

Seeded Watermelon Cultivar Trials for Southwestern Indiana, 2003

Christopher C. Gunter^{1*}, Melborn K. Lang², Dennis Nowaskie², Angie Thompson²

¹Horticulture Specialist at the Southwest Purdue Agricultural Program,
Vincennes, IN 47591

²Southwest Purdue Agricultural Center, Vincennes, IN 47591

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 25 seeded watermelons, with 13 named varieties, and 12 experimental line.

Methods:

Twenty five 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 17, 2003 and transplanted into the field on May 14, 2003. Plots consisted of 55-foot long single rows, covered with 4 ft. black plastic mulch, with rows centered eight feet apart, 11 plants per row and 5 feet between plants. Each trial was grown in accordance with the recommendations outlined in the Midwest Vegetable Production Guide for Commercial Growers (ID-56, 2002). Trickle irrigation lines placed beneath the plastic mulch provided water as needed. Fruits were harvested from August 5 through August 18. Data was analyzed with the Statistical Analysis Software (SAS) package (SAS Institute, Cary, NC).

Results:

Yields and Quality. Yields ranged from 19.8 to 27.1 tons/acre with 1667 to 2398 fruit/acre harvested across all the entries (Table 1). Yields were generally higher in this years trial, compared to the 2002 trial. The average fruit weight was 24.4 lbs/fruit, with a range of 21.3 to 27.8 lbs/fruit. Highest yielding cultivars were; Patriot, Celebration, Mardi Gras, WX 266, and Raspa. Most of the fruit in this trial was oblong in shape with medium or thick rinds. RoJo Grande, Ole, RWM 8150, WX 257, WX 261, and WX 262 had cracked hearts in at least one of the samples evaluated. One instance of rind necrosis was observed on Carson. The best tasting melons in the trial were: WX 266, SF 420, HSR 3024, and Campadre, which also had the highest percent soluble solids. 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, 2003.

Cultivar	Seed Source	Yield Cwt./lb/A	Yield ^s Tons/A	Fruit No./A	Ave fruit		%SS ^t	Flavor ^u	Uniformity ^v	Rind ^w	Size ^x	Shape ^y	Flesh ^z
					weight lbs	lbs							
Patriot	WI	541.0	27.1 a	2310	23.4	10.6	3	1	M	M	Ov-Ob	LR	
Celebration	RG	538.7	26.9 ab	2299	23.3	10.0	3	2	T	M	Ob	LR	
Mardi Gras	RG	536.8	26.8 abc	2273	23.6	9.0	2	2	M	L	Ob	DP	
WX 266	WI	529.6	26.5 abc	2112	25.1	11.6	4	2	M	L	Ob	R	
Raspa	WI	525.7	26.3 abc	1947	27.2	10.0	3	2	T	L	Rd	LR	
WX 260	WI	522.8	26.2 abc	2280	23.0	9.4	2	3	M	M-L	Ob	P	
Fiesta	RG	522.3	26.1 abc	2398	21.8	9.6	3	2	M	S-M	Ob	R	
Dulce	WI	515.3	25.8 abcd	1782	29.0	9.0	3	2	Th	L	Ob	DP	
RWM 8151	RG	502.0	25.1 abcde	1888	26.6	9.8	3	3	Th	M	Ov-Ob	LR	
WX 262	WI	495.0	24.7 abcde	1782	27.8	9.6	3	3	Th	L	Ob	R	
Gold Strike	WI	494.0	24.7 abcde	2320	21.3	10.2	3	2	T	M	Ob	DY	
WX 8	WI	485.3	24.2 abcde	1914	25.4	10.0	2	2	M	M	Ob	R	
SF 420	AC	485.0	24.2 abcde	2079	23.3	11.0	4	2	Th	M-L	Ob	LR	
WX 264	WI	477.7	23.9 abcde	2079	23.0	10.8	3	2	Th	M	Ob	R	
Jamboree	RG	477.2	23.9 abcde	1914	25.1	8.4	2	3	M	L	Ob	LR	
WX 261	WI	475.7	23.8 abcde	1881	25.2	9.1	3	3	Th	L	Ob	R	
WX 257	WI	470.6	23.5 abcde	1746	27.0	10.0	3	3	T	L	Ob	R	
HSR 3024	HL	446.2	22.3 abcde	2079	21.5	11.0	4	3	M	M	Rd	R	
RoJo	WI	439.5	22.0 abcde	1914	23.2	9.8	2	1	T	M-L	Ob	R	
Ole'	WI	436.9	21.8 abcde	1716	25.5	10.4	3	2	M	M	Ob	R	
Sangria	RG	433.3	21.7 bcde	1804	24.2	9.8	3	1	T	L	Ob	R	
Carson	HL	430.0	21.5 cde	1947	22.2	10.4	3	2	T	M-L	Ob	R	
Campadre	DP	412.8	20.6 de	1749	23.8	11.6	4	3	M	M	Rd	R	
RWM 8150	RG	409.9	20.5 de	1716	24.0	10.0	3	3	T	M	Ov-Ob	R	
SF 790	AC	396.8	19.8 e	1667	23.7	10.6	3	1	M	L	Ob	R	
Grand mean		480.0	24.0	1984	24.4								
LSD (5%)		107.9	5.4	460	2.3								
C.V. (%)		13.7	13.7	14	5.7								

Randomized complete block design: 3 replications.

^s Yield wt. (tons) averages spanned by the same letter are not significantly different.

^t %SS = Percent soluble solids: the higher the value, the greater the amount of total sugar.

^u Flavor (1 to 5): 1=very poor, 3=acceptable, 5=great.

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

^w Rind: T=thin, M=medium, Th=thick.

^x Size: S=small, M=medium, L=large, VL=very large.

^y Shape: Rd=round, Ov=oval, Ob=oblong.

^z Flesh: LR=light red, RO=red-orange, R=red, LP=light pink, P=pink, DP=dark pink.