

# Cantaloupe Variety Trials 1996

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Yuma County Cooperative Extension Office*

Cooperators:  
H & H Seed Company  
SMT Farms  
The Barkley Company  
Huerta Packing

## Introduction

Cantaloupe acreage in southwestern Arizona has seen a slight increase in the past few years and may even have leveled off. Melon production has traditionally been centered in the Bard/Winterhaven area on the west side of the Colorado River, but has spread somewhat into the Yuma, Gila and Dome Valleys as the acreage expanded. The spring of 1996 saw warmer than usual conditions which created a desirable environment for insect populations and good conditions for Powdery mildew as well. A few commercial fields showed signs of some the aphid vectored viruses beginning in mid-season and the presence of Powdery mildew was also observed.

## Materials and Methods

Fifteen varieties from five seed companies were evaluated in trials conducted with grower cooperators in the Yuma Valley and in the Bard/Winterhaven area. Single-row plots were planted with an earthway push planter on standard 80" Yuma beds in a north to south orientation. Two beds were used for each variety and a minimum of 50 foot plots were planted.

Five melons representative of the entire plot were harvested and evaluated with an average weight being recorded. Brix was measured with a hand held refractometer and color was a subjective measure.

Many of the characteristics were rated using a scale of 1 to 5 with 5 being the most desirable. For those characteristics being rated by other means, there is a key provided for explanation. Each variety was given an overall rating and some additional comments are provided as well. Varieties with an overall rating of 3 to 5 should perform well for the given planting date and conditions under which they were grown. An overall rating of 3 may be commercially acceptable, however the variety may experience some specific problems when grown under similar conditions to those of this trial. Any variety rated 1 to 2 should be considered unacceptable for commercial use under similar conditions to those of this trial.

## Results and Discussion

Table 1 is a summary of the overall evaluation for each variety in the four plantings. Detailed evaluations of the trials are provided in tables 2 through 5. Addendum 1 provides the AZMET (Arizona Meteorological Network) monthly summary for the Yuma Valley for the entire growing season.

All the trials produced generally strong stands with low to moderate virus infection, Powdery mildew and whitefly infestations. A summary of the results is provided in table 1. All of the varieties evaluated grew strong vines and produced heavy fruit loads throughout the season. Several varieties expressed suturing before and at maturity. HMX 2582 expressed suturing in the early planting, but not in the later plantings. La Fiesta produced the best overall fruit load, vine strength, fruit quality and flavor throughout the season. HPX 6299 and HPX 6300 produced excellent quality

and flavor in the mid and late seasons. Corona seemed to produce a better tasting fruit in the late season, but expressed desirable plant characteristics throughout the season.

\*\* It should be noted that many of the varieties trialed are not necessarily adapted to the planting window in which they are trialed. Occasionally favorable or undesirable results may occur in such instances. In any case, these results are generally associated with environmental conditions rather than varietal characteristics.

**Table 1. Summary of overall Evaluations for the Four Cantaloupe Planting Dates**

<u>Variety</u>	<u>Feb. 1</u>	<u>Feb. 6</u>	<u>Feb. 19</u>	<u>March 4</u>
Cruiser - Harris Moran	3.0			
HMX 4598 - Harris Moran	3.5			
Goldmine - Harris Moran	4.5			
HMX 4599 - Harris Moran	4.0			
HMX 5589 - Harris Moran	3.5			
HMX 2582 - Harris Moran	4.0	3.5		3.5
HMX 4602 - Harris Moran	3.5			
HMX 2583 - Harris Moran	3.5			3.5
SEM 3118 - Sakata Seed		3.5		
Corona - Orsetti Seed	4.0		3.5	4.0
La Fiesta - Orsetti Seed	4.5		4.5	4.5
XPH 6300 - Asgrow Seed		4.0	4.0	
HPH 6299 - Asgrow Seed		4.0	4.0	
HMX 2583 - Harris Moran		3.0		









**ADDENDUM 1**

**AZMET Arizona Meteorological Network Monthly Summaries  
for the period 8-1-95 through 4-30-96**

**Yuma Valley**

ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY  
 Yuma Valley  
 1995

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND		SOLAR RAD	RAIN	ET <sub>o</sub>	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
8/ 1	114	80	97	63	11	34	100	97	16	5.1	709	0.00	0.38	30	35	40
8/ 2	113	84	97	75	14	44	100	97	19	6.9	709	0.00	0.38	31	36	41
8/ 3	113	80	97	68	13	37	100	98	20	5.8	707	0.00	0.39	30	35	40
8/ 4	113	80	96	67	12	36	100	98	18	4.5	687	0.00	0.36	30	35	40
8/ 5	114	76	97	53	8	23	100	98	15	5.4	693	0.00	0.39	29	34	39
8/ 6	114	84	100	60	9	25	101	98	23	7.4	650	0.00	0.40	31	36	41
8/ 7	110	85	96	70	21	45	100	97	25	7.4	663	0.00	0.37	31	36	41
8/ 8	111	81	97	61	22	38	101	98	14	4.9	671	0.00	0.35	30	35	40
8/ 9	113	84	98	58	18	37	102	99	20	5.1	664	0.00	0.36	31	36	41
8/10	107	85	96	65	24	43	101	97	22	8.1	656	0.00	0.39	31	36	41
8/11	101	84	91	77	39	60	98	96	26	11.4	613	0.00	0.34	31	36	41
8/12	101	84	91	69	35	55	98	95	20	9.2	610	0.00	0.33	31	36	41
8/13	108	81	94	71	18	42	100	97	18	4.7	649	0.00	0.33	30	35	40
8/14	103	82	92	73	35	53	98	95	27	11.6	638	0.00	0.38	30	35	40
8/15	101	82	89	80	36	60	97	94	27	11.2	581	0.00	0.32	30	35	40
8/16	102	81	90	81	30	58	97	94	20	8.7	636	0.00	0.34	30	35	40
8/17	103	78	90	77	25	51	98	96	16	5.4	655	0.00	0.32	29	34	39
8/18	105	74	90	80	11	46	98	96	13	4.3	668	0.00	0.32	28	33	38
8/19	98	78	88	75	28	57	94	94	18	5.6	276	0.00	0.14	29	34	39
8/20	99	82	88	76	37	59	97	95	23	6.3	510	0.00	0.25	30	35	40
8/21	102	79	90	79	28	50	98	96	15	5.1	613	0.00	0.30	29	34	39
8/22	109	81	97	69	22	39	100	97	15	4.7	627	0.00	0.33	30	35	40
8/23	110	84	98	56	17	35	101	98	20	5.1	633	0.00	0.35	31	36	41
8/24	105	81	92	68	26	47	100	97	27	7.2	598	0.00	0.33	30	35	40
8/25	105	80	92	76	25	51	98	97	18	5.1	618	0.00	0.31	30	35	40
8/26	107	79	92	74	15	42	93	92	15	4.7	632	0.00	0.32	29	34	39
8/27	109	84	95	59	13	34	91	91	17	4.5	596	0.00	0.32	31	36	41
8/28	111	77	96	65	11	32	91	91	25	4.7	630	0.00	0.34	29	34	39
8/29	112	80	97	59	14	34	92	92	23	6.7	598	0.00	0.35	30	35	40
8/30	109	83	93	79	22	51	94	93	17	5.8	471	0.00	0.26	30	35	40
8/31	112	80	95	68	16	39	95	94	19	4.9	580	0.00	0.32	30	35	40

AVG. 107 81 94 69 21 44 98 96 20 6.4 621  
 TOTAL 0.00 10.35 929 1084 1239  
 RESULTANT WIND VECTOR = 3.7 MPH AT 185 DEGREES

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 \* ABBREVIATIONS AND UNITS \*  
 \* \*  
 \* MX : MAXIMUM FOR DAY AIR TEMP : AIR TEMPERATURE IN DEGREES F \*  
 \* MN : MINIMUM FOR DAY REL HUM : RELATIVE HUMIDITY IN % \*  
 \* AV : AVERAGE FOR DAY SOLAR RAD : SOLAR RADIATION IN LANGLEYS \*  
 \* WIND SPEED : IN MILES/HOUR SOIL TEMP : SOIL TEMPERATURE AT 2 AND 4 \*  
 \* INCHES, IN DEGREES F \*  
 \* RAIN : RAINFALL IN INCHES ET<sub>o</sub> : REFERENCE CROP EVAPOTRANSPIRATION \*  
 \* IN INCHES \*  
 \* \*  
 \* ## : MISSING DATA, ET<sub>o</sub> & HEAT UNIT TOTALS ARE PRORATED \*  
 \* 55 : TEMPERATURE LIMITS = 86/55 DEGREES F \*  
 \* 50 : TEMPERATURE LIMITS = 86/50 DEGREES F \*  
 \* 45 : TEMPERATURE LIMITS = 86/45 DEGREES F \*  
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ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY  
Yuma Valley  
1995

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND SPEED		SOLAR RAD	RAIN	ETo	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
9/ 1	110	85	98	75	19	39	97	96	21	6.9	576	0.00	0.33	31	36	41
9/ 2	112	82	97	77	19	42	97	96	18	6.3	589	0.06	0.33	30	35	40
9/ 3	107	83	94	69	28	49	97	96	24	6.3	569	0.00	0.31	30	36	41
9/ 4	109	82	95	73	25	48	98	96	16	5.6	588	0.00	0.32	30	35	40
9/ 5	103	85	92	76	31	55	96	95	26	12.8	496	0.00	0.32	31	36	41
9/ 6	103	80	92	80	28	57	97	96	16	4.7	562	0.00	0.27	30	35	40
9/ 7	105	83	93	56	27	41	97	96	22	7.2	531	0.00	0.30	31	35	40
9/ 8	106	82	94	49	18	29	97	96	25	8.3	564	0.00	0.36	30	35	40
9/ 9	103	76	91	35	9	19	95	94	21	5.6	592	0.00	0.33	28	33	38
9/10	104	72	90	51	11	24	94	94	14	4.3	612	0.00	0.32	27	32	37
9/11	107	71	89	55	8	25	93	93	16	3.8	606	0.00	0.32	27	32	37
9/12	113	68	90	54	5	23	92	92	21	3.6	613	0.00	0.32	26	31	36
9/13	112	71	92	48	7	21	94	92	17	4.9	609	0.00	0.35	27	32	37
9/14	105	76	92	78	21	42	95	93	21	6.5	569	0.00	0.30	28	33	38
9/15	105	80	92	84	16	45	96	94	19	7.2	568	0.00	0.31	30	35	40
9/16	102	82	90	75	35	57	94	92	21	9.6	535	0.00	0.29	30	35	40
9/17	102	76	89	76	30	52	94	93	15	5.4	528	0.00	0.26	28	33	38
9/18	104	74	89	79	13	41	95	93	15	3.4	565	0.00	0.28	28	33	38
9/19	104	74	89	74	17	46	94	93	26	4.5	553	0.00	0.28	28	33	38
9/20	105	75	89	76	18	45	94	93	13	4.7	552	0.00	0.28	28	33	38
9/21	104	71	88	82	12	41	94	92	14	3.8	549	0.00	0.27	26	31	36
9/22	103	74	88	79	19	50	94	92	13	3.6	524	0.00	0.24	28	33	38
9/23	104	71	87	81	14	44	93	91	20	5.6	526	0.00	0.28	26	31	36
9/24	103	71	87	61	15	36	93	91	23	5.6	523	0.00	0.28	26	31	36
9/25	101	68	85	77	18	45	92	91	18	4.7	522	0.00	0.26	25	30	35
9/26	102	67	87	62	14	35	92	90	20	5.6	520	0.00	0.28	25	30	35
9/27	99	76	86	74	22	50	91	89	26	7.8	501	0.00	0.29	28	33	38
9/28	96	74	83	83	12	43	91	91	29	7.6	510	0.00	0.28	27	32	37
9/29	92	67	78	50	15	32	90	90	31	10.1	511	0.00	0.30	23	28	33
9/30	94	62	79	58	8	22	88	87	30	10.7	533	0.00	0.38	21	26	31
AVG.	104	75	89	68	18	40	94	93	20	6.2	553					
TOTAL												0.06	9.05	835	984	1134

RESULTANT WIND VECTOR = 1.8 MPH AT 206 DEGREES

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*                                     ABBREVIATIONS AND UNITS                                     *
*                                                                                                     *
*  MX : MAXIMUM FOR DAY           AIR TEMP : AIR TEMPERATURE IN DEGREES F           *
*  MN : MINIMUM FOR DAY           REL HUM  : RELATIVE HUMIDITY IN %                 *
*  AV : AVERAGE FOR DAY           SOLAR RAD : SOLAR RADIATION IN LANGLEYS           *
*  WIND SPEED : IN MILES/HOUR     SOIL TEMP : SOIL TEMPERATURE AT 2 AND 4           *
*                                     INCHES, IN DEGREES F                             *
*  RAIN : RAINFALL IN INCHES     ETo    : REFERENCE CROP EVAPOTRANSPIRATION         *
*                                     IN INCHES                                       *
*                                                                                                     *
*  ## : MISSING DATA, ETo & HEAT UNIT TOTALS ARE PRORATED                             *
*  55 : TEMPERATURE LIMITS = 86/55 DEGREES F                                       *
*  50 : TEMPERATURE LIMITS = 86/50 DEGREES F                                       *
*  45 : TEMPERATURE LIMITS = 86/45 DEGREES F                                       *
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ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY

Yuma Valley  
1995

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND		SOLAR RAD	RAIN	ETo	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
10/ 1	96	58	77	69	7	28	86	86	19	4.0	537	0.00	0.26	20	25	30
10/ 2	99	58	78	73	6	30	86	86	24	5.6	538	0.00	0.29	20	25	30
10/ 3	100	57	80	82	6	30	86	86	16	4.0	530	0.00	0.27	20	25	30
10/ 4	94	59	78	69	8	26	86	85	35	10.7	504	0.00	0.35	20	25	30
10/ 5	85	60	75	58	8	18	85	85	33	12.3	526	0.00	0.37	18	23	28
10/ 6	92	53	73	65	7	27	83	83	18	4.0	499	0.00	0.24	17	22	27
10/ 7	94	57	75	75	9	36	83	83	16	3.4	495	0.00	0.22	19	24	29
10/ 8	93	59	76	84	21	49	85	85	12	3.6	486	0.00	0.21	20	25	30
10/ 9	97	61	78	84	10	43	85	85	10	3.4	483	0.00	0.22	21	26	31
10/10	100	60	80	79	9	37	85	85	12	4.3	481	0.00	0.24	21	26	31
10/11	97	62	79	78	18	47	85	85	20	4.0	457	0.00	0.21	22	27	32
10/12	96	65	80	90	20	53	86	85	17	4.0	460	0.00	0.20	23	28	33
10/13	98	61	80	83	12	39	85	85	26	8.3	463	0.00	0.29	22	27	32
10/14	99	71	85	49	8	15	87	85	27	11.9	464	0.00	0.37	26	31	36
10/15	101	65	84	56	8	24	86	85	31	6.9	437	0.00	0.28	24	29	34
10/16	91	62	78	65	13	31	86	86	30	9.8	449	0.00	0.28	21	25	30
10/17	93	55	73	83	12	45	83	84	11	4.0	444	0.00	0.20	18	23	28
10/18	93	58	74	78	17	48	83	83	10	3.6	436	0.00	0.19	19	24	29
10/19	93	57	75	93	13	53	82	83	10	2.9	420	0.00	0.17	19	24	29
10/20	99	57	76	91	10	49	83	83	10	2.5	417	0.00	0.18	20	25	30
10/21	98	59	77	82	11	41	82	82	13	3.8	402	0.00	0.19	21	26	31
10/22	81	60	71	82	7	30	81	81	35	13.2	404	0.00	0.33	15	20	25
10/23	79	58	68	34	8	16	78	79	25	8.7	420	0.00	0.26	14	18	23
10/24	83	46	66	73	8	32	77	78	15	3.6	415	0.00	0.19	12	15	20
10/25	86	50	67	65	9	35	76	78	10	2.9	469	0.00	0.19	14	18	23
10/26	88	50	68	81	8	40	76	78	9	2.2	461	0.00	0.19	15	19	24
10/27	92	54	71	80	10	44	78	79	7	2.5	445	0.00	0.18	17	22	27
10/28	88	55	71	82	23	53	78	79	8	2.7	363	0.00	0.14	17	21	26
10/29	90	61	74	82	23	54	79	79	15	3.4	340	0.00	0.14	20	25	30
10/30	81	61	70	88	43	66	78	79	19	4.3	276	0.00	0.11	16	21	26
10/31	81	57	68	94	45	70	77	78	17	4.5	365	0.00	0.13	14	19	24
AVG.	92	58	75	76	13	39	83	83	18	5.3	448					
TOTAL												0.00	7.08	582	733	887

RESULTANT WIND VECTOR = 2.3 MPH AT 3 DEGREES

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 \* ABBREVIATIONS AND UNITS \*  
 \*  
 \* MX : MAXIMUM FOR DAY AIR TEMP : AIR TEMPERATURE IN DEGREES F \*  
 \* MN : MINIMUM FOR DAY REL HUM : RELATIVE HUMIDITY IN % \*  
 \* AV : AVERAGE FOR DAY SOLAR RAD : SOLAR RADIATION IN LANGLEYS \*  
 \* WIND SPEED : IN MILES/HOUR SOIL TEMP : SOIL TEMPERATURE AT 2 AND 4 \*  
 \* INCHES, IN DEGREES F \*  
 \* RAIN : RAINFALL IN INCHES ETo : REFERENCE CROP EVAPOTRANSPIRATION \*  
 \* IN INCHES \*  
 \*  
 \* ## : MISSING DATA, ETo & HEAT UNIT TOTALS ARE PRORATED \*  
 \* 55 : TEMPERATURE LIMITS = 86/55 DEGREES F \*  
 \* 50 : TEMPERATURE LIMITS = 86/50 DEGREES F \*  
 \* 45 : TEMPERATURE LIMITS = 86/45 DEGREES F \*  
 \*\*\*\*\*

ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY  
Yuma Valley  
1995

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND SPEED		SOLAR RAD	RAIN	ET <sub>o</sub>	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
11/ 1	78	61	69	88	41	61	76	77	14	3.4	229	0.00	0.09	15	20	25
11/ 2	79	55	67	87	40	65	76	77	9	2.5	382	0.00	0.13	12	17	22
11/ 3	82	56	69	89	31	59	77	78	11	3.4	395	0.00	0.15	14	19	24
11/ 4	84	56	69	86	17	48	77	78	13	2.9	399	0.00	0.16	15	20	25
11/ 5	78	54	65	95	26	65	75	76	12	3.1	256	0.00	0.09	11	16	21
11/ 6	80	56	67	98	33	74	76	76	10	2.9	387	0.00	0.13	13	18	23
11/ 7	82	56	68	99	29	67	76	77	9	2.9	387	0.00	0.13	14	19	24
11/ 8	86	54	68	92	23	62	76	77	8	2.0	384	0.00	0.13	15	20	25
11/ 9	85	53	68	96	26	66	76	76	16	3.6	380	0.00	0.15	15	19	24
11/10	83	55	68	100	28	66	76	76	13	2.7	371	0.00	0.13	14	19	24
11/11	84	52	68	92	29	56	75	76	12	3.4	373	0.00	0.15	14	18	23
11/12	87	54	68	84	19	54	75	76	13	2.9	338	0.00	0.13	15	20	25
11/13	86	52	68	87	15	50	75	76	14	4.3	381	0.00	0.17	15	19	24
11/14	86	51	66	85	17	52	74	75	9	3.1	366	0.00	0.15	14	19	24
11/15	90	52	68	85	16	54	74	75	9	2.7	366	0.00	0.14	16	20	25
11/16	87	51	67	88	23	58	74	75	7	2.5	358	0.00	0.13	14	19	24
11/17	88	52	67	88	20	58	74	74	6	2.5	351	0.00	0.13	15	20	25
11/18	86	51	66	83	20	54	73	74	11	3.8	349	0.00	0.14	14	18	23
11/19	88	49	66	82	19	53	73	74	11	3.1	349	0.00	0.13	15	19	24
11/20	86	50	66	81	17	52	73	73	10	3.1	342	0.00	0.13	14	18	23
11/21	84	52	65	78	17	51	72	73	8	2.5	314	0.00	0.12	14	18	23
11/22	85	46	63	84	18	54	71	72	6	2.5	336	0.00	0.12	12	16	20
11/23	83	48	63	84	16	52	71	72	13	3.4	326	0.00	0.13	12	15	20
11/24	87	49	66	74	13	44	71	72	12	4.0	320	0.00	0.15	14	18	23
11/25	85	51	67	79	16	48	72	72	8	2.7	319	0.00	0.13	14	18	23
11/26	82	54	66	85	31	60	72	73	14	2.7	272	0.00	0.09	13	18	23
11/27	71	57	65	43	12	20	70	71	33	13.0	355	0.00	0.27	9	14	19
11/28	72	43	59	67	12	31	67	69	19	4.9	309	0.00	0.15	6	9	13
11/29	77	44	60	79	18	43	67	69	13	4.0	346	0.00	0.14	8	12	16
11/30	80	45	61	82	20	50	67	69	11	3.4	345	0.00	0.13	10	13	18
AVG.	83	52	66	85	22	54	73	74	12	3.5	346					
TOTAL												0.00	4.10	394	529	675

RESULTANT WIND VECTOR = 1.7 MPH AT 28 DEGREES

\*\*\*\*\*  
\* ABBREVIATIONS AND UNITS \*  
\*  
\* MX : MAXIMUM FOR DAY AIR TEMP : AIR TEMPERATURE IN DEGREES F \*  
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\* AV : AVERAGE FOR DAY SOLAR RAD : SOLAR RADIATION IN LANGLEYS \*  
\* WIND SPEED : IN MILES/HOUR SOIL TEMP : SOIL TEMPERATURE AT 2 AND 4 \*  
\* INCHES, IN DEGREES F \*  
\* RAIN : RAINFALL IN INCHES ET<sub>o</sub> : REFERENCE CROP EVAPOTRANSPIRATION \*  
\* IN INCHES \*  
\*  
\* ## : MISSING DATA, ET<sub>o</sub> & HEAT UNIT TOTALS ARE PRORATED \*  
\* 55 : TEMPERATURE LIMITS = 86/55 DEGREES F \*  
\* 50 : TEMPERATURE LIMITS = 86/50 DEGREES F \*  
\* 45 : TEMPERATURE LIMITS = 86/45 DEGREES F \*  
\*\*\*\*\*

ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY

Yuma Valley  
1995

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND SPEED		SOLAR RAD	RAIN	ET <sub>o</sub>	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
12/ 1	80	46	60	86	26	55	68	69	10	3.1	335	0.00	0.12	10	14	18
12/ 2	78	45	59	97	37	72	68	69	8	2.5	328	0.00	0.09	9	13	17
12/ 3	80	45	60	91	28	67	68	69	7	2.7	323	0.00	0.10	10	13	17
12/ 4	80	46	60	87	23	61	68	69	8	2.7	318	0.00	0.11	10	13	18
12/ 5	79	49	62	85	23	59	68	69	9	3.4	300	0.00	0.11	10	14	19
12/ 6	76	53	62	79	30	59	68	69	8	2.5	174	0.00	0.06	10	14	19
12/ 7	79	48	63	85	27	55	69	69	13	2.5	308	0.00	0.11	10	14	18
12/ 8	77	47	61	88	22	53	67	69	14	4.3	318	0.00	0.13	9	12	17
12/ 9	77	45	59	78	19	50	66	68	11	3.6	325	0.00	0.12	8	12	16
12/10	78	43	59	81	21	52	66	67	10	3.1	326	0.00	0.12	9	12	16
12/11	77	44	57	84	21	60	65	67	11	2.9	283	0.00	0.09	8	11	15
12/12	75	44	58	89	32	68	65	67	9	2.9	262	0.00	0.08	7	11	15
12/13	77	48	63	94	38	63	67	67	17	4.9	283	0.00	0.11	9	13	17
12/14	72	48	61	80	29	51	67	68	17	5.1	315	0.00	0.13	7	10	15
12/15	70	44	55	89	32	63	64	66	11	2.9	242	0.00	0.07	5	8	12
12/16	67	42	57	88	24	47	64	65	21	6.9	311	0.00	0.14	4	7	10
12/17	67	47	57	55	19	33	63	65	20	8.1	320	0.00	0.17	4	7	12
12/18	67	35	50	88	24	55	61	63	12	3.4	315	0.00	0.10	3	6	9
12/19	65	35	50	88	29	59	60	62	11	3.6	280	0.00	0.09	3	5	8
12/20	67	39	51	91	26	61	61	63	9	2.7	301	0.00	0.09	3	6	9
12/21	67	35	49	91	18	57	60	62	11	2.0	314	0.00	0.09	3	6	9
12/22	63	38	49	78	17	43	59	61	18	5.4	298	0.00	0.12	2	4	7
12/23	56	35	47	77	29	57	56	59	13	5.4	119	0.00	0.04	0	1	4
12/24	61	34	48	97	40	70	58	59	13	3.1	264	0.00	0.07	1	3	5
12/25	63	39	53	87	26	45	58	60	19	7.4	249	0.00	0.12	2	4	7
12/26	68	41	56	70	19	32	59	60	22	8.7	312	0.00	0.17	4	7	10
12/27	69	40	54	68	13	32	59	60	19	5.6	316	0.00	0.15	5	7	11
12/28	71	37	51	74	14	45	58	60	13	3.4	318	0.00	0.11	5	8	11
12/29	69	42	55	75	22	45	59	60	17	4.0	252	0.00	0.10	5	7	11
12/30	71	39	53	78	20	55	60	61	9	2.5	289	0.00	0.09	5	8	11
12/31	71	41	55	83	26	56	61	62	20	3.1	260	0.00	0.08	5	8	11
AVG.	72	42	56	83	25	54	63	65	13	4.0	289					
TOTAL												0.00	3.26	185	278	395

RESULTANT WIND VECTOR = 2.1 MPH AT 4 DEGREES

\*\*\*\*\*  
 \* ABBREVIATIONS AND UNITS \*  
 \*  
 \* MX : MAXIMUM FOR DAY AIR TEMP : AIR TEMPERATURE IN DEGREES F \*  
 \* MN : MINIMUM FOR DAY REL HUM : RELATIVE HUMIDITY IN % \*  
 \* AV : AVERAGE FOR DAY SOLAR RAD : SOLAR RADIATION IN LANGLEYS \*  
 \* WIND SPEED : IN MILES/HOUR SOIL TEMP : SOIL TEMPERATURE AT 2 AND 4 \*  
 \* INCHES, IN DEGREES F \*  
 \* RAIN : RAINFALL IN INCHES ET<sub>o</sub> : REFERENCE CROP EVAPOTRANSPIRATION \*  
 \* IN INCHES \*  
 \*  
 \* ## : MISSING DATA, ET<sub>o</sub> & HEAT UNIT TOTALS ARE PRORATED \*  
 \* 55 : TEMPERATURE LIMITS = 86/55 DEGREES F \*  
 \* 50 : TEMPERATURE LIMITS = 86/50 DEGREES F \*  
 \* 45 : TEMPERATURE LIMITS = 86/45 DEGREES F \*  
 \*\*\*\*\*

ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY

Yuma Valley  
1996

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND SPEED		SOLAR RAD	RAIN	ET <sub>o</sub>	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
1/ 1	72	54	64	34	13	22	62	63	32	12.5	330	0.00	0.24	8	13	18
1/ 2	67	42	59	54	12	23	61	62	29	11.2	296	0.00	0.21	4	7	10
1/ 3	70	35	50	77	13	46	59	61	10	2.9	324	0.00	0.11	4	7	10
1/ 4	70	37	51	85	26	59	59	60	11	3.6	295	0.00	0.09	5	7	10
1/ 5	68	38	53	95	37	71	60	61	9	2.7	276	0.00	0.07	4	6	9
1/ 6	73	39	56	98	19	53	60	61	18	5.1	317	0.00	0.14	6	9	12
1/ 7	78	46	62	64	13	31	61	62	18	5.4	332	0.00	0.17	9	13	17
1/ 8	79	44	61	72	14	37	62	62	17	5.4	334	0.00	0.16	9	12	17
1/ 9	77	41	57	76	17	48	61	62	11	2.9	319	0.00	0.11	8	11	15
1/10	79	43	60	82	16	45	61	62	24	5.1	324	0.00	0.15	9	12	16
1/11	77	48	65	58	12	24	57	59	28	12.1	348	0.00	0.26	9	13	17
1/12	81	47	64	59	9	26	55	57	20	6.3	346	0.00	0.19	11	14	19
1/13	81	42	59	70	10	40	56	57	11	3.1	343	0.00	0.13	10	13	17
1/14	80	42	59	74	11	42	56	57	15	4.0	340	0.00	0.15	9	13	16
1/15	80	44	59	73	16	44	56	57	11	3.4	305	0.00	0.12	10	13	17
1/16	81	44	62	79	20	50	58	59	22	5.4	290	0.00	0.13	10	13	17
1/17	76	50	65	70	15	38	61	61	31	7.6	323	0.00	0.17	9	13	18
1/18	68	46	57	65	9	25	58	58	23	7.4	345	0.00	0.18	5	8	12
1/19	73	40	55	73	20	48	56	58	24	5.4	290	0.00	0.11	6	9	12
1/20	70	40	55	79	14	49	58	58	15	4.0	359	0.00	0.13	5	8	11
1/21	65	38	51	79	24	51	55	56	7	2.9	202	0.00	0.06	3	5	8
1/22	62	48	55	68	33	49	56	57	29	9.6	313	0.00	0.14	2	5	10
1/23	64	33	48	98	18	59	55	56	11	2.5	362	0.00	0.10	2	4	7
1/24	65	33	47	88	19	55	54	56	8	2.5	344	0.00	0.10	3	4	7
1/25	70	36	52	84	35	61	55	56	16	4.3	346	0.00	0.11	4	7	10
1/26	67	38	53	96	15	48	56	57	17	5.8	371	0.00	0.15	3	6	9
1/27	67	39	54	74	18	36	56	57	15	4.3	279	0.00	0.11	4	6	9
1/28	72	39	55	81	31	60	57	58	14	2.7	366	0.00	0.11	6	9	12
1/29	72	42	55	92	33	66	58	59	8	2.2	281	0.00	0.07	6	9	13
1/30	71	46	57	86	32	63	59	59	10	2.9	209	0.00	0.06	6	9	13
1/31	73	45	59	89	39	63	60	60	11	2.9	301	0.00	0.09	6	10	14
AVG.	72	42	57	76	20	46	58	59	17	5.1	316					
TOTAL												0.00	4.14	193	287	402

RESULTANT WIND VECTOR = 2.8 MPH AT 357 DEGREES

\*\*\*\*\*  
 \* ABBREVIATIONS AND UNITS \*  
 \*  
 \* MX : MAXIMUM FOR DAY AIR TEMP : AIR TEMPERATURE IN DEGREES F \*  
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 \* IN INCHES \*  
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 \* 55 : TEMPERATURE LIMITS = 86/55 DEGREES F \*  
 \* 50 : TEMPERATURE LIMITS = 86/50 DEGREES F \*  
 \* 45 : TEMPERATURE LIMITS = 86/45 DEGREES F \*  
 \*\*\*\*\*

ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY

Yuma Valley  
1996

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND SPEED		SOLAR RAD	RAIN	ET <sub>o</sub>	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
2/ 1	70	53	62	95	49	67	61	61	18	5.6	210	0.03	0.07	7	12	17
2/ 2	71	46	58	95	40	71	61	61	12	2.7	332	0.00	0.09	6	9	13
2/ 3	71	46	58	99	37	75	61	61	8	2.9	259	0.00	0.07	6	9	14
2/ 4	78	46	62	91	23	56	63	62	13	3.6	387	0.00	0.14	9	13	17
2/ 5	81	48	64	86	20	54	64	64	9	2.0	314	0.00	0.11	11	15	20
2/ 6	81	54	68	79	29	50	66	65	18	5.8	390	0.00	0.19	13	18	23
2/ 7	85	52	68	80	16	45	66	65	22	5.8	393	0.00	0.20	14	18	23
2/ 8	90	51	68	73	13	42	67	66	11	3.4	408	0.00	0.17	15	20	25
2/ 9	84	50	65	83	20	53	67	67	12	3.4	402	0.00	0.16	13	17	22
2/10	81	51	65	86	31	60	67	67	11	2.9	350	0.00	0.13	12	16	21
2/11	76	54	65	91	43	68	67	67	8	2.2	227	0.00	0.07	10	15	20
2/12	69	57	64	84	26	54	65	66	19	5.1	127	0.00	0.06	8	13	18
2/13	75	55	64	94	39	69	67	67	13	4.0	413	0.00	0.14	10	15	20
2/14	80	49	63	96	30	69	68	68	13	2.9	418	0.00	0.14	11	15	20
2/15	81	49	64	95	31	66	68	68	11	3.1	427	0.00	0.15	11	15	20
2/16	85	51	68	95	21	57	70	69	15	2.9	413	0.00	0.16	14	18	23
2/17	87	53	69	88	22	59	71	70	14	2.9	420	0.00	0.16	15	20	25
2/18	82	51	65	93	13	55	68	69	9	2.5	307	0.00	0.11	12	16	21
2/19	81	53	67	80	31	52	68	68	19	5.4	340	0.00	0.15	12	17	22
2/20	82	55	67	88	32	60	69	69	13	3.4	319	0.00	0.12	14	19	24
2/21	77	57	66	86	25	55	69	69	23	4.5	258	0.00	0.10	12	17	22
2/22	71	53	63	64	15	40	67	67	23	10.5	355	0.00	0.19	7	12	17
2/23	68	49	58	59	15	30	65	65	19	6.7	444	0.00	0.19	5	9	13
2/24	70	41	55	83	17	52	63	65	13	3.8	349	0.00	0.12	5	8	11
2/25	67	43	55	86	37	59	62	63	28	9.6	269	0.00	0.11	4	6	10
2/26	59	39	51	86	33	56	60	61	22	6.7	322	0.00	0.11	1	3	5
2/27	62	35	49	91	31	59	60	61	11	3.1	466	0.00	0.13	2	4	6
2/28	64	43	53	85	28	58	61	62	15	3.6	396	0.00	0.13	3	5	9
2/29	68	39	53	84	25	53	61	62	13	4.0	508	0.00	0.17	4	6	10
AVG.	76	49	62	86	27	57	65	65	15	4.3	352					
TOTAL												0.03	3.83	263	378	510

RESULTANT WIND VECTOR = 1.1 MPH AT 306 DEGREES

\*\*\*\*\*  
 \* ABBREVIATIONS AND UNITS \*  
 \* \*  
 \* MX : MAXIMUM FOR DAY AIR TEMP : AIR TEMPERATURE IN DEGREES F \*  
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 \* RAIN : RAINFALL IN INCHES ET<sub>o</sub> : REFERENCE CROP EVAPOTRANSPIRATION \*  
 \* IN INCHES \*  
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 \* ## : MISSING DATA, ET<sub>o</sub> & HEAT UNIT TOTALS ARE PRORATED \*  
 \* 55 : TEMPERATURE LIMITS = 86/55 DEGREES F \*  
 \* 50 : TEMPERATURE LIMITS = 86/50 DEGREES F \*  
 \* 45 : TEMPERATURE LIMITS = 86/45 DEGREES F \*  
 \*\*\*\*\*

ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY

Yuma Valley  
1996

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND		SOLAR RAD	RAIN	ET <sub>o</sub>	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
3/ 1	70	45	58	77	17	37	63	63	19	7.2	515	0.00	0.22	5	8	12
3/ 2	73	40	58	68	13	33	63	63	20	5.6	541	0.00	0.23	6	9	12
3/ 3	71	42	57	88	16	53	62	63	8	2.5	250	0.00	0.07	5	8	12
3/ 4	76	47	64	74	22	45	66	65	12	2.9	440	0.00	0.16	8	12	16
3/ 5	75	55	65	70	29	42	67	67	30	10.7	499	0.00	0.25	10	15	20
3/ 6	72	53	62	74	12	36	67	67	21	8.7	546	0.00	0.24	8	12	17
3/ 7	79	44	63	62	12	30	66	66	18	6.3	466	0.00	0.21	9	12	16
3/ 8	83	42	64	76	10	38	67	67	17	4.9	566	0.00	0.24	10	14	18
3/ 9	90	49	68	69	8	36	69	68	11	3.6	469	0.00	0.20	15	19	24
3/10	85	49	68	75	14	39	70	69	18	3.6	496	0.00	0.20	13	17	22
3/11	85	48	70	82	12	40	72	71	25	6.9	563	0.00	0.26	13	17	21
3/12	77	56	66	66	25	45	71	71	25	8.9	557	0.00	0.25	11	16	21
3/13	69	46	59	87	32	56	68	69	17	5.1	346	0.00	0.12	5	8	12
3/14	65	49	57	98	51	78	66	67	17	2.9	346	0.16	0.09	4	7	12
3/15	75	45	59	100	29	69	66	67	10	2.9	575	0.00	0.19	8	11	15
3/16	85	46	65	97	14	55	69	68	14	3.1	571	0.00	0.21	12	16	20
3/17	89	47	67	96	10	51	71	70	13	2.9	590	0.00	0.23	14	18	22
3/18	91	50	69	83	10	47	73	72	13	3.4	606	0.00	0.24	16	20	25
3/19	91	57	73	66	9	31	74	73	14	4.0	621	0.00	0.28	18	23	28
3/20	92	50	71	73	8	41	74	73	9	2.9	582	0.00	0.24	16	20	25
3/21	90	58	73	79	14	45	76	75	12	3.1	540	0.00	0.22	18	23	28
3/22	86	53	70	80	15	43	75	74	17	4.3	580	0.00	0.25	15	19	24
3/23	73	57	64	54	19	38	72	72	27	13.0	607	0.00	0.30	10	15	20
3/24	75	46	62	76	15	39	72	71	19	4.7	592	0.00	0.23	8	11	15
3/25	77	43	61	80	15	45	71	71	13	3.4	626	0.00	0.23	8	11	15
3/26	78	52	65	68	15	39	72	72	27	8.5	622	0.00	0.28	11	15	20
3/27	84	47	67	79	12	40	73	72	18	4.3	631	0.00	0.26	12	16	20
3/28	81	47	66	76	26	45	73	72	23	6.7	609	0.00	0.27	11	14	19
3/29	73	49	63	72	14	37	73	73	25	7.4	645	0.00	0.26	7	11	16
3/30	80	44	62	84	10	43	72	72	8	2.2	649	0.00	0.23	10	13	17
3/31	86	46	65	84	9	45	74	73	10	2.7	661	0.00	0.25	13	17	21
AVG.	80	48	65	78	17	44	70	70	17	5.1	545					
TOTAL												0.16	6.94	328	449	590

RESULTANT WIND VECTOR = 2.2 MPH AT 301 DEGREES

\*\*\*\*\*  
 \* ABBREVIATIONS AND UNITS \*  
 \*  
 \* MX : MAXIMUM FOR DAY AIR TEMP : AIR TEMPERATURE IN DEGREES F \*  
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 \* AV : AVERAGE FOR DAY SOLAR RAD : SOLAR RADIATION IN LANGLEYS \*  
 \* WIND SPEED : IN MILES/HOUR SOIL TEMP : SOIL TEMPERATURE AT 2 AND 4 \*  
 \* INCHES, IN DEGREES F \*  
 \* RAIN : RAINFALL IN INCHES ET<sub>o</sub> : REFERENCE CROP EVAPOTRANSPIRATION \*  
 \* IN INCHES \*  
 \*  
 \* ## : MISSING DATA, ET<sub>o</sub> & HEAT UNIT TOTALS ARE PRORATED \*  
 \* 55 : TEMPERATURE LIMITS = 86/55 DEGREES F \*  
 \* 50 : TEMPERATURE LIMITS = 86/50 DEGREES F \*  
 \* 45 : TEMPERATURE LIMITS = 86/45 DEGREES F \*  
 \*\*\*\*\*

ARIZONA METEOROLOGICAL NETWORK MONTHLY SUMMARY  
 Yuma Valley  
 1996

DATE	AIR TEMP			REL HUM			SOIL TEMP		WIND		SOLAR RAD	RAIN	ET <sub>o</sub>	HEAT UNITS		
	MX	MN	AV	MX	MN	AV	2"	4"	MX	AV				55	50	45
4/ 1	89	49	69	80	11	42	75	74	17	4.3	648	0.00	0.27	15	19	24
4/ 2	79	63	70	56	11	37	76	75	26	11.6	649	0.00	0.32	16	21	26
4/ 3	80	52	68	82	19	45	76	75	16	4.7	630	0.00	0.25	12	16	21
4/ 4	83	53	70	82	14	42	76	75	21	5.6	585	0.00	0.26	13	18	23
4/ 5	85	58	72	66	14	29	76	74	36	10.5	667	0.00	0.36	17	22	27
4/ 6	85	56	69	71	15	40	76	75	18	6.5	672	0.00	0.29	15	20	25
4/ 7	88	48	69	85	13	47	77	76	11	3.6	683	0.00	0.28	14	18	23
4/ 8	92	54	72	78	11	43	78	79	12	4.0	682	0.00	0.29	17	22	27
4/ 9	92	52	74	79	9	37	78	76	21	4.9	658	0.00	0.30	16	21	26
4/10	82	58	70	49	19	34	70	73	32	10.5	677	0.00	0.33	15	20	25
4/11	83	51	69	79	14	40	70	72	17	5.8	675	0.00	0.29	13	17	22
4/12	86	51	70	94	18	49	71	72	21	6.3	662	0.00	0.29	14	18	23
4/13	82	54	69	69	9	32	73	72	22	5.1	690	0.00	0.29	13	18	23
4/14	83	47	66	80	10	42	74	74	14	4.0	704	0.00	0.28	12	15	20
4/15	88	48	71	79	8	35	76	75	17	3.1	676	0.00	0.28	14	18	23
4/16	87	60	75	49	11	24	77	76	29	8.3	673	0.00	0.35	19	24	29
4/17	83	64	72	59	28	43	78	76	24	8.5	652	0.00	0.30	19	24	29
4/18	82	57	71	83	15	44	78	77	20	7.4	697	0.00	0.31	15	20	25
4/19	82	54	70	63	8	29	78	77	21	5.8	726	0.00	0.32	14	18	23
4/20	85	51	70	65	10	29	78	77	19	4.7	661	0.00	0.28	13	18	23
4/21	84	59	72	53	10	29	79	78	25	7.2	715	0.00	0.33	17	22	27
4/22	89	50	73	87	8	37	80	78	14	4.0	729	0.00	0.31	15	19	24
4/23	97	51	74	81	7	38	81	79	10	2.9	735	0.00	0.32	17	22	27
4/24	101	55	78	78	9	39	82	80	11	3.4	720	0.00	0.32	19	24	29
4/25	98	57	79	74	17	39	83	81	11	3.6	690	0.00	0.30	20	25	30
4/26	100	62	80	76	13	41	84	82	9	3.1	720	0.00	0.32	22	27	32
4/27	102	61	82	70	10	37	85	83	12	3.6	721	0.00	0.33	22	27	32
4/28	84	59	76	82	8	25	82	80	34	12.1	715	0.00	0.45	16	21	26
4/29	89	57	76	65	7	19	82	80	23	7.6	754	0.00	0.38	17	22	27
4/30	99	51	75	80	6	38	82	80	11	3.4	760	0.00	0.33	18	22	27
AVG.	88	55	72	73	12	37	78	77	19	5.9	688					
TOTAL												0.00	9.32	479	618	767

RESULTANT WIND VECTOR = 2.6 MPH AT 307 DEGREES

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*                                     ABBREVIATIONS AND UNITS                                     *
*                                                                                                     *
*   MX : MAXIMUM FOR DAY           AIR TEMP : AIR TEMPERATURE IN DEGREES F           *
*   MN : MINIMUM FOR DAY           REL HUM  : RELATIVE HUMIDITY IN %                 *
*   AV : AVERAGE FOR DAY           SOLAR RAD : SOLAR RADIATION IN LANGLEYS          *
*   WIND SPEED : IN MILES/HOUR     SOIL TEMP : SOIL TEMPERATURE AT 2 AND 4          *
*                                     INCHES, IN DEGREES F                             *
*   RAIN : RAINFALL IN INCHES     ETo : REFERENCE CROP EVAPOTRANSPIRATION          *
*                                     IN INCHES                                       *
*                                                                                                     *
*   ## : MISSING DATA, ETo & HEAT UNIT TOTALS ARE PRORATED                       *
*   55 : TEMPERATURE LIMITS = 86/55 DEGREES F                                       *
*   50 : TEMPERATURE LIMITS = 86/50 DEGREES F                                       *
*   45 : TEMPERATURE LIMITS = 86/45 DEGREES F                                       *
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