

## Seedless Watermelon Cultivar Trials for Southwestern Indiana, 2002

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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 22 seedless watermelons, a yellow fleshed type and three orange fleshed varieties.

### Methods:

Seeds of 22 seedless watermelon cultivars were sown in the greenhouse on April 15 and transplanted on May 22 into a randomized complete block design with three replications. Royal Sweet was used as a 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 6, 8 and 15. 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 21.9 to 34.5 tons/acre with 2046 to 4125 fruit/acre harvested across all entries (Table 1). The average weight of seedless fruit was down this year to 16.7 lbs/fruit with a range of 14.1 to 22.5 lbs/fruit. Smaller weight per fruit led to the higher number of fruit per acre in general. Highest yielding in this trial were: 7187, 7167, Trillion and Millionaire. Most of the fruit in this years trial were oval and medium sized. Notable melon varieties exhibiting high soluble solids include 313, Sugar Shack, Millenium and Sweet Slice. This year one yellow fleshed variety, RWT 8118, was submitted. 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.

Table 1. Comparison of Yield and Quality of Seedless Watermelon in Southwestern Indiana, 2002.

Cultivar	Seed Source	Yield Cwt.Lb/A	Yield <sup>f</sup> Tons/A	Fruit No./A	Ave fruit weight		%SS <sup>s</sup>	Flavor <sup>t</sup>	Uniformity <sup>u</sup>	Rind <sup>v</sup>	Size <sup>w</sup>	Shape <sup>x</sup>	Flesh <sup>y</sup>	Degree of
					Lbs									Seedlessness <sup>z</sup>
7187	AC	690.5	34.5 a	4026	17.1	10.4	2	2	M	M	Ob	LP	3	
7167	AC	669.9	33.5 ab	4125	16.3	10.0	3	3	Th	M	Ov	P	3	
Trillion	AC	629.5	31.5 abc	3927	15.9	10.0	2	1	T	M	Ob	LP	1	
Millionaire	SW	593.8	29.7 abcd	3267	18.2	10.6	3	3	T	M	Ov	P	2	
Sugar Slice	WI	568.1	28.4 abcde	3927	14.5	11.0	3	2	M	M	Ov	DP	2	
HXM 8914	HM	559.0	28.0 bcdef	3729	15.0	11.8	3	3	T	S	Rd	P	2	
Sugar Shack	SC	558.5	27.9 bcdef	3300	16.9	12.0	4	3	Th	M	Ov	P	1	
Gem-dandy	WI	555.4	27.8 bcdef	3663	15.2	11.4	4	2	M	M	Ov	P	3	
Palomar	NV	551.6	27.6 bcdef	3267	16.9	12.0	2.5	3	Th	M	Rd	P	3	
#5244	AC	546.4	27.3 bcdef	3366	16.1	11.4	3	2	M	M	Ov	R	2	
Cooperstown	SM	543.5	27.2 bcdef	3366	16.1	13.0	3	2	M	M	Ov	R	1	
Sweet Slice	WI	522.1	26.1 cdef	3102	16.9	12.4	3	1	Th	M	Rd	R	3	
RWT 8118	NV	509.3	25.5 cdef	3630	14.1	11.4	3	2	M	M-L	Rd	Y	2	
SR 8026	SS	504.7	25.2 cdef	2409	20.8	12.2	3	2	M	L	Ob	R	1	
Sugar Time	SC	501.9	25.1 cdef	3102	16.1	11.2	3	2	M	S-M	Rd	P	3	
Carousel	NV	501.9	25.1 cdef	3465	14.5	11.6	4	1	M	M	Ob	R	2	
Millenium	SW	495.2	24.7 def	3333	14.9	12.2	3.5	3	M	M	Ov	DP	2	
313	NV	491.9	24.6 def	3036	16.2	14.4	4	2	M	M	Ov	R	3	
Imagination	NV	490.7	24.6 def	3333	14.7	11.6	3	3	M	M	Rd	R	3	
Revolution	SS	480.8	24.0 def	2607	18.5	11.6	3	2	M	L	Ob	R	2	
Seedless Sangria	NV	460.0	23.0 ef	2046	22.5	11.0	4	2	M	L	Ob	R	3	
Freedom	SS	438.6	21.9 f	2244	19.5	11.6	3	2	M	M	Rd	DP	2	
Grand mean		539.2	27.0	3285	16.7									
LSD (5%)		128.7	6.4	757	2.1									
C.V. (%)		14.5	14.5	13	7.6									

Randomized complete block design: 3 replications.

<sup>r</sup> Yield wt. (tons) averages spanned by the same letter are not significantly different.

<sup>s</sup> %SS = Percent soluble solids: the higher the value, the greater the amount of total sugar.

<sup>t</sup> Flavor (1 to 5): 1=very poor, 3=acceptable, 5=great.

<sup>u</sup> Uniformity (1 to 3): 1=lacks uniformity/variable, 2=average, 3=very uniform.

<sup>v</sup> Rind: T=thin, M=medium, Th=thick.

<sup>w</sup> Size: S=small, M=medium, L=large, VL=very large.

<sup>x</sup> Shape: Rd=round, Ov=oval, Ob=oblong.

<sup>y</sup> Flesh: LR=light red, RO=red-orange, R=red, LP=light pink, P=pink, DP=dark pink, Y=yellow.

<sup>z</sup> Degree of Seedlessness (1 to 3): 1=brown or black seeds present, 2=white seeds present, 3=no seeds present.