

1994 VEGETABLE INVESTIGATIONS



REPORT OF PROGRESS 736

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Introduction

In 1994, the Department of Horticulture and cooperating experiment fields conducted a series of experiments on growing vegetables at several locations in Kansas. Primary test locations were Manhattan, Wichita (Horticulture Research Center), and DeSoto (East Central Horticulture Field). Data were recorded on harvest date and methods, seed sources, production factors, spacing and replications, pest management practices, and crop performance and quality. This report presents, in table form, results of these experiments for one year. However, general recommendations should be based on more than one year's results.

The seed sources for varieties are listed with each table, and a summary sheet of sources is included at the conclusion of this report. Trade name are used to identify products. No endorsement is intended, nor is any criticism implied of similar products not mentioned.

Small differences should not be overemphasized. Values for least significant differences (LSD) are included in most tables. Unless two entries differ by a value greater than the LSD value shown, little confidence should be placed on the superiority of one entry over another.

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WEATHER SUMMARY-1994

Location/ Month	Average Temp F					Rainfall (in.)				
	1990	1991	1992	1993	1994	1990	1991	1992	1993	1994
Manhattan:										
April	54.1	58.0	54.8	49.2	56.0	0.9	4.2	0.6	1.9	4.2
May	51.1	69.1	64.0	62.5	65.5	4.0	4.5	1.7	11.0	3.2
June	78.0	78.0	69.6	72.2	76.3	4.9	2.0	3.7	6.8	5.7
July	79.5	82.2	76.3	78.2	76.7	7.1	1.8	13.2	17.6	4.1
August	77.8	78.6	72.5	78.5	77.2	7.1	2.2	2.0	6.6	3.2
September	72.8	70.4	68.6	64.0	68.5	0.8	1.7	5.6	4.0	0.4
DeSoto:										
April	57.3	56.9	54.7	50.6	53.6	2.3	4.3	3.4	6.2	8.3
May	61.7	73.4	63.0	63.1	64.5	10.2	6.3	6.5	7.3	1.5
June	75.0	78.7	72.4	73.9	76.9	3.9	2.5	9.6	4.1	2.5
July	78.2	82.0	77.1	79.1	76.3	3.3	4.0	7.5	16.1	2.4
August	78.2	78.0	71.7	78.7	75.3	2.4	1.1	4.5	2.0	5.4
September	71.8	68.8	67.6	64.0	67.3	0.6	2.0	3.8	12.6	3.2
Wichita:										
April	54.3	58.8	55.0	52.5	54.7	0.8	2.3	1.3	2.1	3.8
May	63.7	70.2	63.5	63.5	66.4	1.3	4.1	4.1	9.6	1.0
June	81.7	78.5	70.0	74.5	79.2	1.9	2.1	5.8	4.4	2.7
July	81.7	82.5	66.5	81.7	77.6	1.7	3.6	4.8	6.2	5.9
August	80.8	79.1	73.0	81.0	79.0	2.0	8.5	2.1	1.3	2.3
September	74.3	68.9	70.0	67.4	70.5	2.0	1.0	1.5	1.8	1.1

The three primary locations where vegetable research trials are conducted have automated weather stations that record daily weather data. This is intended to be a general synopsis of the weather pattern for the summer season. More detailed weather information is available in printed or in electronic data format.

When compared to the previous 5 years of weather data, the summer of 1994 was more typical than the cool 1992 season or the wet season of 1993. Moderate summer temperatures were recorded during July and August, and May and June were somewhat warmer than normal. Precipitation was fairly well balanced with moderate amounts recorded in July and August for the three locations. All in all, 1994 provided an excellent growing season with high yields and quality for most crops.

TOMATO VARIETIES-YIELD

DeSoto, 1994

Seed Source	Variety	Yield (Cartons/Acre)				Lb/ Fruit	% US1	Peak Hvst Date	Vine Size
		Mktbl US#1	Useable US1	Cull +US2	Total				
PE	PSX86088	1476	1943	602	2545	0.52	58.0	Au 4	C-M
PE	PSX686	1474	1839	523	2362	0.59	62.4	JI 29	M
PE	Passion	1259	1516	520	2036	0.64	61.8	JI 28	C-M
MI	Joker	1212	1512	435	1947	0.58	62.3	Au 8	M
FM	Spitfire	1212	1648	370	2018	0.49	60.1	JI 25	M
MI	Daybreak	1138	1512	991	2503	0.53	45.5	JI 29	M
RNK	Mt Delight	1115	1533	429	1962	0.45	56.8	Au 3	C
PE	PSX3089	1114	1642	306	1948	0.49	57.2	JI 25	C
RNK	Santiago	1080	1365	525	1889	0.63	57.2	JI 28	M
RNK	Mt Gold	1074	1296	358	1653	0.53	65.0	Au 3	C
RNK	Mt Spring	1000	1372	220	1592	0.50	62.8	JI 25	VC
RNK	Merced	958	1245	506	1751	0.54	54.7	JI 25	C-M
PE	Big Beef	944	1662	873	2535	0.50	37.2	Au 1	L
RNK	Tango	878	1212	857	2069	0.62	42.5	JI 28	M
PE	Celebrity	773	1182	855	2036	0.56	38.0	JI 28	M
HM	Jet Star	702	1207	631	1838	0.50	38.2	JI 29	L
HA	First Pick	419	1104	1312	2415	0.42	17.3	JI 22	M
RNK	Quick Pik	51	499	1354	1853	0.41	2.7	JI 25	L
LSD .05		325	460	292		0.05			

Note: Lb/Fruit based on US#1 tomatoes as a season average.

Peak harvest date can be an indication of earliness.

Project Leaders: Charles Marr and Terry Schaplowsky

Transplanted: May 10

Fertilizer: 300 lb/A 13-13-13 preplant

Nitrogen applied with drip (approx 4 lb N/A/wk)

Irrigation: Drip irrigation tape

Herbicide: Enide 90W

Insecticides: Endosulfan, Kelthane, Asana, Bravo 720,
and Dithane M45 as needed.

Harvest: Jul 14 - Aug 22

Harvest in 1994 started a little later than normal, resulting in a slightly lower total season yield (for 6 weeks of harvest). Some newer varieties that were impressive in this year's test included Passion, Joker, and several numbered breeding lines (that may be released soon). Consistent performance was observed from Mt Delight, Mt Spring, Merced, and Daybreak. Daybreak is an early maturing variety that will continue to produce through the season.

TOMATO VARIETY CHARACTERISTICS

DeSoto, 1994

Seed Source	Variety	Weight Lb.	Shape	Crack Resist	Firmness	Comments
RNK	Mt. Spring	0.59	R	E	V	Excellent
FM	Spitfire	0.62	R	G	V	Stylar scar, Rough
PE	PSX 3089	0.62	R-O	F-G	V	Good
RNK	Mt.Gold	0.61	R	E	G	Good
PE	PSX 86089	0.66	R	G	V	Good
PE	Passion	0.74	R	F(C)	F	Good
MI	Daybreak	0.69	R	G(C)	V	Excellent
PE	PSX 686	0.84	R	G	V	Excellent, Large
RNK	Quick Pik	0.33	R	F	F	Rough
RNK	Mt.Delight	0.58	R	G-E	F	Good
MI	Joker	0.74	R-O	G-E	V	Some stylar scar
PE	Big Beef	0.63	O	F	M	Stylar scar
HA	Jet Star	0.57	O	E	M	Good
RNK	Santiago	0.93	O	G(C)	F	Good, Huge
PE	Celebrity	0.66	O	F(C)	M	
RNK	Tango	0.73	O	G	F	Good
HA	First Pik	0.39	R	G	F	
RNK	Merced	0.61	R	F	V	Good

Project Leaders: Charles Marr and Terry Schaplowsky

Notes: Weight=lb/5 fruit sample

Shape: R=round,O=oblate

Crack Resist: E=excellent,G=Good,F=Fair(c)=concentric

Firmness: V=very,G=good,M=moderate

Comments: These notes were based on a sample of US#1 fruit evaluated in the laboratory and not of the entire season's production. The comments are most useful when varieties are considered in comparison with each other.

PEPPER VARIETIES-YIELD

DeSoto, 1994

Seed Variety Source	No/ Plant	Lb/ Plant	Lb/ Fruit	Color Start	Color Ripe	Seed Variety Source	No/ Plant	Lb/ Plant	Lb/ Fruit	Color Start	Color Ripe		
REPLICATED TRIAL						OBSERVATIONAL TRIAL							
RS	Mayata	14.5	7.9	0.40	G	R							
RNK	Elisa	14.3	6.3	0.35	G	R							
RNK	Whopper Im	10.3	5.8	0.37	G	R	RNK	Ivory	23.7	11.1	0.28	W	Y-O
VL	Predi	14.6	5.6	0.39	G	R	EM	Big Bertha	18.4	7.3	0.40	G	R
VL	Vidi	13.9	5.4	0.40	G	R	HA	Flamingo	26.6	7.3	0.25	W	O-R
PE	King Arthur	12.6	5.2	0.39	G	R	PE	Golden Summe	22.1	6.9	0.28	LtG	O
RNK	Marquis	13.6	5.1	0.35	G	R	RNK	Valencia	17.0	6.6	0.38	G	O
EM	Bell Boy	17.1	5.1	0.29	G	R	RNK	Lilac	18.8	6.3	0.27	P	R
PE	Camelot	13.3	5.1	0.33	G	R	RNK	Memphis	15.3	5.7	0.34	G	R
FM	Four Corners	15.4	5.1	0.31	G	R	RNK	Indra	13.7	5.6	0.38	G	R
VL	Ori	11.4	4.7	0.40	G	DkO	LI	Merlin	15.7	5.3	0.33	G	R
VL	Figaro	11.0	4.4	0.34	G	R	RNK	Matador	13.8	5.2	0.37	G	Y
VL	Tomi	9.6	4.3	0.43	G	R	RS	Melito	11.7	4.4	0.35	G	R
RNK	Bobmy	12.1	4.2	0.37	G	R							
RS	Edino	11.3	4.0	0.35	G	R							
RNK	Orobelle	9.9	3.2	0.31	G	Y-O							
LSD .05		3.19	2.26	0.05									

Color: G=green,Y=yellow,R=red,P=purple,O=orange, W=white

Project Leaders: Charles Marr and Terry Schaplowsky

Transplanted: May 17

Fertilizer: 250 lb/A 13-13-13 preplant

50 lb/A N through drip tape

Herbicide: Enide 90W

Insecticides: Endosulfan, Kelthane

Fungicides: Bravo 720

Harvest Jul 27-Oct 24

The harvest season started fairly late in 1994; however, yields were productive throughout the autumn season- with the last harvest being made in late October. Plants were grown in double rows 15" apart with plants spaced 2' in the rows.

PEPPER VARIETY CHARACTERISTICS

DeSoto, 1994

Seed Source	Variety	Lb/ Fruit	Length In.	Width In.	Wt/ Volume Index	Shape	Comments
BLOCKY BELL							
RNK	Whopper(l)	0.43	3.74	3.74	3.96	B	
PE	Camelot	0.40	3.54	3.54	4.01	B	
RNK	Valencia	0.36	2.95	3.54	4.43	BB	
RNK	Bomby	0.35	3.15	3.54	3.96	BB	
RNK	Memphis	0.33	3.54	3.54	3.33	B	Excellent
RNK	Orobelle	0.30	2.95	3.35	3.89	B	
RNK	Memphis	0.30	3.54	3.74	2.89	B	
EM	Bell Boy	0.29	3.54	3.35	3.13	B	
PE	Golden Summer	0.29	3.15	3.35	3.48	B	Lt Yellow
FM	Four Corners	0.28	3.15	3.54	3.21	BB	
HA	Flamingo	0.25	3.35	2.95	3.25	Bp	Yellow
RNK	Lilac	0.22	3.15	2.95	2.95	B	Violet
LI	Islander	0.19	2.76	2.95	3.03	B	Violet
ELONGATED BELL							
VL	Vidi	0.46	4.92	3.94	3.04	E	Excellent
VL	Tomi	0.40	5.51	3.74	2.44	E	Attractive
RS	Mayata	0.40	4.53	3.35	3.32	E	
VL	Predi	0.38	4.33	2.95	3.78	E	
RS	Melito	0.38	4.33	3.35	3.31	E	
RNK	Marquis	0.38	5.12	3.62	2.58	E	
VL	Ori	0.35	5.12	2.95	2.99	E	
EM	Big Bertha	0.35	4.92	3.35	2.70	E	
RNK	Indra	0.35	3.94	3.35	3.34	E	Good
RNK	Elisa	0.34	4.33	3.35	2.99	E	
VL	Figaro	0.32	3.35	3.54	3.47	Esp	Good
RS	Edino	0.32	3.94	3.54	2.93	Es	
RNK	Matador	0.30	4.72	2.95	2.77	E	
VL	Soni	0.29	6.30	2.17	2.72	EE	
RNK	Ivory	0.24	3.35	2.76	3.33	Es	Pale Yellow
RNK	Belconi	0.20	5.51	2.17	2.14	EE	
HOT/SPECIALTY							
MI	Big Jim	0.11	5.91	1.57			
MI	Inferno	0.10	6.30	1.38			Excellent
MI	Anaheim	0.10	5.91	1.38			
MI	Hung. Wax-Hot	0.05	4.33	0.98			
MI	Ole	0.04	2.36	1.18			
MI	Cayenne-Lg	0.04	5.51	1.18			
MI	Tam Mild	0.03	2.17	0.98			
MI	Jalapeno	0.02	2.17	0.98			
MI	Habanero	0.02	1.57	1.18			
MI	Cayenne-Sm	0.01	3.94	0.39			Red

Wt/Volume Index=lb/volume (the larger the number, the heavier the fruit for its volume)

Shape:B=blocky, BB=very blocky, E=elongated, EE=very elongated

Bp=blocky,pointed, Es=Elongated slender

Project Leaders: Charles Marr and Terry Schaplowsky

SWEETCORN VARIETIES-YELLOW

DeSoto, 1994

Seed Variety Source	Crates Acre	T/A	% Stand	Rows/ Ear	Fill Rate	Ear Worm	Ear Ln	Ear Dia In.	Hvst Date
RNK Kandy-King	239	4.9	100	14.8	1.5	1.8	8.4	1.9	Jl 14
MI Tuxedo	238	5.2	100	15.0	1.7	1.7	8.6	1.8	Jl 8
SN Seneca Arrow	230	4.8	100	15.3	2.0	2.0	7.8	1.9	Jl 9
RNK Krispy-King	218	5.2	100	16.3	1.8	1.3	8.2	2.0	Jl 12
SN Seneca Horizon	215	4.2	100	15.5	2.0	2.3	7.0	1.9	Jl 5
LI Primeto	215	4.4	100	17.0	1.8	2.0	8.0	1.8	Jl 12
CS Bodacious	212	4.4	100	15.0	1.0	1.8	7.3	1.9	Jl 12
SN Seneca Daybreak	209	3.6	100	12.3	3.0	3.0	7.6	1.9	Jl 8
MI Miracle	206	4.8	99	17.5	1.8	1.8	8.2	1.9	Jl 13
MI Sugar Buns	206	3.2	100	13.5	2.8	3.0	7.3	1.6	Jl 5
LI Chief Ouray	203	4.2	96	17.0	1.8	2.0	7.4	2.0	Jl 8
CS Amiaze	200	3.8	100	15.0	2.0	2.0	7.4	1.8	Jl 10
MI Crisp-n'Sweet	200	4.9	100	16.0	1.3	2.0	8.4	2.0	Jl 13
MI Maple-Sweet	182	2.9	100	12.8	2.0	2.3	7.1	1.6	Jl 8
CS Lyric	178	2.7	100	12.8	2.0	2.3	5.9	1.6	Jl 8
MI Tender Delight	175	3.6	100	15.8	1.8	2.0	7.9	1.9	Jl 22
RNK Flare	172	3.4	80	14.0	2.0	2.3	7.3	1.9	Jl 8
MI Precocious	106	1.2	100	12.5	2.5	3.0	6.7	1.5	Jl 8
LSD .05	79	24							

Crate= 5 dozen ears

Fill Rating: 1=excellent to 3=poor

Worm Rating: 1=excellent to 3=poor

Project Leaders: Charles Marr and Terry Schaplowsky

Planted: Apr 27, 1994

Plots: 20 ft long in 3 ft rows, 4 replications

Fertilizer: 250 lb 13-13-13 preplant

50-0-0 sidedressed on May 23 and Jun 7

Irrigated: Jun 3 and Jun 22

Many varieties in the trial yielded over 200 crates (1000 doz) per acre, which is an excellent commercial yield. Tuxedo had an impressive ear length for an early corn.

Seneca Horizon was a high-yielding early corn with fairly good quality.

Bodacious is a standard variety that is grown widely in Kansas and continues to produce well, having moderate earliness with good yields and quality.

SWEETCORN VARIETIES-BICOLOR
DeSoto, 1994

Seed Variety Source	Marketable Crates Acre	% T/A	% Stand	No Row	Tip Fill	Ear Worm	Ear Ln In.	Ear Dia In.	Hvst Date
MI Phenomenal	315	7.1	100	15.8	1.5	1.8	8.1	2.0	Jl 15
MI Ambrosia	296	6.9	100	16.3	2.0	1.8	8.3	2.0	Jl 8
RO Seneca-Wardan	287	6.5	100	18.5	1.3	1.5	7.8	1.8	Jl 12
MI Delectable	263	6.1	100	19.5	1.3	1.5	8.7	2.0	Jl 12
MI Honey&Pearl	251	6.0	98	16.8	1.8	1.8	8.8	2.0	Jl 8
MI Kiss&Tell	248	4.4	100	16.5	1.3	1.8	7.0	1.8	Jl 12
RNK Snow-Sun	245	5.2	100	14.0	2.0	1.8	7.8	2.0	Jl 5
MI D'Artagnan	215	4.0	100	13.5	2.5	2.0	8.0	1.8	Jl 8
MI Peaches'nCrea	215	4.0	99	15.0	1.3	2.3	7.8	1.8	Jl 8
RNK Monte-Carlo	197	4.4	71	13.8	2.0	1.8	8.1	2.0	Jl 9
MI Gemini	194	3.3	100	14.5	1.8	2.0	7.6	1.6	Jl 8
MI Native-Gem	169	2.8	100	12.5	2.3	2.3	7.0	1.7	Jl 5
LSD .05	73	2.0							

Crate= 5 dozen ears

Fill Rating: 1=excellent to 3=poor

Worm Rating: 1=excellent to 3=poor

Project Leaders: Charles Marr and Terry Schaplowsky

Planted: Apr 25, 1994

Plots: 20 ft long in 3 ft rows, 4 replications

Fertilizer: 250 lb 13-13-13 preplant

50-0-0 applied on May 23, Jun 7

Irrigated: Jun 3 and Jun 22

Ambrosia was high yielding and early with good ear size. Snow-Sun and Native Gem were the earliest producing varieties. Delectable and Honey n' Pearl had impressive ear sizes. Note the fairly good ear sizes (>8 in.) for many of these varieties with an early July harvest.

MUSKMELON VARIETIES-YIELD

DeSoto, 1994

Seed Variety Source	Marketable'		Cull		Lb/ Fruit	Fruit Wide In.	Ln In.	Core		% Sugar
	No/A	Lb/A	No/A	Lb/A				Wide In.	Ln In.	
MI Saticoy	6231	34508	318	1906	5.42	5.4	6.7	3.0	5.1	12.5
HA Superstar	3872	33048	1634	11147	8.36	8.4	8.2	4.1	5.3	10.3
AS Cordele	4571	32317	941	4890	7.14	7.1	7.1	3.1	5.5	9.9
MI Star-sweet	4991	31688	1008	6275	6.20	6.2	7.1	3.2	4.9	10.7
PE Fastbreak	4991	31687	1891	11646	6.32	6.3	7.2	3.5	4.7	9.1
LI Pulsar	4391	26959	1129	6112	6.06	6.1	7.1	3.8	4.2	9.6
BP Supersun	3623	25081	2292	14678	6.85	6.9	7.7	3.8	4.5	9.5
AS Legend	3613	24696	1017	6222	6.76	6.8	7.5	3.5	5.9	9.5
RNK Athena	3706	21186	361	1760	5.06	5.6	6.9	3.2	4.5	11.6
MI Classic	3812	21179	1482	7876	5.57	5.6	7.1	3.2	4.9	12.1
MI Supermarket	3845	18768	578	2845	4.93	4.9	7.0	3.4	4.1	10.7
MI Earlidew	2791	14957	295	1497	5.41	5.4	6.9	3.6	4.4	12.5
RNK NVH987	1385	12646	1123	7769	9.21	9.2	8.0	3.7	6.0	11.1
HO Earliqueen	2361	12445	1538	6689	5.24	5.2	6.9	2.9	3.9	9.9
CS Earligold	1815	9680	1936	9181	5.28	5.3	5.4	2.6	4.0	8.9
LSD .05	1961	14931	1064	6070						

Project Leaders: Charles Marr and Terry Schaplowsky

Transplanted: May 10

Spacing: 2 ft apart in 12 ft rows, 3 replications

Fertilizer: 250 lb/A 13-13-13 preplant

75-0-0 sidedressed May 25

Herbicide: Curbit applied May 25

Insecticides and Fungicides: Adios, endosulfan, Asana, Bravo 720, Dithane M45

Harvest: Jul 19-Aug 23

This trial had several high yielding varieties. Note that Saticoy had high yields with a smaller fruit size. Superstar, Cordele, and Starsweet had larger size. Saticoy and Classic had excellent sweetness. Note the large fruit size of NVH 987.

MUSKMELON VARIETY CHARACTERISTICS

DeSoto, 1994

Variety	% Sugar	% Dry Weight	Wide In.	Ln In.	Rib	Net	Color
Athena	10.0	15.4	7.5	7.5	S	S	M-L
Classic	10.5	13.2	7.0	7.0	Y	G	M-D
Cordele	9.5	13.4	7.0	6.5	Y	G	M-D
Earlidew	14.0	14.5	7.0	7.0	N	N	G
Earliqueen	10.8	13.4	7.0	7.0	Y	L	L
Fastbreak	11.0	14.3	7.0	7.0	Y	G	M-L
Legend	12.1	12.4	8.0	6.5	Y	G	D
NHV 897	12.3	13.3	10.5	8.0	Y	G	D
Pulsar	11.1	12.8	7.5	7.5	Y	G	M
Superstar	9.5	15.7	9.5	9.0	Y	G	L-M
Starsweet	11.5	14.0	7.5	7.0	S	M	M
Supermarke	11.0	11.4	7.0	6.5	Y	M	D
Supersun	8.0	11.2	7.0	7.5	Y	M	M
Saticoy	11.9	12.1	8.5	6.5	S	L	D
Earligold	10.8	11.1	7.5	7.5	S	M	L
Passport	-	11.5	6.0	6.0	N	M	G
Venus	10.5	14.8	6.0	6.0	N	N	G

Project Leaders: Charles Marr and Terry Schaplowsky

Note: These ratings were taken from a five-melon sample of the varieties included in the yield trial data. They provide information about general appearance and characteristics of the fruit.

Rib: S=slight, Y=ribbed, N=none

Net: S=slight, G=good, M=moderate, N=none

Colors(flesh): D=Dark, M=Medium, L=Light, G=Green

MUSKMELON VARIETIES-YIELD

Wichita, 1994

Seed Source	Variety	Yield/Acre				% Cull	Lb/ Fruit	Avg Hvst
		Marketable No/A	Marketable Lb/A	Cull No/A	Cull Lb/A			
PE	Fastbreak	19844	59371	1936	4477	7.0	3.0	Jl 6
MI	Saticoy	14681	58282	484	1210	2.0	4.0	Jl 16
RNK	Athena	13229	54409	2904	7482	12.1	4.1	Jl 19
AS	Cordele	11132	49025	968	4298	8.1	4.4	Jl 9
BU	Supersun	12423	45579	1613	4272	8.6	3.7	Jl 22
MI	Supermark	13391	43974	1129	3375	7.1	3.3	Jl 18
HO	Passport	13552	43665	2420	4147	8.7	3.2	Jl 3
HA	Superstar	10487	43640	3549	13613	23.8	4.2	Jl 8
MI	Starsweet	10003	42884	968	3146	6.8	4.3	Jl 15
RNK	NVH 897	7744	41000	1613	7240	15.0	5.3	Jl 14
MI	Legend	9680	40514	807	3075	7.1	4.2	Jl 12
MI	Classic	11616	38175	2420	5960	13.5	3.3	Jl 16
MI	Earlidew	9841	37782	4679	15488	29.1	3.8	Jl 6
BU	Venus	10454	34412	871	3630	9.5	3.3	Au 20
LI	Pulsar	8067	31944	9841	33699	51.3	4.0	Jl 8
HO	Earliqueen	8712	28142	4679	11133	28.3	3.2	Jl 8
LSD .05		4464	16877	1961	7270			

Project Leaders: Alan Erb, Charles Marr, and Mark Pyeatt

(See comments on production practices for Muskmelon Characteristics, Wichita)

This trial grown on plastic with drip irrigation had exceptionally high yields overall. Fastbreak was a high yielding variety, but overall quality was poor (flavor and sweetness). Note the high percentage of culls with Superstar, Earlidew, and especially Pulsar. The best overall melons in the trial for production and quality were Saticoy, Cordele, and Athena.

MUSKMELON VARIETY CHARACTERISTICS
Wichita 1994

Variety	Lb/ Fruit	Seed Cav. Fruit		% Sugar	Flavor
		Volume Cu. In.	Volume Cu. In.		
NVH897	8.2	150	664	13.0	3.3
Athena	5.4	94	434	10.8	2.4
Fastbreak	3.3	56	291	9.3	2.2
Legend	4.2	74	365	11.7	2.2
Supermarke	4.2	85	341	11.8	2.2
Supersun	5.3	81	408	12.0	2.0
Cordele	4.8	84	401	10.7	2.0
Classic	2.8	48	226	9.8	2.0
Earlidew#	4.7	57	413	13.3	2.5
Starsweet	4.6	78	326	12.3	3.0
Saticoy	5.1	79	4.6	12.4	2.5
Earliqueen	3.3	39	389	11.8	2.5
Pulsar	4.1	77	360	12.7	2.7
Superstar	4.4	75	324	11.2	2.6
Passport	3.9	55	351	11.5	2.5
Venus#	2.5	57	298	7.0	1.0

Flavor rating scale: 1=poor, 2=fair, 3=good, 4=excellent

Two honeydew types were evaluated

Project Leaders: Alan Erb, Charles Marr, and Mark Pyeatt

Transplanted: May 5

Spacing: Plots 18 ft long, 9 plants/plot, rows 5 ft apart
3 replications

Field Layout and Irrigation: Black plastic mulch was laid on raised beds, and drip tubing was buried under the mulch.

Fertilizer: 18-46-0 starter solution (1/2 pt/plant of a 3lbs/100gal solution), 350 lbs/A of 13-13-13 preplant, and 3.46 lbs (34-0-0) of nitrogen/A applied once a week through the drip tubes from May 19 to Jul 29; total amount of nitrogen applied, 87.4 lbs/A

Herbicides: Dacthal W75 (8lbs/A) and Roundup 41% (50 ml/gal) on May 1 on 5/10

Insecticide: Pounce 3.2 EC (0.5 lbs/A) sprayed twice, on Jun 17 and Jul 22, and Thiodan W50 (2 lbs/A) on Jul 6, to control cucumber beetles

Harvest: Jun 29 to Aug 22 (17 harvests-twice/week)

MUSKMELON VARIETY CHARACTERISTICS-CONTINUED

Wichita, 1994

This variety trial consisted of 14 muskmelon and two honeydew (Earlidew and Venus) cultivars. The black plastic mulch, raised beds, drip irrigation, and fertigation accelerated plant growth and improved moisture retention. The end result of this combination of cultural practices was an early harvest, 55 days after transplanting. Overall, the four best varieties were: Saticoy, Starsweet, Fastbreak, and NVH 897. Saticoy was one of the highest yielding varieties and had better than average fruit quality. Starsweet had very good flavor and a better than average yield. Fastbreak was the highest yielding variety; however, % sugar and flavor were low. NVH 897 had the largest fruit size and the highest flavor rating and % sugar value. The negative aspects of NVH 897 are that fruit size is almost too large, and it produced the lowest number of fruits. The best Honeydew evaluated was Earlidew. It had good fruit size and a high % sugar value.

MUSKMELON FLAVOR EVALUATION CONSUMER PREFERENCE

Variety	Appearance		Flavor	
	Mean	StD	Mean	StD
Athena	6.6	1.7	6.2	1.7
Classic	6.8	1.6	7.4	1.7
Cordele	6.4	1.8	5.4	1.6
Earlidew	5.3	2.0	5.2	2.3
Earligold	5.9	2.2	5.5	1.6
Fastbreak	6.8	2.1	4.5	1.9
Legend	6.4	2.1	4.7	2.4
NVH 897	6.1	2.1	4.7	2.5
Pulsar	6.3	1.8	3.9	2.3
Superstar	6.5	1.6	4.6	1.7
Starsweet	7.0	1.4	6.7	1.7
Supermarket	6.5	1.6	4.1	1.9
Supersun	6.9	1.5	6.3	1.8
Saticoy	6.9	1.9	5.3	2.0
Earliqueen	6.0	1.8	4.4	2.1
Passport	4.2	2.1	4.7	2.3
Venus	5.5	1.9	3.0	2.1

Ratings 1=poor to 10=excellent, with 5=average

Rated: Jul 15, 1994

Number of raters=40

Consumers were given an approximate 1-in. square sample taken from at random from three different melons.

Raters were encouraged to consider a rating of 5 to be average or typical of what they might expect for summer fresh-market muskmelons. Appearance ratings were generally better than flavor ratings, indicating that some disappointment in flavor was noted. A few melons were rated above average for flavor. Venus, a late melon, received an especially poor rating because it was unripe.

High standard deviations indicate considerable variation among raters.

WATERMELON VARIETIES-YIELD

Wichita, 1994

Seed Variety Source	Yield		Cull No/A	Weight % Melon	Cull %
	Marketable No/A	Lb/A			
STANDARD					
WI Parker	7169	106631	1451	14.9	17
WI W-931	5739	86480	549	15.1	9
PE PS 79791	6219	85137	1137	13.7	15
CS Sangria	5143	71594	632	13.9	11
CS AuProducer	5056	70563	1311	14.0	21
WI Patriot	4280	67616	967	15.8	18
RNK Fiesta	5082	63956	545	12.6	10
FM Huck Finn	4114	57959	484	14.1	11
CS Jubilee	3820	56749	1773	14.9	32
WI Desert Storm	3630	48400	1468	13.3	29
PE Royal Majesty	4341	47939	545	11.0	11
RNK NVH 4296	4447	47508	0	10.7	0
SEEDLESS					
LI Tristar	7467	98010	0	13.1	0
RNK Crimson Trio	8282	93094	0	11.2	0
PE Ace of Hearts	6937	91153	0	13.1	0
AT Laurel	7956	88103	723	11.1	8
L I Yellow Rose	5627	78771	2614	14.0	32
PE Deuce of Heart	8649	77634	545	9.0	6
PE Eureka	6171	75897	484	12.3	7
HO Ruby	6703	72043	1742	10.7	21
RNK Juliett	4556	67994	545	14.9	11
PE Honeyheart	5523	59526	967	10.8	15
RNK RXW 117	2831	45248	710	16.0	20
LSD .05	3116	30676			

Project Leaders: Alan Erb, Charles Marr, and Mark Pyeatt

(See comments for Watermelon Characteristics-Wichita)

WATERMELON VARIETY CHARACTERISTICS

Wichita, 1994

Variety	Lb/ Fruit	Flesh Color	Volum Cu.In.	% Sugar	Flavor*
Huck Finn	20.8	Red	1597	12.0	3.5
Jubilee	15.5	Red	1117	9.5	2.1
Au Producer	15.0	Yello	1156	10.3	2.2
Sangria	14.8	Red	1141	10.3	2.4
Fiesta	14.3	Red	1240	10.8	2.8
W931	16.0	Red	1237	11.5	3.0
PS79791	14.8	Red	1145	11.4	3.3
Patriot	16.1	Red	1106	10.8	2.7
Royal Majesty	14.0	Red	1185	11.0	3.6
Desert Storm	17.5	Red	1379	11.3	3.2
Parker	16.5	Red	1292	10.3	2.9
Eureka#	12.5	Red	912	9.8	2.9
Laurel#	12.3	Red	1080	11.1	2.9
Juliett#	16.8	Red	1221	8.8	1.4
Crimson Trio#	13.0	Red	1121	11.0	3.3
RXW117#	14.1	Red	1290	8.5	1.0
Yellow Rose#	14.0	Yello	997	9.3	1.7
Ruby#	14.5	Red	1161	10.8	3.0
Deuce of Hearts	9.0	Red	750	11.6	3.1
Ace of Hearts#	14.6	Red	1191	10.0	1.8
Honey Heart#	12.8	Yello	1022	11.5	2.9
Tristar#	11.5	Red	906	9.8	2.6
NVH4296#	9.8	Red	795	9.8	1.6

*Flavor rating scale: 1=Poor, 2=Fair, 3=Good, and 4=Excellent

Seedless watermelon

Project Leaders: Alan Erb, Charles Marr, and Mark Pyeatt

Transplanted or Seeded: May 23, one field was transplanted and the other seeded

Spacing: Plots 18 ft long, 9 plants/plot, rows 5 ft apart, 2 or 4 replications

Field Layout and Irrigation: Black plastic mulch was laid on raised beds and drip tubing was buried under the mulch

Fertilization: 15-15-15 starter solution (1/2 pt/plant of a 3 lbs/gal solution), 300 lbs/A of 13-13-13, preplant, and 4lbs (34-0-0) of nitrogen/A applied once a week through the drip tubes from 6/17 to 8/25; total amount of nitrogen applied, 75 lbs/A

Herbicides: Dacthal W75 (8 lbs/A) and Roundup 41% (50 ml/gal) on May 10, and one application of Dacthal on June 21

Miticide: Kelthane 35 (1 lb/A) sprayed twice, on Aug 10 and Aug 24, to control spider mites

Harvest: Jul 25 to Aug 29 (6 harvests-once/week)

WATERMELON VARIETY CHARACTERISTICS-CONTINUED

Wichita, 1994

This variety trial consisted of 11 standard and 12 seedless watermelon cultivars. The black plastic mulch, raised beds, drip irrigation, and fertigation accelerated plant growth and improved moisture retention. The end result of this combination of culture practices was an early harvest, 63 days after transplanting. Harvesting started on the seeded plants a week later, 70 days after seeding. Overall, the four best standard varieties were: W931, Parker, PS79791, and Royal Majesty. W891 was one of the highest yielding varieties and had better than average fruit quality. Parker was the highest yielding variety and had better than average fruit quality. Overall, the four best seedless varieties were Crimson Trio, Deuce of Hearts, Tristar, and Laurel. Crimson Trio was one of the highest yielding cultivars and had better than average fruit quality. Deuce of Hearts was high yielding and had better than average fruit characteristics. Based on % sugar and flavor, Honey Heart was the best yellow fleshed watermelon.

WATERMELON APPEARANCE AND FLAVOR CONSUMER PREFERENCE

Variety	Flavor		Appearance		Rind Color	Sugar	
	Mean	StD	Mean	StD			
Ace-of-Hearts	5.04	2.04	5.65	1.89	1	M	9.00
AuProducer	6.15	1.93	6.06	1.76	2	M-L	11.20
Crimson-Trio	3.59	1.94	4.93	2.08	1.5	M	11.00
Desert Storm	4.44	2.13	5.24	1.91	1	D	11.00
Deuce-of-Heart s	5.13	2.16	5.78	1.91	1	D	11.00
Eureka	4.18	2.26	5.59	2.10	1.5	M-D	9.75
Fiesta	5.72	1.69	6.51	1.69	1	D	9.75
Huck Finn	6.94	1.78	6.89	1.79	2	M	9.50
Jubilee	4.83	1.96	5.31	1.99	1.5	M	9.00
Juliett	4.02	2.49	4.20	2.27	2.75	L	7.00
Laurel	5.11	2.38	4.80	2.22	1.5	M	12.75
NVH-4296	5.48	2.01	7.24	1.95	1.25	M	10.50
PS 78791	2.81	2.42	4.09	2.31	2.25	M	10.00
Parker	6.48	1.60	7.30	1.59	1	D	9.20
Patriot	4.63	2.29	4.81	1.95	1.75	L	11.00
RXW-117	4.35	2.20	4.78	2.07	2.5	M	11.50
Royal Majesty	5.07	2.21	5.80	2.02	1.75	M	9.75
Ruby	5.76	2.22	6.07	2.35	1	D	11.00
Sangria	4.68	1.61	6.30	1.99	1.5	D	10.00
Tristar	6.67	1.99	6.52	1.84	2	M	20.50
W-931	4.87	2.13	4.98	1.90	1.5	M	11.00
Yellow-Rose	3.06	2.20	5.54	2.46	1.25	Y	7.00

Color: L=light, M=medium, D=dark

Rated on a scale of 1=poor to 10=excellent
with 5=average.

StD=Standard deviation. A high standard deviation indicates significant variability among tasters in rating this variety.

Ratings were conducted on August 18, 1994 with 54 raters. Raters were given cubes of melon to taste and allowed to view a cut half and whole melon to rate for appearance. Rating sheets indicated 5 as an average or expected value; thus, ratings of 5 or higher would be considered to be above the consumer's expectation for appearance and flavor.

Appearance and flavor of AuProducer, Tristar, Huck Finn, and Parker were high.

PUMPKIN VARIETIES-YIELD

Wichita, 1994

Seed Variety Source	Mkt Lb	Cull Lb	Total Lb	Lb/Fruit
GIANT				
Prizewinner	40308	0	40308	90.0
JACK-O'-LANTERN				
RNK 92-P159	63976	10786	74761	11.8
EM Conn. Field	48214	10090	58305	14.5
PE Buckskin	46036	4199	50234	10.8
RNK 90-S-516	43540	7608	51148	10.3
RNK Big Autumn	36802	8923	45725	11.3
HM HMX 2688	34076	18675	52751	12.7
HM Howden	33580	4165	37745	18.9
HO Frosty	33364	19326	52691	13.5
RNK 90-S-523	32793	9959	42753	14.1
MI Pankow	31946	9170	41115	11.2
MI Ichabod	31748	2721	34470	15.3
CS Spirit	31025	11144	42170	14.4
MI Tom Fox	30212	6939	37151	10.5
PE Happy Jack	29033	10305	39338	14.3
HO Aspen	28808	7386	36194	15.5
AC ProGold 510	28404	14205	42608	18.6
HM Wizard	27079	6620	33699	10.5
MI Jackpot	26858	18669	45527	18.2
MI Hallo-Queen	26780	19783	46563	14.4
MI Half Moon	26012	5443	31455	11.4
MI Snowball	25914	10709	36623	13.4
AC ProGold 500	22880	6590	29471	15.4
MI Tallman	20845	8923	29768	12.2
MI Cinderella	19235	14364	33599	19.2
MI Ghost Rider	18901	10965	29866	11.6

(continued)

PUMPKIN VARIETIES-YIELD,CONTINUED

Wichita, 1994

Seed Variety Source	Mkt Lb	Cull Lb	Total Lb	Lb/ Fruit
SUGAR				
HM Spookie	20475	8497	28972	4.9
CS Triple Treat	20409	0	20409	4.4
HM HMX 2690	16904	9604	26508	4.0
BABY				
RNK 92-P137	32723	3922	36645	3.0
HM Oz	23177	4850	28027	3.8
PE Spooktacular	22171	4449	26620	3.1
EM Baby Bear	20938	2619	23557	1.9
LI Gremlin	13239	3776	17016	2.4
SN Harvest Moon	11655	4265	15920	2.9
MINIATURE				
MI Jack Be Little	11552	700	12252	0.5
ST Baby Boo	10039	926	10965	0.4
HM Munchkin	8654	300	8954	0.4
MI Sweetie Pie	6220	505	6725	0.4
LSD .05	9136	3658		

Project Leaders: Alan Erb, Charles Marr, and Mark Pyeatt

Planted: Jun 13

Fertilizer: 13-13-13 200 lb/A preplant

Plots: 14 ft plots in 14 ft rows, 3 replications

Insecticides: Pounce

Fungicides: Bayleton, Bravo

Harvest: Oct 3

This trial represents a large collection of pumpkin varieties that now are available. Good yields of jack-o-lantern types with attractive fruit were Howden, Frosty, Aspen and Conn.Field. In the small pumpkin category, Spookie had excellent yield and attractive fruit. Good baby types included Oz, Spooktacular, and Baby Bear, which averaged from 3-4 lbs. Jack Be Little and Baby Boo were the best miniatures.

PUMPKIN VARIETY CHARACTERISTICS

Wichita, 1994

Seed Variety Source	Color	Width In.	Height In.	Stem Handle
GIANT				
Prizewinner	BO	36.0	36.0	L
JACK-O'-LANTERN				
RNK 92-P159	LO	9.5	11.0	DG
EM Conn.Field	MO	10.5	12.0	DG-L
PE Buckskin	T	9.0	11.0	L
RNK 90-S-516	LO	8.5	10.0	MG
RNK Big Autumn	LO	9.5	9.5	MG
HM HMX 2688	BO	6.5	6.5	G
H M Howden	MO	11.0	12.0	G-L
HO Frosty	LO	13.0	11.5	MG
RNK 90-S-523	MO	11.5	9.0	LG
MI Pankow	MO	11.0	9.0	MG
MI Ichabod	DO	13.0	11.0	G-L
CS Spirit	LO	11.0	12.0	DG
MI Tom Fox	LO	9.5	9.0	DG
PE Happy Jack	DO	9.5	10.5	G-S
HO Aspen	MO	10.0	11.0	DG-L
AC ProGold 510	MO	11.0	13.0	DG
HM Wizard	DO	11.0	11.0	DG-L
MI Jackpot	MO	12.0	13.5	DG-L
MI Hallo-Queen	DO	9.0	9.0	MG
MI Half Moon				
MI Snowball	W	10.0	9.5	L
AC ProGold 500	LO	12.5	10.5	DG
MI Tallman	MO	10.0	16.0	DG-L
MI Rouge 'dEtat	RO	12.0	7.5	LG
MI Ghost Rider	BO	12.5	12.5	MG

(continued)

PUMPKIN VARIETY CHARACTERISTICS, CONTINUED

Wichita, 1994

Seed Source	Variety	Color	Width In.	Height In.	Stem Handle
SUGAR					
HM	Spookie	MO	7.0	7.0	G
CS	Triple Treat	MO	7.0	7.0	L
HM	HMX 2690	DO	6.5	6.0	L
BABY					
RNK	92-P137	BO	5.5	6.3	DG
HM	Oz	MO	6.0	6.5	G-L
PE	Spooktacular	BO	5.0	4.5	LG
EM	Baby Bear	MO	5.2	3.8	LG
LI	Gremlin	MO	5.5	4.0	L
SN	Harvest Moon	MO	5.3	4.8	L
MINIATURE					
MI	Jack Be Little	MO	3.3	2.0	G
ST	Baby Boo	W	3.3	1.8	L
HM	Munchkin	MO	3.5	1.8	G
MI	Sweetie Pie	BO	3.5	1.8	DG

Colors: BO=Bright, DO=Dark, MO=Medium Orange
W=White

Stem: DG=Dark , G=Green, LG=Light Green, L=Light Buff

PUMPKIN WEED CONTROL

Manhattan, 1994

Herbicide	Rate	Weed Grass	Rating Brdl	Vine Injury	Harvest Yield		
					No/ Acre	Lb/ Acre	Lb/ Fruit
Prefar	6 qt	9.50	9.50	9.60	1089	16760	15.7
Prefar	5 qt	9.30	9.50	10.00	1452	21893	15.5
Prefar	4 qt	9.00	9.10	9.60	1452	21201	15.0
Command	1 pt	9.60	9.10	8.30	1406	21788	16.2
Command	1/2 pt	10.00	10.00	7.50	1330	19940	16.1
Command	3/4 pt	10.00	9.60	7.60	1285	18695	14.7
Prefar+Comma	4+1/2	9.50	9.50	7.50	1436	22843	15.8
Prefar+Comma	4+3/4	9.50	9.30	6.50	1164	17808	15.0
Curbit	3 pt	7.00	6.30	10.00	877	14164	16.2
No Control	-	3.50	2.30	10.00	922	14439	15.7
LSD .05		0.91	1.18	2.05	491	7305	NS

Grass/Broadleaf Ratings: 10=excellent to 0=poor

Injury Ratings: 10=none to 0=complete

Project Leader: Charles Marr

Variety:Connecticut Field

Planted: Jun 14

Weed Control/Injury Ratings: Jul 8-vines 6-8 in. long)

Plots: 4 rows, 12 ft apart, 20 ft long, 4 replications

Herbicide: Jun 13, with boom sprayer 30 PSI

Prefar and Command PPI disked after application

Curbit- soil applied after planting

Harvest: October 1

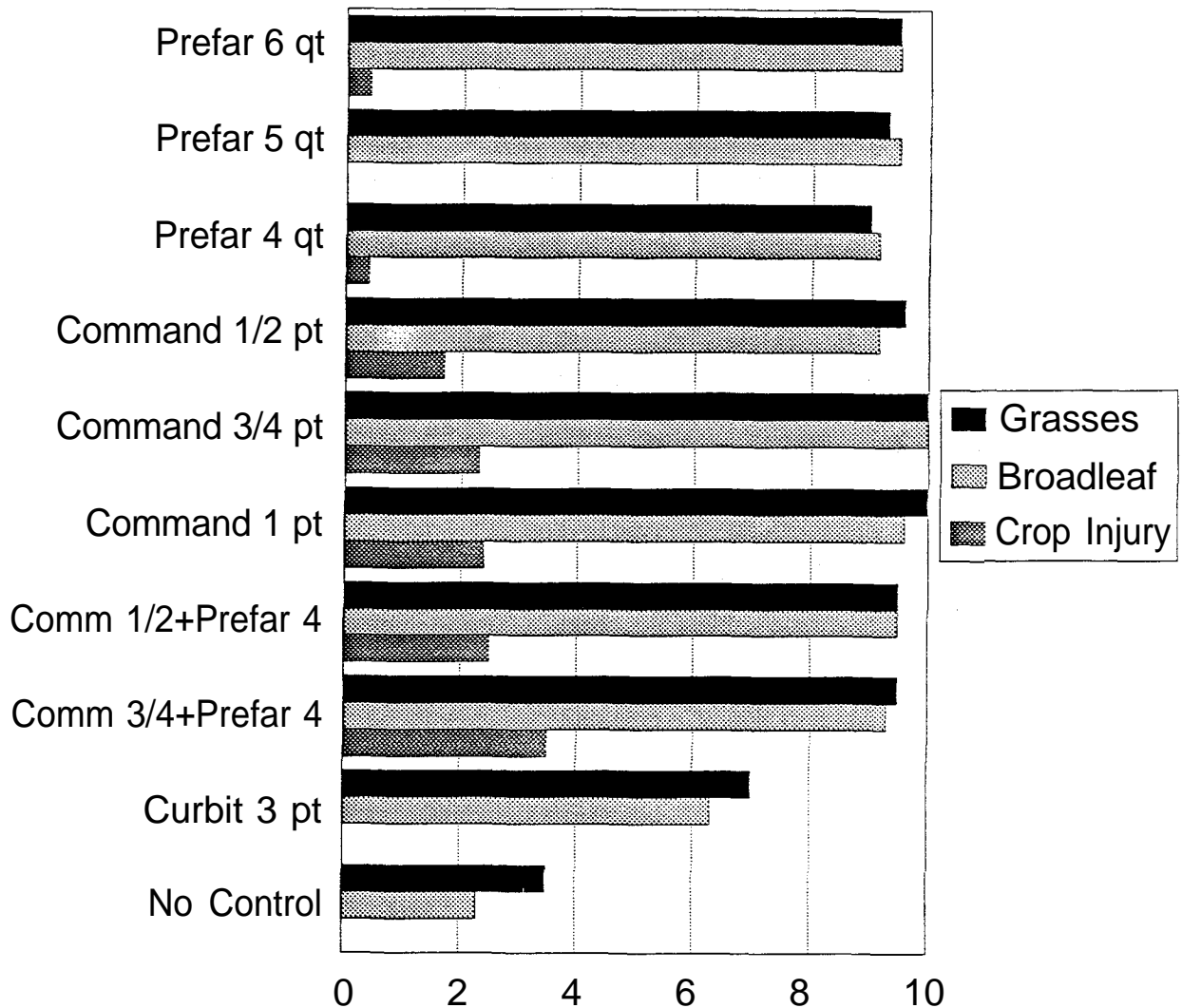
Primary Weeds Present:

Broadleaf Amaranthus sp. 75%
Lambsquarter 10%
Jimson Weed 5%
3-Seeded Mercury 5%

Grasses Crabgrass 75%
Foxtail 25%

Pumpkin Weed Control and Crop Injury

Manhattan, 1994



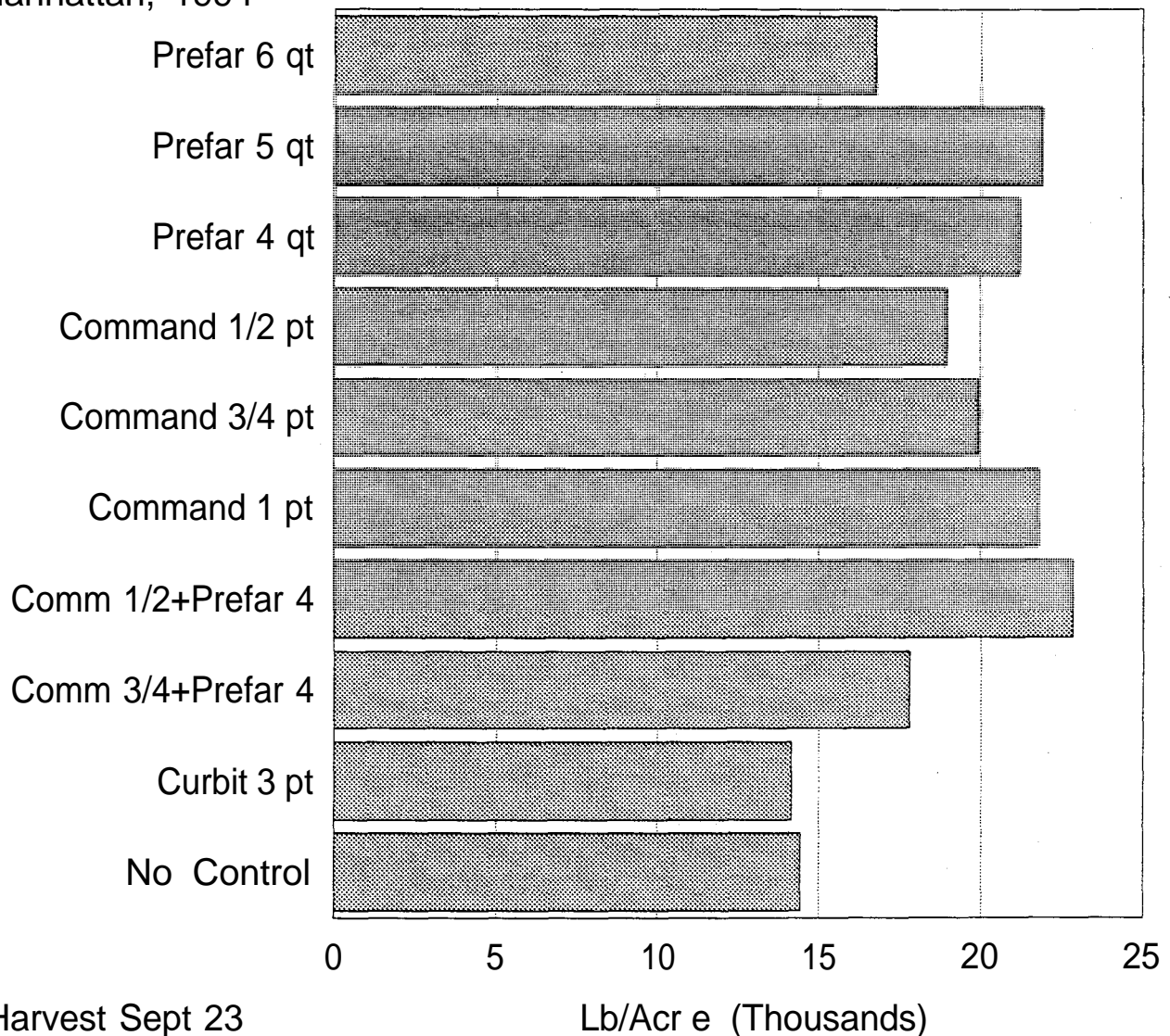
0=None to 10=Complete

Ratings July 8, 1994

Weed control and injury ratings were taken on July 8 (when vines were 6-8 in. tall). Note that weed control was excellent for grasses and broadleaf weeds with all treatments except Curbit. Crop injury in the form of whitened leaves and somewhat stunted plants was present in all plots where Command was used and was greatest at the 3/4 Command+4 qt Prefar treatment. Weed control with Curbit was poor, because rainfall did not occur until 8 days after application. Curbit must be incorporated by rainfall or physically to be effective.

Pumpkin Yield and Herbicides

Manhattan, 1994



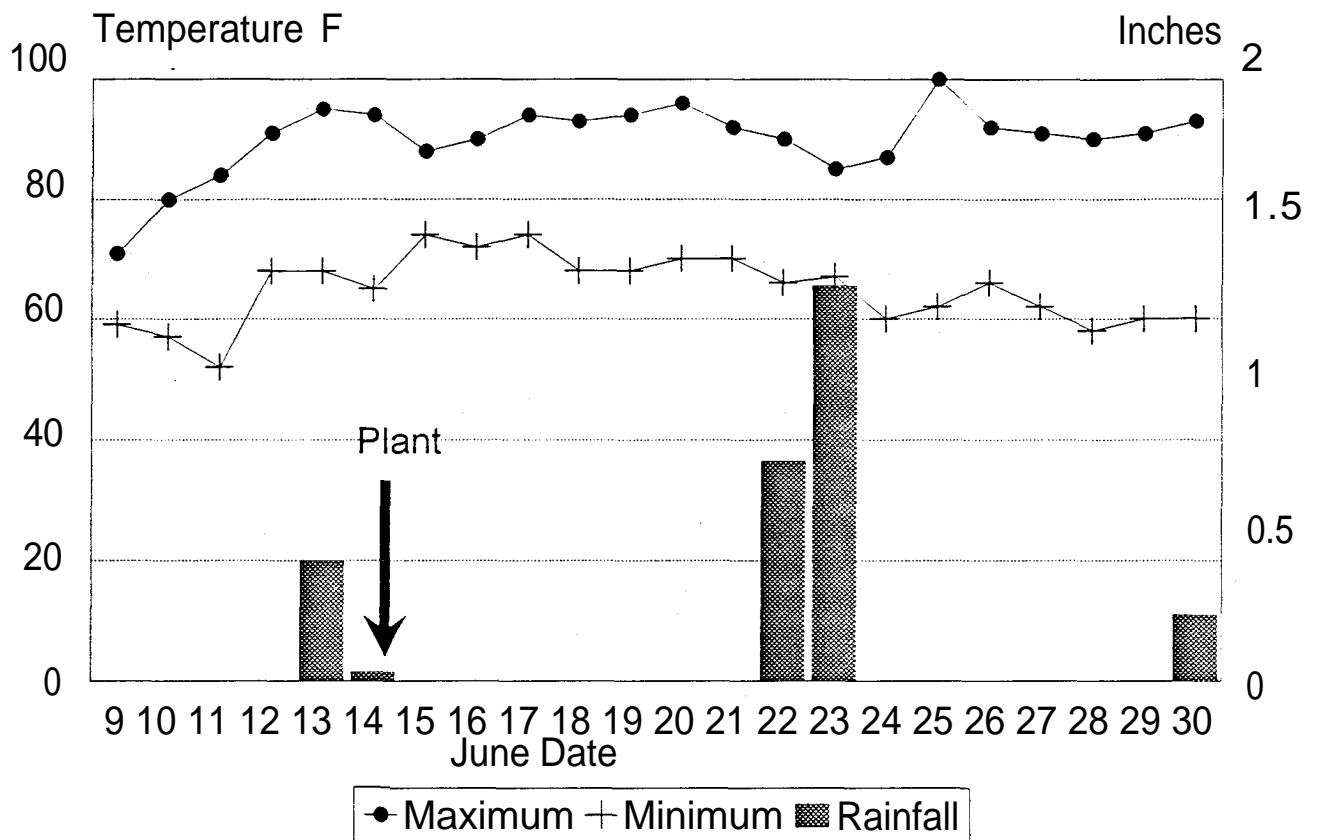
Harvest Sept 23

Lb/Acre (Thousands)

The only two labeled herbicides for pumpkins are Command and Prefar. These materials were compared to Curbit applied to Connecticut Field pumpkins direct seeded at Manhattan in June, 1994. Prefar and Command were preplant incorporated 1 in. the day prior to seeding, but Curbit was applied after planting. Curbit is NOT labeled for pumpkin weed control. Yields were 21-22,000 lbs with Prefar at 4 or qt/A, as well as with 1/2 Command+4 qt Prefar or 1 pt Command alone.

Weather during Pumpkin Herbicide Trial

Manhattan, June 1994



Temperatures were warm from planting through the end of June, with maximums in the 90's and minimums from 60's to 70's. Note that a light rain preceded planting, and then rain did not occur until 8 days after planting, when a 1/5 in. rainfall occurred. Effective weed control in pumpkins is determined by incorporation of herbicide materials without excessive dilution by heavy rainfall until pumpkins germinate and/or emerge.

ASPARAGUS VARIETIES- YIELD

Wichita, 1994

Source	Variety	Day of Peak Harvest	Lb/ Acre 1994	88-94 Total	% Stand
NJ	Jersey Giant	Apr 28	6454	33946	98
CAST	86-30	May 3	4224	29090	98
CA	Brocks Imperial	May 2	2448	23703	98
NJ	Greenwich	Apr 26	4650	30037	94
NJ	Jersey Gem	Apr 29	3398	28557	92
CA	UC 157 F1	Apr 30	3467	25509	100
CA	UC 157 BR	May 1	2996	24860	100
NJ	Jersey Knight	May 1	4035	24124	94
NJ	61 x 22-8	May 1	3888	25300	100
CAST	Atlas	May 2	3262	22410	100
NJ	Jersey General	May 1	3805	22838	98
CA	Ida Lea	May 1	2558	21402	92
NJ	Jersey Centennial	Apr 30	3206	22394	94
CA	US 157 F2	May 4	2097	19006	98
CAST	86-25	Apr 30	2459	15797	92
LSD .05			1058		

Cumulative total represents 1988-1994 harvests

Source: NJ=New Jersey, CA=California

CAST=Calif. Asparagus Seed/Transplant Co.

Project Leaders: Charles Marr, Alan Erb, and Mark Pyeatt

Spacing: Plants 2 ft. in 6 ft. rows, 5 replications

Established: April 1987 from seedling transplants

First Commercial Harvest: 1988

Weed Control: Karmex and Gramoxone

Fertilizer: 180 lb/A 13-13-13 and 75 lb/A 34-0-0 after harvest

Asparagus was harvested from this plot from March 21 through May 20 (approximately 8 weeks). However, a late freeze in March limited production so no harvest was made from March 25 through April 15 (approximately a 3-week period). Thus, lower yields were observed for the year's cumulative harvest. It has been our general observation that the New Jersey developed cultivars perform better in cooler years, whereas California developed varieties do best in somewhat warmer conditions. This was certainly borne out this year when California-developed varieties had depressed yields. The CAST breeding lines represent crosses between California and New Jersey lines, so they are somewhat intermediate. Cumulative yields represent total harvests for seven seasons, although the 1988 and 1989 data are not shown in this table. Over seven harvest seasons, the most consistent, high-yielding variety has been Jersey Giant.

SWEET POTATO VARIETIES-YIELD

Wichita 1994

Cultivar	Origin	Bushels/Acre*						
		US#	Canner	Jumb	Mktbl	Culls	%US#1	%Jumbo
Hernandez	LA	776	247	301	1325	55	58	23
NC-C9208	NC	763	270	182	1216	99	63	15
Red Star	NC	745	365	312	1421	52	52	22
L-87-95	LA	743	229	156	1127	78	66	14
NC-C58	NC	736	158	250	1144	73	64	22
NC-C59	NC	722	169	270	1161	52	62	23
Travis	LA	688	226	149	1063	121	64	14
L-87-72#	LA	681	150	463	1294	84	53	36
Jewel	NC	669	133	271	1073	155	62	25
L-86-33	LA	666	233	248	1147	84	58	22
NC-C75#	NC	652	139	474	1266	157	52	37
L-87-59#	LA	635	128	435	1198	118	53	36
Gold Star	NC	622	213	171	1005	125	62	17
L-89-110	LA	605	183	164	951	94	64	17
Sumor	SC	601	160	189	950	101	63	20
W-294	SC	582	149	115	845	35	69	14
W-285	SC	445	147	161	753	33	59	21

*Average weight of 1 bu in lbs was 45.87

#The best jumbo producers were: L-87-72, L-87-59, and NC-C-75

(See comments for Sweet Potato Characteristics-Wichita)

SWEET POTATO VARIETY CHARACTERISTICS

Wichita, 1994

Variety	Skin		Comments
	Color	Flesh Color	
Hernandez	CP	LO	Handles easily, nicely shaped roots
NC-C9208	CP	LO	Handles easily, skins easily, nice shape
Red Star	VI	MO	Handles easily, skins easily, nice shape
L-87-95	MR	LO	Handles easily, skins easily, nice shape
NC-C58	MR	LO	Handles easily, skins easily, nice shape
NC-C59	MR	MO	Handles easily, skins easily, nice shape
Travis	DR	MO	Some elongated, easy to handle
L-87-72	MR	MO	Some elongated, skins easily, handles easily
Jewel	CP	LO	Some cracks, skins easily, some deformed
L-86-33	DR	MO	Some elongated, skins easily, nice looking
NC-C75	DR	MO	Cracks on jumbos, skins easily
L-87-59	MR	LO	Cracks on jumbos, skins easily, nice shape
Gold Star	CP	LO	Some cracks, handles easily, nice shape
L-89-110	MR	LO	Some elongated, skins easily, handles easily
Sumor	LY	W	Some elongated, handles easily
W-294	CP	LO	Handles easily, skins easily, nice shape
W-285	DR	LO	Handles easily, skins easily, nice shape

Project Leaders: Alan Erb, Charles Marr, and Mark Pyeatt

Bedded for Slip Production: Apr 1 9 Transplanted: May 27

Field Layout and Irrigation: Plants were transplanted onto 1 ft-high ridges, and drip irrigation tubing was applied at the original soil surface level.

Plots: Plants spaced 1 ft apart in 3.5 ft rows, 12 ft long, 8 replications

Fertilizer: 18-46-0 starter solution (1/2 pt/plant of a 3 lbs/100gal solution) and 385 lbs/A of 13-13-13, preplant

Insecticide: Diazinon 4 qt/A, preplant to control grubs and wireworms

Herbicide: Dacthal (10 lbs/A) 5 weeks after transplanting

Harvest: Oct 7

SWEET POTATO VARIETY CHARACTERISTICS, CONTINUED

Wichita, 1994

All the varieties and selections in the trial yielded well, which indicates this was an excellent year for sweet potato production. The top three varieties/selections for US#1 production were: Hernandez, NC-C9208, and Red Star. In 4 years of production, Hernandez yield has ranged from a low of 175 bu/A of US#1 roots (during the cool wet year of 1992) to a high of 776, and Red Star ranged from a low of 159 in 1992 to a high of 745. Sweet potato is a tropical vegetable that grows best when exposed to warm days and nights. The optimum mean temperature for growth is 75 F. Sweet potatoes stop growing at 59 F and die from chilling injury if kept at 50 F or below for prolonged periods. Hernandez was ranked first in yield of US#1 roots (58% of the marketable total); it produced 23% jumbo roots and had a total marketable yield of 1,325 bu/A. NC-C9208 was ranked second in yield of US#1 roots (63% of the marketable total); it produced 15% jumbo roots and had a total marketable yield of 1,216 bu/A. Red Star produced the highest marketable yield of 1,421 bu/A, with 52% US#1 roots and 22% jumbo roots. Statistically, there was no difference between these top three entries and Sumor, which is listed near the bottom of the results table. All the entries in the study produced more than 50% US#1 roots and at least 14 % jumbo roots. The three best jumbo producers were: NC-C75 (474 bu/A, 37%) L-87-72 (463 bu/A, 36%) and L-87-59 (435 bu/A, 36%).

Seed Sources

AC	Abbott and Cobb, Box 307, Feasterville, PA 19047
AG	Agway Seeds, Rt. #4, Zeager Rd., Elizabethtown, PA 17022
AR	Arco Seed Co., Box 181, ElCentro, CA 92244
AS	Asgrow Seed Co., Box 48503, Doraville, GA 30340
BP	Burpee Seed Co., 622 Town Rd., West Chicago, IL 60185
BR	Burrell Seed Co., Box 150, Rocky Ford, CO 81607
CS	Chesmore Seed Co., Box 8368, St. Joseph, MO 64508
CO	Comstock and Ferre, 363 Main St., Wethersfield, CT 06109
EM	Earl May Seed Co., Shenandoah, IA 51603
FM	Ferry Morse, Box 4938, Modesto, CA 95352
HM	Harris Moran Seed Co., 4511 Willow Rd.-Suite 3, Pleasanton, CA 94588
HA	Harris Seed Co., 60 Saginaw Dr., Rochester, NY 14692
HB	Herbst Bros., 1000 N. Main, Brewster, NY 10509
HO	Hollar Seed Co., Box 106, Rocky Ford, CO 81067
JO	Johnnys Select Seeds, Foss Hill Rd., Albion, ME 05901
LI	Liberty Seed Co., Box 806, New Philadelphia, OH 44663
MI	Midwest Seeds, 10550 Lackman Rd., Lenexa, KS 66219
MU	Musser Seed Co., 301 4th Ave., Twin Falls, ID 83303
RN	Rogers-NK Seeds, PO Box 4188, Boise, ID 83711
PK	Park Seed Co., Greenwood, SC 29647
PE	Peto Seed Co., Box 4206, Saticoy, CA 93003
RE	Reed's Seeds, 3334 NYW Route 215, Corland, NY 13045
RO	Royal-Sluis, 627 Brunken Ave., Salinas, CA 93901
ST	Stokes Seeds, Box 548, Buffalo, NY 14240
SN	Sun Seeds, 18460 Sutter Blvd., Morgan Hill, CA 95037
TK	Takii Seed Co., 301 Natividad Rd., Salinas, CA 93906
TH	Thompson and Morgan, Box 1308, Jackson, NJ
PI	Pioneer Hybrid Int., 6800 Pioneer Pkwy., Johnson, IA 50131
RO	Robson Co., 1 Seneca Circle, P.O. Box 270, Hall, NY 14463
SK	Sakata Seed American, P.O. Box 880, Morgan Hill, CA 95038
WI	Willhite Seeds, P.O. Box 23, Poolville, TX 76487
VL	Vilmorin Inc., P.O. Box 707, Empire, CA 95319

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