

**Cornell Cooperative Extension**

Eastern NY Commercial Horticulture Program

# 2020 Seedless Watermelon Variety Trial



# Trial Information

- Grown in Ulster County
- Planted 6/5/20
- Raised on black plastic mulch, 7 foot centers, 3.3 feet between plants
- Two replications, 9 plants per rep
- Two rows with one row of pollinator in the center
- Harvested 5 times in August
- Fruit graded into 60 Counts (9.0 to 13.5lbs), 45 Counts (13.6 to 17.5lbs), 36 Count (17.6 to 21.4lbs) and 30 Count (Weighted more than 21.5lbs)

# Citation

- From Sakata Seeds
- Medium green striped skin
- Bright pink flesh
- Average fruit weight 12.6 lbs
- Average length 9.5 inches
- Taste tests rated it 4 out of 5
- In taste test, it had strong flavor, not super sweet but still tasty. It was juicy and had a good texture
- It produced 4,680 marketable fruit per acre and 58,995 pounds with most in the 60 count range (9.0 to 13.5lbs)



# Cracker Jack

- From Vitalis Seed
- Dark green striped skin
- Medium to dark red flesh
- Average fruit weight 15.9 lbs
- Average length 11.2 inches
- Taste tests rated it 4.5 out of 5
- In taste test, it had super sweet taste, very delicious. Taste faded fast and texture was crisp but melt in the mouth. Very juicy. Highest rated in taste test
- It produced 4,149 marketable fruit per acre and 65,835 pounds with most in the 45 count range (13.6-17.5lbs)
- Fruit was very consistent in size and shape
- Our favorite in the trial



# Eclipse

- From Sakata Seed
- Dark green solid skin
- Medium red flesh
- Average fruit weight 12.3 lbs
- Average length 8.9 inches
- Taste tests rated it 2.5 out of 5
- In taste test, it had internal splitting and dryness. It tasted decent, but not standard seedless watermelon taste. Melt in the mouth texture
- All fruit we opened had cracking and splitting but flesh was still good to eat
- It produced 4,893 marketable fruit per acre and 60,356 pounds with 80% in the 60 count range (9.0 to 13.5lbs)



# Joyride

- From Seminis Seed
- Medium green striped skin
- Dark pink flesh
- Average fruit weight 17.9 lbs
- Average length 11.7 inches
- Taste tests rated it 3.25 out of 5
- In taste test, it was decent tasting and super juicy. Texture was a little chewy and lasted in the mouth. Very juicy.
- It produced 3,085 marketable fruit per acre and 55,187 pounds with half in the 45 count range (13.6-17.5lbs), and the rest in the 35 (17.6-21.4lbs) and 30 count range (greater than 21.5lbs). Only 3% of fruit were in the 60 count range (9.0-13.5lbs). Had the highest % of 30 count fruit.
- Had the highest average weight in the trial



# Kingman

- From Sakata Seed
- Light green striped skin
- Medium red flesh
- Average fruit weight 16.0 lbs
- Average length 10.9 inches
- Taste tests rated it 3.75 out of 5
- In taste test, it had decent flavor, if not super sweet. Decent texture. Flavor fades fast
- It produced 3,191 marketable fruit per acre and 51,113 pounds with half in the 45 count range (13.6-17.5lbs)
- It was inconsistent in size and shape of fruit



# Red Amber

- From Vitalis Seed
- Light green striped skin
- Pink flesh
- Average fruit weight 16.9 lbs
- Average length 11.5 inches
- Taste tests rated it 3.5 out of 5
- In taste test, it had good flavor, even if not super sweet. Very juicy and had a nice crunchy texture. It lingered in the mouth a little, can get chewy if overripe
- It produced 5,106 marketable fruit per acre and 86,535 pounds with half in the 36 count range (17.6-21.4lbs).
- Produced the most total weight and the most 36 count fruit





# Red Garnet

- From Vitalis Seed
- Medium green striped skin
- Medium red flesh
- Average fruit weight 14.1 lbs
- Average length 10.9 inches
- Taste tests rated it 4.25 out of 5
- In taste test, it had nice sweet flavor, decent texture and was very juicy. Melt in the mouth texture
- It produced 2,766 marketable fruit per acre and 38,901 pounds with half in the 60 count range (9.0 to 13.5lbs) and half in the 45 count range (13.6-17.5lbs)
- One of our favorites for looks and taste but lowest yielding in marketable fruit



# Red Opal

- From Vitalis Seed
- Light green striped skin
- Medium red flesh
- Average fruit weight 14.6 lbs
- Average length 10.7 inches
- Taste tests rated it 3.75 out of 5
- In taste test, it had was decent tasting, a little sweet. It was juicy. Texture varied but generally softer and melted in mouth
- Some size variation in mature fruit
- It produced 4,255 marketable fruit per acre and 62,005 pounds with half in the 60 count range (9.0-13.5lbs).



# Secretariat

- From Sakata Seed
- Medium green striped skin
- Bright pink flesh
- Average fruit weight 12.9 lbs
- Average length 9.8 inches
- Taste tests rated it 3.75 out of 5
- In taste test, it was sweet and tasty. Had a good, crisp texture.
- Some fruit had some brown seeds
- It produced 5,744 marketable fruit per acre and 73,834 pounds with most in the 60 count range (9.0-13.5lbs).
- Produced the most marketable fruit



# Yellow Buttercup

- From Sakata Seed
- Light green striped skin
- Yellow flesh
- Average fruit weight 12.0 lbs
- Average length 8.7 inches
- Round shape
- Taste tests rated it 2.5 out of 5
- In taste tests, it was viewed as a different taste than standard seedless watermelons. Tasted decent, more acidic or musky. Decent texture
- It produced 5,531 marketable fruit per acre and 66,484 pounds with 81% in the 60 count range (9.0-13.5lbs).
- Was second in number of marketable fruit produced





Thank you to Walkill View Farms for  
hosting the trial

Thank you to Sakata Seed, Vitalis Seed and  
Seminis Seed for contributing to our trial

**Table 1. 2020 Seedless Watermelon Trial Overview of Varieties (Highest to Lowest Number of Marketable Fruit)**

Variety	Company	Skin	Flesh	Total Fruit/ac	Marketable Fruit/ac	Marketable lb/ac	Average Fruit Weight	Average Length	Average Diameter
Secretariat	Sakata Seed	Light green striped	Pink	5957	5744	73834	12.9	9.8	8.2
Yellow Buttercup	Sakata Seed	Very light green striped	Yellow	7021	5531	66484	12.0	8.7	8.5
Red Amber	Vitalis Seed	Light green striped	Pink	5212	5106	86535	16.9	11.5	8.7
Eclipse	Sakata Seed	Solid dark green	Medium red	5319	4893	60356	12.3	8.9	8.7
Citation	Sakata Seed	Medium green striped	Bright pink	5319	4680	58995	12.6	9.5	8.4
Red Opal	Vitalis Seed	Light green striped	Medium red	4893	4255	62005	14.6	10.7	8.4
Cracker Jack	Vitalis Seed	Dark green striped	Dark red	4468	4149	65835	15.9	11.2	8.6
Kingman	Sakata Seed	Light green striped	Medium red	3510	3191	51113	16.0	10.9	8.7
Joy Ride	Seminis Seed	Medium green striped	Pink	3191	3085	55187	17.9	11.7	8.8
Red Garnet	Vitalis/Gowan	Medium green striped	Medium red	3936	2766	38901	14.1	10.9	8.3

Planted 6/5/20

Raised on black plastic mulch, 7 foot centers, 3.3 feet between plants

Two replications, 9 plants per rep

Two rows with one row of pollinator in the center

Harvested 5 times in August

**Table 2. Number and Percentage of Watermelons by Bin Count Per Acre (Highest to Lowest Number of Marketable Fruit)**

Variety	Total Fruit/ac	Marketable Fruit/ac	Marketable lb/ac	# 60 Count Fruit 9.0-13.5 lbs	# 45 Count Fruit 13.6-17.5 lbs	# 36 Count Fruit 17.6-21.4 lbs	# 30 Count Fruit >21.5 lbs	% 60 Count Fruit 9.0 to 13.5 lbs	% 45 Count 13.6-17.5 lbs	% 36 Count 17.6-21.4 lbs	% 30 Count >21.5 lbs
Secretariat	5957	5744	73834	3617	2021	106	0	63%	35%	2%	0%
Yellow Buttercup	7021	5531	66484	4468	957	106	0	81%	17%	2%	0%
Red Amber	5212	5106	86535	957	1596	2447	106	19%	31%	48%	2%
Eclipse	5319	4893	60356	3936	957	0	0	80%	20%	0%	0%
Citation	5319	4680	58995	3404	1170	106	0	73%	25%	2%	0%
Red Opal	4893	4255	62005	1915	1702	425	213	45%	40%	10%	5%
Cracker Jack	4468	4149	65835	851	2021	1276	0	21%	49%	31%	0%
Kingman	3510	3191	51113	851	1702	425	213	27%	53%	13%	7%
Joy Ride	3191	3085	55187	106	1489	1170	319	3%	48%	38%	10%
Red Garnet	3936	2766	38901	1276	1170	319	0	46%	42%	12%	0%

Planted 6/5/20

Raised on black plastic mulch, 7 foot centers, 3.3 feet between plants

Two replications, 9 plants per rep

Two rows with one row of pollinator in the center

Harvested 5 times in August

**Table 3. Marketable Fruit and Weight by Harvest Date**

Variety	8/3/2020		8/7/2020		8/12/2020		8/18/2020		8/25/2020	
	Marketable Fruit/ac	Marketable lb/ac	Marketable Fruit/ac	Marketable lb/ac	Marketable Fruit/ac	Marketable lb/ac	Marketable Fruit/ac	Marketable lb/ac	Marketable Fruit/ac	Marketable lb/ac
Citation	1064	12414	1702	21934	319	3691	851	11499	745	9457
Cracker Jack	1064	14711	1489	24934	213	3585	106	1415	1276	21190
Eclipse	1064	12307	2978	37518	319	3383	319	4032	213	3117
Joy Ride	425	6627	1170	24062	532	8255	319	5351	638	10893
Kingman	957	15445	213	5212	532	8084	745	10627	745	11744
Red Amber	851	14339	2127	36380	638	9574	106	2117	1383	24126
Red Garnet	1489	20785	851	11765	106	1521	319	4829	0	0
Red Opal	638	9457	1808	25040	319	4819	745	11254	745	11435
Secretariat	1064	13956	2978	37752	213	2542	106	1372	1383	18211
Yellow Buttercup	1489	18307	2127	24902	319	4234	1064	13105	532	5936

**Table 4. Percentage of Marketable Fruit by Harvest Date**

Variety	8/3/2020	8/7/2020	8/12/2020	8/18/2020	8/25/2020
Citation	23%	36%	7%	18%	16%
Cracker Jack	26%	36%	5%	3%	31%
Eclipse	22%	61%	7%	7%	4%
Joy Ride	14%	38%	17%	10%	21%
Kingman	30%	7%	17%	23%	23%
Red Amber	17%	42%	13%	2%	27%
Red Garnet	54%	31%	4%	12%	0%
Red Opal	15%	43%	8%	18%	18%
Secretariat	19%	52%	4%	2%	24%
Yellow Buttercup	27%	38%	6%	19%	10%

Planted 6/5/20

Raised on black plastic mulch, 7 foot centers, 3.3 feet between plants

Two replications, 9 plants per rep

Two rows with one row of pollinator in the center

Harvested 5 times in August



**Table 5. Percent Soluble Solid Content Overall and by Harvest Date**

Variety	Overall % Soluble Solids	8/3/2020	8/7/2020	8/12/2020	8/18/2020	8/25/2020
Citation	11.5	10.0	10.8	N/A	13.0	13.0
Cracker Jack	12.7	12.5	13.0	13.0	13.0	12.0
Eclipse	10.4	12.0	8.0	11.2	9.0	12.0
Joy Ride	12.1	12.0	10.5	N/A	12.0	14.0
Kingman	12.4	12.0	13.0	12.0	12.0	13.0
Red Amber	11.4	11.0	11.0	10.0	12.0	13.0
Red Garnet	12.2	13.0	N/A	11.3	N/A	N/A
Red Opal	11.5	12.0	10.0	N/A	11.0	13.0
Secretariat	12.5	11.0	12.0	13.0	13.0	14.0
Yellow Buttercup	11.7	12.0	11.0	11.0	12.5	12.0

Planted 6/5/20

Raised on black plastic mulch, 7 foot centers, 3.3 feet between plants

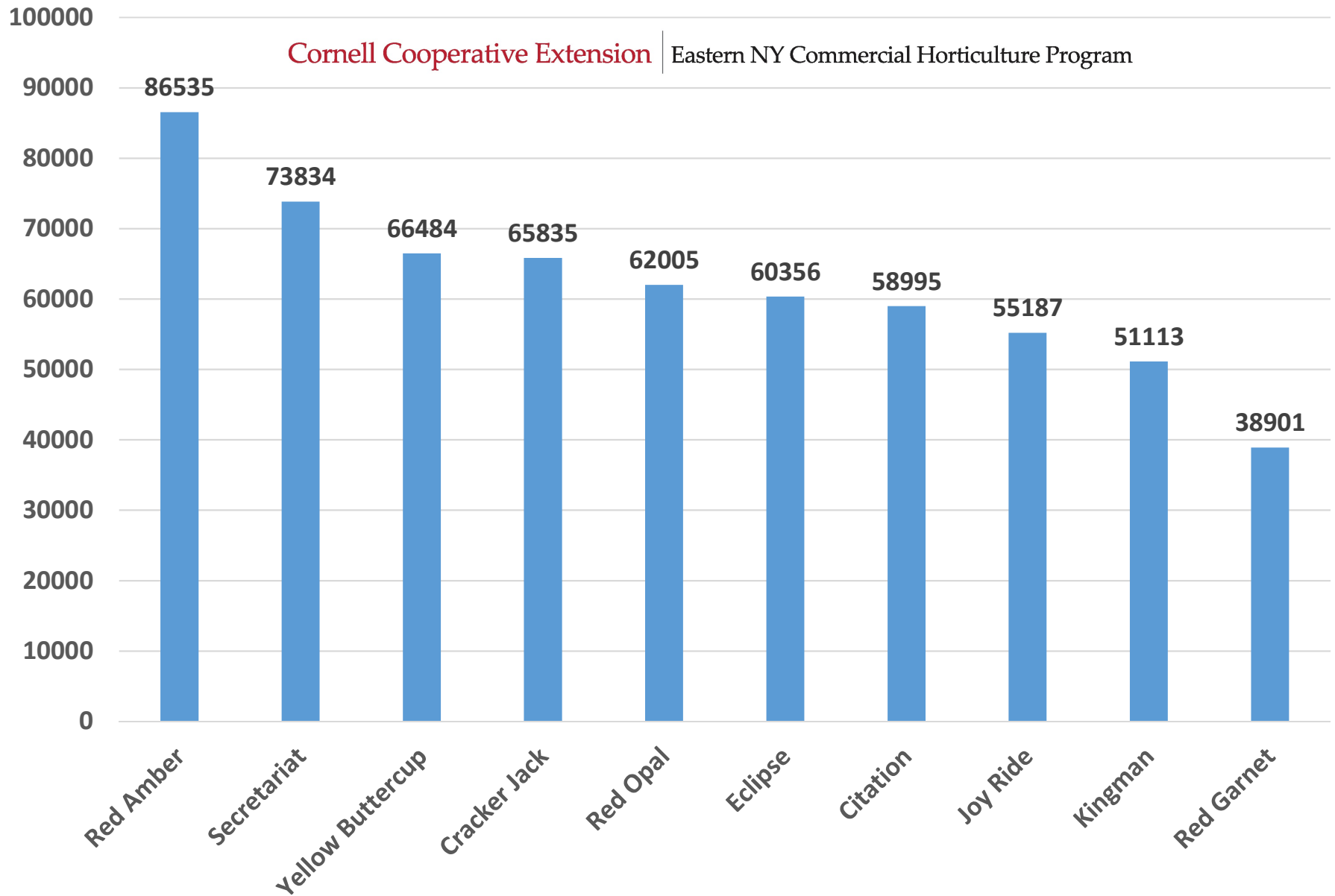
Two replications, 9 plants per rep

Two rows with one row of pollinator in the center

Harvested 5 times in August

Chart 1. Watermelon Yield Marketable lb/ac

Cornell Cooperative Extension | Eastern NY Commercial Horticulture Program



### Chart 2. Watermelon Yield Marketable Fruit/ac

Cornell Cooperative Extension | Eastern NY Commercial Horticulture Program

