

## Seeded Watermelon Cultivar Trials for Southwestern Indiana, 2004

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Indiana remains a major watermelon producer for the Midwest. With the proliferation of new varieties, the increased competition and the need to maximize profitability/unit area, the identification of new varieties that are of high quality, high yielding and disease resistant as well as meet market expectations, is of importance to commercial growers. This trial, along with the seedless watermelon variety trial provides an objective and independent comparative assessment of new watermelons for the commercial industry. This year's study included 19 seeded watermelons, with 18 named varieties, and 1 experimental line.

### Methods:

Nineteen seeded melon cultivars were evaluated in a randomized complete block design with three replications. Each entry was first direct seeded in the greenhouse on April 13, 2004 and transplanted into the field on May 10, 2004. Plots consisted of 48-foot long single rows, covered with 4 ft. black plastic mulch, with rows centered eight feet apart, 12 plants per row and 4 feet between plants. Each trial was grown in accordance with the recommendations outlined in the Midwest Vegetable Production Guide for Commercial Growers (ID-56, 2004). Trickle irrigation lines placed beneath the plastic mulch provided water as needed. Fruits were harvested from July 20 through August 9. Data was analyzed with the Statistical Analysis Software (SAS) package (SAS Institute, Cary, NC).

### Results:

Yields and Quality. Yields ranged from 20.8 to 32.1 tons/acre with 2004 to 3176 fruit/acre harvested across all the entries (Table 1). Yields were generally higher in this year's trial, compared to the 2003 trial. The average fruit weight was 21.6 lbs/fruit, with a range of 18.7 to 23.4 lbs/fruit which is down from last years average and range. Highest yielding cultivars were; Royal Sweet, WX 260, WX 257, WX 265, and WX 261. Most of the fruit in this trial was oblong in shape with medium or thick rinds. WX 257, WX 265, WX 261, Ole, Jamboree, and Fiesta all had cracked hearts in at least one of the samples evaluated. The best tasting melons in the trial were: WX 265, Celebration, Fiesta, and Top Gun. The highest percent soluble solids were in WX 265, Celebration, Sentinel, and Fiesta. Seeded watermelon selection should be in large part based upon the size, shape and class of fruit to which your market is focused.

Table 1. Comparison of Yield and Quality of Seeded Watermelon in Southwestern Indiana, 2004.

Cultivar	Seed Source	Yield Cwt.Lb/A	Yield <sup>s</sup> Tons/A	Fruit No./A	Ave fruit weight Lbs	%SS <sup>t</sup>	Flavor <sup>u</sup>	Uniformity <sup>v</sup>	Rind <sup>w</sup>	Size <sup>x</sup>	Shape <sup>y</sup>	Flesh <sup>z</sup>
Royal Sweet	PS	647.4	32.1 a	2798	22.9	9.8	3	3	Th	L	Ov	DP
WX 260	WI	631.0	31.2 ab	3176	19.8	10.2	3	3	Th	M	Ov	P
WX 257	WI	617.6	30.6 abc	2912	21.1	10.0	3	2	M	L	Ob	DP
WX 265	WI	609.3	30.2 abc	2685	22.8	11.6	4	3	T	M	Ob	Y
WX 261	WI	597.6	29.6 abcd	2798	21.3	9.4	3	2	M	L	Ob	DP
WX 262	WI	584.2	28.9 abcd	2571	22.5	9.0	2	2	M	M-L	Ob	R
Mardi Gras	RG	571.8	28.3 abcde	2534	22.3	9.4	3	2	T	L	Ob	P
ACX 2800D	AC	570.1	28.2 abcde	2609	21.7	10.6	3	3	M	M	Ob	R
Sentinel	SM	553.1	27.4 abcdef	2534	21.6	11.6	3	3	M	M-L	Ov	R
Ole'	WI	552.7	27.4 abcdef	2496	21.9	10.2	3	2	Th	M	Ob	P
Jamboree	RG	547.7	27.1 abcdef	2307	23.4	10.4	3	2	M	L	Ov	DP
Celebration	RG	538.6	26.7 abcdef	2382	22.6	11.8	4	3	M	M-L	Ov-Ob	DP
Delta	SM	537.6	26.6 abcdef	2496	21.4	11.0	3	3	Th	M	Ov	DR
Waddie	DP	521.2	25.8 abcdef	2458	21.2	11.4	3	1	T	M	Ov	DP
Fiesta	RG	491.2	24.3 bcdef	2571	18.7	11.6	4	3	T	M	Ob	DP
Top Gun	RG	477.6	23.6 cdef	2118	22.4	10.0	4	3	M	M	R-Ov	R
WX 264	WI	456.2	22.6 def	2231	20.3	11.0	3	3	Th	M	Ov	DP
WX 266	WI	438.1	21.7 ef	2004	21.5	10.2	3	2	M	L	Ob	DP
Plantation Pride	DP	419.4	20.8 f	2004	20.9	9.6	2	2	T	L	Ob	P
Grand mean		545.5	27.0	2512	21.6							
LSD (5%)		141.8	7.0	668	3.0							
C.V. (%)		15.5	15.5	16	8.2							

Randomized complete block design: 3 replications.

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

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

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

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

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

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

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

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