Seeded Watermelon Cultivar Trials for Southwestern Indiana, 2005

Christopher C. Gunter[1*], Melborn K. Lang[2], Dennis Nowaskie[2], Angie Thompson[2]
[1] Southwest Purdue Agricultural Program, Vincennes, IN 47591
[2]Southwest Purdue Agricultural Center, Vincennes, IN 47591
*Horticulture Specialist and author to whom correspondence should be addressed

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 six named seeded watermelons.

Methods:

Seeds from 6 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 19, 2005 and transplanted into the field on May 13, 2005. 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, 2005). Trickle irrigation lines placed beneath the plastic mulch provided water as needed. Fruits were harvested from July 21 through August 10. Data was analyzed with the Statistical Analysis Software (SAS) package (SAS Institute, Cary, NC).

Results:

Yields and Quality. Yields ranged from 30.5 to 35.7 tons/acre with 1921 to 2260 fruit/acre harvested across all the entries (Table 1). Yields were generally higher in this year's trial, compared to the 2004 trial. The average fruit weight was 31.4 lbs/fruit, with a range of 29.0 to 33.1 lbs/fruit which is down from last years average and range. Highest yielding cultivar was ACX 2800. Most of the fruit in this trial was oblong. The highest percent soluble solids were in ACX 2800, SF 800, and Top Gun. 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 of Seeded Watermelon in Southwestern Indiana, 2005.

Cultivar	Seed Source	Yield[z] Cwt./Acre	Yield Tons/A		Fruit No./A	Ave Fruit Weight Lbs
ACX 2800	AC	714.8	35.7	a	2260	31.7
Jamboree	RG	689.3	34.5	a	2109	32.8
SF 800	AC	681.8	34.1	a	2147	31.8
Sangria	RG	641.4	32.1	a	2147	29.8
Escarlett	RG	631.2	31.5	a	1921	33.1
Top Gun	RG	610.4	30.5	a	2109	29.0
Grand Mean		661.5	33.1		2116	31.4
LSD (5%)		175.9	8.8		584	3.3
C.V. (%)		14.9	14.9		16	6.0

Randomized complete block design: 3 replications.

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

Table 2. Comparison of Quality of Seeded Watermelon in Southwestern Indiana, 2005.

Cultivar	Seed Source	% SS[z]	Pressure[y]	Flavor[x]	Length[w]	Width[v]	Ratio[u]	Shape[t]	Flesh[s]
ACX 2800	AC	11.0	0.0	3	16.5	9.0	1.8	Ob	R
Jamboree	RG	10.0	1.2	3	17.0	9.0	1.9	Ob	DP
SF 800	AC	11.0	1.5	2	13.5	9.5	1.4	Ob	R
Sangria	RG	8.0	1.3	3	16.0	8.0	2.0	Ob	R
Escarlett	RG	12.0	0.6	3	15.5	9.5	1.6	Ob	R
Top Gun	RG	11.0	1.3	3	13.0	10.5	1.2	Ov	R

Randomized complete block design: 3 replications.

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

[y] **Pressure: Pressure test reading in pounds per square inch**

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

[w] **Length: Length of fruit from stem attachment end to blossom end (in)**

[v] **Width: Width of fruit as measured following a longitudinal cut from stem end to blossom end (in)**

[u] **Ratio: Length divided by the width of the fruit**

[t] **Shape: Rd=Round, Ov=Oval, Ob=Oblong.**

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