

Cantaloupe Variety Trial, 1990

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Introduction

The 1990 spring cantaloupe season in the desert southwest was hit hard by aphid vectored virus diseases. These included zucchini yellows, watermelon mosaic and papaya ring spot. Subfreezing temperatures in mid-February also affected early plantings, destroying newly germinating plants and producing spotty stands. A large portion of the cantaloupes shipped through Yuma is grown in the Bard/Winterhaven area on the west side of the Colorado River. Spring acreage this season was tagged near 2,500 acres.

Methods and Materials

Twenty-nine varieties from eight seed companies were included in a trial conducted with a grower cooperation near Winterhaven. The trial had a water date of February 5. Single row fifty foot plots were planted using an Earthway push planter on large south-facing Yuma beds. These beds, used to increase early season soil temperatures and plant growth, are transformed into flat 80 inch beds.

Evaluations made throughout the season included a count of the number of plants per plot after thinning on April 18, percentage of the bed with vine cover and number of potential marketable fruit per plot on May 31. Evaluation of varietal characteristics were made as they matured between June 1 and June 7, and these included representative fruit size and weight, interior color, cavity size and flavor. All plots were evaluated on June 7 for virus symptoms which included blistering, distortion or mottling of leaves and incomplete netting of fruit referred to as slicks. Vine holding ability was also evaluated on June 7.

Results and Discussion

Although the plants had not emerged by the February 14 freeze, the stands were somewhat spotty with some varieties stronger than others. Virus diseases were also a factor, but appeared after initial fruit set, allowing for a successful harvest of the field and evaluation of the plots.

A summary of the results is provided in Table 1. The top rated variety in this trial was Mission which had excellent germination, fruit set and vine vigor throughout the season. The round, moderate-sized fruit was early with good flavor. It was followed by Laguna and Aragon with a less vigorous vine but larger fruit, and Hy-Mark with a more vigorous plant but smaller-sized fruit. Of the numbered varieties, HMX 5582 was the most consistent with good vigor and fruit quality, while Sunre 7030 produced large, high quality fruit on a weak vine with a small fruit set.

Table 1. Evaluation of cantaloupe varieties from the February 5, 1990 planting with Interstate Packing in the Bard area.

Variety	Stand (plants/plot)	Vine Vigor (% bed cover)	Fruit Set (fruit/plot)	Fruit Size (inches)	Fruit Weight (pounds)	Internal Color (a)	Cavity Size	Flavor	Virus Symptoms (vine, fruit)	Vine Holding (% collapse)	Evaluation Date	Comments
Aragon (Asgrow)	13	60	38	5.5 x 5	2.8	2	1	1	3	30	6/4	Moderate to large fruit, coarse net, excellent flavor
Caravelle (Asgrow)	17	60	32	5 x 5	2.2	2	1	2	2	40	6/1	Weak vine, medium-sized round fruit, some sunburning and slicks
Challenger (Northrup King)	15	70	65	5 x 4.5	2.0	2	1	2	2	50	6/7	Large set, small fruit, moderate vine
Cruiser (Harris Moran)	25	100	63	6 x 5.5	3.7	2	1	3	3	30	6/1	Early large fruit, poor flavor, excellent vine vigor, some slicks
Durango (Petoseed)	11	40	39	5.5 x 5.5	2.9	2	3	1	2	20	6/4	Medium to large round fruit with coarse net, excellent flavor
Easy Rider (Harris Moran)	20	70	33	5 x 4.5	2.0	2	2	2	3	20	6/1	Mostly small, moderate quality fruit, slicks, excellent vine holding
Gold Mark (Sunseed)	25	90	56	6 x 5.5	3.3	1	3	2	3	40	6/1	Large persian-like melon, good flavor, soft flesh, open cavity
Hilline (Asgrow)	16	60	36	5 x 4.5	2.2	2	3	2	3	60	6/7	Few mostly small fruit, open cavity, poor vines, slicks, bull nose
Hy-Mark (Petoseed)	25	90	68	5 x 4.5	2.1	2	1	1	2	60	6/1	Excellent set of small to medium-sized fruit, good appearance
Laguna (Asgrow)	19	70	56	6 x 5	2.8	2	2	2	2	60	6/1	Good set of large fruit, good netting, moderate vine strength
Main Pak (Sunseed)	24	80	56	5 x 4.5	2.0	2	2	1	2	30	6/7	Moderate quality, small fruit, excellent flavor, some sutures
Mission (Asgrow)	29	90	89	5 x 5	2.4	2	2	1	2	30	6/1	Excellent set of moderate-sized round fruit, strong vine
Primo (Northrup King)	32	80	54	6.5 x 6	4.0	2	2	2	2	30	6/1	Excellent germination, very large fruit, some netted sutures
Sweet Surprise (Sakata)	26	80	67	5 x 5.5	3.2	2	2	2	2	30	6/1	Heavy set of early-maturing round fruit, overripe at full slip
Tasty Sweet (Sunseed)	28	80	66	5.5 x 5	2.7	2	3	2	2	80	6/1	Large fruit, some persian-type exterior, sunburning, slicks
Top Mark (Northrup King)	16	70	35	5 x 4.5	1.9	2	2	2	2	70	6/7	Small fruit of moderate quality, some slicks
Top Mark (Sunseed)	12	70	36	5 x 4.5	1.8	3	2	2	3	30	6/7	Small fruit, good vine holding, sunburning, slicks
Top Score (Petoseed)	8	40	24	4.5 x 5	2.2	3	3	2	2	50	6/7	Round fruit, some full net sutures, fine netting, sunburning, slicks
Travler (Shamrock)	6	20	14	5 x 5	-	2	1	2	3	80	6/1	Weak vine, poor set, round fruit, some sutures, poor netting
Exp. 3141 (Shamrock)	12	50	19	5 x 4.5	2.0	-	-	-	3	40	6/7	Poor set of triangular fruit, poor netting, slicks, weak vines
HMX 5582 (Harris Moran)	23	80	42	6 x 5	2.9	2	1	2	2	50	6/1	Large fruit, thick net, moderate vine, slicks
PSX 22386 (Petoseed)	10	70	38	5 x 4.5	2.2	2	2	1	2	80	6/4	Excellent flavor, poor vine holding, sunburning, slicks
PSX 30787 (Petoseed)	12	50	22	6 x 5	2.6	2	3	2	3	30	6/1	Few fine-netted, large fruit, open cavity, slicks, good vine holding
SME 8101 (Sakata)	11	40	38	4.5 x 5	2.2	2	1	1	3	30	6/7	Small, round fruit with coarse net, some netted sutures
Sunre 7029 (Sunseed)	10	30	30	5.5 x 5	2.8	3	1	3	2	80	6/1	Very weak vine, few fine-netted large fruit, poor color and flavor
Sunre 7030 (Sunseed)	14	30	24	6 x 5	2.9	1	1	1	3	40	6/1	Weak vine, excellent fruit size and quality, sunburning, slicks
XPH 5373 (Asgrow)	15	60	54	5 x 5	2.2	2	3	2	2	90	6/1	Good set of round fruit, open cavity, poor vine holding

(a) 1 = most desirable, 2 = moderate, 3 = undesirable