Seedless Watermelon Cultivar Trials for Southwestern Indiana, 2001

Christopher C. Gunter[1*], Melborn K. Lang[2], Dennis Nowaskie[2], Angie Thompson[2]
[1]Horticulture Specialist at the Southwest Purdue Agricultural Program,
Vincennes, IN 47591
[2]Southwest Purdue Agricultural Center, Vincennes, IN 47591

Seedless watermelons continue to generate both grower and consumer excitement, and in many urban markets around the US the percentage of seedless melons has gained considerably. Indiana remains a strong producer of seedless (triploid) watermelons, and since 1994, we have conducted extensive annual variety trials for seedless varieties. This trial, along with the seeded (diploid) watermelon variety trial provides an objective and independent comparative assessment of new watermelons for the commercial industry. This year's study included 24 seedless watermelons, a yellow fleshed type and three orange fleshed varieties.

Methods:

Seeds of 24 seedless watermelon cultivars were sown in the greenhouse on April 17 and transplanted on May 15 into a randomized complete block design with three replications. Stars-N-Stripes was used a as pollinator and planted in every third row and in the guard rows. Plots were single rows 55 ft. long, centered eight ft. apart, and covered with 4 ft. black plastic mulch. Each plot had 11 plants five feet apart. The recommendations in the Midwest Vegetable Production Guide for Commercial Growers (ID-56, 2001) were followed for fertilization, weed, disease and insect control. Plots were harvested on July 31, August 7, and 14. The data was analyzed using the Statistical Analysis Software (SAS) package (SAS Institute, Cary, NC). Trickle irrigation was used as necessary to provide ample water to the field plots.

Results and Conclusions:

Yields and Quality. Yields ranged from 31 to 46 tons/acre with 3102 to 4554 fruit/acre harvested across all entries (Table 1). The average weight of seedless fruit was up this year to 20.5 lbs/fruit with a range of 16.8 to 24.0 lbs/fruit. Smaller weight per fruit led to the higher number of fruit per acre in general. Highest yielding in this trial were: 7167; Trillion; RWT 8096-VP and 8238. Most of the fruit in this years trial were round to oval and medium sized. Notable melon varieties exhibiting good internal qualities include HMX 8913, Tri-X Palomar, Tri-X Shadow and Tri-X 313. In addition, RWM 8023 was noted as a visually appealing melon by all evaluators. This year three orange fleshed varieties were submitted and of these Orange Sweet was rated the highest during this evaluation. Seedless watermelons should be a part of your melon production strategy as long as you have a market that will purchase the fruit at a higher price than the seeded watermelons.

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Table 1. Comparison of Yield and Quality of Seedless Watermelon in Southwestern Indiana, 2001.

Cultivar	Seed Source	Yield Cwt.Lb/A	Yield[r] Tons/A	Fruit No./A	Ave fruit weight Lbs	%SS[s]	Flavor[t]	Uniformity[u]	Rind[v]	Size[w]	Shape[x]	Flesh[y]	Degree of Seedlessness[z]
7167	AC	919.0	46.0 a	4521	20.3	10.4	3	2	Th	M	Ov	LP	3
Trillion	AC	846.8	42.3 ab	3927	21.5	11.4	4	2	M	M-L	Ov	DP	2
RWT 8096-VP	NV	840.7	42.0 ab	3597	23.0	10.6	3	2	M	M	Ov	DP	3
8238	AC	840.2	42.0 ab	3993	21.1	12.2	4	2	M	M-L	Ov-Ob	DP	3
Tri-X Carousel	NV	828.3	41.4 ab	3993	20.8	10.0	4	2	M	M-L	Ov-Ob	R	3
RWT 8118-VP	NV	821.7	41.1 ab	4554	17.7	11.2	2	1	Th	M	Rd-Ov	Y	1
7187	AC	816.8	40.9 ab	3828	21.3	10.0	2	3	M	M	Ov	DP	3
Orange Seedless	NV	818.0	40.9 ab	3729	21.3	10.4	2	1	Th	M	Ov	O	1
HMX 8913	HM	815.9	40.8 ab	4257	19.1	11.0	4	3	Th	M	Ov	DR	2
Tri-X Palomar	NV	808.8	40.4 ab	3828	21.3	11.2	4	3	M	M-L	Rd	P	3
Afternoon Delight	DP	799.9	40.0 ab	3729	21.4	11.0	3	3	Th	L	Rd	DP	3
HMX 8914	HM	796.3	39.8 ab	3861	20.6	11.0	3	3	Th	M	Rd	LR	3
RWM 8023	NV	779.1	38.9 ab	3399	22.2	11.6	4	1	M	M	Rd-Ov	R	3
Orange Sunshine	NV	771.6	38.6 abc	3828	19.6	10.8	3	1	M	S-M	Rd	O	3
Fantastik	AC	763.6	38.2 abc	3729	20.6	11.6	3	2	Th	M	Ov	R	3
Orange Sweet	NV	752.1	37.6 bc	3861	19.3	10.6	3	3	T	M	Rd	O	3
Tri-X Shadow	NV	745.0	37.3 bc	3828	19.4	10.8	4	3	Th	M	Ov	DP	3
4502	SW	744.7	37.2 bc	3102	24.0	9.4	3	2	Th	L	Rd	P	3
Imagination-VP	NV	744.3	37.2 bc	4455	16.8	10.8	3	2	M	M	Rd	R	3
Farmers Wonderful	JS	718.6	35.9 bc	3630	19.2	10.6	4	3	M	M-L	Rd	R	2
Tri-X 313	NV	714.8	35.7 bc	3432	20.8	10.8	4	3	Th	M	Ov	R	3
8043	AC	698.9	35.0 bc	3366	20.7	10.8	4	1	Th	M	Ov	DR	3
7177	AC	753.6	34.6 bc	3399	20.4	10.4	4	2	Th	M	Ov	DP	3
Sweet Eat'n	DP	620.6	31.0 c	3168	19.6	10.8	3	3	Th	M	Ov	DP	3
Grand mean		779.1	39.0	3792	20.5								
LSD (5%)		157.6	7.9	757	2.4								
C.V. (%)		12.3	12.3	12	7.2								

Randomized complete block design: 3 replications.

[r] Yield wt. (tons) averages spanned by the same letter are not significantly different.

[s] %SS = Percent soluble solids: the higher the value, the greater the amount of total sugar.

[t] Flavor (1 to 5): 1=very poor, 3=acceptable, 5=great.

[u] Uniformity (1 to 3): 1=lacks uniformity/variable, 2=average, 3=very uniform.

[v] Rind: T=thin, M=medium, Th=thick.

[w] Size: S=small, M=medium, L=large, VL=very large.

[x] Shape: Rd=round, Ov=oval, Ob=oblong.

[y] Flesh: LR=light red, RO=red-orange, R=red, LP=light pink, P=pink, DP=dark pink, Y=yellow.

[z] Degree of Seedlessness (1 to 3): 1=brown of black seeds present, 2=white seeds present, 3=no seeds present.