	31	37	9	0
Palomar	14	14	41	28	3	0
PX 8133	0	4	25	54	13	4
PX 8134	6	26	24	32	6	6
Revolution	0	18	5	32	27	18
Ruby	12	6	0	50	31	0
RWT 8173	11	7	7	30	26	19
Obsession	12	12	12	41	9	12
Summer King	8	13	4	46	17	13
SSX 7401	6	6	22	50	8	8
SSX 7436	3	13	20	37	20	7
SSX 7609	7	23	20	33	3	13
Super Seedless 7167	9	18	21	26	18	9
Super Seedless 7187	5	14	41	36	5	0
Super Seedless 9651	5	29	19	33	5	10
Sweet Delight	10	23	23	29	10	6
Sweet Slice Plus	10	3	23	47	7	10
Tri-X-212	11	20	23	37	6	3
Tri-X-313	4	0	12	46	15	23
Tri-X-Triple Threat	0	14	31	46	3	6
Vagabond	10	23	10	45	6	6
Verde Roo	10	20	20	40	10	0
WT-04-70	11	14	11	50	7	7
WTC-9006	8	12	20	40	8	12
WTC-9135	4	4	19	38	8	27
WTC-9139	0	0	23	39	16	23
Average	7	15	21	37	11	9

[1] Fruit number (per cultivar and weight class) divided by the total number (per cultivar) times 100.

Table 23. Triploid Red-Flesh watermelon hybrid cultivar trial. **Fruit number** for **fourth** harvest by various weight classes, (per acre), including average fruit size[1]. **Clayton, N.C. 2008.**

Cultivar	Seed Company	Rank[2]	Fruit size category (lb)						Total No./ Acre	Mkt No./ Acre[3]	Avg wt.
			<7.9	8-9.9	10-11.9	12-15.9	16-17.9	18 +			
ACX 4674	Abbott & Cobb	23	479	479	131	261	44	0	1394	436	9.1
Firm N' Red	Abbott & Cobb	14	261	305	349	174	87	0	1176	610	10.3
Constitution	Nunhems	23	741	261	261	174	0	0	1438	436	8.2
Crunchy Red	Harris-Moran	2	349	392	436	392	44	87	1699	958	10.4
CS 48705	Clifton Seed	7	566	305	523	218	0	0	1612	741	9.2
Cut Master ESL	Willhite	36	828	174	131	87	0	0	1220	218	7.5
Fresh Cut ESL	Willhite	29	349	305	87	174	87	0	1002	349	9.7
Harmony	Seedway	19	349	349	349	131	0	0	1176	479	9.3
Imagination	Syngenta	37	218	131	87	87	0	0	523	174	6.2
Liberty	Nunhems	23	784	349	174	218	44	0	1568	436	8.9
Matrix	Syngenta	2	218	174	305	479	44	131	1350	958	11.0
Melody	Syngenta	12	697	523	566	44	0	44	1873	653	8.9
NUN 6032	Nunhems	15	523	174	349	131	44	0	1220	523	9.5
NUN 6033	Nunhems	34	566	305	174	87	0	0	1133	261	8.5
Ovalita	United Genetics	26	436	174	261	131	0	0	1002	392	7.8
Palomar	Syngenta	37	748	218	87	87	0	0	1176	174	7.7
PX 8133	Seminis	1	174	305	349	653	174	87	1742	1263	11.9
PX 8134	Seminis	7	479	566	305	392	0	44	1786	741	9.7
Revolution	Nunhems	29	218	436	131	218	0	0	1002	349	9.2
Ruby	Hollar	7	392	349	349	349	44	0	1481	741	10.2
RWT 8173	Syngenta	10	131	174	218	131	261	87	1002	697	8.7
Obsession	Syngenta	10	392	436	436	261	0	0	1525	697	9.7
Summer King	Syngenta	34	392	261	87	174	0	0	915	261	9.4
SSX 7401	Sakata	40	479	392	44	44	44	0	1002	131	8.4
SSX 7436	Sakata	26	523	131	218	174	0	0	1045	392	8.9
SSX 7609	Sakata	29	523	131	174	174	0	0	1002	349	7.8
Super Seedless 7167	Abbott & Cobb	19	741	436	392	44	44	0	1655	479	8.4
Super Seedless 7187	Abbott & Cobb	15	653	174	349	131	0	44	1350	523	8.2
Super Seedless 9651	Abbott & Cobb	19	479	392	174	261	0	44	1350	479	9.6
Sweet Delight	Syngenta	12	436	218	305	261	44	44	1307	653	9.6
Sweet Slice Plus	Willhite	15	131	436	305	218	0	0	1089	523	10.2
Tri-X-212	Syngenta	19	349	305	261	174	0	44	1133	479	9.6
Tri-X-313	Syngenta	6	349	566	523	218	44	0	1699	784	9.7
Tri-X-Triple Threat	Syngenta	15	871	523	131	392	0	0	1917	523	8.8
Vagabond	Harris-Moran	4	1045	392	305	436	87	0	2265	828	8.7
Verde Roo	D. Palmer	38	871	349	131	44	0	0	1394	174	7.7
WT-04-70	D. Palmer	29	479	349	131	131	87	0	1176	349	9.1
WTC-9006	Zeraim Gedera	26	566	218	131	218	44	0	1176	392	8.9
WTC-9135	Zeraim Gedera	29	479	349	87	131	87	44	1176	349	9.6
WTC-9139	Zeraim Gedera	4	349	436	392	174	174	87	1612	828	10.9
Average		- -	**490**	**323**	**255**	**207**	**38**	**20**	**1334**	**519**	**9.1**
LSD (0.05)		**- -**	**433**	**338**	**330**	**328**	**127**	**91**	**769**	**589**	**2.4**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 plants were interplanted among the triploid plants, 1, 4, and 7.

[2] Ranked according to total marketable weight.

[3] Includes fruit 10 - 18 + pounds.

Table 24. Triploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by **number** within each fruit size category for **fourth harvest**. **Clayton, NC, 2008.**

	Percentages[1] (%) by Fruit Size Category					
Cultivar	**<7.9**	**8-9.9**	**10-11.9**	**12-15.9**	**16-17.9**	**18 +**
ACX 4674	34	34	9	19	3	0
Firm N' Red	22	26	30	15	7	0
Constitution	52	18	18	12	0	0
Crunchy Red	21	23	26	23	3	5
CS 48705	35	19	32	14	0	0
Cut Master ESL	68	14	11	7	0	0
Fresh Cut ESL	35	30	9	17	9	0
Harmony	30	30	30	11	0	0
Imagination	42	25	17	17	0	0
Liberty	50	22	11	14	3	0
Matrix	16	13	23	35	3	10
Melody	37	28	30	2	0	2
NUN 6032	43	14	29	11	4	0
NUN 6033	50	27	15	8	0	0
Ovalita	43	17	26	13	0	0
Palomar	64	19	7	7	0	0
PX 8133	10	17	20	38	10	5
PX 8134	27	32	17	22	0	2
Revolution	22	43	13	22	0	0
Ruby	26	24	24	24	3	0
RWT 8173	13	17	22	13	26	9
Obsession	26	29	29	17	0	0
Summer King	43	29	10	19	0	0
SSX 7401	48	39	4	4	4	0
SSX 7436	50	13	21	17	0	0
SSX 7609	52	13	17	17	0	0
Super Seedless 7167	45	26	24	3	3	0
Super Seedless 7187	48	13	26	10	0	3
Super Seedless 9651	35	29	13	19	0	3
Sweet Delight	33	17	23	20	3	3
Sweet Slice Plus	12	40	28	20	0	0
Tri-X-212	31	27	23	15	0	4
Tri-X-313	21	33	31	13	3	0
Tri-X-Triple Threat	45	27	7	20	0	0
Vagabond	46	17	13	19	4	0
Verde Roo	63	25	9	3	0	0
WT-04-70	41	30	11	11	7	0
WTC-9006	48	19	11	19	4	0
WTC-9135	41	30	7	11	7	4
WTC-9139	22	27	24	11	11	5
Average	37	24	19	15	3	1

[1] Fruit number (per cultivar and weight class) divided by the total number (per cultivar) times 100.

Table 25. Triploid Red-Flesh watermelon hybrid cultivar trial. **Fruit number** for cumulative harvests, (4), by various weight classes (per acre)[1]. **Clayton, N.C., 2008.**

		Fruit size category (lb)						Total	Total
Cultivar	Rank[2]	<7.9	8-9.9	10-11.9	12-15.9	16-17.9	18 +	Number	Mkt. No.[3]
ACX 4674	14	653	1655	1307	2875	349	44	6883	4574
ACX 7125	18	436	436	1045	1873	915	610	5314	4443
Firm N' Red	30	958	784	1481	2091	349	87	5750	4008
Crunchy Red	1	436	479	1089	2396	697	1176	6273	5358
CS 48705	10	741	784	1655	2265	741	131	6316	4792
Cut Master ESL	39	1307	958	1350	1742	218	44	5619	3354
Fresh Cut ESL	31	392	741	741	2047	958	218	5097	3964
Harmony	35	653	1133	1089	2134	349	261	5619	3833
Imagination	40	828	1002	871	1220	0	0	3920	2091
Liberty	5	871	784	1045	2439	915	610	6665	5009
Matrix	7	218	436	653	1655	828	1786	5576	4922
Melody	18	828	1002	1917	1786	566	174	6273	4443
NUN 6032	17	566	697	1350	2222	479	479	5794	4530
NUN 6033	37	610	697	1089	1568	610	479	5053	3746
Ovalita	21	871	871	1742	2134	392	87	6098	4356
Palomar	33	1045	697	1176	2222	349	131	5619	3877
PX 8133	22	174	566	1002	2004	697	610	5053	4312
PX 8134	35	697	1176	1307	2004	349	174	5706	3833
Revolution	38	218	741	305	1525	828	1045	4661	3703
Ruby	29	523	915	1045	2178	653	174	5489	4051
RWT 8173	14	349	479	479	1742	1568	784	5401	4574
RWT 8174	25	653	784	1133	2091	697	218	5576	4138
Obsession	22	479	523	653	2439	784	436	5314	4312
Summer King	31	697	741	958	2265	479	261	5401	3964
SSX 7436	33	784	653	1307	1960	436	174	5314	3877
SSX 7609	27	741	828	915	2396	436	305	5619	4051
Super Seedless 7167	6	915	871	1438	2352	610	566	6752	4966
Super Seedless 7187	7	784	697	1481	2614	566	261	6403	4922
Super Seedless 9651	13	653	1220	697	2483	653	784	6490	4617
Sweet Delight	10	697	871	1089	2352	871	479	6360	4792
Sweet Slice Plus	3	349	566	1133	2701	653	566	5968	5053
Tri-X-212	25	610	1089	1133	2178	523	305	5837	4138
Tri-X-313	2	392	610	1176	2483	828	784	6273	5271
Tri-X-Triple Threat	24	1220	1394	1438	2396	261	87	6795	4182
Vagabond	3	1307	1002	1133	3180	523	218	7362	5053
Verde Roo	27	1481	1438	1307	1917	523	305	6970	4051
WT-04-70	14	871	915	828	3049	523	174	6360	4574
WTC-9006	20	871	566	915	2396	653	436	5837	4400
WTC-9135	9	653	566	915	1699	1002	1220	6055	4835
WTC-9139	12	436	566	915	1960	828	958	5663	4661
Average	- -	699	823	1108	2176	616	441	5863	4341
LSD(0.05)	**- -**	**501**	**576**	**662**	**942**	**527**	**481**	**1418**	**1345**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 plants were interplanted after the triploid plants, 1, 4, and 7 within the plot.

[2] Ranked according to total marketable weight.

[3] Includes fruit 10 - 18+ pounds.

Table 26. Triploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by **number** within each fruit size category.**Clayton, NC., 2008.**

	Percentages[1] (%) by Fruit Size Category (lb)					
Cultivar	**<7.9**	**8-9.9**	**10-11.9**	**12-15.9**	**16-17.9**	**18 +**
Firm N' Red	9	24	19	42	5	1
ACX 7125	8	8	20	35	17	11
Constitution	17	14	26	36	6	2
Crunchy Red	7	8	17	38	11	19
CS 48705	12	12	26	36	12	2
Cut Master ESL	23	17	24	31	4	1
Fresh Cut ESL	8	15	15	40	19	4
Harmony	12	20	19	38	6	5
Imagination	21	26	22	31	0	0
Liberty	13	12	16	37	14	9
Matrix	4	8	12	30	15	32
Melody	13	16	31	28	9	3
NUN 6032	10	12	23	38	8	8
NUN 6033	12	14	22	31	12	9
Ovalita	14	14	29	35	6	1
Palomar	19	12	21	40	6	2
PX 8133	3	11	20	40	14	12
PX 8134	12	21	23	35	6	3
Revolution	5	16	7	33	18	22
Ruby	10	17	19	40	12	3
Obsession	6	9	9	32	29	15
Summer King	12	14	20	38	13	4
RWT 8203	9	10	12	46	15	8
SSX 7401	13	14	18	42	9	5
SSX 7436	15	12	25	37	8	3
SSX 7609	13	15	16	43	8	5
Super Seedless 7167	14	13	21	35	9	8
Super Seedless 7187	12	11	23	41	9	4
Super Seedless 9651	10	19	11	38	10	12
Sweet Delight	11	14	17	37	14	8
Sweet Slice Plus	6	9	19	45	11	9
Tri-X-212	10	19	19	37	9	5
Tri-X-313	6	10	19	40	13	13
Tri-X-Triple Threat	18	21	21	35	4	1
Vagabond	18	14	15	43	7	3
Verde Roo	21	21	19	27	7	4
WT-04-70	14	14	13	48	8	3
WTC-9006	15	10	16	41	11	7
WTC-9135	11	9	15	28	17	20
WTC-9139	8	10	16	35	15	17
Average	12	14	19	37	11	8

[1] Fruit number (per cultivar and weight class) divided by the total number (per cultivar) times 100.

Table 27. Triploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested by **number** by harvest for total and total marketable categories. **Clayton, NC., 2008.**

	Percentages[1] (%) by Harvest for Total and Total Marketable fruit							
	Harvest 1		Harvest 2		Harvest 3		Harvest 4	
Cultivar	Total	Total Mrkt.	Total	Total Mrkt.	Total	Total Mrkt.	Total	Total Mrkt.
ACX 4674	26	27	38	37	25	24	11	12
Firm N' Red	21	22	41	44	26	25	12	9
Constitution	25	26	39	41	18	16	18	18
Crunchy Red	27	31	47	45	24	17	11	6
CS 48705	24	25	36	36	33	33	7	6
Cut Master ESL	22	27	44	42	17	16	17	15
Fresh Cut ESL	4	4	58	66	25	23	13	8
Harmony	32	34	27	30	26	24	14	12
Imagination	25	27	36	38	26	24	13	11
Liberty	18	19	41	43	29	28	13	10
Matrix	27	31	35	38	23	21	15	10
Melody	34	37	28	28	19	17	19	19
NUN 6032	22	24	37	37	25	25	16	14
NUN 6033	28	29	26	26	32	31	14	14
Ovalita	24	25	27	27	41	42	8	5
Palomar	26	27	32	32	28	29	14	12
PX 8133	24	23	34	35	35	34	7	8
PX 8134	14	16	49	51	27	25	10	8
Revolution	28	30	27	28	33	31	12	11
Ruby	27	28	43	44	23	21	6	7
RWT 8173	26	28	29	30	32	31	12	12
Obsession	23	24	42	44	25	24	11	7
Summer King	33	38	36	38	14	15	15	8
SSX 7401	24	26	37	37	25	24	15	13
SSX 7436	31	32	35	35	21	20	12	12
SSX 7609	19	20	37	38	28	23	16	19
Super Seedless 7167	29	30	31	35	29	30	11	6
Super Seedless 7187	40	42	34	36	17	16	9	7
Super Seedless 9651	36	40	29	27	22	21	14	12
Sweet Delight	37	37	34	40	20	20	10	3
Sweet Slice Plus	23	25	34	37	30	30	13	8
Tri-X-212	22	22	33	31	31	32	14	15
Tri-X-313	48	50	29	30	13	13	11	7
Tri-X-Triple Threat	33	36	24	24	30	29	11	11
Vagabond	29	33	25	26	33	33	12	8
Verde Roo	29	30	37	38	16	16	18	17
WT-04-70	13	14	49	54	22	19	15	14
WTC-9006	32	34	38	36	20	21	10	9
WTC-9135	21	22	38	40	32	30	9	9
WTC-9139	10	11	46	48	34	33	11	8
Average	26	28	36	37	26	25	12	10

[1] Fruit number (per cultivar and harvest) divided by the total number and total marketable number (per cultivar) times 100.

Table 28. Triploid Red-Flesh watermelon hybrid cultivar trial. **Cumulative** weight per acre, (x100), of fruit harvested over four harvests by various weight classes plus average fruit size[1]. **Clayton, N.C. 2008.**

		Fruit size category (lb)						Total Wt./	Mkt Wt./	Avg lb./
Cultivar	Rank[2]	<7.9	8-9.9	10-11.9	12-15.9	16-17.9	18 +	Acre	Acre[3]	fruit
ACX 4674	21	46	151	143	397	60	9	805	609	11.7
Firm N' Red	14	27	40	113	264	154	120	718	651	13.5
Constitution	37	62	71	161	283	58	17	652	519	11.3
Crunchy Red	2	28	44	120	339	119	231	881	809	14.0
CS 48705	15	49	71	185	313	125	24	768	648	12.1
Cut Master ESL	39	87	87	150	241	37	8	610	436	10.8
Fresh Cut ESL	26	23	67	81	287	160	42	661	570	13.0
Harmony	34	43	101	120	297	59	53	672	529	12.0
Imagination	40	48	91	92	164	0	0	396	256	10.0
Liberty	5	58	72	117	340	153	120	860	730	12.9
Matrix	1	14	40	73	232	141	387	886	832	15.8
Melody	23	56	91	209	248	94	35	734	587	11.7
NUN 6032	16	39	63	150	311	81	93	736	634	12.7
NUN 6033	33	41	65	119	220	102	94	642	536	12.7
Ovalita	27	58	77	187	295	66	16	700	564	11.4
Palomar	35	69	60	131	312	59	24	655	526	11.7
PX 8133	19	12	51	110	277	118	119	687	625	13.5
PX 8134	38	46	106	144	273	59	32	660	507	11.4
Revolution	22	15	66	33	215	139	206	674	593	14.5
Ruby	30	32	83	117	296	111	34	674	558	12.3
RWT 8173	7	21	43	53	243	265	149	773	709	14.3
Obsession	25	45	71	125	290	116	43	690	574	12.4
Summer King	18	30	46	72	336	132	88	704	628	13.2
SSX 7401	31	49	67	106	316	81	51	670	554	12.4
SSX 7436	36	51	58	143	271	72	34	630	521	11.7
SSX 7609	28	43	75	102	329	72	61	681	564	12.1
Super Seedless 7167	10	61	77	157	324	103	114	837	698	12.4
Super Seedless 7187	13	50	62	162	363	95	50	782	670	12.2
Super Seedless 9651	12	44	111	77	348	109	149	839	684	12.9
Sweet Delight	11	45	79	118	325	148	98	814	690	12.9
Sweet Slice Plus	6	23	50	125	380	110	110	799	726	13.4
Tri-X-212	24	42	95	125	305	88	59	713	576	12.2
Tri-X-313	3	27	53	131	345	138	162	857	776	13.7
Tri-X-Triple Threat	32	80	127	159	328	43	16	753	546	11.1
Vagabond	9	87	90	128	443	87	42	877	699	11.8
Verde Roo	29	99	131	144	268	88	59	788	558	11.2
WT-04-70	17	59	83	90	420	88	33	773	631	12.2
WTC-9006	20	57	51	100	327	109	84	728	620	12.5
WTC-9135	4	43	51	100	241	169	241	945	751	13.8
WTC-9139	8	25	51	101	272	140	191	780	704	13.7
Average	**- -**	46	74	122	302	104	87	**738**	**615**	**12.5**
LSD (0.05)	**- -**	**34**	**52**	**73**	**131**	**89**	**96**	**201**	**202**	**1.0**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 plants were interplanted after the triploid plants, 1, 4, and 7 within the plot.

[2] Ranked according to total marketable weight.

[3] Includes fruit 10 - 18+ pounds.

Table 29. Triploid Red-Flesh watermelon hybrid cultivar trial. Percentage harvested over four harvests by **weight** within each fruit size category. **Clayton, NC, 2008.**

	Percentages[1] (%) by Fruit Size Category					
Cultivar	**< 7.9**	**8-9.9**	**10-11.9**	**12-15.9**	**16-17.9**	**18 +**
ACX 4674	6	19	18	49	7	1
Firm N' Red	4	6	16	37	21	17
Constitution	10	11	25	43	9	3
Crunchy Red	3	5	14	39	14	26
CS 48705	6	9	24	41	16	3
Cut Master ESL	14	14	25	40	6	1
Fresh Cut ESL	4	10	12	43	24	6
Harmony	6	15	18	44	9	8
Imagination	12	23	23	41	0	0
Liberty	7	8	14	40	18	14
Matrix	2	4	8	26	16	44
Melody	8	12	28	34	13	5
NUN 6032	5	9	20	42	11	13
NUN 6033	6	10	19	34	16	15
Ovalita	8	11	27	42	9	2
Palomar	10	9	20	48	9	4
PX 8133	2	7	16	40	17	17
PX 8134	7	16	22	41	9	5
Revolution	2	10	5	32	21	31
Ruby	5	12	17	44	16	5
RWT 8173	3	6	7	31	34	19
Obsession	7	10	18	42	17	6
Summer King	4	7	10	48	19	13
SSX 7401	7	10	16	47	12	8
SSX 7436	8	9	23	43	11	5
SSX 7609	6	11	15	48	11	9
Super Seedless 7167	7	9	19	39	12	14
Super Seedless 7187	6	8	21	46	12	6
Super Seedless 9651	5	13	9	42	13	18
Sweet Delight	6	10	15	40	18	12
Sweet Slice Plus	3	6	16	48	14	14
Tri-X-212	6	13	17	43	12	8
Tri-X-313	3	6	15	40	16	19
Tri-X-Triple Threat	11	17	21	43	6	2
Vagabond	10	10	15	50	10	5
Verde Roo	13	17	18	34	11	7
WT-04-70	8	11	12	54	11	4
WTC-9006	8	7	14	45	15	12
WTC-9135	5	5	11	25	18	25
WTC-9139	3	6	13	35	18	25
Average	6	10	17	41	14	11

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 plants were interplanted among the triploid plants, 1, 4, and 7.

Table 30. Triploid Red-Flesh watermelon hybrid cultivar trial. Interior fruit quality. **Clayton, N.C., 2008.**[1]

Cultivar	SS[2]	Flesh Color[3]	Sd. Trace Size[4]	Hard Seed Population[5]	LD[6]	Rind[7]	Flesh Firmness[8]	Hollow Heart Ratings[9]				
								HH0	HH1	HH2	HH3	HH4
ACX 4674	11.6	3.5	0.7	1.5	1.3	1.7	2.7	55	30	10	5	0
Firm N' Red	12.3	3.2	0.6	0.5	1.3	1.8	3.0	85	5	0	10	0
Constitution	12.3	3.5	1.0	0.3	1.2	1.3	2.5	60	25	5	5	5
Crunchy Red	11.8	3.6	0.4	1.1	1.6	1.7	3.3	100	0	0	0	0
CS 48705	12.3	3.5	0.8	0.1	1.1	1.6	2.9	35	15	20	25	5
Cut Master ESL	12.1	3.7	1.1	0.3	1.3	1.6	2.7	30	0	20	30	20
Fresh Cut ESL	12.3	3.6	0.8	0.2	1.1	1.6	2.9	70	20	0	10	0
Harmony	12.2	3.8	0.6	0.1	1.3	1.6	2.8	75	0	5	15	5
Imagination	11.4	3.8	0.8	0.3	1.1	1.5	2.6	80	5	10	5	0
Liberty	12.3	3.4	0.9	0.3	1.3	1.5	2.8	50	35	5	10	0
Matrix	11.5	3.7	1.0	0.2	1.6	1.7	2.4	60	25	5	10	0
Melody	11.3	3.6	0.9	1.0	1.1	1.6	2.3	90	10	0	0	0
NUN 6032	12.1	3.3	0.6	0.2	1.3	1.6	2.9	50	25	20	5	0
NUN 6033	11.9	3.4	0.8	0.2	1.2	1.9	2.8	75	0	0	5	20
Ovalita	12.1	3.6	0.4	0.5	1.3	1.5	2.9	40	30	15	10	5
Palomar	11.5	3.3	1.3	0.4	1.1	1.7	2.6	75	5	10	10	0
PX 8133	11.8	3.7	0.4	0.2	1.6	1.8	3.0	65	5	10	20	0
PX 8134	11.5	3.6	0.9	0.4	1.3	1.8	2.9	70	10	0	15	5
Revolution	12.4	3.6	0.8	0.4	1.8	1.7	2.9	80	10	5	0	5
Ruby	11.9	3.7	0.9	0.7	1.3	1.7	2.7	60	20	0	15	5
RWT 8173	12.9	4.4	1.0	0.4	1.3	1.4	2.4	45	15	10	25	5
Obsession	12.0	4.3	0.9	0.4	1.3	1.5	2.6	75	20	5	0	0
Summer King	11.9	3.3	0.5	0.7	1.3	1.6	2.8	65	5	0	15	15
SSX 7401	11.6	3.1	0.8	0.5	1.3	1.5	2.7	45	25	10	0	5
SSX 7436	11.7	3.4	0.8	0.4	1.3	1.6	2.6	45	35	10	10	0
SSX 7609	12.1	3.4	0.8	0.4	1.3	1.6	2.5	75	10	10	5	0
Super Seedless 7167	12.3	3.1	0.5	0.4	1.3	1.6	2.8	50	20	10	20	0
Super Seedless 7187	12.1	3.3	0.5	0.4	1.3	1.7	3.0	75	20	0	5	0
Super Seedless 9651	12.1	3.6	0.4	0.6	1.2	1.5	3.1	65	15	10	10	0
Sweet Delight	12.8	3.0	0.9	0.0	1.3	1.7	2.7	45	10	25	10	10
Sweet Slice Plus	11.5	4.1	0.8	0.6	1.2	1.6	2.2	40	10	10	20	20
Tri-X-212	11.9	3.3	0.8	0.4	1.4	1.7	2.8	70	15	0	5	10
Tri-X-313	12.9	3.2	0.4	0.3	1.3	1.8	2.6	45	0	20	20	15
Tri-X-Triple Threat	11.4	3.8	0.6	0.6	1.1	1.5	2.5	70	10	10	5	5
Vagabond	11.7	3.3	0.6	0.2	1.3	1.5	3.5	100	0	0	0	0

Table 30 (cont.). Triploid Red-Flesh watermelon hybrid cultivar trial. Interior fruit quality. **Clayton, N.C., 2008.**[1]

Cultivar	SS[2]	Flesh Color[3]	Sd. Trace Size[4]	Hard Seed Population[5]	LD[6]	Rind[7]	Flesh Firmness[8]	Hollow Heart Ratings[9] HH0	HH1	HH2	HH3	HH4
Verde Roo	11.9	3.4	0.9	0.8	1.3	1.6	2.6	45	25	5	20	5
WT-04-70	12.1	3.6	0.8	0.7	1.2	1.5	2.5	35	20	10	25	10
WTC-9006	11.5	2.9	0.6	0.1	1.3	1.7	2.6	80	15	0	5	0
WTC-9135	12.5	3.8	0.5	0.4	1.3	1.7	2.7	90	5	0	5	0
WTC-9139	12.0	3.3	0.6	0.1	1.3	1.8	3.0	90	10	0	0	0
Average	12.0	3.4	0.7	0.4	1.3	1.6	2.7	66	15	5	10	4
LSD (0.05)	**0.7**	**0.5**	**0.4**	**0.6**	**0.2**	**0.2**	**0.3**	**39**	**22**	**16**	**22**	**16**

[1] Most measurements were obtained from fruits in harvest 1.

[2] SS = Indicates sweetness, average of 5 melons per replication (20 total).

[3] Rating: 1 = white, 2 = pink, 3 = red, 4 = medium-dark red, 5 = blood red.

[4] Rating: 1=small (i.e. tomato), 3=medium, 5=large (i.e.Crimson Sweet).

[5] Rating: 1 = few, 3 = some, 5 = many.

[6] LD = Length and diameter ratio, average of 5 melons per replication (20 total).

[7] Rind = Rind thickness (mm), measured from rind to where white and colored flesh meet, average of 5 melons per replication.

[8] Fruit pressure was taken by a penetrometer, Fruit Pressure Tester - FT011 from QA Supplies LLC, Norfolk Va. Five melons per replicate, per cultivar, were probed 1/2 the distance between the rind and the center of the melon.

[9] **HH Percentage Rating Scale:**

HH0: No crack in flesh

HH1: Slight crack in flesh

HH2: Small crack in flesh

HH3: Med. separation in flesh

HH4: Complete separation in flesh to rind

HH3 & HH4 = Non-marketable

Miniature Seedless Watermelon Cultural Practices for 2008 Cultivar Trials, Central Crops Research Station; Clayton, NC

Introduction

Growers are searching for alternative crops that can diversify their farm operation, reduce the risks associated with growing one or a few crops, but most importantly, to return profits to their business operation. Miniature seedless watermelons (also called palm melons or personal size watermelons) are a relatively new development in the watermelon industry. Expanded sales and availability continued in the United States in 2008. Sales from miniature seedless watermelon have helped to increase watermelon sales and have not reduced the sales of regular size watermelons. In the tables that follow, the adaptability of the miniature seedless watermelon cultivars is evaluated, both for yields and quality. This should help the watermelon industry make informed decisions regarding newly released cultivars or those that are being considered for release.

Materials and Methods

As with regular size diploid and triploid watermelons, before the growing season, seed companies were contacted to obtain seed for the watermelon cultivar trials. The first year we conducted miniature seedless watermelon evaluations was in 2003. Since then, a miniature seedless watermelon cultivar variety test has been conducted each year. We report the specifics for the 2008 study in the tables that follow.

Once all seed were obtained, they were planted into LE 1803 transplant trays (Landmark Plastics Corp.; Akron, OH) on 14 April, 2008. The planting medium used was Fafard Super-Fine Germinating Mix, a commercial soil less mix (Conrad Fafard, Inc.; Agawam, ME). Due to stand establishment difficulties with some varieties; the mini watermelon study was delayed in planting as seed for some cultivars was replanted. Approximately 4 to 5 weeks after seeding, the plants were placed in a cold frame and hardened before being established in the field on 29 May 2008. Fertilizer, 30 lb/acre N and 80 lb/acre K_20, was incorporated into the bed on 18 April prior to the laying of black polyethylene plastic (0.70 mil thick high density plastic film, 48 inches wide; B.B. Hobbs, Clinton, NC) on 23 April. Fumigant (Telone C-17) was injected at a 12 gal/acre rate on 18 April when the plastic was laid. Herbicides, Curbit at 4 pints/acre, Buccaneer at 1 qt/acre, and Alanap L at 6 quarts/acre were applied between the plastic beds for weed control on 8-9 May. Sandia at 0.75 oz/acre was applied to row middles on 5 June. Gramaxone at 3 pints/acre was applied on 6 June for weed control between row middles and Poast at 5 oz/gal was applied between the plastic beds for weed control on 3 July. Spacing between row middles was 10 feet. In-row spacing was 12 inches for the miniature seedless watermelon test. Plot size was one row with 10 plants per plot and 10 feet between plots. Pollinizer plants of SP-4 were interplanted in the plots after triploid plants 1, 4, and 7. Four replications were used in the miniature seedless watermelon test. At time of transplant, a starter solution was applied using 20-20-20 (0.5 lb./50 gal. water) and Diazinon (0.5 lb./50 gallons water) for insect control. Plots with missing plants were replanted approximately 7 days after planting to achieve 100% stand in most cases. Trickle irrigation was utilized (NETAFIM, 12 inch spacing, 0.24 gph; NETAFIM, Tel

Aviv, Israel) over the growing season. Fertigation was initiated two weeks after planting and applied weekly. Fertilizer was applied through the drip tube during the planting season. A total of 80 lb/acre N and 160 lb/acre K_2O was drip applied through the season using 4-0-8 liquid fertilizer. Cumulative amount of fertilizer applied for the entire growing season was 110, 0, and 240 lb/acre of N, P_2O_5, and K_2O, respectively. Insecticides were applied every week as a preventative measure beginning 5 June and on the following dates (11, 19, 25 June; 2, 9, 16, 23, and 30 July; and 6, 14, and 28 August). The following products were alternated during consecutive spray applications to avoid insect resistance: Asana XL, Perm Up, Sniper, Thiomax, and Abomectin. Similarly, the following fungicide products were used: Kocide, Previcur Flex, Maneb 75DF, Cabrio, Nova, Procure, Pristine, and Bravo Weather Stik, and Quintec; and applied on the following dates: 5, 11, 19, 25, and 26 June; 2, 9, 16, 23, and 30 July; and 14 August.

There were four harvests for the miniature triploid watermelon test. The first harvest one was 17 July and the fourth harvest was 20 August. Each fruit was harvested when ripe and weighed. Evaluations of each watermelon entry included yield, fruit size, production earliness, soluble solids using a hand held digital refractometer, fruit shape and size, exterior and interior descriptions (rind pattern, length/width ratio, seed trace size, occurrence of hard seeds, hollow heart incidence and severity, and flesh color), and interior flesh firmness. Flesh firmness was taken by using a Penetrometer FT 011 with a 7/16” plunger tip, (QA Supplies LLC, Norfolk, Va.), and recorded in pounds. Samples were obtained by cutting the center of the fruit from the stem to blossom end. Pressure was then taken in two areas of the fruit; top side and ground spot side. Pressure was not taken on fruit with hollow heart. The reported measures on flesh firmness are an average of the two sample areas. Most of the quality measurements were taken at first harvest.

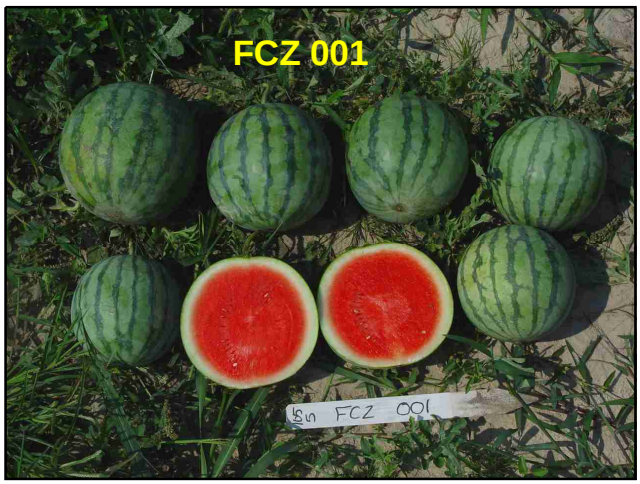
Financial Support
In addition to the seed companies, this program has been supported by the College of Life & Agricultural Sciences, the North Carolina Agricultural Research Service, and the North Carolina Cooperative Extension Service.

Table 31. Triploid mini-watermelon cultivar seed sources and descriptions; 2008.

Entry No.	Cultigen	Company	Description
1	108-UG-8	United Genetics	Distinct, very narrow, dark green stripes on light to medium green background; oval; uniform shape and size; fruit are ideal mini-watermelon size
2	AX 3021	Seedway	Distinct, narrow, dark green stripes on light green background; round; uniform shape with some size variations; ideal mini-watermelon size; very dark yellow flesh color with some hints of orange/salmon
3	AX 3022	Seedway	Appears as solid green; distinct, extremely narrow, very dark green stripes on dark green background; round to short oval; ideal mini-watermelon size; yellow flesh
4	Bobbie	Nunhems	Distinct, narrow, dark green stripes on light green background; round; uniform shape and size; ideal mini-watermelon size
5	FCZ-001	Zeraim Gedera	Distinct, narrow, dark green stripes on a light to medium green background; round; uniform shape and size; ideal mini-watermelon size
6	FCZ-003	Zeraim Gedera	Distinct, narrow, dark green stripes on light green background; round; uniform shape and size; ideal mini-watermelon size
7	Little Deuce Coupe	Syngenta	Appears as solid light green rind; distinct, extremely narrow, very dark green stripes on light green background; round to oval; fairly uniform shape and size; ideal size for mini-watermelon market
8	Master	Syngenta	Appears as solid light green rind; distinct, extremely narrow, dark green stripes on light green background; round to oval; fairly uniform shape and size; ideal size for mini-watermelon market
9	Mini Yellow	D. Palmer	Appears as solid dark green rind; distinct, very narrow, very dark green stripes dark green background; round; uniform shape and size; size of some fruits are larger than mini-watermelon size designations
10	NUN 0017	Nunhems	Distinct, very narrow, very dark green stripe on a medium to dark green background; oval; uniform shape and size; mini-watermelon watermelon size is generally too large
11	Petite Perfection	Syngenta	Distinct, very narrow, dark green stripes on light green background; slightly oval; uniform shape and size; ideal mini-watermelon size
12	Pixie	Nunhems	Distinct, narrow, dark stripes shadowed with medium green on light green background; round; slightly larger than ideal mini-watermelon size in some harvests
13	Sorbet	Hollar	Distinct, narrow, dark green stripes on medium to dark green background; round; uniform shape and size; slightly larger than a mini-watermelon size
14	Vanessa	Nunhems	Solid, dark green rind; round; bright yellow ground spot when ripe; round; uniform shape and size; ideal mini-watermelon size
15	WTP 8960	Zeraim Gedera	Distinct, narrow, dark green stripes on medium to dark green background; waxy look on rind; round; uniform shape and size; ideal mini watermelon size
16	WTP 9019	Zeraim Gedera	Appears as solid dark green rind; very distinct, narrow, dark green stripes on dark green background; round to oval; variable shape and size; fairly good mini-watermelon size with fruit being on the smaller side than most other cultivars tested in this study

Figure 3. Mini Triploid Watemelon Pictures

Figure 3. Mini Triploid Watemelon Pictures



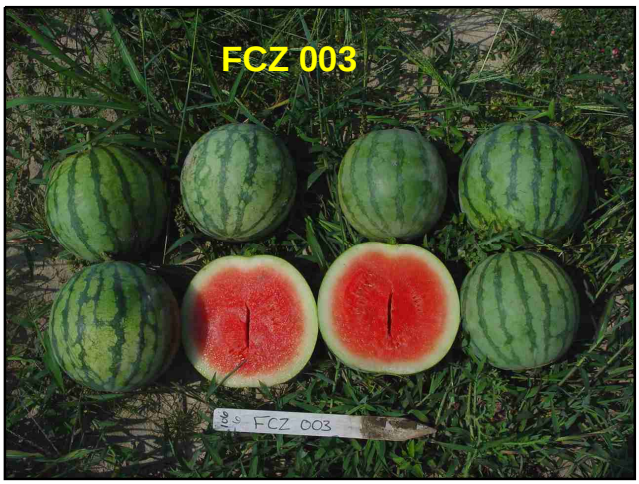


Figure 3. Mini Triploid Watemelon Pictures

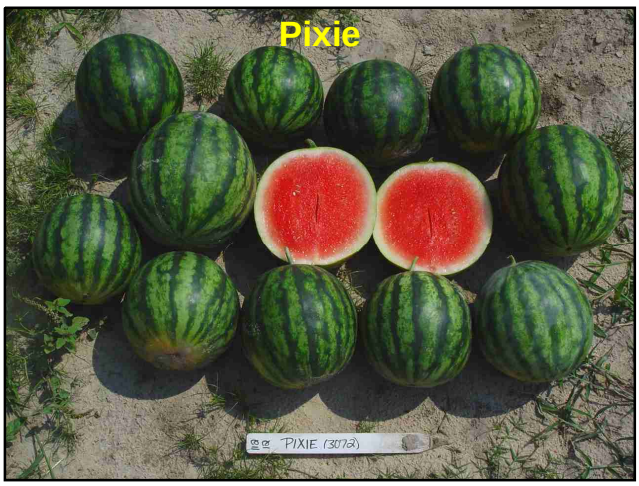


Figure 3. Mini Triploid Watemelon Pictures

Table 32. **Triploid mini watermelon** hybrid cultivar trial. **Number** of fruit harvested in **first** harvest by various weight classes (per acre) plus average fruit size[1]. **Clayton, N.C., 2008.**

		Fruit Size Category									
Cultivar	Rank[2]	<3	3-3.9	4.0-7.0	7.1-8.0	8.1-9.0	9.1-10	>10	Total	Total Mkt[3]	Avg. Wt. (lb)
108-UG-8	1	0	109	3158	109	0	0	0	3376	3267	5.1
AX 3021	4	218	218	1851	109	0	0	0	2396	2069	4.4
AX 3022	6	0	0	762	436	0	0	0	1198	762	6.6
Bobbie	10	0	0	436	0	0	0	0	436	436	2.8
FCZ-001	12	0	109	0	0	0	0	0	109	109	0.9
FCZ-003	9	0	218	327	0	0	0	0	545	545	3.1
Little Deuce Coupe	3	109	545	2069	0	0	0	0	2773	2614	4.3
Master	2	109	2069	762	0	0	0	0	2940	2831	3.7
Mini Yellow	6	0	218	545	327	0	109	0	1198	762	5.8
NUN 0017	15	0	0	0	0	218	0	218	436	0	7.7
Petite Perfection	5	109	218	1416	0	0	0	0	1742	1634	4.4
Pixie	15	0	0	0	0	0	0	0	0	0	0.0
Sorbet	12	0	0	109	218	218	0	0	545	109	6.1
Vanessa	12	0	109	0	0	0	0	0	109	109	0.8
WTP-8969	8	0	218	436	109	0	0	0	762	653	4.3
WTP-9019	11	0	109	218	109	0	0	0	436	327	4.2
Average	- -	34	259	755	88	27	7	14	1187	1014	4.0
LSD(0.05)	**- -**	**168**	**590**	**733**	**325**	**176**	**78**	**78**	**995**	**916**	**3.4**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit numbers for each category are rounded to the nearest whole number.

[2] Ranked according to total marketable number.

[3] Includes fruit 3 to 7 lbs.

Table 33. **Triploid mini watermelon** hybrid cultivar trial. **Percentage** of fruit number harvested in **first** harvest by various weight classes (per acre). **Clayton, N.C., 2008.**

	Percentages[1] (%) by Fruit Size Category							
Cultivar	**<3**	**3-3.9**	**4.0-7.0**	**7.1-8.0**	**8.1-9.0**	**9.1-10**	**>10**	**Mrkt[2]**
108-UG-8	0	3	94	3	0	0	0	97
AX 3021	9	9	77	5	0	0	0	86
AX 3022	0	0	64	36	0	0	0	64
Bobbie	0	0	100	0	0	0	0	100
FCZ-001	0	100	0	0	0	0	0	100
FCZ-003	0	40	60	0	0	0	0	100
Little Deuce Coupe	4	20	75	0	0	0	0	94
Master	4	70	26	0	0	0	0	96
Mini Yellow	0	18	45	27	0	9	0	64
NUN 0017	0	0	0	0	50	0	50	0
Petite Perfection	6	13	81	0	0	0	0	94
Pixie	0	0	0	0	0	0	0	0
Sorbet	0	0	20	40	40	0	0	20
Vanessa	0	100	0	0	0	0	0	100
WTP-8969	0	29	57	14	0	0	0	86
WTP-9019	0	25	50	25	0	0	0	75
Average	1	27	47	9	6	1	3	73

[1] Yields are calculated using 100 percent seedless watermelon population. SP-1 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit percent for each category are rounded to the nearest whole number.

[2] Includes fruit 3 to 7 lbs.

Table 34. **Triploid mini watermelon** hybrid cultivar trial. **Number** of fruit harvested in **second** harvest by various weight classes (per acre) plus average fruit size[1]. **Clayton, N.C., 2008.**

		Fruit Size Category									
Cultivar	Rank[2]	<3	3-3.9	4.0-7.0	7.1-8.0	8.1-9.0	9.1-10	>10	Total	Total Mkt[3]	Avg. Wt. (lb)
108-UG-8	14	0	653	1525	0	0	0	0	2178	2178	4.8
AX 3021	11	762	545	2287	109	0	0	0	3703	2831	4.2
AX 3022	7	0	653	3049	1089	327	327	218	5663	3703	6.3
Bobbie	13	0	327	2069	980	653	0	109	4138	2396	6.3
FCZ-001	9	2069	1525	1525	0	0	0	0	5118	3049	3.3
FCZ-003	1	327	1416	4138	109	0	0	0	5990	5554	4.6
Little Deuce Coupe	2	436	1960	3267	0	0	0	0	5663	5227	4.2
Master	5	1851	1960	2505	0	0	0	0	6316	4465	3.6
Mini Yellow	10	0	218	2723	545	1198	327	218	5227	2940	6.8
NUN 0017	16	0	0	980	1089	762	871	1089	4792	980	8.6
Petite Perfection	8	436	1089	2396	0	0	0	0	3920	3485	4.4
Pixie	4	218	653	3920	436	218	0	0	5445	4574	5.2
Sorbet	15	0	218	1742	545	871	1198	436	5009	1960	7.7
Vanessa	2	0	762	4465	762	109	218	109	6425	5227	5.6
WTP-8969	6	109	109	3812	653	545	871	327	6425	3920	6.8
WTP-9019	12	0	436	2287	327	109	0	0	3158	2723	5.6
Average	- -	388	783	2668	415	299	238	157	4948	3451	5.5
LSD(0.05)	**- -**	**775**	**863**	**1707**	**611**	**517**	**564**	**292**	**2261**	**1978**	**0.6**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit numbers for each category are rounded to the nearest whole number.

[2] Ranked according to total marketable number.

[3] Includes fruit 3 to 7 lbs.

Table 35. **Triploid mini watermelon** hybrid cultivar trial. **Percentage** of fruit number harvested in **second** harvest by various weight classes (per acre). **Clayton, N.C., 2008.**

	Percentages[1] (%) by Fruit Size Category							
Cultivar	**<3**	**3-3.9**	**4.0-7.0**	**7.1-8.0**	**8.1-9.0**	**9.1-10**	**>10**	**Mrkt[2]**
108-UG-8	0	30	70	0	0	0	0	100
AX 3021	21	15	62	3	0	0	0	76
AX 3022	0	12	54	19	6	6	4	65
Bobbie	0	8	50	24	16	0	3	58
FCZ-001	40	30	30	0	0	0	0	60
FCZ-003	5	24	69	2	0	0	0	93
Little Deuce Coupe	8	35	58	0	0	0	0	92
Master	29	31	40	0	0	0	0	71
Mini Yellow	0	4	52	10	23	6	4	56
NUN 0017	0	0	20	23	16	18	23	20
Petite Perfection	11	28	61	0	0	0	0	89
Pixie	4	12	72	8	4	0	0	84
Sorbet	0	4	35	11	17	24	9	39
Vanessa	0	12	69	12	2	3	2	81
WTP-8969	2	2	59	10	8	14	5	61
WTP-9019	0	14	72	10	3	0	0	86
Average	8	16	55	8	6	4	3	71

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit percentages for each category are rounded to the nearest whole number.

[2] Includes fruit 3 to 7 lbs.

Table 36. **Triploid mini watermelon** hybrid cultivar trial. **Number** of fruit harvested in **third** harvest by various weight classes (per acre) plus average fruit size[1]. **Clayton, N.C., 2008.**

		Fruit Size Category									
Cultivar	Rank[2]	<3	3-3.9	4.0-7.0	7.1-8.0	8.1-9.0	9.1-10	>10	Total	Total Mkt[3]	Avg. Wt. (lb)
108-UG-8	4	218	218	1198	218	109	0	0	1960	1416	6.0
AX 3021	8	0	436	653	109	0	0	0	1198	1089	5.4
AX 3022	8	0	218	871	109	0	109	0	1307	1089	5.6
Bobbie	14	0	0	436	327	218	0	0	980	436	5.6
FCZ-001	3	545	871	1525	109	0	0	0	3049	2396	4.8
FCZ-003	5	109	436	871	109	0	0	0	1525	1307	3.4
Little Deuce Coupe	11	109	436	327	109	0	109	0	1089	762	3.4
Master	2	327	1307	1525	0	0	0	0	3158	2831	4.0
Mini Yellow	11	0	0	762	0	218	0	0	980	762	6.5
NUN 0017	15	0	0	327	218	109	0	327	980	327	8.5
Petite Perfection	5	109	109	1198	109	109	0	0	1634	1307	4.0
Pixie	10	0	0	871	545	218	0	0	1634	871	6.3
Sorbet	16	0	0	109	109	0	109	0	327	109	5.2
Vanessa	7	218	327	871	109	218	0	0	1742	1198	4.9
WTP-8969	13	0	109	545	109	109	109	0	980	653	7.1
WTP-9019	1	327	327	2723	980	0	109	0	4465	3049	5.9
Average	- -	123	299	926	204	82	34	20	1688	1225	5.4
LSD(0.05)	**- -**	**436**	**559**	**1052**	**405**	**276**	**172**	**148**	**1741**	**1353**	**3.0**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit numbers for each category are rounded to the nearest whole number.

[2] Ranked according to total marketable number.

[3] Includes fruit 3 to 7 lbs.

Table 37. **Triploid mini watermelon** hybrid cultivar trial. **Percentage** of fruit number harvested in **third** harvest by various weight classes (per acre). **Clayton, N.C., 2008.**

	Percentages[1] (%) by Fruit Size Category							
Cultivar	**<3**	**3-3.9**	**4.0-7.0**	**7.1-8.0**	**8.1-9.0**	**9.1-10**	**>10**	**Mrkt[2]**
108-UG-8	11	11	61	11	6	0	0	72
AX 3021	0	36	55	9	0	0	0	91
AX 3022	0	17	67	8	0	8	0	83
Bobbie	0	0	44	33	22	0	0	44
FCZ-001	18	29	50	4	0	0	0	79
FCZ-003	7	29	57	7	0	0	0	86
Little Deuce Coupe	10	40	30	10	0	10	0	70
Master	10	41	48	0	0	0	0	90
Mini Yellow	0	0	78	0	22	0	0	78
NUN 0017	0	0	33	22	11	0	33	33
Petite Perfection	7	7	73	7	7	0	0	80
Pixie	0	0	53	33	13	0	0	53
Sorbet	0	0	33	33	0	33	0	33
Vanessa	13	19	50	6	13	0	0	69
WTP-8969	0	11	56	11	11	11	0	67
WTP-9019	7	7	61	22	0	2	0	68
Average	5	15	53	14	7	4	2	69

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit percentages for each category are rounded to the nearest whole number.

[2] Includes fruit 3 to 7 lbs.

Table 38. **Triploid mini watermelon** hybrid cultivar trial. **Number** of fruit harvested in **fourth** harvest by various weight classes (per acre) plus average fruit size[1]. **Clayton, N.C., 2008.**

		Fruit Size Category									
Cultivar	Rank[2]	<3	3-3.9	4.0-7.0	7.1-8.0	8.1-9.0	9.1-10	>10	Total	Total Mkt[3]	Avg. Wt. (lb)
108-UG-8	14	327	327	1525	545	762	0	109	3594	1851	5.6
AX 3021	10	0	327	2178	653	436	436	218	4247	2505	6.4
AX 3022	12	436	218	2069	218	218	109	980	4247	2287	7.8
Bobbie	11	109	109	2287	1089	871	545	1525	6534	2396	8.5
FCZ-001	3	1416	980	3703	1089	436	109	0	7732	4683	5.1
FCZ-003	12	0	436	1851	218	109	218	436	3267	2287	7.5
Little Deuce Coupe	6	980	653	3158	109	327	0	218	5445	3812	5.5
Master	5	545	1198	2940	218	0	109	0	5009	4138	4.7
Mini Yellow	9	218	327	2505	762	1307	109	653	5881	2831	7.3
NUN 0017	16	109	0	980	545	436	218	1742	4029	980	9.5
Petite Perfection	7	436	762	2287	871	436	109	218	5118	3049	6.2
Pixie	4	0	327	4138	980	327	980	1307	8059	4465	7.5
Sorbet	15	0	0	1416	109	218	218	980	2940	1416	6.9
Vanessa	1	218	1198	4138	653	545	0	980	7732	5336	6.4
WTP-8969	7	0	436	2614	1307	653	436	1634	7079	3049	8.7
WTP-9019	1	218	1089	4247	545	327	436	1089	7950	5336	6.5
Average	- -	313	524	2627	619	463	252	755	5554	3151	6.9
LSD(0.05)	**- -**	**943**	**789**	**1604**	**956**	**736**	**544**	**1156**	**2338**	**1705**	**3.0**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit numbers for each category are rounded to the nearest whole number.

[2] Ranked according to total marketable number.

[3] Includes fruit 3 to 7 lbs.

Table 39. **Triploid mini watermelon** hybrid cultivar trial. **Percentage** of fruit number harvested in **fourth** harvest by various weight classes (per acre). **Clayton, N.C., 2008.**

	Percentages[1] (%) by Fruit Size Category							
Cultivar	**<3**	**3-3.9**	**4.0-7.0**	**7.1-8.0**	**8.1-9.0**	**9.1-10**	**>10**	**Mrkt[2]**
108-UG-8	9	9	42	15	21	0	3	52
AX 3021	0	8	51	15	10	10	5	59
AX 3022	10	5	49	5	5	3	23	54
Bobbie	2	2	35	17	13	8	23	37
FCZ-001	18	13	48	14	6	1	0	61
FCZ-003	0	13	57	7	3	7	13	70
Little Deuce Coupe	18	12	58	2	6	0	4	70
Master	11	24	59	4	0	2	0	83
Mini Yellow	4	6	43	13	22	2	11	48
NUN 0017	3	0	24	14	11	5	43	24
Petite Perfection	9	15	45	17	9	2	4	60
Pixie	0	4	51	12	4	12	16	55
Sorbet	0	0	48	4	7	7	33	48
Vanessa	3	15	54	8	7	0	13	69
WTP-8969	0	6	37	18	9	6	23	43
WTP-9019	3	14	53	7	4	5	14	67
Average	6	9	47	11	9	4	14	56

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit percentages for each category are rounded to the nearest whole number.

[2] Includes fruit 3 to 7 lbs.

Table 40. **Triploid mini watermelon** hybrid cultivar trial. Cumulative **number** of fruit harvested over 4 harvests by various weight classes (per acre) plus average fruit size[1]. **Clayton, N.C., 2008.**

		Fruit Size Category								
Cultivar	Rank[2]	<3	3-3.9	4.0-7.0	7.1-8.0	8.1-9.0	9.1-10	>10	Total	Total Mkt[3]
108-UG-8	9	545	1307	7405	871	871	0	109	11108	8712
AX 3021	10	980	1525	6970	980	436	436	218	11543	8494
AX 3022	12	436	1089	6752	1851	545	545	1198	12415	7841
Bobbie	14	109	436	5227	2396	1742	545	1634	12088	5663
FCZ-001	5	4029	3485	6752	1198	436	109	0	16008	10237
FCZ-003	7	436	2505	7187	436	109	218	436	11326	9692
Little Deuce Coupe	2	1634	3594	8821	218	327	109	218	14919	12415
Master	1	2831	6534	7732	218	0	109	0	17424	14266
Mini Yellow	13	218	762	6534	1634	2723	545	871	13286	7296
NUN 0017	16	109	0	2287	1851	1525	1089	3376	10237	2287
Petite Perfection	8	1089	2178	7296	980	545	109	218	12415	9474
Pixie	6	218	980	8930	1960	762	980	1307	15137	9910
Sorbet	15	0	218	3376	980	1307	1525	1416	8821	3594
Vanessa	3	436	2396	9474	1525	871	218	1089	16008	11870
WTP-8969	11	109	871	7405	2178	1307	1416	1960	15246	8276
WTP-9019	4	545	1960	9474	1960	436	545	1089	16008	11435
Average	- -	858	1865	6976	1327	871	531	946	13374	8841
LSD(0.05)	**- -**	**1301**	**1317**	**2676**	**1140**	**954**	**971**	**1259**	**3091**	**3048**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit numbers for each category are rounded to the nearest whole number.

[2] Ranked according to total marketable number.

[3] Includes fruit 3 to 7 lbs.

Table 41. Triploid mini watermelon hybrid cultivar trial. Cumulative **Percentage** harvested by number within each fruit size category. **Clayton, NC, 2008.**

	Percentages[1] (%) by Fruit Size Category							
Cultivar	**<3**	**3-3.9**	**4.0-7.0**	**7.1-8.0**	**8.1-9.0**	**9.1-10**	**>10**	**Mkt[2]**
108-UG-8	6	12	66	7	7	0	1	79
AX 3021	8	12	60	9	4	4	2	72
AX 3022	4	9	54	15	5	4	10	63
Bobbie	1	4	42	19	15	5	14	46
FCZ-001	24	22	42	9	3	1	0	64
FCZ-003	4	23	61	4	1	2	4	84
Little Deuce Coupe	11	24	59	1	2	1	2	83
Master	17	37	44	1	0	1	0	81
Mini Yellow	1	5	49	11	20	4	8	54
NUN 0017	1	0	24	18	14	9	34	24
Petite Perfection	9	17	58	8	5	1	2	75
Pixie	2	7	59	13	5	7	8	66
Sorbet	0	4	36	12	17	16	15	40
Vanessa	3	15	59	10	5	1	7	74
WTP-8969	1	6	47	14	9	8	15	53
WTP-9019	3	12	59	12	3	4	7	71
Average	6	13	51	10	7	4	8	64
LSD	**8**	**9**	**14**	**9**	**9**	**8**	**10**	**13**

[1] Fruit number (per cultivar and weight class) divided by the total number (per cultivar) times 100.

[2] Includes fruit 3 to 7 lbs.

Table 42. Triploid mini watermelon hybrid cultivar trial. **Percent** harvested by number by harvest within total and total marketable categories. **Clayton, NC, 2008.**

	Percentages[1] (%) by harvest for Total and Total Marketable							
	Harvest 1		Harvest 2		Harvest 3		Harvest 4	
Cultivar	Total	Total Mrkt.	Total	Total Mrkt.	Total	Total Mrkt.	Total	Total Mrkt.
108-UG-8	30	38	20	25	18	16	32	21
AX 3021	21	24	32	33	10	13	37	29
AX 3022	10	10	46	47	11	14	34	29
Bobbie	4	8	34	42	8	8	54	42
FCZ-001	1	1	32	30	19	23	48	46
FCZ-003	5	6	53	57	13	13	29	24
Little Deuce Coupe	19	21	38	42	7	6	36	31
Master	17	20	36	31	18	20	29	29
Mini Yellow	9	10	39	40	7	10	44	39
NUN 0017	4	0	47	43	10	14	39	43
Petite Perfection	14	17	32	37	13	14	41	32
Pixie	0	0	36	46	11	9	53	45
Sorbet	6	3	57	55	4	3	33	39
Vanessa	1	1	40	44	11	10	48	45
WTP-8969	5	8	42	47	6	8	46	37
WTP-9019	3	3	20	24	28	27	50	47
Average	9	11	38	40	12	13	41	36

[1] Fruit number (per cultivar and harvest) divided by the total number and total marketable number (per cultivar) times 100.

Table 43. **Mini Triploid** watermelon hybrid cultivar trial. Cumulative **weight** (x 100) of fruit harvested over 4 harvests by various weight classes (per acre). **Clayton, N.C., 2008.**

		Fruit Size Category (lb)									
Cultivar	Rank[1]	<3	3-3.9	4.0-7.0	7.1-8.0	8.1-9.0	9.1-10	>10	Total	Total Mkt[2]	Avg. Wt
108-UG-8	10	15	46	394	65	74	0	11	605	440	5.4
AX 3021	12	25	54	353	74	37	42	23	609	407	5.4
AX 3022	11	11	37	381	138	46	52	154	819	418	6.6
Bobbie	14	3	15	300	179	147	50	214	909	315	7.6
FCZ-001	6	100	121	343	89	36	11	0	700	463	4.3
FCZ-003	7	9	88	371	32	9	20	54	583	459	5.1
Little Deuce Coupe	4	42	127	433	16	28	11	29	686	560	4.6
Master	1	66	228	373	16	0	10	0	694	601	4.0
Mini Yellow	13	5	28	368	121	233	52	106	913	396	7.0
NUN 0017	16	3	0	130	141	133	105	406	917	130	9.0
Petite Perfection	8	27	76	379	73	46	11	25	636	454	5.1
Pixie	5	5	35	491	148	64	93	176	1013	526	6.5
Sorbet	15	0	7	187	74	112	144	182	707	194	8.0
Vanessa	3	12	83	508	115	74	21	136	949	591	5.8
WTP-8969	9	3	30	419	165	112	134	258	1119	449	7.5
WTP-9019	2	13	70	524	147	37	52	122	965	594	6.1
Average	- -	21	65	372	100	74	51	119	801	437	6.1
LSD(0.05)	**- -**	**32**	**46**	**146**	**86**	**81**	**93**	**175**	**232**	**156**	**1.1**

[1] Ranked according to total marketable number.

[2] Includes fruit 3 to 7 lbs.

Table 44. Triploid mini watermelon hybrid cultivar trial. Cumulative **Percentage** harvested by weight within each fruit size category. **Clayton, NC, 2008.**

	Percentages[1] (%) by Fruit Size Category							
Cultivar	**<3**	**3-3.9**	**4.0-7.0**	**7.1-8.0**	**8.1-9.0**	**9.1-10**	**>10**	**Mkt[2]**
108-UG-8	3	8	67	10	10	0	1	76
AX 3021	4	9	58	12	7	6	4	67
AX 3022	2	5	47	17	6	6	18	51
Bobbie	0	2	34	21	17	5	22	35
FCZ-001	15	18	47	13	4	1	0	66
FCZ-003	2	16	61	6	2	4	10	77
Little Deuce Coupe	6	18	64	2	4	1	4	82
Master	10	33	53	2	0	2	0	86
Mini Yellow	1	3	40	13	25	6	13	43
NUN 0017	0	0	15	15	14	10	46	15
Petite Perfection	4	12	59	12	8	2	4	70
Pixie	1	4	49	16	7	10	14	53
Sorbet	0	2	26	11	20	18	22	28
Vanessa	1	9	54	12	8	2	13	63
WTP-8969	0	3	38	16	10	11	22	41
WTP-9019	1	7	55	15	4	5	12	62
Average	3	9	48	12	9	6	13	57
LSD	**5**	**7**	**16**	**11**	**12**	**10**	**16**	**17**

[1] Fruit number (per cultivar and weight class) divided by the total number (per cultivar) times 100.

[2] Includes fruit 3 to 7 lbs.

Table 45. Mini Triploid watermelon hybrid cultivar trial. Interior fruit quality. **Clayton, NC, 2008**.[1]

Cultivar	Rind Thickness (mm)[2]	Soluble Solids[3]	Flesh Color[4]	Average Fruit Pressure[5]	Fruit LD	Hollow Heart Ratings [6]				
						HH0	HH1	HH2	HH3	HH4
108-UG-8	0.9	11.6	2.8	2.0	1.11	65	10	0	10	15
AX 3021	0.8	12.1	2.0	2.5	1.10	100	0	0	0	0
AX 3022	1.1	11.7	1.0	2.2	1.06	95	0	5	0	0
Bobbie	1.5	12.3	4.1	2.8	1.07	100	0	0	0	0
FCZ-001	1.4	10.2	3.6	3.3	1.02	100	0	0	0	0
FCZ-003	1.2	10.7	4.0	2.6	1.02	90	0	5	5	0
Little Deuce Coupe	1.0	11.9	3.8	2.8	1.11	100	0	0	0	0
Master	1.0	11.6	3.6	2.7	1.13	100	0	0	0	0
Mini Yellow	1.2	11.6	1.0	2.2	1.05	100	0	0	0	0
NUN 0017	1.5	12.1	3.8	2.5	1.07	100	0	0	0	0
Petite Perfection	0.8	12.1	3.6	3.1	1.12	100	0	0	0	0
Pixie	1.5	12.0	3.6	2.5	1.03	100	0	0	0	0
Sorbet	1.6	10.7	3.7	2.9	1.06	95	5	0	0	0
Vanessa	1.4	11.0	3.7	2.7	1.06	100	0	0	0	0
WTP-8969	1.6	11.1	3.5	3.2	1.03	55	0	10	30	5
WTP-9019	1.4	10.6	3.5	3.5	1.01	95	5	0	0	0
Average	1.2	11.5	3.2	2.7	1.07	93	1	1	3	1
LSD (0.05)	**0.2**	**0.6**	**0.4**	**0.4**	**0.04**	**17**	**6**	**7**	**11**	**8**

[1] Most measurements were obtained from fruits in harvest 1.

[2] Rind Thickness=Rinds were measured in 4 regions of the fruit (stem end and thereafter every 90 degrees) and an average was taken for 5 fruits per replication (15 total).

[3] SS = Soluble solids indicates sweetness, average of 5 melons per replication (15 total).

[4] Rating: 1 = yellow, 2=orange/salmon, 3=red, 3.5=bright red, 4=blood red.

[5] Fruit pressure was taken by a penetrometer, Fruit Pressure Tester - FT011 from QA Supplies LLC, Norfolk Va. Five melons per replicate, per cultivar, were probed 1/2 the distance between the rind and the center of the melon on the top and bottom sides of each fruit.

[6] **Hollow Heart Ratings** (Percentage occurrence in each category).

HH0 = Fruit with no hollow heart, (Marketable fruit).

HH1 = Fruit with minimal / hairline crack in flesh; (Marketable fruit).

HH2 = Fruit with small crack in flesh; (Marketable fruit).

HH3 = Fruit with medium to large flesh separations; (Non marketable fruit).

HH4 = Fruit with flesh separation to rind; (Non marketable fruit).

Yellow and Orange Flesh Watermelon Cultural Practices for 2008 Cultivar Trials, Cunningham Research Station; Kinston, NC

Introduction

Growers are searching for alternative crops that can diversify their farm operation, reduce the risks associated with growing one or a few crops, but most importantly, to return profits to their business operation. Yellow and orange flesh watermelons are not a relatively new development in the watermelon industry, but the continued development of crisper, sweeter, and more attractive yellow and orange flesh watermelons has led to a niche market for some growers. Expanded sales and availability continue in the United States. Sales from yellow and orange flesh watermelons have not and probably will not ever compete with the sales of regular red flesh watermelons, but provide the opportunity for some growers to boost there overall income. Yellow and orange flesh watermelons are also being looked at more in the fresh cut industry as the different flesh colors can add value to fresh cut fruit cups and trays. In the tables that follow, the adaptability of the yellow and orange flesh watermelon cultivars are evaluated, both for yields and quality. This should help the watermelon industry make informed decisions regarding newly released cultivars or those that are being considered for release.

Materials and Methods

As with regular size diploid and triploid watermelons, before the growing season, seed companies were contacted to obtain seed for the watermelon cultivar trials. We have conducted orange and yellow flesh cultivar evaluations periodically; it has been several years since the last one was conducted in North Carolina. We have placed some yellow flesh varieties in our red triploid watermelon evaluations if a company was interested in how it compared to other triploid cultivars.

Once all seed were obtained, they were planted into LE 1803 transplant trays (Landmark Plastics Corp.; Akron, OH) on 9 April, 2008. The planting medium used was Fafard Super-Fine Germinating Mix, a commercial soil less mix (Conrad Fafard, Inc.; Agawam, ME). Due to stand establishment difficulties with some cultivars; the yellow and orange flesh watermelon study was delayed in planting since seed from some cultivars had to be replanted. Approximately 3 to 4 weeks after seeding, the plants were placed in a cold frame and hardened before being established in the field on 20 May 2008. Fertilizer, 60 lb/acre N, 120lb/acre P_2O_5, and 120 lb/acre K_20, was incorporated into the bed on 26 March prior to the laying of black polyethylene plastic (0.70 mil thick high density plastic film, 48 inches wide; B.B. Hobbs, Clinton, NC) on 4 April. Fumigant (Telone II) was injected at a 6.5 gal./acre rate on 4 April when the plastic was laid. Herbicides, Devrinol at 4 lbs/acre and Gramoxone at 3 pints/acre were applied between the plastic beds for weed control on 6 May. Select at 8 oz/acre was applied to row middles on 2 July. Spacing between row middles was 10 feet. In-row spacing was 30 inches for the yellow and orange flesh watermelon test. Plot size was one row with 10 plants per plot and 10 feet between plots. Pollinizer plants of SP-4 were interplanted in the plots after plants 1, 4, and 7 for triploid varieties and no pollinizer plants were used for the diploid plots. Four replications were used in the yellow and orange flesh watermelon test. At time of transplant, a starter solution was applied using 20-20-20 (0.5

lb./50 gal. water) and Diazinon (0.5 lb./50 gal. water) for insect control. Plots with missing plants were replanted approximately 7 days after planting to achieve 100% stand in most cases. Trickle irrigation was utilized (NETAFIM, 12 inch spacing, 0.24 gph; NETAFIM, Tel Aviv, Israel) over the growing season. Fertigation was initiated two days after planting and applied weekly. Fertilizer was applied through the drip tube during the planting season. A total of 21 lb/acre N and 42 lb/acre K_2O was drip applied through the season using 4-0-8 liquid fertilizer. Cumulative amount of fertilizer applied for the entire growing season was 81, 120, and 162 lb/acre of N, P_2O_5, and K_2O, respectively. Insecticides were applied every week as a preventative measure beginning 30 May and on the following dates (5, 13, 20 and 27 June; 3, 11, 18, and 28 July; and 8 and 15 August). The following products were alternated during consecutive spray applications to avoid insect resistance: ABBA, Asana, Capture, and Permethrin. Similarly, the following fungicide products were used: Quadris, Pristine, Previcur Flex, Tenn-Cop, Bravo, Flint, Manzate 75, Nova, Procure, and Tanos; and applied on the following dates: 30 May; 5, 13, 20, and 27 June; 3, 11, and 28 July; and 8 and 15 August.

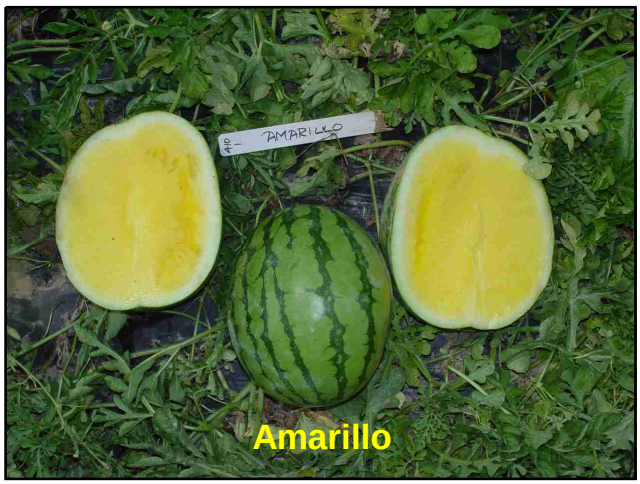
There were four harvests for the yellow and orange flesh watermelon test. The first harvest was 18 July, the second harvest was 30 July, the third harvest was 6 August, and the fourth harvest was 22 August. Each fruit was harvested when ripe and weighed. Evaluations of each watermelon entry included yield, fruit size, production earliness, soluble solids using a hand held digital refractometer, fruit shape and size, exterior and interior descriptions (rind pattern, length/width ratio, seed trace size, occurrence of hard seeds, hollow heart incidence and severity, and flesh color), and interior flesh firmness. Flesh firmness was taken by using a Penetrometer FT 011 with a 7/16" plunger tip, (QA Supplies LLC, Norfolk, Va.), and recorded in pounds. Samples were obtained by cutting the center of the fruit from the stem to blossom end. Pressure was then taken in five areas of the fruit; top side, ground spot side, stem end, blossom end, and heart of fruit. Pressure was not taken on fruit with hollow heart. The reported measures on flesh firmness are an average of the five sample areas. Most of the quality measurements were taken at first harvest.

Financial Support
In addition to the seed companies, this program has been supported by the College of Life & Agricultural Sciences, the North Carolina Agricultural Research Service, and the North Carolina Cooperative Extension Service.

Table 46. Yellow and Orange Watermelon cultivar seed sources and descriptions; 2008.

Entry No.	Cultigen	Company	Description
1	Amarillo	Syngenta	Distinct, narrow, dark green stripes on light green background; round to blocky; fairly uniform shape and size; good yellow flesh
2	Butterball	D. Palmer	Distinct, narrow, dark green stripes on light green background; round; uniform shape and size; attractive yellow flesh
3	Felicity	Known-You	Distinct, narrow, dark green stripes on a light green background; round to oval; uniform shape and size; good yellow flesh
4	Gold Strike	Willhite	Distinct, wide, dark green stripes on light to medium green background; elongated; uniform shape, somewhat variable in size; nice orange flesh color
5	New Queen	Known-You	Distinct, narrow, dark green stripes on a medium green background; oval; uniform shape and size; salmon to orange flesh color; fruit will split when harvested; no market for this melon in N.C.
6	Orchid Sweet	Known-You	Distinct, narrow, dark green stripes on light green background; round; uniform shape and size; nice yellow flesh color
7	Pure Orange	Willhite	Indistinct, very wide, dark green stripes on a light to medium green background; elongated; uniform shape and size; nice orange color
8	PX 1811	Seminis	Indistinct, medium width, medium green stripes on a light green background; oval; uniform shape and size; pale yellow flesh
9	Solid Gold	Seedway	Distinct, narrow, dark green stripes on a light green background; mainly round with some oval fruit; uniform shape and size; bright yellow flesh color
10	SRV 1817	Seminis	Fairly distinct, medium width, medium green stripes on a light green background; oval to blocky oval; uniform shape and fairly uniform size; good yellow flesh color
11	SSX 7736	Sakata	Distinct, medium width, dark green stripes on light green background; oval; uniform shape and size; pale orange flesh
12	SSX 7739	Sakata	Indistinct, very wide, dark stripes on a light green background; elongated; uniform shape and size; nice orange color at heart and fades as it approaches rind
13	Treasure Chest	Seeds by Design	Distinct, narrow, dark green stripes on light green background; round; uniform shape and size; good yellow flesh color
14	Triple Gold	Seeds by Design	Distinct, narrow, dark green stripes on light green background; round; uniform shape and size; good yellow flesh color
15	Yellow Bird	D. Palmer	Distinct, narrow, dark green stripes on light green background; round; uniform shape and size; good yellow flesh color

Figure 4. Yellow and Orange Flesh Watermelon Pictures



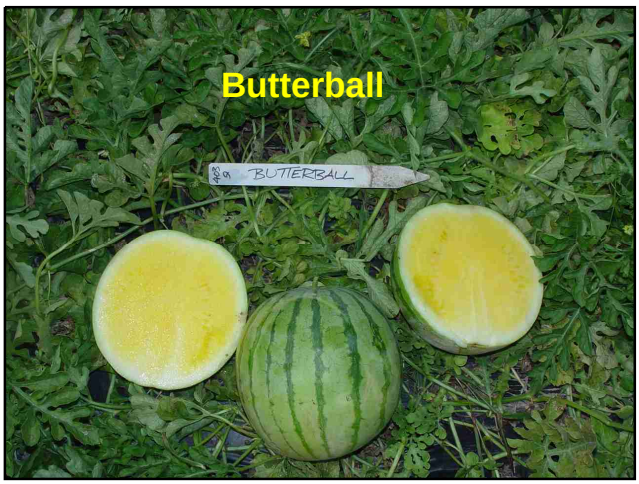


Figure 4. Yellow and Orange Flesh Watermelon Pictures

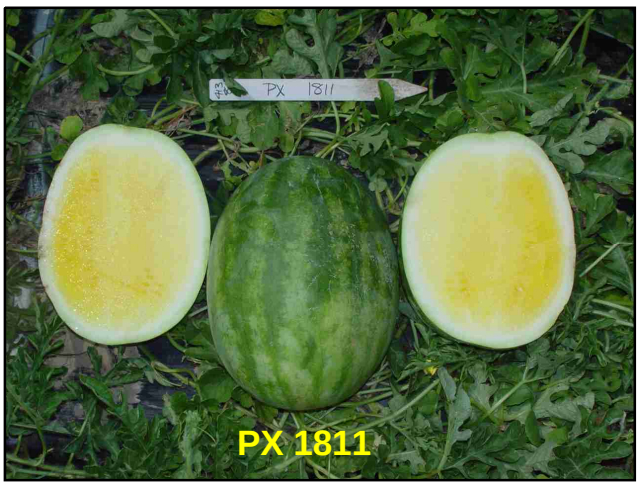


Figure 4. Yellow and Orange Flesh Watermelon Pictures

Figure 4. Yellow and Orange Flesh Watermelon Pictures

Table 47. **Yellow and Orange Flesh** watermelon hybrid cultivar trial. Cumulative **number** of fruit harvested over 4 harvests by various weight classes (per acre) plus average fruit size[1]. **Kinston, N.C., 2008.**

		Fruit Size Category						
Cultivar	**Rank[2]**	**<9.9**	**10-11.9**	**12-15.9**	**16-17.9**	**18 +**	**Total**	**Total Mkt[3]**
Amarillo	12	2309	1481	2004	349	523	6665	2875
Butterball	10	828	784	2527	566	436	5140	3528
Felicity	11	871	349	1394	523	1002	4138	2919
Gold Strike	6	784	610	1002	566	2222	5184	3790
New Queen	15	7318	305	0	0	0	7623	0
Orchid Sweet	14	2178	1394	1263	392	174	5401	1830
Pure Orange	4	174	174	653	436	2831	4269	3920
PX 1811	5	261	305	1133	566	2134	4400	3833
Solid Gold	13	1089	479	1220	523	479	3790	2222
SSX 7736	1	523	915	2352	1002	1133	5924	4487
SSX 7739	2	610	871	2178	1133	1133	5924	4443
SVR 1817	7	610	261	741	566	2396	4574	3703
Treasure Chest	8	871	610	1525	915	1176	5097	3616
Triple Gold	9	741	697	1568	697	1307	5009	3572
Yellow Bird	3	784	610	2178	697	1089	5358	3964
Average	- -	1330	656	1449	595	1202	5233	3247
LSD(0.05)	**- -**	**727**	**512**	**566**	**490**	**663**	**1013**	**703**

[1] Yields are calculated using 100 percent seedless watermelon population. SP-4 was the pollinizer interplanted after triploid plants 1, 4, and 7 (3 plants/plot). Fruit numbers for each category are rounded to the nearest whole number.

[2] Ranked according to total marketable number.

[3] Includes fruit 12 to 18.0+ lbs.

Table 48. **Yellow and Orange Flesh** watermelon hybrid cultivar trial. Cumulative **weight** (x 100) of fruit harvested over 4 harvests by various weight classes (per acre). **Kinston, N.C., 2008**.

		Fruit Size Category (lb)							
Cultivar	Rank[1]	<9.9	10-11.9	12-15.9	16-17.9	18.0 +	Total	Total Mkt[2]	Avg. Wt
Amarillo	12	172	161	272	59	103	766	434	11.5
Butterball	10	65	87	352	95	83	682	530	13.3
Felicity	11	68	39	197	87	218	609	502	14.7
Gold Strike	2	65	66	138	96	517	882	751	17.2
New Queen	15	445	32	0	0	0	477	0	6.2
Orchid Sweet	14	171	152	180	66	35	604	280	11.2
Pure Orange	1	16	19	92	74	686	887	853	20.8
PX 1811	4	22	33	158	94	478	786	731	18.0
Solid Gold	13	90	53	169	89	101	502	359	13.2
SSX 7736	6	41	101	332	169	224	867	726	14.7
SSX 7739	5	53	94	308	192	226	873	726	14.7
SVR 1817	3	53	29	106	97	547	832	750	18.1
Treasure Chest	8	69	66	211	156	248	749	615	14.7
Triple Gold	9	63	77	222	118	267	746	607	14.9
Yellow Bird	7	62	67	306	117	222	775	646	14.4
Average	- -	97	72	203	101	264	736	567	14.5
LSD(0.05)	**- -**	**57**	**56**	**81**	**83**	**155**	**141**	**134**	**1.7**

[1] Ranked according to total marketable number.

[2] Includes fruit 12 to 18.0+ lbs.

Table 49. Yellow and Orange Flesh watermelon hybrid cultivar trial. Interior and exterior fruit quality. **Kinston, NC, 2008.**[1]

Cultivar	Soluble Solids[2]	Flesh Color[3]	Seed Trace[4]	Hard Seed Pop.[5]	Fruit LD[6]	Rind[7]	Flesh Firmness[8]	% Hollow Heart [9]				
								HH0	HH1	HH2	HH3	HH4
Amarillo	11.8	1.0	0.4	0.1	1.2	1.6	2.6	50	5	0	30	15
Butterball	11.8	1.0	0.4	0.0	1.1	1.6	3.0	80	0	5	10	5
Felicity	12.9	1.0	0.6	0.3	1.2	1.5	2.4	55	10	10	5	20
Gold Strike*	12.0	2.0	2.9	3.0	1.8	1.5	2.7	55	30	5	10	0
New Queen*	11.9	1.6	3.5	2.9	1.5	0.8	3.3	100	0	0	0	0
Orchid Sweet	11.5	1.0	0.4	0.6	1.1	1.5	2.4	55	0	0	20	25
Pure Orange*	11.5	2.0	3.0	3.0	1.8	1.5	2.9	100	0	0	0	0
PX 1811	11.8	1.0	0.5	0.1	1.5	1.7	3.2	85	0	10	0	5
Solid Gold	12.7	1.0	0.6	0.3	1.2	1.5	2.4	75	5	0	10	10
SSX 7736	11.9	2.0	0.6	0.8	1.4	1.7	2.7	75	15	0	5	5
SSX 7739	11.9	2.0	0.5	0.3	1.6	1.7	2.8	50	5	15	20	10
SVR 1817	11.5	1.0	0.4	0.2	1.4	1.6	3.5	100	0	0	0	0
Treasure Chest	11.2	1.0	0.4	0.0	1.1	1.6	2.6	80	5	10	0	5
Triple Gold	11.7	1.0	0.6	0.2	1.1	1.6	2.7	90	5	0	0	5
Yellow Bird	11.8	1.0	0.9	0.9	1.0	1.6	2.8	80	0	5	5	10
Average	11.9	1.3	1.1	0.8	1.3	1.5	2.8	75	5	4	8	8
LSD (0.05)	**0.6**	**0.1**	**0.5**	**0.5**	**0.1**	**0.3**	**0.4**	**29**	**12**	**15**	**15**	**18**

[1] Most measurements were obtained from fruits in harvest 1.

[2] SS = Soluble solids indicates sweetness, average of 5 melons per replication (20 total).

[3] Rating: 1 = yellow, 1.5=salmon, 2=orange.

[4] Rating: 1=small (i.e. tomato), 3=medium, 5=large (i.e.Crimson Sweet).

[5] Rating: 1 = few, 3 = some, 5 = many.

[6] LD = Length and diameter ratio, average of 5 melons per replication (20 total).

[7] Rind = Rind thickness (mm), measured from rind to where white and colored flesh meet, average of 5 melons per replication.

[8] Fruit pressure was taken by a penetrometer, Fruit Pressure Tester - FT011 from QA Supplies LLC, Norfolk Va Five melons per replicate, per cultivar, were probed 1/2 the distance between the rind and the center of the melon.

[9] **HH Percentage Rating Scale**:

HH0: No crack in flesh

HH1: Slight crack in flesh

HH2: Small crack in flesh

HH3: Med. seperation in flesh

HH4: Complete seperation in flesh to rind

HH3 & HH4 = Non-marketable