

Seeded Watermelon Cultivar Trials for Southwestern Indiana, 2001

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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 12 seeded watermelons, with 8 named varieties, and 4 experimental lines.

Methods:

Twelve 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, 2001 and transplanted into the field on May 11. 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, 2001). Trickle irrigation lines placed beneath the plastic mulch provided water as needed. Fruits were harvested from July 25 through August 9. Data was analyzed with the Statistical Analysis Software (SAS) package (SAS Institute, Cary, NC).

Results:

Yields and Quality. Yields ranged from 25.2 to 36.7 tons/acre with 2079 to 3135 fruit/acre harvested across all the entries (Table 1). Yields were generally higher in this years trial, compared to the 2000 trial. The average fruit weight was 25.2 lbs/fruit, with a range of 16.2 to 27.9 lbs/fruit. Highest yielding cultivars were; Fiesta, Mardi Gras, Sangria, SF #800, RWM 8114-VP and ACX 5451. Most of the fruit in this trial was oblong in shape with medium or thick rinds. Sangria and Celebration were both noted to have slightly tapered ends. Mardi Gras and ACX 5451 both showed slight cracking. The best tasting melons in the trial were: Mardi Gras, which also had the highest percent soluble solids; RWM 8114-VP; Crimson Sweet; and 790; also notable were SF #800; RWM 8110-VP; and Celebration. Seeded watermelon selection should be in large part based upon the size, shape and class of fruit to which your market is focused.

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

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							
Fiesta	NV	734.4	36.7 a	2904	25.2	10.4	3	3	Th	L	Ob	P
Mardi Gras	NV	712.3	35.6 a	2607	27.3	12.0	4	2	Th	L	Ob	DP
Sangria	NV	677.8	33.9 a	2871	23.8	10.0	3	2	M	L	Ob	DP
SF #800	AC	660.8	33.0 ab	2442	27.1	10.4	3.5	2	Th	M	Ob	P
RWM 8114-VP	NV	632.1	31.6 ab	2475	25.4	10.6	4	3	T-M	M	Ob	R
ACX 5451	AC	629.5	31.5 ab	2310	27.1	9.6	3	1	Th	M	Ob	R
RWM 8110-VP	NV	613.1	30.7 ab	2442	25.1	11.4	3.5	2	T	M-L	Ob	R
Crimson Sweet	JS	582.0	29.1 ab	2277	25.7	10.0	4	3	M-Th	M-L	Rd	DP
RWM 8036	NV	579.7	29.0 ab	2079	27.9	9.8	3	3	M	M	Ob	P
Celebration-VP	NV	577.7	28.9 ab	2145	27.0	11.2	3.5	2	M	M	Ob	DP
790	AC	576.3	28.8 ab	2310	24.9	10.6	4	2	M	M	Ob	DR
Sorbet Swirl	JS	503.4	25.2 b	3135	16.2	7.0	2	3	T	S	Rd	Y
Grand mean		623.3	31.2	2500	25.2							
LSD (5%)		172.3	8.6	675	2.6							
C.V. (%)		16.3	16.3	16	4.4							

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.