

12127

Horticulture Series No. 582

December 1987

O. A. R. D. C.

SEP 21 1988

LIBRARY

*under 3-000 de
2999
P180
M210*

1987

MUSKMELON CULTIVAR EVALUATION TRIALS

Dale W. Kretchman, Mark A. Jameson, and Charles C. Willer

Department of Horticulture
The Ohio State University
Ohio Agricultural Research and Development Center

639
043

MUSKMELON CULTIVAR EVALUATION TRIAL FOR
NORTHWESTERN OHIO, 1987

Dale Kretchman, Mark Jameson and Chuck Willer

Thirteen cultivars and lines of muskmelon, including 3 honeydew types, were evaluated in a replicated trial at the Vegetable Crops Branch of the Ohio Agricultural Research and Development Center near Fremont, Ohio. An additional 3 lines were evaluated in non-replicated plots.

Seeds were sown in a commercial peat-vermiculite mix in 2 1/4 in. square peat pots on May 12. Two plants were grown in each pot. Plants were field set on June 9. Prior to planting, the field received 500 lbs per acre of 10-20-20 broadcast and lightly incorporated. Rows were marked on 6 ft. centers and an additional 150 lbs per acre of 6-24-12 was banded about 2 inches to the side of each row and about 2 inches deep. Four-ft. wide, 1.5 mil black plastic mulch was placed over the rows with a commercial mulch layer and the plants were set through the plastic by hand. Rows were 30 ft. long and the 2-plant pots spaced 30 in. apart. One-half pint of a starter solution of 1 qt. of 10-34-0 per 50 gallons of water was applied to each pot after field setting. There were 4 replications of each cultivar in the replicated trial in a randomized block design, and the entire row of each plot was harvested for data. Standard practices for weed, insect, and disease control were used and no serious problems occurred. A hive of honeybees was placed near the plots to assist pollination.

Results are presented in tables 1 and 2. One of the most obvious observations in 1987 was the number of cultivars that produced fruit with highly undesirable off-flavors. It is not unusual to have one or two entries with serious off taste, but it is rare to have 6 with flavor problems in one season.

<u>Rainfall:</u> June 12 to 30	1.28 in.
July	4.87 in.
to August 25	1.91 in.

Harvest: Started August 6 and continued through August 25.

Seed sources were: Harris-Moran Seed Co., Rochester, NY (HA), W. Atlee Burpee Co., Philadelphia, PA (BU); Petoseed Co., Saticoy, CA (PS); Northrup King Co., Gilroy, CA (NK); and Musser Seed Co., Inc., Twin Falls, ID (MU).

Publications of the Ohio Agricultural Research and Development Center are available to all on a nondiscriminatory basis without regard to race, color, national origin, sex, handicap, or religious affiliation.

12/87-S444-200

TABLE 1. Harvest date of muskmelon and honeydew type melons-Vegetable Crops Branch, OSU/OARDC, Fremont, Ohio 1987.

Cultivar	Seed Source	First Harvest Date	Early Yield-Aug. 6 to 16			Season Total Yield			Fruit SS (%)		Flavor Rating*	
			Cwt/A	Marketable		Cwt/A	Marketable		Aug 13	Aug 20	Aug 13	Aug 20
				Size (lb)	Culls %		Size (lb)	Culls %				
<u>Replicated</u>												
Gold Star	HA	8/8	197.1	4.3	7.6	450.2	9.3	12.2	9.9	10.4	2	2
Super Star	HA	8/10	301.2	5.5	22.1	500.2	10.7	20.7	10.6	9.1	2	3
Burpee Hybrid	BU	8/10	268.8	4.1	17.2	432.6	8.4	19.1	9.4	8.2	1	1
Road Runner**	PS	8/8	176.5	4.1	18.0	388.8	7.7	15.0	10.4	10.5	2	2
Conquistador	NK	8/10	183.5	5.2	13.7	373.6	10.3	13.5	8.5	9.6	2	3.5
Explorer	NK	8/10	154.9	2.5	14.3	393.8	5.1	19.9	6.2	8.3	4	4
Challenger	MR	8/10	29.8	2.1	40.9	427.8	5.0	16.7	11.9	12.1	2	4
Eastern Star	HA	8/10	319.9	6.6	23.1	438.2	12.1	27.5	6.4	9.2	3	4
HXP-3593	HA	8/10	188.5	4.9	19.5	430.8	9.5	19.1	8.2	9.5	3	4
HMX-5606	HA	8/10	85.2	4.5	6.1	474.6	8.4	13.9	8.2	9.6	3	4
<u>Honeydew Types</u>												
Sweet Dream	BU	8/6	277.9	5.0	26.9	418.0	9.6	28.0	10.6	12.0	2	2
Lime Light	BU	8/18	0.0	0.0	0.0	220.3	7.1	15.9	---	10.2	-	3
HMX-5609	HA	8/18	0.0	0.0	0.0	238.2	6.6	47.9	---	11.9	-	2
LSD 5%			71.5	0.9	24.3	126.7	1.4	13.4	-	-	-	-
<u>Non-replicated</u>												
HMX-4599	HA	8/10	174.5	3.4	16.0	270.8	3.5	17.9	7.8	8.6	2	4
HMX-4600	HA	8/14	76.2	3.5	0.0	257.7	3.2	5.7	---	10.6	-	3
PSR-2185	PS	8/16	11.1	4.6	0.0	246.3	5.1	25.0	---	10.3	-	2

*Flavor rating: 1=excellent muskmelon flavor; 2=abnormally sweet to very sweet; 3=bland or flat; 4=decidedly off-flavor.

**Formerly PSX-E680

TABLE 2. Additional observations on muskmelon trials - OSU/OARDC, Fremont, Ohio 1987.

Cultivar	Comments
Gold Star	Medium ribbing, heavy netting, dark orange flesh, large seed cavity, fair uniformity, slightly elongated.
Super Star	Deep ribbing, medium netting, medium orange flesh, small to medium seed cavity, round, good uniformity.
Burpee Hybrid	Deep ribbing, medium netting, medium to dark orange flesh, large seed cavity, good uniformity, round.
Road Runner	Shallow ribbing, medium netting, light orange flesh, large seed cavity, good uniformity, round.
Conquistador	Shallow ribbing, light netting, dark orange flesh, medium seed cavity, cracks at stem-end, oblong shape, good uniformity.
Explorer	Non-ribbed, heavy netting, medium orange flesh, medium seed cavity, highly undesirable flavor-tastes like soap, round, fair uniformity.
Challenger	Non-ribbed, heavy netting, light orange flesh, small seed cavity, slightly oblong, good uniformity.
Eastern Star	Shallow ribbing, light netting, medium orange flesh, medium seed cavity, oblong shape, poor uniformity.
HXP-3593	Shallow ribbing, heavy netting, light orange flesh, medium seed cavity, round, good uniformity.
HMX-5606	Non-ribbed, heavy netting, light orange flesh, medium seed cavity, stem-end protrudes, round.
Sweet Dream	Slight netting, green to greenish-orange flesh, small seed cavity, round, fair uniformity, cracks at stem-end.
Lime Light	Slight netting, light green flesh, large seed cavity, round to slightly oblong, fair uniformity, stem slips at maturity.
HMX-5609	No netting, light green flesh color, medium seed cavity, good uniformity, highly susceptible to splitting, stem slips at maturity.
HMX-4599	Medium ribbing, medium netting, medium orange flesh, large seed cavity, round, fair uniformity.
HMX-4600	Shallow ribbing, medium netting, dark orange flesh, small seed cavity, oblong, good uniformity.
PSR-2185	Medium ribbing, heavy netting, medium orange flesh, medium seed cavity, flat shape (low LD/ratio), fair uniformity.

This page intentionally blank.