

Horticulture Program

HORT-01-1

## EVALUATION OF WATERMELON CULTIVARS FOR SOUTHERN OHIO, 2001

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This Watermelon cultivar trial compared 22 cultivars of seeded (diploid) and seedless (triploid) watermelons, using 4 replications of each cultivar. Objectives were to evaluate potential watermelon cultivars for their suitability in a southern Ohio growing season. The plots were located at the Ohio State University South Centers research and demonstration plots in Hillsboro, Ohio.

### **METHODS:**

**Planting:** Diploid watermelons were seeded on 5/11/01 into 50-cell Pro-Trays using a peat vermiculite soil-less mix. Trays for the triploid watermelons was wetted on 5/7/01 and seeded on 5/8/01 into 50-cell Pro-Trays using a peat vermiculite soil-less mix. Trays were put into a germination chamber set at 75-80 degrees Fahrenheit for 48 hours. Cells were thinned as needed to one plant per cell. Plants were field-planted on June 18, 2001 using a Water Wheel Planter.

**Spacing:** Rows were 5 feet apart, with plants set onto raised beds at 18" spacing between each plant in the row. To see how increased plant populations would affect fruit yield and size. The beds were covered with black plastic mulch with trickle irrigation under the mulch prior to planting. Six plants per plot (5' x 10') provided a plant density of approximately 5,808 plants per acre.

**Soil Type:** Haubstadt Silt Loam

**Fertilizer:** Applied 120 lbs. N, 120 lbs. P<sub>2</sub>O<sub>5</sub> and 120 lbs. K<sub>2</sub>O per acre prior to laying plastic mulch according to soil test recommendations. 20-20-20 (1 lb./100 gallon water, approximately 8 oz. per plant) with transplanting water.

**Weed Control:** 4 pts / Acre Curbit 3EC pre-plant between rows on 6/11/01; hand-hoed and cultivated as necessary.

**Pest Management:** 24 fl oz/A of Admire 2F was added to transplant water at planting. Pounce on 7/13 at a rate of 5 fl oz./A ; Thiodan 3EC 1.3 qt/A 7/23; Bravo Ultrex 2 lb/A on 7/23; Quadris 15.4 oz/A 7/13, 7/21

**Irrigation:** Trickle irrigated on 7/25, 7/13, 8/2, 8/13

**Harvests:** September 6<sup>th</sup> and October 14<sup>th</sup>

## **RESULTS:**

There was average fruit set and yield throughout the harvest season. Vine health and quality remained good throughout the season. Our observations indicate that doubling the plant population may have decreased over all fruit size in this trial. Harvest yield and quality attributes were collected and observed.

The cultivar Mardi Gras was the seeded watermelon producing the largest amount of marketable fruit per plant. Carnival had the largest average fruit weight of the seeded watermelons that were on trial. Carnival also had the highest percent of soluble solids of the seeded watermelons.

The cultivar Imagination was the seedless watermelon producing the largest amount of marketable fruit per plant. Tri-x Brand Palomar had the largest average fruit weight of the seedless watermelons that were on trial. RWM 8073-VP had the highest percent of soluble solids of the seedless watermelons.

The growing season and average daily heat units seem adequate to produce high quality watermelon crop. With field trials similar to this, watermelon crops may fit into the production and marketing scheme for Southern Ohio growers.

**Table 1.** Yields and Quality comparisons from replicated Early Harvest Watermelon cultivar trials in Southern Ohio: Ohio State University Extension South Centers, Hillsboro, OH 2001.

<b><u>Cultivar</u></b>	<b><u>Marketable Fruit per Plant</u></b>	<b><u>Marketable Pounds per Plant</u></b>	<b><u>Average Fruit Weight</u></b>	<b><u>Watermelon Type</u></b>
SW ~ 1	1.38	8.10	5.91	seedless
Super Seedless 7167	1.29	15.92	12.25	seedless
Imagination	1.21	10.20	8.62	seedless
Super Seedless7187 HQ	1.17	13.17	11.44	seedless
Sweet Diane	1.17	16.21	14.36	seeded
RWM 8036	1.17	14.43	13.51	seeded
Trillion	1.08	12.14	11.23	seedless
Tri-x Brand Palomar	1.08	12.78	12.31	seedless
Freedom	1.08	13.05	11.69	seedless
Tri-x Brand 313	1.00	10.05	10.35	seedless
Montreal	1.00	13.83	14.04	seeded
RWM 8073-VP	1.00	11.99	12.52	seedless
Mardi Gras	0.99	15.95	17.12	seeded
RWM 8114-VP	0.96	16.38	17.63	seeded
Tri-x Brand Carousel	0.95	11.45	12.64	seedless
Athens	0.91	14.28	16.21	seeded
Summer Flavor 790	0.88	15.13	17.52	seeded
Emerald	0.88	10.11	11.46	seedless
Carnival	0.87	14.90	17.33	seeded
Summer Flavor 800	0.71	12.17	17.21	seeded
103	0.66	7.33	10.90	seedless
Celebration	0.59	9.88	12.36	seeded
<b>LSD</b>	<b>0.48</b>	<b>6.63</b>	<b>4.22</b>	<b>NA</b>

**Table 2.** Yields and Quality comparisons from replicated Total harvest Watermelon cultivar trials in Southern Ohio: Ohio State University Extension South Centers, Hillsboro, Ohio 2001.

<u>Cultivar</u>	<u>Marketable Fruit per Plant</u>	<u>Marketable Pounds per Plant</u>	<u>Average Fruit Weight</u>	<u>% Soluble Solids</u>	<u>Watermelon Type</u>	<u>Seed Source</u>
Imagination	1.88	14.76	8.06	9.97	seedless	SY
Super Seedless 7167	1.83	20.70	11.33	9.90	seedless	AC
SW~1	1.71	10.71	6.39	11.03	seedless	HZ
Mardi Gras	1.63	23.16	14.29	8.83	seeded	SY
Sweet Diane	1.59	20.28	12.77	9.00	seeded	SY
Tri-x brand Carousel	1.58	16.31	10.42	11.87	seedless	SY
RWM 8073-VP	1.54	16.25	10.77	12.93	seedless	SY
Super Seedless 7187 HQ	1.54	16.62	11.02	11.77	seedless	AC
Trillion	1.50	15.88	10.63	12.17	seedless	AC
RWM 8036	1.50	19.87	13.46	9.50	seeded	SY
Freedom	1.46	16.03	10.97	11.00	seedless	SS
Tri-x Brand 313	1.46	13.04	9.43	9.80	seedless	A
Athens	1.42	20.11	14.13	10.47	seeded	SS
Montreal	1.42	17.82	12.64	6.73	seeded	SS
RWM 8114-VP	1.42	21.23	14.94	8.77	seeded	SY
Emerald	1.29	14.95	11.29	11.10	seedless	HZ
Summer Flavor 790	1.21	19.53	16.57	9.17	seeded	AC
Tri-x Brand Palomar	1.21	13.70	11.60	10.87	seedless	AM
103	1.13	12.89	11.54	12.83	seedless	HZ
Summer Flavor 800	1.13	18.71	16.55	9.63	seeded	AC
Carnival	1.04	17.30	17.02	11.80	seeded	SY
Celebration	0.88	13.76	15.65	7.57	seeded	SY
<b>LSD</b>	<b>0.47</b>	<b>5.97</b>	<b>2.46</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>