Cantaloupe Variety Trial, 1991

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Introduction

Cantaloupe acreage in southwest Arizona has steadily increased over the last couple of years. Cantaloupe production has traditionally centered in the Bard/Winterhaven area on the west side of the Colorado River, but has spread throughout the Yuma Valley and into the Gila and Dome Valleys as the acreage has expanded. The spring of 1991 saw cooler than normal temperatures which allowed aphid populations to remain high over an extended period of time. As a result, aphid vectored virus diseases: zucchini yellows mosaic virus, watermelon mosaic virus II, papaya ring spot(watermelon mosaic virus I) and cucumber mosaic virus were all present in Yuma area cantaloupe fields.

Methods and Materials

Thirty-two varieties from nine seed companies were evaluated in a trial conducted with a grower cooperator in the Gila Valley. Single row fifty foot plots were planted with an Earthway push planter on large south-facing Yuma beds which are used by growers to increase soil temperature and plant growth. The field was irrigated February 8 with the beds transformed into flat 80 inch beds as the season progressed.

The first evaluation of the trial was made on May 31 and included vine vigor, rated as percent bed cover, as well as total fruit load and potential marketable fruit softball sized or larger. On June 13 vine vigor and external fruit appearance were rated on a scale from one to three, with 3 being the highest rating and 1 the lowest. Evaluations of additional characteristics were made as the varieties matured between June 12 and 20 and included fruit size, weight, shape, netting, sutures, cavity size, internal color, flavor, an overall rating and comments.

Results and Discussion

The trial produced generally strong stands, with a moderate virus infestation which included zucchini yellow mosaic virus and watermelon mosaic virus II. A summary of the results are provided in Table 1. Early maturing varieties rated highly in this trial included HMX 9583 with a strong vine having a heavy load of large round fruit, and Laguna with a weaker vine but good load of smaller round fruit with good netting and excellent interior quality. Mid season Aragon produced a vigorous vine and a heavy load of large oval fruit with good netting. Highly rated later maturing varieties were Otero with a strong plant and large round fruit having good interior quality and netting, and Easy Rider with large fruit and good netting. Although Premier and Primo enjoyed good fruit quality, the number of fruit and vine strength were less than desired.

Table 1. Cantaloupe variety evaluations from the February 7, 1991 planting with Interstate Produce.

Variety	% bed cover	Late vine vigor	Total fruit load	Potentially marketable fruit	Fruit quality	Fruit size l x w (inches)	Fruit weight (pounds)	Fruit shape (b)	Netting (c)	Sutures (d)	Cavity size	Internal color	Flavor	Overall evaluation	Evaluation date	Comments
Aragon (Asgrow)	80	3	28	19	3	5 x 4½	2.1	O	M	N	2	2	2	3	6/16	Heavy load, large fruit, good net, moderate internal quality
Caravelle (Asgrow)	50	2	25	12	2	4½ x 4½	1.6	R	M	N	3	2	2	2	6/14	Small - large round fruit, closed cavity, good texture and flavor
Cruiser (Harris Moran)	70	2	29	20	2	5 x 4½	2.0	O	M	N	2	1	1	2	6/12	Early maturity, sheep nose, poor flavor
Durango (Petoseed)	30	1	10	3	1	4¼ x 4½	1.6	R	M	N	1	1	2	1	6/18	Medium-sized fruit, open cavity, fairly weak vine
Easy Rider (Harris Moran)	70	2	25	16	3	4¼ x 4¼	2.0	R	M	N	2	2	3	3	6/18	Round melon, mostly good netting, good flavor, somewhat coarse texture
Galleon (Asgrow)	50	2	8	4	2	4¼ x 4¼	1.5	R	M	N	2	2	3	1	6/18	Medium-sized round fruit, good flavor, moderate cavity size and vine vigor
Goldmark (Sunseed)	70	3	23	9	2	5½ x 5½	2.7	R	M	N	1	2	2	2	6/12	Early maturing large round fruit, open cavity, orange/green netting
Hiline (Asgrow)	70	2	36	33	3	4½ x 4½	1.6	R	F-M	N-T	1	2	2	2	6/16	Good load of round fruit, some fully-netted sutures, large cavity
Hymark (Petoseed)	60	2	14	5	1	4½ x 4½	1.6	R	H	N	3	2	2	1	6/16	Round fruit, mostly poor netting, tight cavity
Laguna (Asgrow)	50	2	24	18	3	4½ x 4½	1.7	R	M	N	3	3	3	3	6/12	Early maturing smaller round fruit, tight cavity, good netting
Loredo (Petoseed)	70	3	23	8	2	5¼ x 4½	2.1	O	M	N	1	1	1	1	6/12	Early maturing oval fruit, moderate to poor netting, pale interior color
Mission (Asgrow)	50	2	6	1	2	4¼ x 4¼	1.5	R	M	N	3	2	3	1	6/16	Mostly small fruit, adequate netting, tight cavity, good flavor and texture
Otero (Hollar)	80	3	30	23	3	4¾ x 4½	2.0	R	M	N	2	3	3	3	6/18	Large melon, good netting, internal color, texture and vine vigor
Premier (Abbott & Cobb)	60	3	24	10	2	3¾ x 4¼	1.9	R	M	N	2	2	3	3	6/18	Heavy load of good-sized fruit, good flavor and vine vigor
Primo (Rogers N/K)	40	2	20	10	2	5 x 4½	2.0	O	M	N	3	2	3	3	6/16	Large oval fruit, mostly good netting, very tight cavity, excellent flavor
Pronto (Abbott & Cobb)	60	2	13	2	1	4¾ x 4¼	1.2	R	M	T	1	1	1	1	6/12	Early maturing large melon, orange and green through mostly poor netting
Sweet Sixteen (Shamrock)	70	1	22	14	2	4½ x 4	1.6	O	M	N	3	1	3	2	6/16	Medium-sized fruit, tight cavity, pale interior color, good flavor and texture
Sweet Surprise (Sakata)	50	2	16	12	2	5 x 4¾	2.2	R	M	N	3	2	3	2	6/12	Early maturing roundish fruit, tight cavity, good netting and fruit load
Tasty Sweet (Sunseed)	70	2	24	7	1	4¼ x 4¼	2.0	R	M	N	2	2	2	1	6/12	Early maturing round melon, mostly poor netting
Topmark (Hollar)	70	2	8	5	2	4½ x 4¼	2.0	R	M	N	2	2	2	1	6/20	Mostly very small or poor quality melons, moderate cavity, good flavor
Traveler (Shamrock)	30	1	5	2	1	4½ x 4	1.6	O	M	N	3	1	1	1	6/18	Irregular-shaped mostly small-sized melons, mostly poor netting
Exp. 37 (Shamrock)	60	2	20	13	2	5x 4½	1.8	O	M	N	2	2	2	2	6/12	Early maturing sheep-nosed oval fruit
HMX 5582 (Harris Moran)	60	2	15	6	2	4½ x 4½	1.7	R	M	N	3	2	3	2	6/12	Early maturing smaller fruit, tight cavity, good flavor and texture
HMX 9583 (Harris Moran)	80	3	41	24	3	5 x 5	2.4	R	M	N	2	2	2	3	6/12	Early maturing large round fruit, moderate netting, strong vine
HMX 9584 (Harris Moran)	60	2	17	7	3	4½ x 4½	1.5	R	M	N	2	2	2	2	6/12	Fairly early round fruit, moderate to poor netting
HMX 9585 (Harris Moran)	60	2	11	8	2	3¾ x 4	1.4	R	M	N	2	2	3	2	6/14	Large number of small fruit, good netting, excellent flavor and texture
NVH 891 (Rogers N/K)	70	3	20	7	2	5½ x 5	2.7	O	M	N-T	1	1	2	1	6/16	Irregular shaped, sheep-nosed fruit, some inadequate netting, open cavity
NVH 892 (Rogers N/K)	30	1	8	4	2	4 x 4	1.4	R	M	N	2	2	2	1	6/16	Small fruit, mostly adequate netting, moderate internal quality
SME 8101 (Sakata)	50	2	14	7	2	3¾ x 4	1.3	R	M	N	3	3	3	2	6/18	Small fruit, tight cavity, good flavor and texture
Sun-7002 (Sunseed)	40	2	11	1	1	5 x 5	2.4	R	M	O	1	2	1	1	6/12	Early maturing, large round sutured fruit, poor netting
Sunre-7029 (Sunseed)	70	2	26	15	2	5 x 4¾	2.3	O	M	N	2	1	2	2	6/12	Fairly early maturing fruit, good fruit load, mostly good netting
Sunre-7044 (Sunseed)	80	3	9	8	2	4½ x 4½	1.7	R	H	O	2	2	2	2	6/14	Heavy load of smallish round fruit, mostly good net

(a) 3 = most desirable, 2 = moderate, 1 = undesirable
(b) R = round, O = oval
(d) F = fine, M = medium, H = heavy
(d) N = none, T = netted, O = open