NUMBER - 28

E D o K N I B B E

~~R~~ Research

MUCK VEGETABLE VARIETY TRIALS

1978

M. VALK E. KNIBBE
HORTICULTURAL RESEARCH INSTITUTE
OF ONTARIO

UCK RESEARCH STATION
OLLAND MARSH
.R.-1 KETTLEBY
NTARIO

Ontario
Ministry of
Agriculture
and Food

MUCK RESEARCH STATION, HOLLAND MARSH, R.R.#1, KETTLEBY, ONTARIO, LOG IJO

VEGETABLE CULTIVAR TRIAL REPORT FOR 1978

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SEED SOURCES - 1978

We wish to express our sincere thanks to all the companies who provided us with seed for trials.

✓	Agw	Agway Inc.,Seed Div., Box 1333, Syracuse, New York, 13201
✓	ARZ	A.R.Zwaan & Sons Ltd.,Prinses Mariannelaan 296, Voorburg,(ZH)Holland
✓	Asg	Asgrow Seed Co. Box 610, Bradford, Ontario, LOG ICO
	Bee	Beemsterboer NV, Box 2, Warmenhuizen, The Netherlands
✓	BEJO	Beemsterboer & Jacob Jong Seed Co.Ltd. Box 9, Noordscharwoude, Holland
✓	Bru	Bruinsma bv, P.O.Box 24, Naaldwijk, Holland
✓	Bur	Roy Burghart, Lafayette Rd., Greenville, Michigan 48838
✓	C.S.	Campbell Soup,Agric.Research Dept. 5589 Hurontario St. R.6, Mississauga, Ont. L5M 2B5
✓	Cro	Crookham Co. P.O. Box 520, Caldwell, Idaho, USA 83605
✓	deJ	Gebr de Jongh, Box 35, Goes, The Netherlands
✓	Des	Dessert Seed Co. P.O. Box 181, El Centro, California 92243
✓	D.P.	DVD Ploeg's Elite Zaden, BV. NL3220, Barendrecht, Holland
✓	Enza	Enza Zaden, P.O. Box 7, Enkhuizen, Holland
✓	F.M.	Ferry Morse Seed Co. Box 100, Mount View, California, 94042
✓	G.B.	Gebr Broersen & Zaadteelt, P.O.4, Tuitjenhorn, Holland
✓	G&S	deGroot en Slot BV, Heerhugowaard, Holland BOX 16
✓	Har	Harris Seed Co.Inc., Moreton Farms, Rochester, N.Y. 14624
✓	Hui.	Joseph Huizer Zaden B.V., Rijsoord, 3210, Holland
✓	Jung	J.W. Jung Seed Co. Randolph, Wisconsin, 53956
✓	Kerr	Dr. E. Kerr, Hort.Experiment Station, Box 587, Simcoe, Ont. N3Y 4N5
✓	Key	Keystone Seed Co., Box 942, Hollister, California, 95023
✓	MSU	Michigan State Univ.Dept.of Horticulture, East Lansing, Mich. 48823
✓	Nia	FMC Agric. Division, C. Raymond Eshleman, Box 132 Cleona, Penn.17042
✓	N.K.	Northrup King & Co. 1500 Jackson St.N.E. Minneapolis, Min. 55413
✓	Nun	Nunhem's Zaden, B.V. Haelen, Holland
✓	O.E.	J.E.Ohlsens Enke, NY Munkegaard, DK-2630 Taastrup, Denmark
✓	Pan	C.W.Pannevis,,Zaadteelt en Zaadhandel BV, Westeinde 62, Box 2, Enkhuizen, Holland
✓	P.W.	Pieters-Wheeler, Box 217, Gilroy, California, 95020
✓	Ro.B	Rogers Bros Co. Box 2188, Idaho Falls, Idaho. 83401
✓	R.Sl	Royal Sluis, P.O. Box 22, Enkhuizen, The Netherlands
✓	R.Zw	Rijk Zwaan,Burgemeester,Crezeelaan 40, P.O.40, DeLier, Holland
✓	Sak	Sakata & Co. ~~2 Kiribatake~~, Kanagawa-KU, Yokohama, Japan (~~and/or~~) c/o ~~Herbst Bros. 1000 N.Main St. Brewster, N.Y. 10509~~

↖ not any more

Herbst brothers is agent for Takii

✓	S&G →	Sluis en Groot, Enkhuizen, Box 13, The Netherlands (and/or)
✓		Sluis & Groot of America Inc. 124 A Griffin St.Salinas California,93901
✓	Sto	Stokes Seeds Ltd. 39 James St. St. Catharines, Ont. L2R 6R6
✓	Tak	Takii, P.O. Box 7, Kyoto Central, Japan see Herbst.
✓	Trp	Trapp & Sons, Beulah, Michigan, USA
✓	Un.S.	Union Seed Co. P.O.Box 339, Nampa, Idaho, 83651
✓	VDH	Vanderhave, Box 1, 4410 AA Rilland 3648, Holland
✓	Ves	Vesey's Seeds Ltd.,York, Prince Edward Island
✓	WSU,UW	Wisconsin State University, Dept.of Horticulture, 1575 Linden Drive, MADISON. Wisconsin, 53706
✓	WW	Weibul A.B. Garden Dept., Fack 26120, Landskrona, Sweden

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E.ZA . ELITE ZADEN (see Radishes)

MEAN TEMPERATURES (°C)

	1976		1977		1978		LTA	
	Max	Min	Max	Min	Max	Min	Max	Min
Jan	- 5.4	-15.8	- 9.5	-18.0	- 6.4	-14.6	- 2.8	-12.0
Feb	1.0	- 6.9	- 3.1	- 9.4	- 6.2	-17.5	- 2.0	-11.9
Mar	4.3	- 3.8	6.6	- 2.4	0.2	-10.9	3.0	- 6.8
Apr	12.9	2.3	13.4	1.7	8.3	- 1.0	11.6	0.3
May	16.0	5.6	21.6	5.8	18.5	6.9	18.1	5.4
June	25.7	12.5	22.2	8.9	23.3	10.2	24.0	11.1
July	24.2	13.6	26.0	14.5	27.0	13.2	26.6	13.3
Aug	24.6	11.9	23.9	12.0	26.4	12.8	25.8	12.5
Sep	19.7	8.0	18.4	10.9	19.7	8.9	21.3	8.7
Oct	10.0	1.5	12.2	2.7	12.6	3.6	14.9	3.7
Nov	3.2	- 4.2	6.6	0.4	6.3	- 1.9	6.7	- 1.2
Dec	- 4.2	-13.6	- 2.3	- 9.1	0.2	- 6.6	- 0.3	- 8.6
Mean	11.0	0.9	11.5	1.5	10.8	0.3	12.2	1.2

LTA = Long Term Average for Beeton Weather Station

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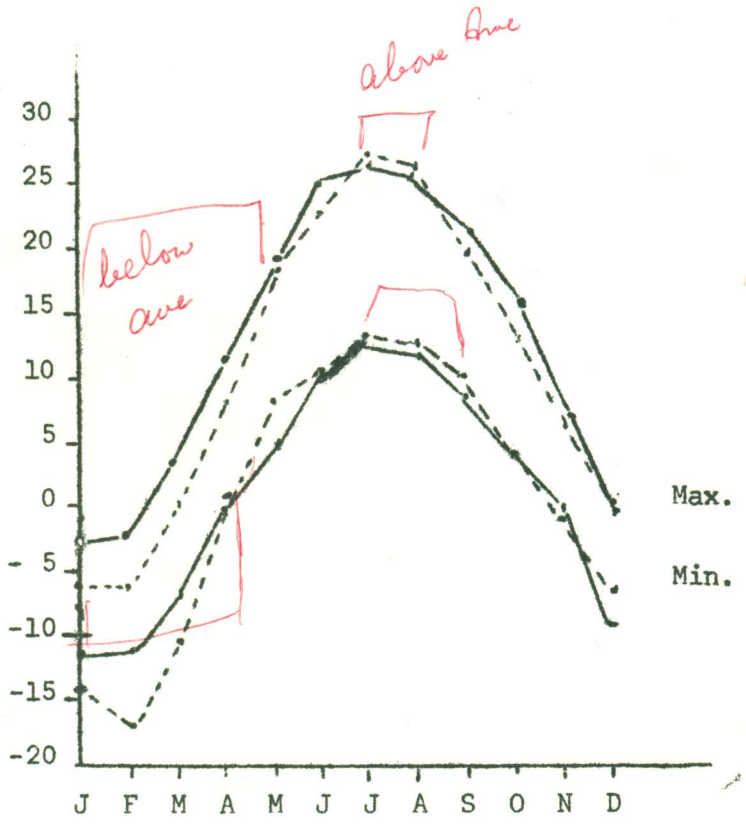

- - - - 1978 for M.R. Station

_____ LTA for Beeton

EXTREME TEMPERATURES °C

	1975		1976		1977		1978		LTA	
	H	L	H	L	H	L	H	L	H	L
Jan.	10	-26	6	-35	- 2	-36	7.5	-24.5	17	-33
Feb.	8	-19	9	-26	6	-25	0.5	-31	16	-34
Mar.	10	-21	17	-14	23	-14	8.0	-26.5	28	-32
Apr.	18	-10	28	- 7	25	-11	17.0	- 7.0	31	-18
May	30	1	25	1	32	- 2	31.0	- 3.5	33	- 9
June	32	4	32	3	30	- 2	32.5	1.5	38	- 4
July	34	6	32	6	34	6	32.5	5.5	41	1
Aug.	36	4	31	2	31	4	33.0	5.5	38	0
Sep.	26	- 1	29	1	29	4	29.0	- 2.0	37	- 8
Oct.	22	- 9	22	- 7	18	- 3	21.5	- 6.5	32	-12
Nov.	19	- 6	13	-13	19	-22	20.0	-11.0	27	-27
Dec.	13	-22	3	-23	11	-30	7.5	-25.5	19	-36
Annual	36	-26	32	-35	34	-36	33.0	-31.0	41	-36

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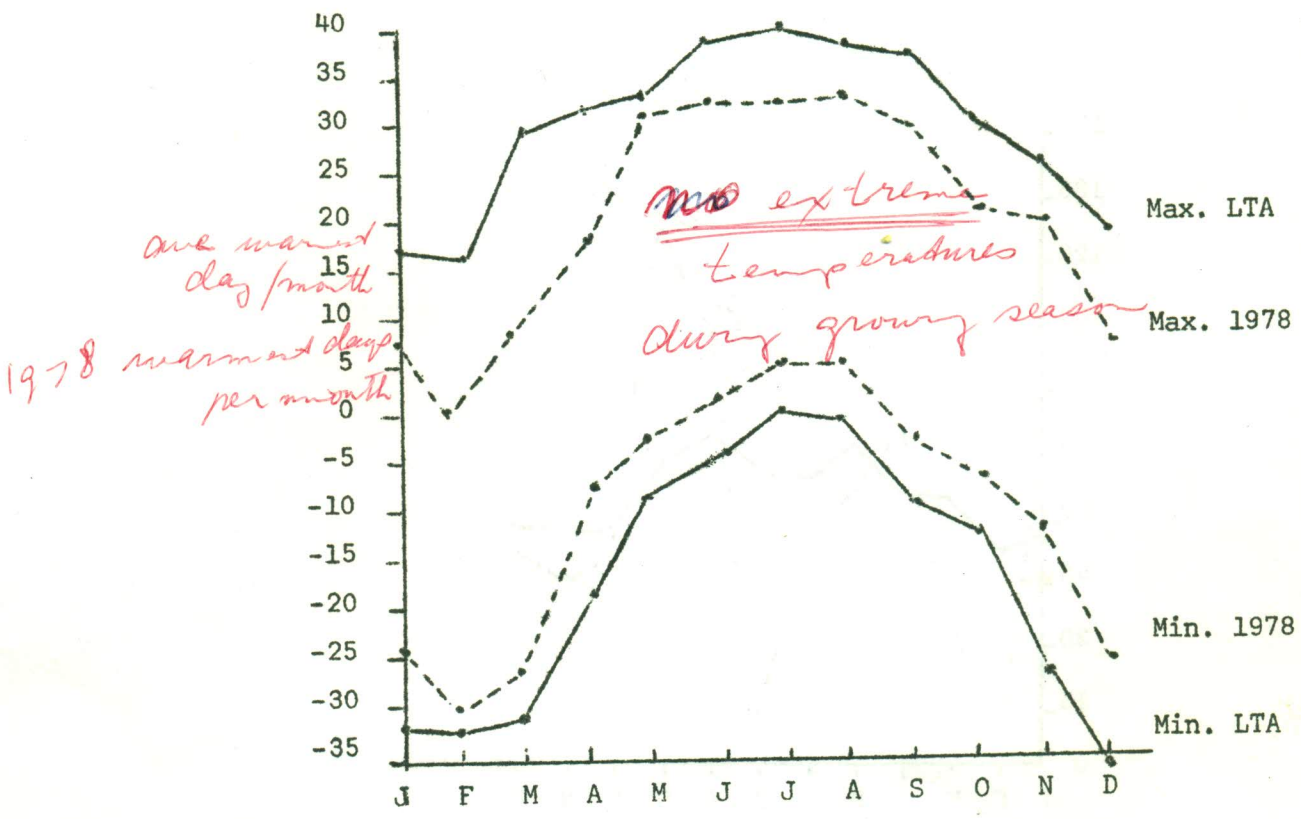

-------1978 for M.R. Station

———LTA (Long Term Average)

PRECIPITATION

	1976		1977		1978		LTA	
	Rain mm	Snow cm	Rain mm	Snow cm	Rain mm	Snow cm	Rain mm	Snow cm
Jan	14	43	0	37	30	44	18	41
Feb	24	17	11	4	0	12	19	35
Mar	73	16	42	16	32	8	35	31
Apr	72	10	20	0	74	5	60	7
May	82	5	50	0	66	0	75	0
June	66	0	67	0	53	0	69	0
July	185	0	118	0	16 low	0	70	0
Aug	53	0	155	0	102 high	0	77.	0
Sep	102	0	114	0	123 high	0	71	0
Oct	79	0	86	0	53	0	56	2
Nov.	14	10	73	10	41	7	37	21
Dec	13	34	11	15	21	32	25	34
Annual	777	135	747	82	611	108	612	171

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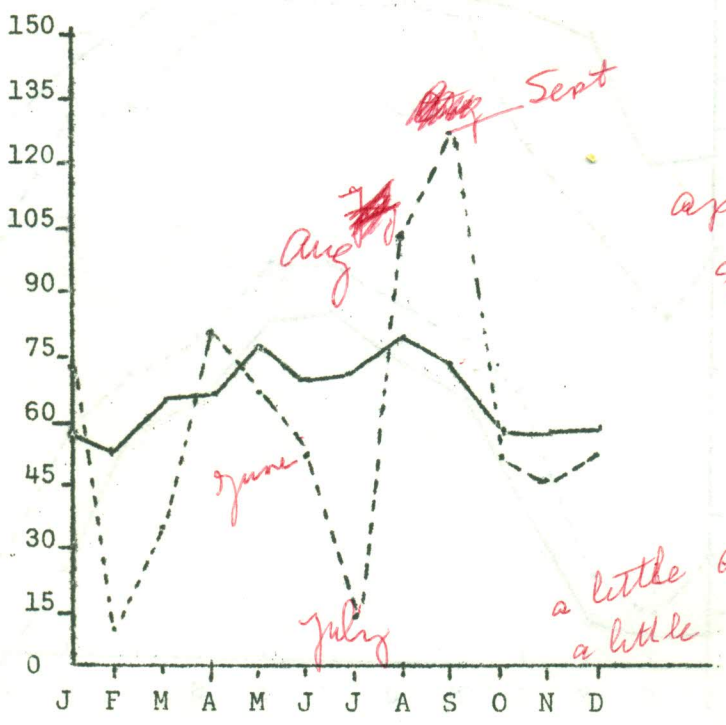


-------1978 M.R. Station

_____LTA for Beeton Weather Station

apparently good weather for growing onions

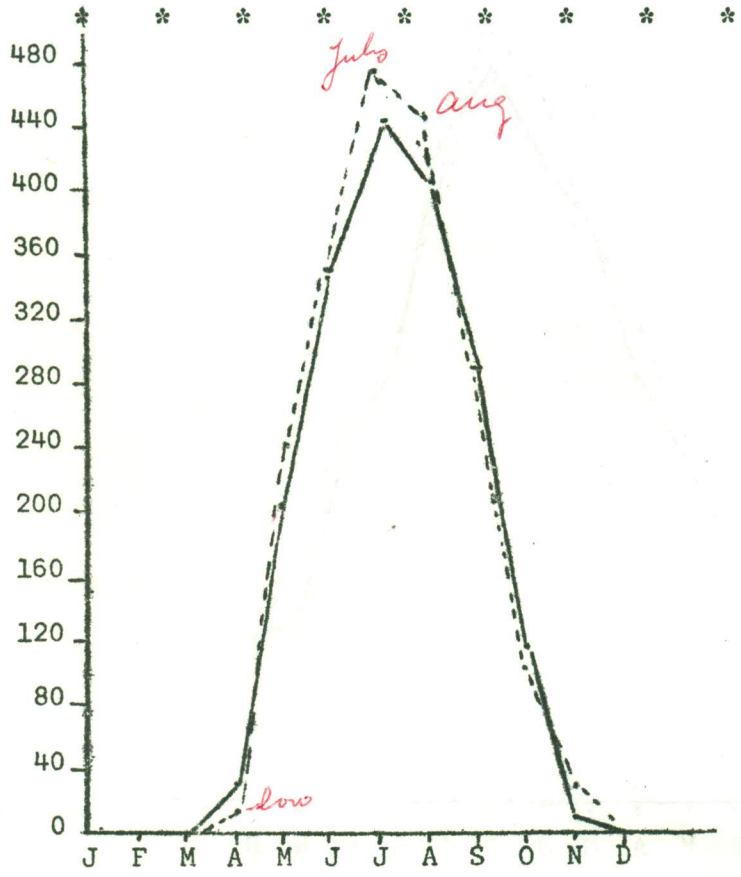
a little above ave temp
a little above ave rainfall for Aug

no blight weather.

GROWING DEGREE DAYS

	1976	1977	1978		LTA
Jan	0	0	0		0
Feb	0	0	0		0
Mar	0	0	0		0
Apr	116	122	17	low	36
May	172	279	242	OK	205
June	408	319	356	OK	354
July	420	472	467	high	447
Aug	398	395	452	high	410
Sep	250	290	280	OK	290
Oct	68	83	112	OK	110
Nov	0	58	33	—	6
Dec	0	0	0	-	0
Annual	1832	2018	1959		1858

Notes:
LTA - Long Term Average, Guelph 1901-70
A temperature of at least 5°C is considered necessary for plant growth. Accumulated temperature (degree days) above 5°C is a measure of plant growth during the month.

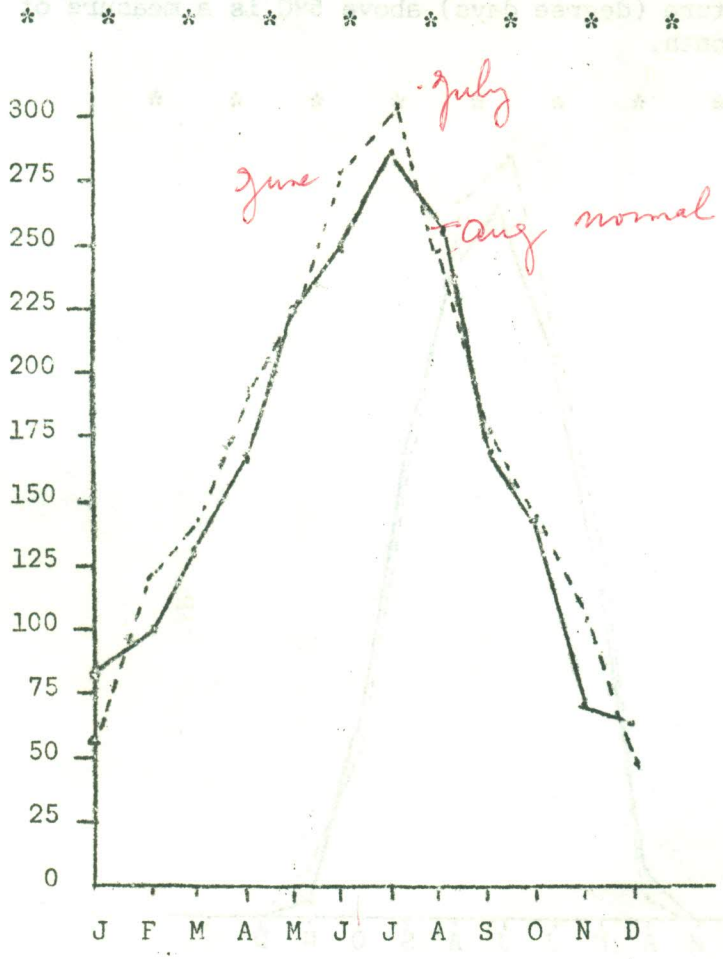


-------1978 M.R.S.
_____LTA for Guelph

SUNSHINE HOURS

	1976	1977	1978	LTA
Jan	75	85	58	80
Feb	88	105	123	99
Mar	114	177	141	131
Apr	221	206	191	168
May	197	341	230	227
June	261	282	281	251
July	250	309	303	286
Aug	268	255	253	251
Sep	192	104	179	171
Oct	114	162	144	143
Nov	88	47	107	74
Dec	83	51	58	69
Total Hours	1951	2124	2068	1950

LTA - Long Term Average for Guelph



- - - - - 1978 M.R.Station

_____ LTA for Guelph

BRUSSELS SPROUTS VARIETY TRIAL - 1978

MAIN TRIAL

Jade Cross	Takii
Jade E	"
Peer Gynt	Sluis & Groot
Predora	BEJO
Perfect Line	Huizer
Goldmine	BEJO
Multi-line	Huizer
Green Marvel #7	Sakata
Hyvros	Nunhems
Lunet	Royal Sluis

OBSERVATION TRIAL

Dorema	BEJO
Hybrid 78-3	Sakata
Jade F	Takii
Rampart	Royal Sluis
Fortress	" "
Craton	" "
Sun-line	Huizer
Captain Marvel #8	Sakata
287-73	Nunhems
285-73	"

Plants were raised in muck soil and on July 10th, transplanted into a Schomberg clay loam. During the growing season, the majority of plants gradually disappeared due to, what was diagnosed to be, clubroot.

One exception, cv Captain Marvel #8 from Sakata was not affected and produced uniform, healthy plants, which were not fully grown due to late planting date.

Its roots appeared free from clubroot symptoms and plants developed normally. The sprouts were of good quality, very firm but difficult to pick. Yield potential and ease of deleafing comparable to Jade E. The cv Sun-Line also produced a few healthy plants and deserves mentioning.

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IN order of Score

Check also Mineral Soils Trial.

Best considered earliness yield scow etc

BROCCOLI MAIN VARIETY TRIAL - 1978

	Variety	Source	Days to Harvest	% Harvested on best day	Tonnes/ hectare	Ave.Wt./head grams	% Unmkble	Reasons Unmkble	Uniformity of beads	Exterior Color	Uniformity	Shape	Breakdown	Yellow Eyes	Loose	Hollow Stem	Head Position	Length of Branches	Score	Dead Florets
3	Hybrid D uneven length of branches	Har	81	33	21.7	409	7	DL	4.0	4.1	4.1	4.3	4.7	3.6	4.5	4.2	4.7	3.4	4.27	4.7
1	Premium Crop	Tak	74	32	22.7	399	8	R	4.2	4.4	4.3	4.5	4.4	4.8	4.6	4.1	3.1	2.7	4.24	5.0
2	Futura	Asg	82	45	22.1	416	4	--	4.1	4.0	4.2	4.3	4.5	3.8	4.1	3.2	4.8	4.2	4.22	4.7
	name tags 8" long																			
4	Corvet F-1RS	R.S1	85	61	28.8	524	2	--	2.3	3.3	4.4	4.0	3.7	5.0	4.5	3.2	4.6	3.7	4.05	4.0
	Gem	Asg	74	49	15.9	435	31	RLYDS	3.9	4.1	3.9	3.4	4.3	3.9	3.7	2.6	4.5	4.2	4.00	4.0
	Southern Comet	Tak	74	32	19.0	369	18	DRL	3.9	3.8	4.0	3.9	3.8	4.7	3.9	2.3	3.0	3.1	3.84	3.7
5	RS 71343 F-1 SKIF	R.S1	77	42	21.3	407	9	DS	3.5	3.6	4.1	4.3	4.2	3.6	4.5	2.1	3.8	2.6	3.84	4.3
	Green Hornet	Sto	75	35	14.8	394	39	DSLRO	3.9	3.8	4.0	4.0	4.0	4.5	4.0	1.9	3.2	2.6	3.80	3.0
	Express Corona	Tak	67	66	15.1	358	29	DRL	3.7	4.1	3.7	2.3	4.6	3.7	3.0	2.0	4.9	4.6	3.78	3.7
	Early One	Agw	79	44	11.7	347	41	SLRYOD	3.6	3.8	3.9	3.2	4.0	3.0	3.2	1.1	4.9	4.9	3.76	4.0
	Cape Queen	Tak	76	40	16.0	427	33	RLSDY	3.5	4.2	3.7	3.2	3.9	3.7	3.1	2.1	3.8	4.0	3.72	4.0
	Green Comet	Tak	71	42	14.8	375	30	DRSL	4.0	3.6	3.7	3.8	3.7	4.0	4.1	2.1	2.5	3.0	3.67	3.3
	Bravo earliest	Sto	68	41	11.8	340	46	RLSYD	3.3	3.4	3.9	3.3	3.1	3.7	4.2	1.7	3.3	3.0	3.52	4.3
	Green Duke	Sak	71	35	12.2	404	50	RLDS	2.7	3.4	3.8	3.4	3.5	3.2	3.4	2.5	3.3	3.1	3.50	4.0
	Dandy Early	Sak	71	38	11.7	398	49	RSDLYHO	3.0	3.3	3.5	3.4	3.9	3.9	3.7	1.3	2.9	2.8	3.49	3.0

explain

Notes:

Main Trial - Seeded June 8, spacing 60 cm x 30 cm (24" x 12"), 3 replications.

Adaptation Trial: 1 replication

Interpretation - 5 = most desirable 1 = least desirable 20 t/ha = 9 T/A

Reasons Unmarketable - D=Dead florets or beads L=Loose R=Rot Y=Yellow eyes or starring
O=Open florets - flowering B=Bracted S=Poor shape

Head Position - position of the head in relation to the leaves. A high head position makes for greater ease of harvesting Length of Branches - 5=very long head branches

Score: the average of 12 columns, some not shown.

Dead Florets: Sometimes some of the beads or florets don't develop and turn a pale brown or yellow color rendering the head unmarketable.

Listed in order of"Score".

In order of score

BROCCOLI ADAPTATION VARIETY TRIAL - 1978

	Variety	Source	Days to Harvest	% Harvested on best day	Tonnes/ hectare	Av. Wt/head grams	% Unmkble	Reasons Unmkble	Uniformity of beads	Exterior Color	Uniformity	Shape	Breakdown	Yellow Eyes	Loose	Hollow Stem	Head Position	Length of Branches	Score	Dead Florets
1	Hyb.1464	Key	85	48	29.8	517	0	---	4.3	4.1	4.4	4.5	4.9	4.0	4.4	2.0	4.8	4.4	4.30	4.7
	XP248	Asg	91	36	10.0	332	21	DRS	3.8	4.1	4.2	4.5	4.1	4.5	4.7	4.2	3.9	3.4	4.29	4.0
2	RS74310 SURFER	R.S1	78	28	24.3	492	5	D	4.4	4.2	4.3	4.4	4.2	4.5	4.4	1.7	3.8	2.9	4.04	4.0
	Crusader	N.K.	85	56	11.3	456	18	DR	3.9	4.7	4.5	4.6	4.3	3.8	4.6	1.9	2.8	3.2	4.03	4.3
	XP249	Asg	85	26	20.9	400	5	D	4.2	4.0	3.9	3.3	4.3	4.3	3.6	2.7	4.0	4.4	4.00	4.0
5	SG 1	Ro.B	78	40	18.3	445	29	DLR	4.4	4.4	4.0	3.8	3.8	4.9	4.1	1.4	3.3	3.6	3.97	3.0
3	XP523	Asg	89	50	25.4	420	0	---	4.1	4.1	4.3	4.2	4.4	5.0	4.3	1.5	3.8	3.4	3.95	4.0
	NCX	Nia	74	40	12.2	445	38	DRLY	4.8	4.2	4.0	4.4	4.6	2.7	4.0	2.0	3.7	2.3	3.89	3.3
4	XP470	Asg	85	57	28.0	486	0	---	4.2	4.3	4.0	4.0	4.3	4.8	4.1	1.2	3.2	2.4	3.84	4.0
5	SG 1	S&G	74	38	24.7	429	19	RS	4.3	4.0	4.1	3.8	3.2	4.7	3.8	2.3	3.0	2.9	3.84	5.0
	RS 73367 F-1	R.S1	78	57	15.5	404	39	DRLS	4.3	4.1	4.0	3.4	2.9	4.9	3.7	1.0	4.3	3.1	3.80	2.3
	RS 73378 F-1 COASTER	R.S1	85	53	21.2	513	12	DSR	2.9	3.5	3.8	4.0	3.1	4.9	4.0	1.0	4.2	2.7	3.66	4.0
	XP521	Asg	89	40	12.1	440	33	DRS	4.7	4.2	3.8	4.1	3.9	5.0	4.3	1.8	3.7	3.7	3.59	4.0
	Hyb. #39	Sak	76	26	28.4	545	5	---	3.6	3.4	4.1	4.0	3.6	4.3	4.7	1.0	2.0	1.7	3.54	4.0
	#2327	Key	78	0	0	-	100	SDRLB	100% unmarketable			-	-	-	-	3.0	3.4	-	-	1.0
	XP97	Asg	No head formation																	
	XP518	Asg	No head formation																	
	XP492	Asg	No head formation																	

Notes:

Variety Trial on Mineral Soil - In addition, the above grown in muck soil, the same 34 cvs were grown on a Granby sandy loam at Hol-Mar Farms. 6 growers and a processor took part in evaluating the cvs. The following 10 cvs did very well, not necessarily in this order: Bravo, Hyb. "D", Hyb. 1464, Corvet, Green Hornet, SG 1, Premium Crop, 71343 F-1, Futura, Green Comet.

Listed in order of "Score",

in order of length (slenderness)

H.L.

CARROT MAIN VARIETY TRIAL - 1978 - PACKAGING TYPES

Best yield 3/4 to 1 1/4

Variety	Source	Total Mkble Yld Tonnes/ha	Total Mkble Yld Bu/acre	% Oversize	% Mkble	Type of Culls	Stand/meter	Type	Roots Length (cm)	Roots Width (cm)	Uniform Shape	Uniform Size	Appearance	Resistance to Greening	Color Interior	Color Exterior	Core Size	% Horizontal Lesions, Degree	Rusty Root Observed	Score
King Imperator	Sto	57	1022	12	88	UF	39	I	22	3.4	3.9	4.0	3.9	4.0	3.8	4.0	4.2	33VL	5.0	4.0
301 Trophy	Har	63	1129	19	84	US	42	GI	21	3.5	4.0	4.1	4.1	4.6	3.7	4.1	4.7	13L	5.0	4.2 (2)
single cross																				
Sp.North "A"	Cro	76	1352	22	88	FU	52	I	21	3.5	3.8	3.8	3.8	4.1	4.2	3.8	4.6	47L	5.0	4.0
Sp.Sweet "A"	Cro	73	1300	22	86	S	47	GI	21	3.6	4.0	3.9	4.0	4.1	3.9	4.0	4.3	47L	5.0	4.0
single cross																				
Canuck	Sto	72	1289	27	85	FU	41	ID	21	3.4	4.1	3.9	4.0	4.4	3.9	4.0	4.7	53L	5.0	4.1 (3)
Sp. Delite	Cro	68	1213	18	91	FS	47	ID	21	3.5	4.1	3.8	3.9	4.4	3.6	4.0	4.7	40L	5.0	4.1 (4)
Candy Pak	Cro	69	1226	15	83	SU	42	G	21	3.4	4.0	4.0	4.1	4.7	4.7	4.1	4.9	13L	5.0	4.4 (1)
Klondike Nantes	Sto	78	1388	35	90	U	38	LN	21	3.5	3.9	3.8	4.1	3.6	4.0	3.9	4.2	33L	5.0	3.9
three way cross																				
Spartan Delux	FM	77	1362	28	84	US	46	G	21	3.6	3.7	3.8	3.9	4.3	3.9	3.8	4.3	33L	5.0	4.0
Hyb.Dominator	Key	63	1116	14	86	U	50	G	21	3.5	3.9	3.8	3.9	4.6	4.0	3.9	4.5	27L	4.7	4.1 (5)
Gold Pak 263	Asg	60	1076	9	86	U	54	G	20	3.4	3.7	3.7	3.6	3.6	4.1	4.0	4.0	67M	4.0	3.8
Gold Pak Elite	Sto	45	800	0.3	98	US	43	G	20	3.3	4.2	4.0	3.8	4.0	4.1	3.8	4.1	40L	3.7	4.0
308 Grenadier	Har	63	1118	17	84	UF	58	IG	20	3.6	4.1	3.9	3.9	4.3	3.9	4.1	4.5	33L	5.0	4.1 (6)
Long Imperator 58	Asg	47	837	6	80	UF	48	I	20	3.4	3.7	3.6	3.5	4.1	3.4	3.6	4.1	73M	3.0	3.7
Hyb.Sp.Fancy	Key	74	1316	23	85	UF	52	ID	20	3.6	3.8	3.8	3.8	4.2	4.1	3.9	4.3	37L	4.7	4.0
Hyb.Fanci Pak	NK	62	1098	15	82	UF	50	GI	20	3.5	3.9	3.9	3.7	4.1	3.5	3.8	4.3	27L	4.0	3.9
310 Hipak	Har	70	1255	23	88	UF	43	G	19	3.5	3.9	3.8	4.1	3.6	3.6	3.9	4.2	33L	5.0	3.9
Spartan Classic	Sto	76	1356	36	83	US	39	DN	19	3.7	3.7	3.6	3.3	3.6	4.2	3.8	4.3	33L	5.0	3.8
earliest shortest																				
XP159	Asg	78	1395	30	87	UF	46	LD	19	3.6	4.0	3.5	3.7	3.7	3.8	3.8	4.2	60L	4.0	3.8
Spartan Premium	Cro	72	1286	30	80	SU	47	DN	18	3.6	3.8	3.4	3.4	3.8	4.1	3.8	4.7	47L	4.7	3.9
longest Best color																				
Sp.Winner	Cro	84	1497	35	89	SU	46	DN	18	3.8	3.7	3.4	3.7	4.0	4.0	4.0	4.0	20L	4.7	3.8
wider slicer										= 1.50										

Better resistance to blight than Sp F, Sp Sw

CARROT MAIN VARIETY TRIAL - 1978 - PACKAGING TYPES CONTINUED

Notes: Varieties are listed in order of length.

Seeded: May 29 with 5 cm wide shoe, rows at 60 cm (24"). Stand aimed at 50 plants/m (15/ft) replicated 3 times.

Marketable Yield: includes oversize

Type of Culls: F-Forks C-Crooks U-Undersize S-Split (Listed in order of number of culls found most)

Stand/m: 40 plants/m = 12/ft 50 plants/m = 15/ft

Length & width: 20 cm = 8 inches 3.5 cm = 1.4"

Type: I=Imperator G=Gold pak, N=Nantes LD=Long Danvers 5=most desirable 1=least desirable

% Horizontal lesions & Degree: gives the % of the roots that have horizontal lesions or black spot and to what degree these appear L=Light or very light M=Medium H=to a heavy or large degree affected (root not mkble)

Score: is the average of 8 columns not including % horizontal lesions

Highest Score:

Candy Pak (also 1977)	4.4	Spartan Delite	4.1
Trophy	4.2	Hyb. Dominator	4.1
Canuck	4.1	Grenadier	4.1

Highest Yield - oversize excluded:

Candy Pak - WSU or U of W.	57 t/ha	1021 b/a	also in 1977
Spartan North A	57 t/ha	1014 b/a	
Sp. Delite	54 t/ha	967 b/a	
Sp. Sweet A	54 t/ha	967 b/a	

Highest Yield - including oversize :

good: providing you have a precision seeder.

Sp. Winner	84 t/ha	1497 b/a
XP159	78 t/ha	1395 b/a
Klondike Nantes	78 t/ha	1388 b/a
Sp. Delux	77 t/ha	1362 b/a
Sp. Classic	76 t/ha	1356 b/a

not quite — in order of length - slenderness

SUMMARY OF CARROT VARIETIES - PACKAGING TYPES

LTA: Long Term Averages of some of the carrot varieties tested in our trials.

Variety	Source	# Years Tested	LTA Length cm	LTA Length inches	LTA Yield t/ha	LTA Yield b/a	LTA % Mkble	LTA Score	1978 Score
Trophy	Har	6	20.8 (1)	8.22	65.1	1158	86	3.97 (4)	4.2 (1)
Grenadier	"	10	20.6 (2)	8.11	66.3	1181	84	3.97 (5)	4.1 (2)
XP159	Asg	4	20.1 (6)	7.91	85.0 (1)	1514 (1)	87	3.92	3.8
Spartan Delite	MSU	10	20.4 (3)	8.03	66.8	1189	88	3.96 (6)	4.1
Gold Pak 28	F.M.	9	20.3 (5)	7.99	56.0	997	86	3.85	---
Canuck	Sto	10	20.4 (4)	8.03	61.4	1093	83	3.95 (7)	4.1
Spartan Delux	MSU	6	20.1 (7)	7.91	74.2 (5)	1320 (5)	86	3.90	4.0
Spartan Sweet A	Cro	10	20.1 (8)	7.91	72.8	1295	82	4.14 (1)	4.0
King Imperator	N.K.	8	20.1 (9)	7.91	54.0	962	83	3.79	4.0
Spartan Fancy	MSU	10	19.9 (10)	7.83	68.0	1210	86	4.03 (2)	4.0
Dominator	Key	10	19.3 (12)	7.59	65.0	1156	86	3.85	4.1
Klondike Nantes	Sto	6	19.4 (11)	7.63	72.3 (6)	1288 (6)	86	3.90	3.9
Hipak	Har	10	18.9	7.44	68.5	1219	86	3.82	3.9
Spartan Premium	MSU	6	17.8	7.00	83.1 (2)	1478 (2)	87	3.86	3.9
Spartan Winner	"	6	17.4	6.85	75.3 (4)	1340 (4)	85	3.88	3.8
Spartan Classic	"	6	17.1	6.73	81.3 (3)	1449 (3)	86	3.82	3.8
Pioneer	Har	9	16.5	6.49	65.2	1160	81	3.63	---
Scarlet Nantes	Asg	8	14.5	5.70	66.1	1177	75	3.46	3.9

OK

(longer point) wider

(clumsy) earliest

* * * * * * * * *

in order of yield

CARROT MAIN VARIETY TRIAL - 1978 - PROCESSING TYPES

Top scores ↓ Top 4 Color scores

	Variety	Source	Mkble. Yield Tonnes/ha	Mkble. Yield Tons/acre	% Marketable	Type of Culls	Stand/meter	Type	Roots Length (cm)	Roots Width (cm)	Uniformity	Smooth	Crown Shape	Core Size	Color RAW Gr.Shoulder	Color RAW Exterior	Color RAW Cortex	Color RAW Camb Zone	Color RAW Core	Uniformity of Interior Color	Score	% Horizontal Lesions & Degree	Wt/root (g)	ave color
6	SDC764(1)1976 (1)	CS	89	39.6 (1600)	87	U	25	D	16	5.8	4.0	3.5	3.1	3.0	3.8	3.8	3.6	3.9	3.8	3.8 (8)	3.63	33L	213	3.8
	SDC730(1)1976 (4)	CS	86	38.2	90	U	26	D	16	6.0	3.9	3.8	3.3	3.1	3.7	3.8	3.5	3.8	3.4	3.4 (10)	3.57	27L	199	3.6
3	Dess-Dan (3)	Des	82	36.5	83	UF	20	LD	19	5.8	3.9	3.8	3.5	3.8	3.9	3.8	3.8	3.8	3.7	3.3 (3)	3.73	33L	239	3.7
	Oranza	BEJO	80	35.6	79	U	18	LN	21	5.3	3.9	3.9	3.7	3.0	2.6	3.7	3.2	3.8	3.3	3.3 (5)	3.44	40M	272	3.3
	Royal Danvers (4)	Agw	79	35.0 (1400)	74	USF	20	LD	21	5.6	3.6	3.6	3.7	3.8	3.6	3.8	3.7	3.7	3.3	3.3 (9)	3.61	27L	230	3.6
	Sp.Classic	Cro	77	34.2	77	US	20	LD	20	5.7	3.7	3.5	3.5	4.1	3.4	3.8	3.3	3.6	3.2	3.3 (11)	3.54	33M	234	3.4
5	Sp.Bonus (3)	Cro	72	32.2	79	SU	19	LD	18	6.0	3.7	3.4	3.1	3.9	3.9	3.8	3.4	4.0	3.6	3.6 (6)	3.64	20L	224	3.7
	Target (4)	Har	72	32.1	83	US	20	LD	20	5.8	4.0	3.6	3.3	3.9	3.8	3.9	3.4	3.7	3.4	3.4 (7)	3.64	33L	219	3.6
	Red Core Chantenay 503	Asg	70	31.0	75	U	22	C	13	6.0	4.2	3.7	3.2	3.3	3.3	3.8	3.2	3.5	3.3	3.2 (12)	3.47	60L	188	3.4
2	Danvers Gold (3)	WSU	69	30.7	76	FUS	20	D	16	5.8	3.8	3.7	3.4	4.2	3.9	3.8	3.7	3.9	3.6	3.7 (2)	3.77	40L	210	3.7
1	NCX 6010M (2)	Nia	69	30.5	78	US	15	LD	22	6.0	4.0	3.7	3.9	3.8	4.0	3.9	3.9	4.0	3.7	3.4 (1)	3.83	27L	270	3.8
4	Sp.Deluxe (3)	Cro	68	30.0	72	UFS	19	LD	20	5.5	3.5	3.6	3.7	3.9	3.8	3.6	3.8	3.9	3.6	3.5 (5)	3.69	27L	214	3.7
	Danvers 126	Agw	66	29.4 (1200)	79	UF	17	LD	18	5.6	3.1	3.3	3.9	3.1	3.2	3.5	3.3	3.4	3.1	3.0 (14)	3.29	27L	229	3.2
	Hyb. Gold	WSU	46	20.5 (800)	59	SU	16	LD	16	5.6	3.1	2.9	3.3	3.9	3.8	3.2	3.4	3.7	3.4	3.3	3.40	67M	173	3.3

SP Premium: excell + color - longer
SP Winner: good color - wider

Notes: Varieties are listed in order of yield

Seeded: May 19 with 5 cm scatter shoe, rows at 60 cm, replicated 3 times. Aimed for a stand of 30 plants/m (9/ft).

Type of Culls: U=Undersize (stand generally too thick) F=Forks S=Split - Listed in order of type found most.

Stand/m: 25/m = 8/ft 1m = 3.3 feet

Length & Width: 1" = 2.5 cm 18 cm = 7 inches

Type: LD = Long Danvers C = Chantenay N=Nantes

Crown Shape: A hollow crown receives the lower marks

Score: The average of the 10 preceding columns

No signs of Rusty Root disease were found except some in Hyb.Gold and Danvers 126.

Horizontal Lesions & Degree: 33L means 33% of roots were found to have very small lesions to a light degree M = medium degree and H = heavily affected and becoming unmarketable.

E = excellent
see page 20
judge by length (20cm or more) and slenderness (less than 3.6)
score over 4.30 = excellent
4.10 + is good

CARROT ADAPTATION VARIETY TRIAL - 1978 - PACKAGING TYPES

Variety	Source	t/ha	Bu/acre	% Oversize	% Mkble	Type of Cull	Stand/meter	Type	Av.length	Av.wdth (cm)	Uniform. Shape	Uniform. Size	Smooth	Resistance to Greening	Color Interior	Color Exterior	Core Size	Rusty Root	Horizontal Lesions % roots affected Degree	Score - 16 - order of score
Amsterdammer Bak	R.Zw	54	962	7	71	SF	57	N	18	3.1	4-	4-	3+	3+	4+	4	5-	5	30L	4.00
Nantes	"	54	969	14	74	UF	47	N	16	3.5	4-	4-	4-	4-	4+	4-	4+	4	56M	3.85
Ultra Pak	Sto	55	987	45	76	FS	27	G	20	3.4	4-	4	4-	4	4-	4-	4-	4	20L	3.87
Spartan Premium	"	75	1341	29	76	SU	48	GN	17	3.6	3+	4-	4-	3+	4	4-	4+	5	70L	3.87
XP232	Asg	74	1314	27	91	FUS	47	G	20	3.4	4-	4-	4-	4+	4-	4	4+	5	30L	4.06
Hicolor 9	"	46	820	14	66	FSU	56	G	19	3.3	3+	3+	3	5-	4+	4	4+	3	90L	3.75
Scarlet Nantes	"	53	942	13	58	US	78	N	15	3.8	4+	4	4-	3+	3+	4-	4+	4	40L	3.93
XP501	"	80	1426	37	79	FS	32	LN	22	3.6	4-	4	4-	3	4+	4-	4-	5	30M	3.88
XP433	"	36	646	12	46	SUF	40	N	15	3.6	4	4	3	3+	3+	3+	3+	4	70M	3.52
XP508	"	46	817	32	78	FS	22	N	20	3.5	4-	4-	4-	3+	4	4-	4-	5	30L	3.85
XP415E	"	51	908	35	66	FS	30	IG	19	3.5	4-	4	3+	4-	4+	3	3+	3	80M	3.53
1209	"	33	591	9	60	FS	34	I	21	3.6	4-	3+	3+	4+	4+	4-	4+	5	80M	3.98
1289	"	61	1085	48	83	SUF	35	G	19	3.5	4-	4	4-	4-	4+	4-	4+	5	80M	4.05
XP556	"	34	597	45	77	SFU	36	N	16	3.7	4+	4+	4-	4-	4+	4-	4	5	70M	4.12
1212	"	64	1134	38	86	SF	30	I	20	3.5	4-	4	4	5-	4+	4	4	5	50M	4.21
Spartan Fancy '75	Cro	57	1018	17	85	FSU	41	D	18	3.4	4	4-	4-	4-	4+	4	4+	5	70L	4.08
E Exp.Hyb.W226'74	"	72	1274	25	85	FSU	49	I	22	3.4	5-	4+	4+	5-	4-	4	5-	4	50L	4.30 (4)
Exp.Hyb.W97'75	"	60	1067	25	82	SF	41	ID	18	3.5	4-	4-	4-	4	4+	4	4+	5	80M	4.08
Exp.Hyb. H140'76	"	49	878	15	69	FUS	59	DG	17	3.4	3+	3+	3+	4+	4+	4-	4	4	70M	3.77
Exp.Hyb. W241'76	"	60	1073	24	88	SUF	41	G	20	3.4	4	4-	4-	4-	4-	4-	4+	4	50L	3.85
Exp.Hyb. W96'77	"	71	1262	27	80	FSU	55	D	17	3.6	4+	4-	3+	4+	3+	4	4	3	70M	3.73
Exp.Hyb. W118'77	"	47	841	32	69	FS	20	G	22	3.7	4	4+	4	4+	5-	4	4+	5	60M	4.32 (3)
Exp.Hyb. W120'77	"	54	963	36	76	SUF	34	G	19	3.4	4+	4	4+	4-	5-	4	4+	5	40L	4.28
Exp.Hyb. H150'77	"	44	786	3	63	SFU	59	G	20	3.2	4	3+	4-	4+	4	4	5-	5	50M	4.12
Exp.Hyb. W104'77	"	64	1146	11	80	UFS	57	G	20	3.5	4-	4-	4-	5-	4-	4-	4	4	50L	3.90
Exp.Hyb. W113'77	"	70	1244	20	82	US	66	G	20	3.4	4-	4-	4-	4+	4+	4	5-	5	70L	4.17
Hyb.D461AXD95B	Des	62	1103	18	75	S	44	G	19	3.2	4+	4	4	4+	4-	4	4+	5	70M	4.20

CARROT ADAPTATION VARIETY TRIAL - 1978 - PACKAGING TYPES

	Variety	Source	Mkb.Yield t/ha	Mkb.Yield Bu/acre	% Oversize	% Mkble	Type of Cull	Stand/meter	Type	Av.length	Av.width	Uniform. Shape	Uniform. Size	Smooth	Resistance to Greening	Color Interior	Color Exterior	Core Size	Rusty Root	Horiz.Lesions % roots affected Degree	Score
E	Cutlass	Des	71	1262	20	84	SF	52	GI	22	3.4	4+	4	4	4	3+	4	4	5	35L	4.06
	D461A x Nante 77	"	53	948	23	68	SFU	44	N	17	3.7	4	4-	4	4-	4+	4-	4+	5	60L	4.08
	13Cx65	FM	62	1109	25	75	SF	37	ID	19	3.6	4-	4-	4	4+	3+	4+	4	5	80M	4.03
	13Cx37	"	61	1079	23	86	FS	39	I	21	3.4	4	4-	4	4+	4-	4	4	4	50M	3.96
	13Cx24	"	66	1170	43	80	SF	34	G	17	3.6	4+	4+	4	4-	3-	4-	4-	5	90M	3.92
	Spartan Deluxe	"	62	1103	48	76	SF	32	I	20	3.6	4	4-	4-	4	5-	4	4	5	30L	4.13
	Exp.6k 13/11214	Har	63	1116	36	77	SF	32	N	18	3.7	4-	4-	4-	4-	3+	4	4	5	20L	4.38 (1)
	Hyb. EN13	"	41	737	85	59	S	8	I	28	5.6	4+	4	4-	4	4	4	4	5	40L	4.12
	Hyb. 6K11	"	73	1292	36	94	FU	33	G	20	3.5	4+	4	4	4	4-	4	4+	5	40L	4.16
	Hyb. 1411SP	"	45	805	2	67	FSU	51	G	20	3.1	4+	4	4-	4+	5-	4	5-	4	50M	4.21
	Hyb.756AN	"	61	1083	14	81	FUS	53	ID	21	3.7	4	4-	4-	4+	4-	4-	4	4	45L	3.86
	Hyb.1411AN	"	52	926	11	84	FU	38	G	19	3.4	4	4-	4	4+	4+	4-	4+	4	60L	4.03
	Hyb. EN16	"	36	634	28	55	FS	25	DN	17	3.6	4-	4-	4-	4-	4+	4-	4+	5	70M	4.01
E	Hyb. 6K16	"	80	1426	21	71	FU	51	I	21	3.7	4+	4-	4	4-	4	4-	4+	5	40L	4.08
	Hyb. 141182	"	79	1402	11	81	FSU	74	DN	19	3.4	4-	4	4	4+	4+	4-	4+	5	30L	4.16
	Hyb. 14116K	"	65	1158	2	73	UF	93	I	19	3.4	4	4-	4	4+	5-	4-	4+	5	50M	4.21
	Hyb. 6K3C	"	50	890	29	76	FU	48	GD	19	3.4	3	3	3-	4-	3-	3+	4-	3	20V	3.13
E	Hyb. 6K14	"	85	1509	12	85	UF	72	G	20	3.5	4+	4+	4+	4+	4+	4	4+	5	40V	4.35 (2)
	Hyb. 1411SN	"	66	1170	6	81	SFU	50	DN	19	3.5	4-	4	4	4-	4+	4-	4+	5	60V	4.08
	Spartan Delite	Key	61	1079	29	72	FSU	43	DI	19	3.5	4-	4	4-	4	3+	4-	4+	4	50M	3.83
	Hyb.Woodland	NK	66	1181	20	81	SFU	64	GD	21	3.3	4	4-	4	4	3+	4	4+	4	85L	3.88
	Exp. 461A	"	87	1542	18	91	FS	48	G	20	3.4	4	4	4	4	3+	4-	4	4	0	3.87
	Exp. 483	"	78	1396	40	91	FSU	41	DI	21	3.4	4-	3+	4-	4-	4	3+	4+	5	20L	3.87
	PWR 5477	PW	63	1122	48	84	S	32	DN	15	3.8	4-	4-	4-	4	4+	4-	4+	5	30L	4.05
	PWR 12077	"	61	1079	30	74	FSU	46	DN	17	3.5	4-	4-	4-	4-	5-	4	4+	5	30L	4.10
	PWR 11977	"	43	774	11	71	FS	46	I	18	3.3	4-	4	4	4-	4-	4-	4+	4	70M	3.88
	PWR 16477	"	73	1292	26	82	SF	50	DG	18	3.6	3+	3+	3	4	3+	4-	4	5	40L	3.36

CARROT ADAPTATION VARIETY TRIAL - 1978 - PACKAGING TYPES

	Variety	Source	Mkb.Yield t/ha	Mkb.Yield Bu/acre	% Oversize	% Mkble	Type of Cull	Stand/meter	Type	Av.length	Av.Width	Uniform. Shape	Uniform. Size	Smooth	Resistance to Greening	Color Interior	Color Exterior	Core Size	Rusty Root	Horizontal lesions, % roots affected Degree	Score - 18 -
	PWR 4877	P.W.	25	451	28	60	S	21	I	19	3.4	4+	4-	3+	4+	4+	4	4-	5	60M	4.07
	PWX 1274	"	42	750	6	65	UFS	59	G	18	3.2	3+	3+	3+	4-	4-	4	4+	4	70M	3.70
	PWX 376	"	67	1192	11	78	FSU	68	I	19	3.5	4+	4-	4-	4	3+	4	4	3	70L	3.75
BB	Minicor	Ro.B	40	716	1	53	US	86	N	15	3.1	4-	4-	4	3+	4+	4	5-	5	65L	4.02
	Long Shanty F 1	"	66	1167	21	79	UF	62	DG	17	3.5	3+	3+	4-	4	4+	4	4+	4	57L	3.85
	Gold Fingers	"	56	1006	17	68	UFS	71	D	15	3.9	4	3+	3-	4	5-	4-	4+	3	50L	3.81
BB	USC 651	Un.S	35	628	0	19	U	105	N	14	3.2	3	3+	3	4-	5-	4-	5	3	70M	3.67
BB	Nanta	BEJO	50	885	5	70	UFS	54	N	15	3.5	3+	4-	3+	4-	4-	4-	4	4	35M	3.65
	Berlicum Oranza	"	83	1481	41	85	UFS	43	N	17	3.6	3+	4-	3+	4-	4-	4	4-	5	40L	3.81
	Colora	"	61	1083	10	82	SF	46	N	18	3.5	4-	4-	4-	4-	4	4+	4+	5	40L	4.03
	Mokum F 1	"	65	1158	14	77	USF	59	N	17	3.4	4-	4-	3+	4-	5-	4	5-	4	27M	3.93
	Vita Longa	"	63	1128	30	81	SU	37	D	15	3,7	4	4-	3+	4	4	4	3+	4	50L	3.80
BB	P1787144	"	45	799	11	53	US	53	N	15	3.4	3+	4-	3+	3+	4+	4-	4+	4	70L	3.73
	Berjo	"	63	1125	16	78	U	55	ND	16	3.6	3	4-	3	4-	4-	4-	3+	4	47L	3.51
	Laros	"	58	1027	21	75	FU	50	N	17	3.6	4-	3+	3	3-	4-	4-	4-	3	50L	3.38
	Nantes Tito	D.P.	64	1143	21	75	SU	40	N	17	3.6	5-	4	4-	4-	3	4-	4	4	53M	3.93
BB	Amsterdam Sucram	"	51	914	3	58	SU	62	N	17	3.3	4-	4-	4-	3+	4	4	4+	4	42L	3.92
	Nantes Producto	R.Sl.	68	1213	17	72	UFS	57	N	16	3.6	4-	4-	4-	3+	4+	4	4+	5	60L	4.05
BB	Caramba	S&G	50	899	6	55	US	62	N	15	3.3	4-	4-	4-	3+	4	4-	4+	4	50L	3.86
	SG591	"	64	1140	24	67	USF	49	N	15	3.5	4-	4	3	3+	4+	4-	4	4	76M	3.87
BB	Little Finger	"	16	289	8	31	US	45	N	14	3.1	3	3+	3	4-	4+	4	4+	5	30VL	3.82
BB	Tip Top	"	50	887	9	59	USF	57	N	17	3.4	3+	4-	3+	3+	4	4	4	4	63M	3.68
	Amsterdam Forcing	A.R.Z	41	734	1	60	USF	52	N	17	3.4	4-	4-	3+	3+	5-	4-	4+	4	45L	3.87
	NCX 6020	Nia	59	1042	23	75	FSU	39	I	23	3.8	4+	4	4-	4	3+	4	3+	3	60L	3.70
	NCX 6023	"	72	1286	23	82	SF	43	G	22	4.0	4+	4	4-	4-	4	3+	4+	4	70M	3.91
	(5986x9541)1305	MSU	76	1353	18	84	UFC	66	DI	17	3.7	4	3+	4-	4	4+	4	4+	5	35M	4.07
	(9541x1322)1305	"	68	1218	25	81	SFU	61	D	17	3.6	3+	3+	3+	4	4	4	4	4	10V	3.80

CARROT ADAPTATION VARIETY TRIAL - 1978 - PACKAGING TYPES

	Variety	Source	Mkb.Yield t/ha	Mkb.Yield bu/acre	% Oversize	% Mkble	Type of Cull	Stand/meter	Type	Av.length	Av.width	Uniform. Shape	Uniform. Size	Smooth	Resistance to Greening	Color Interior	Color Exterior	Core Size	Rusty Root	Horiz.Lesions, % roots affected Degree	Score
E	(1302x5986)107	MSU	82	1460	8	78	UCS	68	ID	21	3.7	5-	4	4	4-	5-	4	4+	4	40L	4.17
E	(6000x1391)107	"	76	1347	54	89	SFU	33	G	22	3.7	4+	4	4	4	4-	4	4+	5	20L	4.16
	(5986x1304)107	"	61	1091	44	86	FUS	34	DI	19	3.5	3	3+	3+	4	4+	4	4	5	50L	3.86
	(5986x6000)107	"	68	1213	52	84	SU	32	ID	21	3.8	4-	4-	4-	4	4-	4-	4	4	40M	3.81
	(1302x5986)1383	"	61	1090	18	88	FU	49	I	20	3.4	4+	4+	4	4	4	4	5	4	35V	4.30 (4)
	(5931x1302)1383	"	59	1042	17	81	USF	38	G	21	3.7	5-	4+	4+	4+	4-	4	4	5	40V	4.28
	(1302x1391)1383	"	66	1176	16	85	SUF	51	I	20	3.6	4+	4	4-	5-	5-	4	5-	5	30L	4.38 (1)
	(6000x5986)1383	"	66	1176	21	85	SU	42	I	21	3.6	4	4-	4	4	4	4-	4+	5	30L	4.08
	(5931x5986)1383	"	55	977	16	83	SU	44	IG	22	3.5	4	4	4	4	4+	4	4+	4	20L	4.16
	(5931x6000)1383	"	67	1189	34	85	SF	40	ID	20	3.7	3+	4-	4-	4+	4+	4-	5-	5	60L	4.08
	(5931x1304)1383	"	59	1054	34	89	US	38	D	17	3.6	4-	4-	3+	4+	4+	4-	5-	5	50M	4.08
	(5986x6000)1394	"	68	1219	17	88	S	47	GI	23	3.6	4+	4	4	4	3+	4-	4	4	40M	3.91
	(5931x6000)1394	"	77	1378	33	90	SF	47	GI	21	3.5	4	4	4	4-	3+	4	4+	4	30L	3.91
	(1302x9541)1394	"	78	1396	38	88	SFU	45	GD	21	3.7	4-	4-	4-	4	4-	4	4+	5	50M	4.01
	(1305x1391)1394	"	78	1384	34	92	US	43	ID	21	3.5	4	4	4	4	3+	4+	5	5	40L	4.20
	(9541x5986)1394	"	79	1402	21	87	SUC	59	I	20	3.4	4+	4	4+	4	4+	4	5	4	30M	4.23
	(5986x1302)1394	"	56	1000	18	67	FS	52	I	22	3.4	4+	4	4	4	4	4	5-	5	60M	4.25
	(5986x1391)1302	"	74	1317	15	80	FSU	58	I	20	3.6	4	4+	4+	5-	4	4	4+	4	70M	4.20
	(5986x872)1302	"	68	1204	22	87	FU	52	DG	19	3.6	4	4-	4-	4-	5-	4	4+	4	35L	4.05
	(8549x5986)1302	"	53	952	11	80	FS	41	GD	20	3.5	4-	4	4-	5-	4+	4	4+	4	40L	4.15
E	(6000x5986)1302	"	66	1173	15	93	SFU	42	G	23	3.5	5-	4	4+	4+	5-	4	4+	4	30M	4.28
	(6000x1383)5986	"	61	1091	47	83	FSU	24	G	22	3.9	4+	4+	4+	4+	4+	4	4+	5	20V	4.35 (2)
E	(6000x1391)5986	"	64	1148	20	85	SF	40	G	22	3.5	4-	4-	4-	5-	4+	4+	5-	4	22L	4.17
	(1302x1383)5986	"	53	952	19	86	FUS	30	GI	23	3.4	4+	4+	4	4	4+	4	5	4	40L	4.28
	(9541x1302)5986	"	86	1530	28	95	UFS	46	DG	19	3.6	4-	4-	4-	5-	4-	4-	5-	5	30L	4.11
	(5931x1302)5986	"	57	1012	33	84	FS	26	G	22	3.6	4+	4+	4+	5-	4	4	4	5	50L	4.32 (3)
	(1302x1390)1391	"	51	911	26	83	FSU	34	DI	14	3.6	4+	4-	4-	4-	4+	4	4+	4	22L	4.11

CARROT ADAPTATION VARIETY TRIAL - 1978 - PACKAGING TYPES

Variety	Source	Mkb.Yield t/ha	Mkb.Yield bu/acre	% Oversize	% Mkble	Type of Cull	Stand/meter	Type	Av.length	Av.width	Uniform. Shape	Uniform. Size	Smooth	Resistance to Greening	Color Interior	Color Exterior	Core Size	Rusty Root	Horiz.lesions % roots affected Degree	Score
(5986x1413)1391	MSU	55	969	28	78	SCF	36	GD	19	3.4	4-	4-	4-	4	4+	4-	5-	4	40L	3.97
(5986x9541)1391	"	65	1164	40	82	SF	36	D	20	3.7	4+	4-	3+	4+	4	4-	4+	4	50M	3.95
(5931x1302)1391	"	60	1064	36	83	FS	34	DG	18	3.6	4-	4-	4-	4-	4+	4-	5-	5	90L	4.06
(1302x1304)1391	"	84	1499	32	96	S	45	DG	20	3.8	4-	4-	4-	4+	4+	4	5-	5	10V	4.17
(5986x1304)1391	"	65	1164	34	87	SF	39	D	18	3.6	3+	4-	3+	4+	4	4	4	5	30L	3.95
(6000x1302)1391	"	66	1179	20	89	US	46	GD	18	3.3	3+	3+	3+	4	4	4-	5-	5	20M	3.91
(5931x6000)1391	"	71	1271	17	85	FUS	52	G	20	3.3	4	4	4+	4+	4	4	4+	5	50L	4.23
(6000x1383)1391	"	76	1347	16	89	S	50	GD	19	3.7	4	4-	4-	4+	4	4	4+	4	20V	4.00
(6000x5986)1391	"	58	1027	14	82	SFU	48	DG	19	3.4	4-	4-	3+	4+	4-	4	5-	4	40L	3.98
(1302x1304)5986	"	55	974	6	81	UFC	59	G	21	3.5	4+	4	4	4-	3+	4	4	4	15L	3.95
(1302x1391)5986	"	56	1000	2	82	UF	71	G	20	3.1	4+	4	4	4-	4-	4	4+	4	15L	4.03
(1302x6000)5986	"	48	859	7	77	CUF	50	IG	23	3.4	4+	4+	4	4	4-	4	4+	4	20L	4.16

Notes:

For data interpretation, see Main Variety Trial, Packaging types.
The named cultivars,and those requested, were replicated two times. All others are non-replicated.
Horizontal lesions: V-Very lightly affected L=Lightly M=Medium H=Heavy

Some of the outstanding cultivars were:

	Lgth & Width			Score	t/ha	b/a
Exp.Hyb.W226/74 (Cro)	22	x	3.4	4.30	72	1274
Hyb. 6K16 (Har)	21	x	3.7	4.08	80	1426
(1302x5986)107 (MSU)	21	x	3.7	4.17	82	1460
(6000x1391)107 (MSU)	22	x	3.7	4.16	76	1347
Hyb. 6K14 (Har)	20	x	3.5	4.35	85	1509
Cutlass (DES)	22	x	3.4	4.06	71	1262
(6000x5986)1302 (MSU)	23	x	3.5	4.28	66	1173
(6000x1391)5986 (MSU)	22	x	3.5	4.17	64	1148

check color - explain 4+ to 3-
1/2 score
3 yield
H.L.
(4)

CARROT ADAPTATION TRIAL - 1978 - PROCESSING TYPES

Variety	Source	Mkb. t/ha	% Mkble	Type of Culls	Stand/meter	Type	Roots: Length	Roots: Width	Uniformity	Smooth	Crown Shape	Core size	Color: Green Shoulder	Color: Exterior	Color: Cortex	Color: Camb Zone	Color: Core	Color: Uniformity	Score	% Horiz.Lesions Degree	Weight/root
Flacoro Hyb.5	Sto	70	76	US	19	DN	22	5.5	4-	3+	4-	3+	4-	4-	4-	4	3+	4-	3.22	70L	219
Flaboro Hyb.1	"	73	77	FU	17	D	19	5.8	4	4-	4-	4-	3+	4-	4	4	4-	4-	3.76	30M	259
Flacoro Hyb.2	"	67	73	UF	18	LD	20	5.5	4-	4-	4-	4-	4-	4-	4-	4	3+	4-	3.65	40L	224
Flacoro Hyb.3	"	62	69	UF	17	D	22	5.3	4-	4-	3+	4-	3+	4-	4-	4-	3+	4-	3.59	30L	215
Flacoro Hyb.4	"	87	78	UF	21	LD	23	5.5	4	4	3+	3	4-	4-	3+	4-	3-	3+	3.45	15V	246
Flacoro Hyb.6	"	64	73	UF	19	D	21	5.4	4-	4-	4-	4	4-	4-	3+	3-	3+	3+	3.63	50L	207
XP506	Asg	53	62	SU	14	LN	19	4.8	4+	4+	4	4+	3-	4-	4	3-	3	4-	3.77	40L	233
XP528	"	96	82	S	19	D	19	6.2	4+	4	4-	3	3+	4-	4-	4-	4+	4-	3.74	50M	300
XP504	"	21	38	S	5	LN	25	4.7	4	4-	4	4-	3	4-	4+	4	4+	4	3.87	20V	282
XP541	"	26	46	US	8	LN	22	4.1	4	3+	4+	4-	3+	4-	4-	4	4	4-	3.77	10L	190
XP653	"	51	52	US	12	LD	25	5.1	4	4-	4	4+	4-	4-	4+	4	4	4	3.97	30M	266
Exp.Hyb. W3577	Cro	72	82	US	23	D	19	5.5	3+	4-	3+	4	4	4-	4	4	4-	4	3.77	30L	184
Exp.Hyb. W88'77	"	73	74	US	18	D	21	5.8	4	4-	4-	4	4	4	4	4	4-	4-	3.88	70L	241
Exp.Hyb.W110'77	"	63	71	UF	16	LD	21	5.3	4	4-	4	4-	4	4-	4-	4	4-	4-	3.82	30M	236
Exp.Hyb.W142'77	"	73	73	US	20	D	19	5.7	4-	4-	3+	4	4	4	4+	4	4	4	3.90	30L	217
Exp.Hyb.W161'77	"	44	51	US	13	ND	20	5.0	4-	4	3+	4-	4-	4-	4-	4	4-	4-	3.72	20M	202
Exp.Hyb.W109'75	"	51	58	US	14	LN	21	4.8	4	4-	4	4+	4-	4	4	3+	4-	4-	3.44	50M	219
Exp.Hyb.H152'76	"	65	76	USF	20	DI	21	5.4	4	4-	4-	4	4	4-	4	4+	4-	4	3.91	50M	193
13C-X72 Chant.Hyb. FM		62	56	SF	14	D	17	6.0	4-	3+	3	4-	3+	4	4-	4	4-	4-	3.61	30L	276
13C-X73 " " "		67	73	S	15	DC	17	6.2	4	4	3+	4	3+	4-	4-	4	4-	4-	3.74	60M	274
13C-X75 Danvers" "		42	55	S	7	D	18	6.5	4+	4-	3	4-	4	4	4-	4	4-	4-	3.78	30M	388
13C-X78 " " "		55	76	SU	15	D	19	5.7	4-	4-	3+	4+	4-	4-	4+	4	4-	4	3.84	60M	218
Sp. Bonus	Key	67	78	US	17	D	21	5.8	4	4-	4-	4-	4-	4-	4-	4	4-	4-	3.76	40V	237
Danvers 126	"	94	88	US	25	D	19	5.7	3+	3+	4-	3-	4-	3+	4-	4-	4-	4-	3.48	35L	230
PWX 2675	PW	53	71	US	13	D	19	5.8	4-	4-	4-	4-	4-	4	3+	3	3-	3	3.45	90M	249
PWX 2775	"	41	50	SU	11	D	19	5.5	3+	3+	4	4-	4-	4-	4-	4-	3+	3+	3.57	30L	220
PWR11877	"	100	84	US	24	DN	17	6.1	4-	4-	4-	3+	4-	4-	4-	4	3+	3+	3.61	10L	248

CARROT ADAPTATION TRIAL - 1978 - PROCESSING TYPES

Variety	Source	Mkb. t/ha	% Mkble	Type of Culls	Stand/meter	Type	Roots: Length (cm)	Roots: Width (cm)	Uniformity	Smooth	Crown Shape	Core Size	Color: Green Shoulder	Color: Exterior	Color: Cortex	Color: Camb Zone	Color: Core	Color: Uniformity	Score	% Horiz. Lesions Degree	Weight/root
Asteca 170	PW	65	75	SU	19	DN	18	5.6	4-	4	3+	3+	4-	4	4-	4	4-	4-	3.71	35L	203
Montezuma 175	"	60	64	SU	14	D	18	5.9	4-	4-	4-	4	4-	4-	4-	3+	3	3+	3.59	27L	259
Sp.Bonus 100	"	56	69	SU	15	D	18	5.7	4	4-	4-	4-	4-	4	4	4-	4-	4	3.82	35L	228
Farba-78	DP	52	72	FU	14	DI	22	5.1	3+	3	4	3+	3+	4-	4	4	4	4-	3.63	67M	232
Rosal	"	64	59	US	15	LN	22	5.2	4-	3+	4-	4-	3+	4	4-	4-	3	3+	3.55	55L	253
DP44	"	52	59	US	14	LN	18	4.9	5-	4-	4-	4	3+	4-	4-	4-	3+	3+	3.71	20L	216
#76644	R.S1	77	75	US	16	LD	23	5.3	4-	3	4	3	3	3+	3+	3+	3+	3	3.29	60M	288
RS75202 F1	"	64	73	UF	16	ND	20	5.5	4-	3+	4-	4	4-	4-	4-	4	4-	4	3.75	30M	234
RS74325 F1	"	80	79	--	19	DN	21	5.4	4	4+	4	4-	4-	4	4-	4	3+	4-	3.84	30L	254
RS75200 F1	"	85	84	US	18	LN	21	6.0	4-	3+	4-	3+	3+	4-	4-	4	3+	4-	3.57	50L	288
RS71337 F1	"	67	83	US	18	ND	21	5.7	4-	4	4-	4	3+	4-	4	4	4-	4-	3.78	10V	224
Giganta Original	ARZ	114	90	UF	16	LD	27	5.9	4	4-	4+	2-	2+	4	3+	3+	3+	3+	3.53	40L	437
Karaf Impr.Flakkeer	"	49	68	FU	14	D	19	5.3	3-	3+	4	3	3+	4-	4-	4-	4	4-	3.51	60M	214
Karotan	RZ	49	72	FU	13	ID	21	5.3	3+	3	4-	4-	4-	4-	4+	4	4+	4	3.75	75H	231
Flakkeese	"	57	65	US	15	LN	20	5.2	3	3+	4-	3+	3+	4-	4-	4	4-	4-	3.49	75M	231
SDC764(2)1976	C.S	84	87	US	21	D	18	5.8	4	4	3+	4-	4-	4	4	4	4	4	3.87	30M	235
Lucky's Gold	WSU	56	75	SU	20	DN	16	5.7	4-	4-	3+	4+	4-	4-	4	4	4	4	3.80	50L	167
Royal Cross	Tak	37	29	SR	8	DC	16	6.3	3+	3+	3	3+	3+	4	3+	4-	3+	3+	3.31	56M	282
Coral Cross	"	61	61	SF	14	DN	16	6.1	4-	4-	3	4-	3	4	3+	4-	3	3	3.61	55M	263
F.1. 4977	"	66	64	US	16	N	18	5.5	4	4	4-	4-	3+	4	4-	4-	4	4-	3.74	80M	249
Colora	BEJO	38	45	US	11	LN	22	4.6	4	3+	4-	4+	3-	4	4	4-	4	4	3.80	22L	207
No. 2	G&S	61	63	FU	16	D	20	5.0	3	3-	4	3	3-	3+	3+	4-	3	3	3.17	40L	234
No.3	"	19	29	US	5	LN	19	4.7	3+	2+	3	4+	2-	3+	3+	4	3	3	3.12	20V	212
(1302x872)9541 (Lot 77W142)	MSU	95	91	US	18	LD	20	6.1	4+	4	4-	4-	4-	4-	4	4	4	4	3.91	20M	316

CARROT ADAPTATION TRIAL - 1978 - PROCESSING TYPES

Variety	Source	Mkb. t/ha	% Mkble	Type of Culls	Stand/nmeter	Type	Roots: Length (cm)	Roots: Width (cm)	Uniformity	Smooth	Crown Shape	Core Size	Color: Green Shoulder	Color: Exterior	Color: Cortex	Color: Camb Zone	Color: Core	Color: Uniformity	Score	% Horiz.Lesions Degree	Weight/root
(1302x872)9541	MSU	67	77	US	19	D	19	5.4	4	4-	4-	4	4-	4-	4	4	4+	4	3.91	30M	212
(6000x872)9541	"	51	66	USF	21	D	18	5.1	4-	3+	3+	4-	4	4	4-	4	3+	4-	3.70	40L	147
(9555x1303)9541	"	73	76	USF	23	D	18	5.3	4-	4	3+	4	4-	4-	4	4	4	4	3.84	20L	194
(872x1302)9541	"	60	79	SF	14	D	18	5.8	4	4-	3	3+	4-	4	4	4	4-	4-	3.71	60V	279
(872x1303)9541	"	76	86	UF	27	D	15	5.3	3+	4-	3+	4-	4	4	4	4-	4	4	3.77	40M	172
(872x6000)9541	"	56	70	UFS	19	D	18	5.5	4	3+	3+	4	4-	4	4-	4	3+	3+	3.61	17L	189
(6000x872)9541	"	76	85	US	20	D	19	5.5	4-	3+	4-	4+	4	4-	4-	4-	3+	4-	3.71	50V	226
(1302x9541)5988	"	63	63	US	21	DN	19	4.9	4-	4+	3+	4	4-	4	4	4-	4	4-	3.86	30L	185
(1302x1304)5988	"	61	64	US	18	DN	20	5.1	4	4	3+	4+	4	4	4-	4-	4-	4-	3.82	10V	209
(872x5986)5988	"	51	81	SU	16	ND	21	5.0	4	4-	3+	4+	3+	4-	4-	4	4-	4-	3.75	27L	186
(1305x1391)5988	"	73	65	US	22	LN	20	5.5	4-	4-	3+	4	4-	4-	4	4-	4	4-	3.75	70L	197
(6000x9541)5988	"	86	81	SU	26	ND	20	5.6	3+	4-	3+	4	4-	4-	4-	4-	4-	4	3.68	30V	202
(9541x5986)5988	"	74	83	SU	18	LD	22	5.6	3+	3+	4-	4	3+	4-	4-	4-	4-	4-	3.61	50V	252
(1302x872)5988	"	59	69	SU	19	LD	21	5.3	4-	4-	4-	4	4-	4	4-	4-	4-	4-	3.72	30V	189
(1302x1304)5988	"	69	71	US	19	DN	21	5.4	3+	4-	3+	4	4	4	4+	4	4	4	3.86	30L	224
(6000x1302)5988	"	55	57	UF	15	LN	21	5.3	4	4-	3+	4	4-	4	3+	3	4-	3+	3.60	50L	219
(9541x1322)872	"	70	77	UF	21	D	20	5.7	4-	4	3+	4	4-	4-	4-	4	4-	4-	3.76	35L	200
(5931x6000)872	"	61	68	SU	18	DI	23	5.4	4-	4	4	4	--	4-	4	4+	4	4	3.96	50L	208
Regulus II	WW	63	75	SUF	17	D	20	5.6	3+	3+	3+	3-	3-	4-	3	4	3	3	3.19	45L	223
Can-Pak	Des	62	69	US	17	LD	23	5.0	4	4-	4-	4	4	4	3+	4	4-	3+	3.77	45L	222
Hi-Dan	"	57	64	US	14	LD	28	5.6	3+	4-	4-	4-	3+	4	3+	3+	4-	4-	3.57	63M	240

CARROT ADAPTATION TRIAL - 1978 - PROCESSING TYPES

Variety	Source	Mkb. t/ha	% Mkble	Type of Culls	Stand/meter	Type	Roots: Length (cm)	Roots: Width (cm)	Uniformity	Smooth	Crown Shape	Core Size	Color: Green Shoulder	Color: Exterior	Color: Cortex	Color: Camb Zone	Color: Core	Color: Uniformity	Score	% Horiz.Lesions Degree	Weight/root
Cultivars grown in packaging trial and judged as processing types.																					
XP402L	Asg	57	67	SU	19	DC	14	5.9	4-	3+	3	3	3+	4-	3+	4	3+	3+	3.39	60M	183
XP402	"	49	59	SUF	16	C	13	5.1	3+	3+	3+	3	4-	4-	3	4	3-	3	3.30	80M	179
Hyb.Touche	Des	54	66	USF	23	D	17	5.1	4-	3+	3	4	4-	4-	4-	4-	3+	3+	3.54	20M	144
Hyb.EN13	Har	49	68	US	16	N	18	5.2	4+	4+	3+	3+	4-	4	4-	4	3	3+	3.69	60L	179
Exp. 477	NK	66	73	US	17	LD	23	4.8	4-	3+	3+	3+	4	4	3+	4	3	3+	3.52	80M	230
Exp.476	"	62	68	US	15	LD	23	5.2	4	4	4-	3	4	4-	3+	4	3+	3+	3.63	70M	245
Exp.474	"	73	78	US	25	D	19	5.1	4	3+	3+	4-	4	4	4+	4+	4+	4	3.92	40L	178
Exp.451	"	53	61	US	20	DN	17	4.8	4-	4-	3	3+	4	4-	4-	4	4-	4-	3.65	30L	158
PWR 3577	PW	69	77	SU	21	ND	17	5.5	4	4-	3	3	4-	4-	3+	4	3+	3+	3.60	60M	199
NCX 6022	Nia	41	59	S	8	I	28	5.6	4+	4-	4	3	4	4	4+	4	4	4	3.93	40L	303
(872x9541)107	MSU	73	80	US	26	D	19	4.6	4	3+	4-	3+	4-	4+	4+	4	4	4	3.86	80M	170

Hyb 457 NK now called Bonanza : N. cyl. 10" x 1¼-1½ Blunt. Smooth Some green shoulder color good

462 B NK ✓ ✓ TAHOE : Tapered D 9 x 2¼-2½ ✓ ✓ . color uniform no gre- shoulder Int, color excelent

Notes:

Only named cultivars and the numbered ones requested were replicated twice.

Rusty Root resistance is not shown as very little was found. Only Karaf Impr. Flakkeer, XP402L, XP402 and No.2 (G&S) were lightly affected.

5=most desirable 1=least desirable 56t/ha = 1000 b/a = 25 T/A

25 plants/m = 8 plants/foot 20 cm = 8 inches

Horizontal Lesions: 20V means that 20% of the roots had very few small lesions L=Lightly affected M=Med and H=Heavily affected

For any further data interpretation, see Main Trial - Processing Types.

In order of Maturity - earliness

EARLY CAULIFLOWER MAIN VARIETY TRIAL - 1978

Variety	Source	Mean Harvest Date	% Harv'd in 2 best days	% Unmkble	Mkb. Yield Crates/hectare	Mkb. Yield Crates/acre	% Good Color	% Ricey	% Bracted	% Loose	Curd Protection	Curd Discoloration	% Buttons
Early Abundance	Sto	Jul.14	97	3	2644	1070	88	3	6	2	1.88	1.94	-
Extra Early Snowball	Sto	Jul.14	90	0	2556	1034	95	2	2	0	2.13	2.33	-
Snow Crown (purple disc underside)	Tak	Jul.14	76	2	2643	1070	94	2	0	3	1.99	2.58	-
Super Snowball	Sto	Jul.16	92	8	2340	947	78	34	17	0	1.97	2.47	-
Alert	O.E.	Jul.16	67	5	2340	947	77	7	16	9	2.19	2.44	4
Idol	Sto	Jul.20	56	10	2296	929	64	7	8	25	2.88	2.19	-
Early Dominant	Ves	Jul.21	54	16	2210	894	52	16	13	13	2.30	2.66	-
Delta	VDB.	Jul.21	65	24	1820	737	63	58	31	13	2.44	1.60	-
Imperial 10-6	Har	Jul.24	78	19	2253	912	95	17	25	19	2.40	1.98	-
Dominant	Ves	Jul.31	42	5	2470	1000	85	12	2	17	2.77	1.80	-

EXPLAIN

Buttons

Notes:
Listed in order of maturity

Main trial, 10 varieties, replicated 3 times.
Adaptation trial, 45 varieties
Seeded: April 20 in greenhouse, transplanted to field May 24. Spacing 57 cm x 43 cm (23" x 17"). or 2ft x 1½ft
Part of each plot not tied to judge for natural curd protection and curd discoloration only.
5=most desirable 1=least desirable.

Best Early varieties in Main Trial

1. Extra Early Snowball, July 14 2556 cr/ha 95% good color 2% ricey
   Fair curd protection, good once over harvest
2. Snow Crown July 14 2643 cr/ha 94% good color 2% ricey
   Fair once over harvest
3. Early Abundance July 14 2644 cr/ha 88% good color 3% ricey
   Poor curd protection, good once over harvest
4. Alert July 16 2344 cr/ha 77% good color 7% ricey
   Fair once over harvest

in order of earliness

EARLY CAULIFLOWER ADAPTATION TRIAL - 1978

Variety	Source	Mean Harvest Date	% Harvested in 2 days	% Unmkble	Mkb. Yield: Crates/ hectare	Mkb. Yield: Crates/ acre	% Good Color	% Ricey	% Bracted	% Loose	Curd Protection	Curd Discoloration	% Buttons
White Contessa (very early)	Sak	Jun.26	39	57	1300	526	74	100	0	4	1.0	-	44
Snow Queen	Tak	Jun.26	33	57	1170	473	--	86	0	24	1.0	-	38
Tropical Snow 55	Sak	Jul.4	--	100	0	0	--	100	0	0	1.0	2.0	23
Snow King	Tak	Jul.10	100	21	1430	579	64	18	0	14	1.0	2.0	??
Merano	R.S1.	Jul.14	85	5	2470	1000	65	0	5	0	2.7	1.7	0
Snow Crown	Har	Jul.14	84	0	2470	1000	95	5	0	0	2.5	1.7	0
Opaal	R.Z.	Jul.14	79	5	2340	947	89	5	0	5	3.0	3.3	0
Sparto	S&G	Jul.17	84	0	2470	1000	74	21	42	11	2.7	2.0	0
Maston	O.E.	Jul.17	81	9.5	2470	1000	86	0	43	9	2.2	1.5	0
Snowball Alpha	S&G	Jul.17	66	0	2340	947	67	17	67	17	2.2	1.6	0
Primeur "A"	G.B.	Jul.17	55	10	2340	947	90	15	0	10	2.0	1.5	0
Alpha Fortados R.S.	R.S1.	Jul.19	67	0	2730	1105	71	14	24	0	2.5	2.2	0
R.S. 351	R.S1.	Jul.19	60	0	2600	1052	60	10	0	0	2.3	1.3	0
Marva	BEJO	Jul.21	78	0	2665	1079	83	10	15	5	2.2	1.9	0
Raket	S&G	Jul.21	75	3	2015	815	84	16	19	9	2.2	2.3	0
Paloma	R.S1.	Jul.21	73	0	1950	789	53	7	27	20	2.0	2.3	0
Tornado	S&G	Jul.21	72	0	2340	947	67	0	11	0	2.7	2.3	0
Alpha Veralto R.S.	R.S1.	Jul.21	56	8	2145	868	78	14	47	6	2.0	1.7	0
Delta Early	VDB	Jul.21	56	11	2080	842	67	33	28	11	2.8	2.2	0
Type 338 BRZ	R.Z.	Jul.24	72	6	2210	894	100	22	6	0	2.7	2.7	0
Romax	A.R.Z.	Jul.24	70	0	2600	1052	75	5	0	0	1.3	2.3	0
Selsto	Hui...	Jul.24	62	24	2080	842	43	76	19	29	1.7	1.7	0
Snowball 87	S&G	Jul.24	33	22	1820	737	78	19	8	19	2.4	2.0	0
Junal	D.P..	Jul.26	72	17	1950	789	78	78	6	17	2.6	2.4	0

EARLY CAULIFLOWER ADAPTATION TRIAL - 1978

later cultivars 2 weeks behind

Variety	Source	Mean Harvest Date	% Harvested in 2 days	% Unmkble	Mkb. Yield: Crates/ hectare	Mkb. Yield: Crates/ acre	% Good Color	% Ricey	% Bracted	% Loose	Curd Protection	Curd Discoloration	% Buttons
Type 598 R.Z.	$R.Z_W$	Jul.26	64	0	2860	1157	100	9	4	0	3.0	3.0	0
Pioneer	A.R.Z.	Jul.26	64	4.5	2730	1105	91	73	27	4	2.2	2.4	0
Formana	BEJO	Jul.26	63	0	2470	1000	95	47	0	11	1.7	2.0	0
Snowflower	Asg	Jul.26	55	15	1820	737	85	36	30	42	2.4	1.3	0
Olympus PC74109	Asg	Jul.26	53	16	2080	842	84	37	26	11	2.7	1.5	0
Nitan	O.E.	Jul.26	50	5	2470	1000	50	15	20	35	2.2	2.8	0
Kassa	VDB.	Jul.26	50	40	1560	631	65	70	45	30	2.4	1.6	0
R.S. 355	R.S1	Jul.26	47	7	1820	737	87	7	13	0	2.2	1.8	0
Snow Diana	Sto	Jul.26	39	22	2080	842	49	17	15	17	3.0	1.4	0
Super Junior	Sto	Jul.26	35	60	1040	421	75	40	70	50	2.4	1.8	0
Perfected Snowball	Sto	Jul.26	31	56	910	368	75	37	56	69	1.5	2.0	0
Focus	S&G	Jul.28	47	0	2210	894	100	0	6	18	2.3	2.2	0
SG 105	S&G	Jul.31	70	0	2600	1052	100	0	0	5	3.0	3.3	0
Whitehorse	Sto	Jul.31	67	23	1495	605	66	73	20	13	2.6	1.2	0
Dok Elgon	R.S1	Jul.31	63	0	2470	1000	92	13	0	0	2.5	3.5	0
Alpha Hormade	AR.Z	Jul.31	63	5	2340	947	100	0	0	0	3.0	3.4	0
Oze-White Top	S&G	Aug.8	65	3	2340	947	97	5	0	8	2.9	3.2	0
Type 165 RZ	R.Z.	Aug.11	72	0	2340	947	100	11	0	0	3.0	3.5	0
Talbion	Ro.B.	Sep.5	72	0	1625	658	68	8	0	0	4.0	1.5	0
Summer White #5	Sak	100 % buttons											
White Baron #8	Sak	100 % buttons											

STOVEPIPE type

Notes;
Listed in order of maturity
For interpretation of data, see main trial

in order of Ave yield
Mention water table kept at 50cm (20")

TRANSPLANTED CELERY VARIETY TRIAL - 1978

Variety	Source	Mkble. Yield: Early Harv t/ha	Mkble. Yield: Average t/ha	Mkble. Yield: Average T/Acre	% Trim loss	Petiole lgth (cm)	Stalk Width (cm)	Total length (cm)	Internal Sucker growth	Crispness	Stringyness	Compactness	Boron Deficiency	Yellow Leaves	Score	Seeders
Florida 683	Key	97.1	141.9	63.4	21	29	9.2	63	3.5	4.0	4.2	4.0	5.0	3.9	4.1	0
Green Giant	Tak	100.6	140.7	62.8	30	28	8.9	62	3.8	4.1	3.9	3.7	5.0	3.5	4.0	0
Florida 683 (K Strain)	Key	109.9	138.4	61.8	21	25	8.9	61	3.4	4.0	3.4	3.8	4.3	3.7	3.8	0
Calmario	Nia	91.2	137.2	61.3	24	26	8.3	62	3.4	4.1	3.3	4.1	4.6	3.7	3.9	0
Surepak	F.M	95.9	136.6	61.0	30	33	8.1	69	3.8	4.2	3.6	4.4	3.9	4.5	4.1	0
52-70 Strain 214	Key	100.6	133.3	59.5	25	30	8.7	64	4.1	4.2	3.6	4.0	4.4	3.8	4.0	0
Tendercrisp	F.M	97.1	130.8	58.4	24	28	8.5	62	3.6	4.1	3.8	3.3	3.0	4.1	3.6	0
Florida 213	Key	94.2	130.8	58.4	39	28	8.3	60	3.5	4.0	4.2	4.0	4.7	4.1	4.1	0
Junebelle	"	92.4	129.8	58.0	29	27	8.5	60	3.8	3.9	3.4	4.0	4.9	3.1	3.8	0
52-70 HK	"	95.9	128.5	57.3	28	26	8.3	60	3.7	4.0	3.5	3.5	4.2	3.0	3.6	0
Clean Cut	Har	77.2	126.9	56.7	26	31	8.3	67	4.0	4.2	3.9	4.1	4.0	4.0	4.0	0
Improved 52-70	Sto	87.7	126.5	56.5	30	30	8.7	62	4.1	4.1	3.5	4.0	4.3	3.7	3.9	0
Tall Utah	S&G	92.4	124.7	55.7	29	29	8.6	64	3.3	4.1	3.6	3.7	3.6	3.6	3.6	0
Florimart 19	Key	92.4	121.1	54.0	25	27	9.0	55	3.8	3.8	3.3	3.4	2.6	4.6	3.6	0
Tendercrisp	F.M	92.4	120.1	53.6	23	31	8.9	64	3.8	4.1	3.7	3.4	3.6	4.7	3.9	0
Transgreen	"	83.0	120.1	53.6	31	27	8.3	61	4.0	4.2	3.8	3.7	5.0	2.9	3.9	0
Floragreen(XP74)	Asg	66.7	119.3	53.3	25	30	7.6	63	4.3	4.0	3.3	4.0	4.4	3.6	3.9	0
Processed Tall	Key	88.9	118.5	52.9	30	29	8.0	65	3.9	4.1	3.6	4.0	2.8	4.1	3.7	10
Florimart	Sto	81.9	114.6	51.2	27	26	8.3	65	4.2	3.9	3.4	3.6	2.2	4.2	3.6	0
XP458	Asg	72.5	113.8	50.8	27	29	7.6	65	4.3	4.0	4.3	3.3	4.9	3.3	4.0	33
XP536	"	75.4	113.3	50.6	29	28	8.0	63	4.7	4.1	3.4	3.0	4.6	3.2	3.8	0
XP452	"	71.3	109.5	48.9	31	28	7.3	62	4.1	3.9	3.2	3.8	5.0	3.4	3.9	0
XP152	"	78.4	108.6	48.5	36	30	7.1	64	4.2	4.1	3.3	3.3	4.6	3.7	3.9	17
XP455	"	53.8	99.4	44.4	36	28	7.1	58	4.3	4.0	3.6	3.3	2.6	3.3	3.5	0

July 20

683 good

looks good

52-70 good

good

52-70

good

early

good

Chips??

Jack??

TRANSPLANTED CELERY VARIETY TRIAL - 1978

Notes:
Varieties listed in order of Average Yield

Seeded: March 13. Transplanted to flats April 18 and to field May 9.
Spacing 57 cm x 15 cm (23" x 6"), replicated 3 times,
Harvest dates: July 20 (see early harvest t/ha), July 27, August 9
Petiole length: 30 cm = 12" Stalk width: 9 cm = 3.5" Total length: 60 cm = 24"
Yellow leaves: the degree of loss of green color on the outer leaves as the plant grows older.
Boron deficiency: 5.0 is no sign of catscratches at any time
1.0 is very undesirable

Some of the outstanding varieties were: early as well as late

Cultivar	t/ha	% trim loss	Boron deficiency	% seeders	Score
Florida 683 (Key)	142	21	5.0	0	4.1
Green Giant (Tak)	141	30	5.0	0	4.0
52-70 Str.214 (Key)	133	25	4.4	0	4.1
Calmario (Nia)	137	24	4.6	0	3.9
Surepak (F.M.)	137	30	3.9	0	4.1
Cleancut (Har)	127	26	4.0	0	4.0
Florida 213 (Key)	131	39	4.7	0	4.1

no order of listing discuss:

LETTUCE VARIETY TRIALS - 1978 - BUTTERHEAD TYPES

Variety	Source	Trial	Days to Harvest	Wt/head grams	Diameter (cm)	Color (5)	Firmness (4)	% Tipburn (1)	Bottom Rot (2)	Leaf Crispness	% Seeders (3)	Sucker growth	Acceptability	Notes
Big Boston	Agw	E	55	408	11.6	G	3.9	50	3.9	S	0	--	--	
		M						0	5.0		50		3	
		L	57	368	12.3	G	4.0	30	3.4	M	0	3	-	
XP451	Asg	E	56	551	12.0	LG	4.4	90	3.4	S	0	--	--	Red tinged leaves
		M											2	
		L	60	450	13.0	LG	2.0	40	2.9	S	0	3.8		
XP412	Asg	E	51	163	5.9	VDG	3.7	5	4.0	S	55	--	--	Very light weight
		M												
		L									100			
Summer Queen	Asg	E	53	420	12.1	G	4.3	0	4.0	S	0	--	--	
		M				LG	4.0	0	4.0		5		2	Edges of leaves yellowish
		L	57	400	12.3	G	3.7	0	3.7	M	0	3.5		
Brasil 48	Asg	E	53	343	12.0	LG	3.5	0	5.0	S	0			
		M				LG	2.0						3	
		L	57	405	12.0	LG	4.0	10	4.2	MS	10	3.5		Going to seed
E Citation	Asg	E	55	630	13.8	VDG	5.0	0	4.7	M	0			High marks
very nice, but!!		M											2	Large leaves, brittle
		L	57	478	13.4	VDG	4.7	0	4.7	M	0	4.7		Not pure Butterhead type
Tania	Har	E	54	382	11.8	DG	3.5	80	4.3	S	0			
		M				VDG	4.3	0	4.0		0		4.3	
E very nice, but!!		L	57	423	13.9	DG	4.4	90	3.5	MS	0			Very nice
Dark Green Boston	Har.	E	55	403	11.9	G	3.7	60	4.0	S	0			
		M					3.0	0	4.0		70		2	
		L	57	348	12.0	G	3.9	10	3.5	MS	10	2.5		
Daresta	BEJO	E	54	353	12.0	DG	3.7	0	5.0	S	0			
		M					2.0				100		1	
		L		343	11.6	DG	3.5	0	4.0	S	50	5.0		

LETTUCE VARIETY TRIALS - 1978 - BUTTERHEAD TYPES

Variety	Source	Trial	Days to Harvest	Wt/head grams	Diameter (cm)	Color	Firmness	% Tipburn	Bottom Rot	Leaf Crispness	% Seeders	Sucker growth	Acceptability	Notes
Dark Green Boston														
	Key	E	55	361	11.9	G	4.0	80	3.9	S	0			
		M						12			50		2	
		L	57	388	12.3	G	3.7	40	3.7	MS	10	4.5		
Prodo B.H.	Ro.B	E	53	425	12.4	LG	4.0	30	4.5	S	0			
		M					2.0							
		L	54	420	12.8	G	3.7	0	4.4	S	0	5.0		
Hag Edgar	R.S 1	E	53	373	11.2	G	4.2	20	4.0	S	18			
		M									100		1	
		L	53	345	11.8	G	3.2	0	3.9	S	30			
Odeon B.H.	R.S 1.	E	52	205	10.1	DG	2.4	0	3.5	S	40			
		M									100		1	
		L	55	370	13.2	DG	4.3	20	4.0	MS	50	5.0		
Mariska	S&G	E	54	349	11.9	G	3.5	0	4.5	S	0			
		M					2.0				0		2	
		L	57	410	12.5	G	3.9	0	4.2	S	10	4.5		
E Capitan	S&G	E	54	418	12.0	G	4.0	10	4.0	S	0			
	E	M					4.0	0	4.0		0		4	Quite nice
		L	--	420	13.0	G	3.5	10	3.4	S	0	4.4		
Mondrian	S&G	E	54	393	12.7	G	4.2	20	4.0	S	0			
		M				G	2.0	0	4.0		0		3	Soft light color
		L	59	433	13.0	G	4.0	0	2.5	S	0	2.0		
DL145	S&G	E	53	383	12.7	G	4.2	30	4.0	S	0			
	E	M						0	4.0		5		4	
		L	59	375	12.6	G	3.9	0	2.9	S	0	3.5		

LETTUCE VARIETY TRIALS - 1978 - BUTTERHEAD TYPES

Variety	Source	Trial	Days to Harvest	Wt/Head grams	Diameter (cm)	Color	Firmness	% Tipburn	Bottom Rot	Leaf Crispness	% Seeders	Sucker Growth	Acceptability	Notes
America	S&G	E	55	465	12.5	G	4.2	20	4.0	S	0			
		M				G			5.0		5		4	
		L	54	383	12.4	G	3.9	0	3.7	MS	0	5.0		
Kares	R.Zw	E	53	445	12.8	G	4.3	--	5.0	S	0			
		M									1			
		L	57	398	12.7	G	3.2	0	3.2	MS	20	4.3		
Corelli	R.Zw	E	53	425	13.2	G	3.7	10	4.2	S	0			
		M					3.0				5		3	
		L	57	415	12.8	G	5.2	10	3.0	M	20	3.7		
Reskia	R.Zw	E	53	423	12.6	VLG	3.7	50	3.5	S	0			
		M					3.0		3.0		5		3	
		L	59	478	13.2	LG	4.7	40	4.2	S	0	4.9		
Irma	D.P	E	55	478	12.1	LG	3.5	40	3.9	S	0			
		M					2.0				3		2	
		L	55	425	12.9	LG	4.0	40	3.4	S	0	4.0		
Irma 136	D.P	E	53	403	12.2	VLG	4.3	60	5.0	S	0			
		M					2.0				3		3	
		L	57	460	13.9	LG	4.7	30	3.7	S	0	5.0		
Mona	D.P.	E	57	428	12.3	G	3.9	50	4.0	S	20			
		M					2.0				2		2	
		L	57	553	13.8	LG	4.5	10	4.2	MS	30	4.9		
Sanno	D.P.	E	55	450	12.1	DG	4.2	50	3.9	S	0			
		M				G	4.0	0	4.0		5		3	
		L	57	405	12.4	DG	4.3	0	3.5	MS	0	4.0		
Vigar	D.P.	E	59	460	13.4	DG	1.5	100	3.0	S	70			
		M					2.0	0	4.0		5		3	
		L	58	433	13.6	G	3.9	50	3.0	S	0	4.0		

LETTUCE VARIETY TRIALS - 1978 - BUTTERHEAD AND ROMAINE TYPES

Variety	Source	Trial	Days to Harvest	Wt/Head grams	Diameter (cm)	Color	Firmness	% Tipburn	Bottom Rot	Leaf Crispness	% Seeders	Sucker Growth	Acceptability	Notes
R.S.761534	R.Sl	E												
		M							4.0		2		2	Small in size
		L	58	423	13.2	G	4.4	10	3.7	MS	0	4.0		Very nice
Orfeo	R.Sl	E												
		M				LG			4.0		5		2	
		L	58	403	12.6	G	4.5	0	2.9	MS	0	4.5		Very nice
Marion	Pan	E												
		M	Looks nice										4	
		L		377	12.7	VLG	3.5	15	3.5	S	5	4.0		
ROMAINE TYPES														
535 Paris Island Cos	Har	E	61	960	12.4	DG	3.7	5	3.7	C	10			
		M											5	Very good
		L	60	780	14.6	VDG	4.3	0	5.0	C	0			Nice
Cosmo	Key	E	61	995	11.2	VDG	3.5	90	4.5	C	80			
		M											3	Fair, partly seeders
		L	65	1020	12.1	VDG	4.3	5	5.0	C	10			
Barcarolle	S&G	E	60	713	11.7	DG	2.5	80	4.5	C	100			
		M											3	Too small
		L	62	635	13.8	DG	3.2	10	5.0	C	30			
Roli	D.P.	E	59	925	13.8	DG	3.7	70	4.4	C	80			
		M	Very nice, long narrower leaves										5	
		L	59	713	12.3	DG	3.5	10	5.0	C	85			
Paris Island Cos	Agw	L	66	767	11.8	VDG	4.3	0	5.0	C	0			Short, very nice
Blonde Romaine	Asg	E	61	815	11.7	VLG	3.9	60	4.0	M	0			Much sucker growth
		M											2	
		L	66	930	12.8	VLG	3.9	50	3.2	S	0			Very yellow, prone to disease

LETTUCE VARIETY TRIALS - 1978 - ROMAINE TYPES

Variety	Source	Trial	Days to Harvest	Wt/Head grams	Diameter (cm)	Color	Firmness	% Tipburn	Bottom Rot	Leaf Crispness	% Seeders	Sucker Growth	Acceptability	Notes
543 Valmaine Cos	Har	E	61	918	14.2	DG	4.5	0	4.7		0			
		M											5	Very good
		L	66	765	12.2	DG	3.9	0	4.9		0			Very nice, short
Cartan	D.P.	E	61	880	13.5	DG	4.3	70	4.5		5			
		M	Good but small										4	
		L	65	870	12.7	VDG	4.3	5	4.9		2.5			Nice
Black Seeded Simpson	Key	E	55	558		LG		20	5.0					
Prizehead	Key	E	55	565					5.0					Nice decorative, red flamed color
XP438	Asg	No stand												
XP505	Asg	No Heads												

NOTES:

Trial: E - seeded May 26 in muck soil, replicated 3 times
M - seeded June 22 in mineral soil, sandy loam, non replicated
L - seeded July 14 in muck soil, replicated 3 times.

Rows at 40 cm, thinned to 30 cm in the row 5 = most desirable 1 = least desirable
454 grams = 1 pound 2.5 cm = 1 inch
Color: VLG = Very Light Green VDG = Very Dark Green Leaf Crispness: 5=soft, M=Med. C=Crisp
All cultivars showed good resistance to Downy Mildew .
At the mineral soil trial, a mark was given for the overall acceptability

Good Varieties on muck soils, both midsummer and late:

Cultivar	% Tipburn	Wt/head	Firmness	% Seeders	Color
Capitan	10	419	3.9	0	Green
America	10	424	4.1	2	Light green
Citation	0	554	4.8	0	Dark green
Kares	0	422	3.8	7	Green
Corelli	10	420	3.9	8	Green

Best Butterhead type cvs on mineral soils: Capitan, Tania, DL145, America and Mondian

LONG TERM AVERAGES - SUMMARY OF ONION VARIETIES 1969-1978 - TESTED IN OUR TRIALS

In order of Ave yield (check days)

Variety	Source	# of Years	Yield 1978 b/a	LTA Yield t/ha	LTA Yield b/a	LTA Days to Maturity		LTA Firmness	
Summit	Har	3	-	62.6	1114	122	VL	3.30	soft
Gladiator	Key	9	1300	62.0	1104	117	L	3.73	
Bronze Age	F.M.	5	1533	60.5	1076	118	L	3.26	
very good Progress (1956)	Har	3	1523	59.2	1053	112	M	3.80	
Northern Oak	Sto	6	-	58.5	1042	120	VL	3.80	
Sentinel	Har	5	1589	56.7	1009	117	L	4.10	(3)
very good Trapp"s #8	Trp	6	1641	56.6	1008	112	M	4.20	(2) ✓
Ontario M	Asg	3	1328	55.7	992	115	L	3.80	
Exporter	Sto	9	1235	55.3	985	115	L	3.58	soft
Canada Maple	Sto	9	1478	55.0	978	115	L	4.21	(2) ✓
very good Mucker	Des	3	-	54.5	970	114	M	4.00	
Spartan Era	Key	6	-	54.2	965	117	L	4.10	(3)
very good Storage King	Sto	5	1209	53.7	956	113	M	3.74	a little soft
very good Nutmeg	Har	7	1334	53.7	956	111	M	4.28	(1)
Trapp's #6	Trp	8	1401	53.6	955	110	M	3.92	
Rocket	Asg	9	1509	53.5	953	109	E	3.70	
Garnet	Asg	8	1452	53.3	950	109	E	3.55	
Taurus (XP45)	Asg	4	1247	51.9	925	109	E	3.60	
Copper Cache	F.M.	5	1430	51.7	921	113	M	3.76	
Fawn Preview	F.M.	6	1226	50.7	904	110	M	3.93	
Buccaneer	Har	9	1342	50.3	896	110	M	4.01	
Mustang	Har	8	-	49.8	886	110	M	3.90	
Muck Master	Twi	3	-	48.8	868	109	E	4.20	(2) ✓
Golden Laker	F.M.	5	-	47.4	848	112	M	4.00	
Ace Globe	Twi	2	-	47.1	839	109	E	4.00	
Imp. Autumn Spice	Sto	5	910	44.4	790	111	M	3.70	
Aries (XP75)	Asg	4	829	44.0	784	109	E	3.77	
Sunburst	Asg	7	-	43.3	771	113	M	4.00	
Canada Granite	Sto	4	988	42.7	761	121	L	4.00	
Pronto S	Asg	3	-	42.5	756	107	E	2.90	
Simcoe	Des	3	-	41.1	732	108	E	4.10	(3)
Autumn Spice	Asg	8	-	40.8	727	107	E	4.20	(2) ✓
Autumn Bronze	F.M.	2	-	40.0	713	115	L	4.00	
Harvestmore	Har	2	-	39.4	701	120	L	3.50	
Super Spice	Sto	5	611	37.5	668	107	E	4.14	(3)

E = to 109 days
M to 114
L = 115+

Rocket 950 days ave 9 years harder than Rocket

answer to Sto = Mirage Sto about 109 days color 4.0 firmness 4.0 Tamarack Sto 109 days color 4.0 firmness 4.0

in order of days to Maturity - earliness (very little difference - only 10 days)

stand 40/m = 12/ft. 31/m = 9/ft 53/m = 15/ft.

yield very high (as all over)

discuss types of tests firmness

ONION MAIN VARIETY TRIAL - 1978

order of yield	Variety	Source	Days to Maturity	Stand/Meter	Yld. #1 Lge Tonnes/ha	Yld. #1 Lge Bags/Acre	% #1 Small	% Culls	Av. Bulb Wt. #1 Lge. (g)	Shape	Firmness	Uniformity Size	Uniformity Shape	Color	Skin Thickness	Skinning	Neck Finish	Score (order of score)	Type of Culls
(5)	Progress (1956)	Har	104	42	86 (5)	1523	4	4	104	G	3.9	3.8	3.7	3.5	3.6	3.3	3.9	3.67	DU
(6)	Rocket	Asg	105	43	85 (6)	1509	7	2	106	HG	3.7	3.9	3.9	3.5	3.9	3.7	4.1	3.81	DU
	Autumn Splendour	Cro	105	39	63	1122	(11)	1	(97)	G	4.2	3.8	3.8	4.0	4.1	4.0	4.3	4.03 (5)	--
	→ should have a better yield																		
	Fawn Preview	F.M	105	37	69	1226	8	2	103	HG	4.1	3.8	3.8	3.5	3.7	3.7	4.0	3.80	DU
	Taurus XP45	Asg	105	43	71	1274	(10)	(5)	(95)	G	3.6	3.8	4.0	3.6	3.8	3.8	4.1	3.81	D
	Golden Passport	F.M.	106	(31)	66	1167	6	2	111	G	4.1	4.0	4.0	3.8	4.1	4.1	4.3	4.06 (3)	U
	thick Stand																		
	Buccaneer (size small)	Har	106	(53)	75	1342	(13)	3	(87) → 2 1/8"	HG	4.1	3.9	3.9	4.0	4.1	3.7	4.2	3.99	UD
(8)	Garnet	Asg	106	44	82 (8)	1452	6	(7)	100 2 1/4"	G	3.9	4.1	3.9	4.0	4.0	3.7	4.2	3.97	D
	Trapp"s #6	Trp	106	36	79	1401	4	2	109	G	4.1	4.0	3.6	4.0	4.0	4.0	4.3	4.00	U
	Storage King	Sto	107	38	68	1209	6	(6)	100	HG	3.9	3.9	3.8	3.5	3.8	3.8	3.9	3.80	D
(2)	Trapp's #8	Trp	107	43	92 (2)	1641	3	0	102	G	4.2	4.2	4.2	4.2	4.0	3.9	4.4	4.16 (1)	U
(9)	Copper Cache	F.M	108	39	80 (9)	1430	5	3	110	G	4.0	3.8	3.8	3.6	3.8	3.7	3.9	3.80	DU
	Ontario M largest	Asg	108	(31)	75	1328	2	(5)	(119) → 2 3/8"	G	4.0	4.2	4.2	4.0	4.1	3.8	4.0	4.04 (4)	D
	Nutmeg	Har	108	38	75	1334	4	2	(97)	HG	4.2	4.1	4.1	4.1	4.0	3.9	4.1	4.07 (2)	U
	Gladiator	Key	112	35	73	1300	5	2	108	HG	4.0	3.9	4.1	3.8	4.0	3.9	4.0	3.96	U
(7)	Canada Maple	Sto	113	40	83 (7)	1478	5	4	112	HG	4.3	3.8	3.8	3.5	4.1	4.1	3.8	3.91	URdD
(4)	Bronze Age	F.M.	113	37	86 (4)	1533	4	1	116	G	3.9	3.9	4.0	3.8	4.1	4.0	4.0	3.96	DU
(3)	Sentinel(5551)	Har	113	48	89 (3)	1589	7	3	102	G	4.4	4.0	4.1	4.0	4.0	3.8	4.1	4.06 (3)	U
	Exporter	Sto	114	33	69	1235	6	1	110	G	4.3	4.0	3.8	4.3	4.0	3.9	3.8	4.01	DU
(1)	Autumn Pride	Cro	114	46	100 (1)	1783	6	1	113	HG	3.9	4.0	3.8	3.8	4.1	3.4	3.6	3.80	DU

ONION MAIN VARIETY TRIAL - 1978

NOTES:

Listed in order of Days to Maturity

Seeded on May 3 in rows 43 cm (17") apart at 52 seeds/m (16/ft) replicated four times. The water table was kept at 60 cm (2 ft) up to harvesting time.

900 kg/ha 10-5-20 fertilizer was applied with 20 kg/ha of Copper sulphate.
A sidedressing of 120 kg/ha Ammonium Nitrate was applied at the 15 cm stage (6") and 2 cm of overhead irrigation was applied after.
All cultivars matured uniformly, with only 10 days between the first and last maturity variety (normally 20 days).

Stand/m: 1m = 3.3 ft Shape: G=Globe HG=High Globe
Score: Average of 7 markings from Firmness to Neck Finish. 5=most desirable 1=least desirable

Storage & Color: The onions were brought into storage immediately after topping and dried with forced air at 25°C (77°F) for one week. Then the temperature was gradually lowered from 15°C (60°F) in October to 2°C at the end of December. The relative humidity was between 30 and 60 in September and 70 in December. The artificial drying resulted in a much improved color on most varieties depending on their place in the storage.

Firmness: This was tested with the Shore-Durometer in 2 different ways and also by hand.

drying: high temp (90°F or 32°C) and high Rel. hum (80%) will give best color improvement.

Best cvs considering maturity, yield, firmness and score were:

1 3/4 = 50 gr 70 gr = 51 mm = 2" onions.
size range: 2 1/4 = 100 gr
2 1/2 = 135 gr

	D.T.M*	t/ha	b/a	Firmness	Score
Trapp's #8	107	92.2	1641	4.2	4.16
Rocket	105	84.8	1509	3.7	3.81
Nutmeg	108	74.9	1334	4.2	4.07
Ontario M	108	74.6	1328	4.2	4.04
Garnet	106	81.6	1452	3.9	3.97
Progress	104	85.6	1523	3.9	3.67
Copper Cache	108	80.3	1430	4.0	3.80
Trapp's #6	106	78.7	1401	4.1	4.00

Ont M. 119 gr
Bronze Age 116
A. Pride 113
Can Maple 112
Golde Pasp 111
Copper Cache 110
Exporter

D.T.M.* - Days to maturity

gradually lower temp after 1 to 2 weeks drying from 25° to 0° (77° to 32°)

size to weight
1 3/4" = 50 gr
2" = 70 gr
2 1/4 = 100 gr
2 1/2 = 135 gr

no order. Best ○ underlined | less 117 days | yield over 1000 | Firmness 4+ | score 4.00 | low culls

Best early or mid

explain stand ○ maggots overwintering

explain Japanese

explain Oblong

ONION ADAPTATION VARIETY TRIAL - 1978

Variety	Source	Days to Maturity	Mkb. Yld. #1 Large t/ha	Mkb. Yld. #1 Large Bags/A	Yield % #1 Small	Yield % Culls	Av. Wt. #1 Large (g)	Stand/Meter	Shape	Firmness	Uniformity Size	Uniformity Shape	Color	Skin Thickness	Skinning	Neck Finish	Score	Type of Culls
D 1955	Har	113	67	1196	5	15	105	36	G	4+	4+	4+	4+	4	4-	4+	4.17	DUR
1426	"	113	53	938	2	11	128	25	G	4-	4-	4-	4-	4	4-	4	3.78	DSUR
D195162/2415	"	113	73	1291	1	7	122	30	HG	4+	4+	4-	4	4	4-	4	4.00	DS
D275162/2425	"	113	64	1141	5	4	111	31	G	4+	4+	4+	4	4	5-	4+	4.27	DU
(1) X65WD	F.M	110	71	1264	5	2	104	37	G	5-	4+	5-	4+	4	5-	4+	4.42	DU
X48WD	"	107	55	985	3	6	129	23	G	4+	4+	4	4	4+	4-	4	4.08	DS
X40WD	"	107	71	1270	5	3	97	39	HG	4-	4-	3+	3+	4	3+	4+	3.65	DU
X39WD	"	103	57	1005	6	5	132	24	G	4+	4-	4-	4-	4	3+	4+	3.85	DU
X44WD	"	105	95	1698	7	2	109	48	G	4+	4-	3+	4-	4-	3	4+	3.71	DU
X22WD	"	107	74	1311	2	6	127	29	HG	4	4+	4-	4-	4	4-	4+	3.95	D
Explorer-1	"	104+	55	972	13	8	115	40	G	4+	4+	4-	4+	4	4+	4+	4.11	DS
Prime Beauty	"	105+	52	917	12	13	92	40	HG	4	3+	4-	4-	4	4-	4	3.80	SD
X56WD	"	105	52	917	19	10	81	50	G	4-	3+	3+	3	3+	3	4+	3.41	DU
X15M6	"	113	54	965	10	16	100	40	G	4-	4-	4-	3+	4	4	4-	3.72	DSU
X58M4	"	113	38	672	23	9	85	46	HG	3+	3+	3+	4-	4	5-	4+	3.80	DSU
X52M4	"	119	39	693	7	8	93	25	HG	4-	4-	4-	4	4	3+	4-	3.72	DSUR
X22M6	"	120	62	1101	7	12	114	33	HG	4-	4	4-	4-	4	4	4+	3.91	DSUR
X42M6	"	107	64	1135	6	5	96	36	HG	4+	4+	4	3+	4	4-	4	3.94	DSU
X58M6	"	113	53	944	4	9	118	27	HG	4-	4-	3+	4-	4	4	4-	3.72	DSU
X65W2	"	110	39	693	13	2	96	27	G	4+	4-	4	4	4+	4	4+	4.08	DSU
X53W2	"	110	60	1067	10	5	109	34	HG	4+	4	3+	4	4	3+	4+	3.88	DSU
X44W2	"	113	79	1399	1	9	178	25	HG	4-	4+	4-	4+	4	4+	4-	4.00	DSU
(6) X42W2	"	110	79	1406	7	3	92	47	G	4+	4	4	4	4-	4-	4+	4.00	DU
X15W2	"	110	62	1101	1	14	123	27	HG	3+	4+	4-	4-	4-	3+	4	3.71	D
X15B	"	113	78	1386	2	6	111	35	HG	4	4+	4-	4-	4	4-	4	3.91	DU
X42SG	"	117	67	1189	3	1	82	32	G	5-	4+	4+	4+	4	4-	4+	4.22	SU
X15SG	"	119	80	1427	1	10	159	27	HG	3+	4+	4-	4-	4	3+	3+	3.65	DSU

ONION ADAPTATION VARIETY TRIAL - 1978

Variety	Source	Days to Maturity	Mkb.Yield #1 L. t/ha	Mkb.Yield #1 L. Bags/Acre	Yield % #1 Small	Yield % Culls	Av.Wt. #1 Large (g)	Stand/Meter	Shape	Firmness	Uniformity Size	Uniformity Shape	Color	Skin Thickness	Skinning	Neck Finish	Score	Type of Culls
X42P	F.M	119	27	482	2	22	127	14	G	4-	4-	4-	4-	4-	3+	4+	3.72	DS
X65M4	"	115	57	1005	3	14	119	30	G	5-	4+	4+	5-	4+	4+	4+	4.41	DSUR
X64M4	"	113	64	1135	8	10	80	38	G	4-	4-	3+	4-	4	4-	4-	3.68	DSU
X62M4	"	131	43	768	1	25	209	13	HG	4	4+	3+	4-	4	4	3+	3.80	DUR
X51M4	"	131	36	632	0	35	211	12	HG	4	5-	4-	4+	4	4-	4-	4.01	DSU
X44M4	"	131	--	----	0	100	--	12	--	--	--	--	--	--	--	--	----	DSR
X42M4	"	131	49	863	1	20	198	15	HG	3+	5-	4	4+	4	4-	3+	3.90	DS
Fusario 542	U.W.	125	57	1005	1	21	157	20	HG	4-	4	4-	4+	4	4+	3+	3.92	DS
Fusario 254	"	120	40	713	0	12	154	13	G	4+	5-	4+	5-	4+	5-	4+	4.51	D
Fusario 24	"	125	59	1053	1	10	127	24	G	5-	5-	4+	5-	4+	5-	4+	4.52	DSR
Fusario 24	"	121	27	486	2	6	53	25	G	5-	4+	5-	4+	4+	5-	4+	4.45	D
Southport Red #14	Des	120	48	856	2	33	109	32	FG	2+	4-	4-	Dark Red	4-	5-	3-	3.53	DSUR
Spartan	"	117	74	1325	3	22	146	31	HG	3-	4-	3	4	4-	4-	3+	3.50	DU
9010	"	113	44	781	5	18	105	26	G	4	3+	3+	3+	4	4-	4	3.65	DUR
PLK	"	110	65	1162	9	6	89	44	G	4	4-	3+	4-	4	4-	4+	3.81	DUR
Flat Red	"	113	49	866	6	33	97	36	G	3	4-	4-	Dk.Red	4-	5-	3	3.73	DUR
Imp.Aut.Spice	Sto	104	51	910	14	7	97	39	G	4-	4-	4-	3+	4	4+	4+	3.87	DU
Super Spice	"	108	34	611	2	27	132	19	G	4+	4	4-	4	4	4+	4+	4.07	SDUR
Spartan Sleeper	"	123	63	1128	4	18	128	31	HG	4-	4+	3-	4	4	4+	4	3.85	DSU
Canada Granite	"	118	56	988	5	11	98	34	G	4+	4-	3+	4-	4+	4+	4+	4.07	U
Gringo	"	119	69	1226	2	19	124	32	HG	3	3+	3+	4-	4-	3+	3+	3.45	DSUR
Early Exp.Hyb.	Cro	116	61	1077	2	11	150	23	HG	4-	4+	4+	4-	4+	4+	3+	4.05	DSUR
CRK N27	"	117	63	1128	3	12	132	26	HG	4	3+	4-	3+	4-	4	4	3.71	DU
CRK N25	"	113	51	910	4	16	134	23	G	4	4+	4-	4-	4	5-	4+	4.10	DRdU

Spartan Sleeper — similar to Sparta types growing in height instead of width (19% Oblong)

ONION ADAPTATION VARIETY TRIAL - 1978

Variety	Source	Days to Maturity	Mkb.Yield #1 Lge. t/ha	Mkb.Yield #1 Lge. Bags/Acre	Yield % #1 Small	Yield % Culls	Av.Wt. #1 Large (g)	Stand/Meter	Shape	Firmness	Uniformity Size	Uniformity Shape	Color	Skin Thickness	Skinning	Neck Finish	Score	Type of Culls
CRK H339	Cro	105	31	550	6	5	113	16	G	5-	4	4-	4+	4	5-	4	4.20	--
CRK H337 Early Pak	"	107	71	1264	6	1	112	37	G	4+	4	3+	4	4	4	4	3.94	U
CRK H336	"	113	63	1121	6	2	110	33	G	3+	4-	3	3+	4	4-	4-	3.52	DU
CRK H335	"	113	54	965	15	1	95	38	G	4-	3	3	3	4	4+	4	3.57	U
CRK H329	"	110	80	1420	3	1	120	34	G	4+	4	4-	3	4	5	4-	3.95	DU
CRK H35	"	107	38	679	9	4	116	20	HG	4	4-	3+	4	4	3+	4	3.75	U
(3) CRK H23	"	110	64	1141	3	1	125	27	G	4+	4+	5-	5-	4+	5-	5-	4.52	UR
CRK H33	"	107	73	1291	8	1	92	45	G	4	4-	3+	4	4-	4-	4	3.77	DU
CRK N28 - called Autumn Glow	"	107	54	965	1	6	169	17	G	4-	4+	3+	4-	4	4+	4-	3.85	DSU
Aut.Keeper	"	115	62	1097	10	10	132	35	HG	4	4+	4-	4-	4+	4	4-	3.92	DU
Aut.Keeper '76	"	120	76	1349	2	23	121	37	HG	4-	4+	4-	4+	4+	4+	4-	4.08	D
CRK H251	"	125	47	836	1	18	158	18	HG	4-	4+	4-	4-	4	5	4-	4.01	DSU
CRK W306	"	125	16	278	1	25	186	6	G	4+	4+	4+	4	4	5	4	4.27	D
CRK W20	"	114	82	1467	5	13	94	50	G	4+	3+	3+	4-	4	4-	4+	3.80	D
CRK H148	"	119	70	1236	5	10	103	39	G	4-	4-	3+	4	4	4-	4+	3.81	DU
CRK N79	"	119	76	1345	5	8	113	38	HG	3+	4	3+	3+	4-	5-	4-	3.71	DS
CRK W85	"	125	63	1128	2	9	109	31	G	4+	4+	4+	4+	4	4-	4+	4.17	DUR
Elite	"	119	53	951	3	37	125	27	HG	3	3+	3+	4-	4-	4-	4-	3.55	DRdSU
→ Spartan Sleeper	"	119	69	1233	2	12	121	31	HG	3+	4	3-	3+	4	4+	4	3,67	DU
(Dr Peterson: Spartan) peculiar to Spartan crops																>	(27% Oblong)	
Spartan Banner	"	119	62	1107	5	4	125	28	HG	4-	4-	3	3+	4	4+	4-	3.62	DSU
Exp. 7712	Un.S	113	59	1047	5	26	105	38	G	3	3+	3+	3+	4-	3+	4-	3.37	DS
Exp.7715	"	113	69	1230	8	15	91	48	G	4+	4-	4-	4-	4-	4-	4+	3.87	DU
Exp.7721	"	120	66	1175	5	21	118	41	G	3+	4	4-	4-	4	4-	4-	3.72	DUR
Exp.7731	"	117	61	1087	4	1	107	30	G	5-	4+	4+	4+	4+	5-	4+	4.41	DR

ONION ADAPTATION VARIETY TRIAL - 1978

Variety	Source	Days to Maturity	Mkb.Yld. #1 L. t/ha	Mkb.Yld. #1 L. Bags/Acre	Yield % #1 Small	Yield % Culls	Av.Wt. #1 Large (g)	Stand/Meter	Shape	Firmness	Uniformity Size	Uniformity Shape	Color	Skin Thickness	Skinning	Neck Finish	Score	Type of Culls
Exp. 7725	Un.S	113	79	1413	3	19	130	37	G	3+	4	4-	4-	4	4-	4-	3.72	DUR
Exp. 7711	"	117	18	319	1	58	131	14	HG	3+	4	3+	4-	4	4-	4	3.71	DUR
Exp. 7710	"	113	69	1230	9	10	98	44	G	4	4	3	4-	4	4	4	3.81	DSR
Exp. 7713	"	119	45	808	8	27	117	29	G	4	4-	4-	4-	4+	4-	4-	3.82	DSU
Exp. 7724	"	117	69	1223	2	20	120	33	G	3+	4-	4	3+	4+	5-	3+	3.80	DSU
Exp. 7726	"	125	83	1481	3	3	115	36	G	4+	4-	4-	4	4+	4-	4+	4.00	UR
Exp. 7732	"	125	63	1128	1	18	115	30	G	3+	4-	3+	3+	4-	4+	4-	3.61	DUR
Exp. 7717	"	125	82	1467	2	11	121	36	G	4+	3+	3	4-	4	4	4+	3.80	DU
Exp. 7722	"	120	71	1264	1	10	126	29	G	4	4	4+	4+	4+	4	4+	4.17	D
Exp. 7727	"	120	84	1494	1	11	129	33	HG	4+	4	3+	4	4+	5-	4	4.08	DR
Keep Well	Tak	83	19	333	33	9	52	39	RG	2	4+	4+	2	2-	2-	4+	2.81	SUR
Keep Well - (at August 22nd)			23	414	30	--	---	--	--	4	--	--	3+	3	4	4+	3.88	---
Top Keeper	Tak	83	18	319	24	10	62	27	RG	2-	4+	4+	2	2-	2-	4+	2.85	SUR
Top Keeper - (at August 22nd)			23	406	21	--	---	---	--	4-	--	--	3+	3	4	4+	3.84	---
Tropic Ace	Tak	84	21	377	14	21	63	31	FR	2+	4	4	2	2-	2-	4+	2.85	SUR
Tropic Ace - (at August 22nd)			32	560	12	--	---	--	--	4	--	--	3+	3	4	4+	3.80	---
Dragon Eye	Tak	84	8	146	18	40	49	30	FR	3-	5-	4+	2+	2+	2+	4+	3.27	SU
Dragon Eye - (at August 22nd)			27	486	15	--	---	--	--	4	--	--	3+	3+	4+	4+	4.02	---
Kyoto Prolific Yellow	Tak	106	31	547	3	42	89	24	G	3+	4	4-	4-	4-	3+	4-	3.65	DSU
Takii's Pride	"	123	72	1284	1	26	178	25	HG	3+	5-	4-	4	4-	5-	4-	3.98	DSUR
NCX 1009	Nia	119	75	1331	0	5	175	20	HG	4	4+	4+	4	4+	4	4	4.12	D
Fusario 24	Jung	131	65	1162	1	4	130	25	G	4+	4+	4+	5-	4+	4+	4+	4.34	DWSU
Fusario 245	"	125	22	394	3	23	145	11	G	4-	4	4	4+	4+	4+	4-	4.02	DWSUR
Gambler Hyb.	Agw	131	69	1230	1	23	168	26	HG	3	4+	4+	4+	4+	4-	3	3.81	DSUR

Explain

ONION ADAPTATION VARIETY TRIAL - 1978

Variety	Source	Days to Maturity	Mkb.Yield #1 Large t/ha	Mkb.Yield #1 Large Bags/Acre	Yld. % #1 Small	Yld. % Culls	Av.Wt. #1 Large (g)	Stand/Meter	Shape	Firmness	Uniformity Size	Uniformity Shape	Color	Skin Thickness	Skinning	Neck Finish	Score	Type of Culls
Indian Queen	Agw	135	62	1107	3	24	151	27	HG	3	4-	4-	4	4	4+	3+	3.67	DSU
Produbel	D.P	145	23	414	2	60	127	24	HG	3-	4-	4-	3+	4-	4	3+	3.48	DS
Produskin	"	145	21	374	4	64	92	33	G	3+	4-	4-	3+	4	4-	3+	3.61	DSUR
Solo	"	132	33	594	12	29	78	37	G	3+	3+	3+	4-	4-	4-	4-	3.55	DSUR
Prudumax	"	138	26	459	2	59	109	28	G	3+	4-	3+	4-	3+	4-	3+	3.50	DSUR
H.76048	VDH.	131	21	374	3	39	89	20	G	3+	4	3+	4	4	5-	3+	3.80	DSUR
H.76033	"	131	39	693	2	30	113	25	G	3+	4	4	4-	4	4-	3+	3.71	DSU
H.76107	"	131	42	747	7	36	79	47	G	4-	4	4	4-	4	4+	4-	3.91	DSU
H.76223	"	131	33	591	13	33	78	41	HG	4-	4	4	4-	4	5-	3+	3.91	SU
H.76052	"	131	25	448	4	43	79	27	G	4	3+	4-	4-	4	5-	4-	3.87	DU
Robot	ARZ.	145	29	509	2	56	101	32	G	4-	4-	4-	4-	4	4	3+	3.78	DS
74050	BEJO	145	15	265	1	62	115	19	G	3+	3+	4-	4-	4-	5-	3+	3.67	DSU
Goldskin	Hui	145	12	221	2	68	102	21	G	3-	3+	4-	3+	4-	4-	3+	3.45	DS
92	deJ	145	17	306	3	69	107	24	G	3	4-	4-	4-	4	4+	3+	3.67	DSU
Excellent	"	145	16	282	3	62	109	20	HG	3	4-	4-	4-	4-	4-	3-	3.51	DS
#26	"	145	39	693	4	42	104	33	G	4	3+	3+	3+	4	5-	3+	3.70	DSU
#18 not had	"	110	63	1128	2	7	120	28	G	4-	4+	4	4-	4	4	4-	3.91	DSU
Enormous	"	145	26	455	1	47	197	14	G	3	4-	3+	4-	4-	5-	3-	3.71	DS
Cepria	"	135	18	323	7	54	91	24	G	2+	3	3-	3+	3-	2	3-	2.72	DSU
34	"	131	32	577	20	12	92	32	G	3-	3+	3+	3+	4	5-	3	3,47	DSUR
Sublima	"	138	49	870	3	28	102	32	G	3	3+	3+	3+	4-	3+	3+	3.37	RD
Verbeterde-Victoria	"	145	7	126	4	82	0	28	HG	3-	3+	4-	4-	4	4	3-	3.44	DSUR
Hyb. 107	S&G	125	77	1365	2	8	170	25	HG	3+	4+	4	4-	4+	5	3+	3.98	DWSU
Hyb. America	"	111	38	679	2	25	128	19	G	3+	4-	3+	4-	4-	4	4-	3.60	DS
SG23	"	145	60	1060	0	54	117	17	HG	4-	3	3+	4-	4	4-	3-	3.44	DS
Jumbo	"	138	45	791	4	37	112	31	G	3	4-	4-	4+	4	4+	3	3.81	SD
RS70416 F.1.	R.S1.	145	17	306	1	74	161	18	G	4-	4-	3+	4-	4	4+	3+	3.71	DSU

ONION ADAPTATION VARIETY TRIAL - 1978

Variety	Source	Days to Maturity	Mkb.Yield #1 Large t/ha	Mkb.Yield #1 Large Bags/Acre	Yield % #1 Small	Yield % Culls	Av.Wt. #1 Large (g)	Stand/Meter	Shape	Firmness	Uniformity Size	Uniformity Shape	Color	Skin Thickness	Skinning	Neck Finish	Score	Type of Culls
XPH 667P	Asg	133	No information															
XPH 418P	"	110	17	309	2	60	150	12	HG	3+	4-	4-	4	4-	3+	4-	3.62	DSU
XP513	"	125	0	0	4	96	0	21	HG	4+	3+	4	4	4	3+	4	(3.84)	D
(For XP513 - Evaluation marks are given to doubles)																		
XPH 668P	"	125	35	618	0	59	207	17	HG	4-	4+	4	4+	4	4-	3+	3.90	DS
XPH 662	"	117	29	523	0	61	175	19	HG	3	3+	3+	4-	4-	3+	3	3.32	D
XPH 665	"	125	57	1019	1	38	142	28	HG	4	4+	4-	4	4	4+	4-	4.00	DS
XPH 673	"	117	3	54	0	75	200	3	HG	3	4-	4-	3+	3+	3+	3+	3.37	DR
XP75 now called ARIES	"	110	47	829	6	31	102	33	G	4	3+	3+	4	4	3+	4+	4.02	DS
XP25	"	110	48	856	5	26	124	28	HG	3+	4	4	4-	4	4-	3+	3.71	DSU
Granada	"	112	70	1236	5	15	105	41	HG	3+	4-	3+	4	4	3+	4-	3.57	DS
D626351/1085	Har	110	83	1474	8	6	96	52	HG	4+	4	3+	4-	4	4	4+	3.94	DSU
(2) D5562/2455	"	113	81	1433	6	8	93	50	HG	4+	4	4	4	4	5-	4+	4.18	DU
(4) D275155/1443	"	113	62	1094	0	11	132	24	G	5	4+	5-	5-	4+	4+	5-	4.57	DS
(5) D27516LA/2276	"	113	78	1393	1	12	131	32	G	4+	4+	4+	4	4	4-	4+	4.12	DSU
D5542/2315	"	110	62	1087	1	26	136	27	G	4+	4	4+	4	4+	5-	4	4.22	DSR
D626355/1155	"	107	77	1372	4	9	113	38	HG	4+	4+	4	4-	4	4-	4+	4.04	DSU
Beltsville	"	105	58	1033	6	22	84	44	G	4+	4-	4-	4	4	4-	4+	3.95	DS
D5556	"	103	74	1318	4	11	110	38	G	3+	4-	4-	4-	3+	3+	3+	3.47	DSU
5537	"	110	82	1461	6	9	105	44	G	4+	4-	4-	4	4-	4-	4+	3.91	DU
C655	"	107	65	1155	4	21	131	32	G	5-	4+	4+	4	4+	5-	4+	4.37	DSU
Saturn Hyb.	P.W	109	47	829	4	28	113	28	HG	3+	4-	3+	4	4	3+	4-	3.68	DR
PWX 775	"	103	45	808	0	28	175	16	HG	4	4+	4	4+	4+	5-	4	4.22	DSU
PWX 7075	"	107	38	679	3	57	119	33	G	4	4-	4	4+	4	3+	4+	3.94	DU
PWX 5675	"	125	29	516	1	65	131	24	G	4	4	4	4	4	3+	4+	3.94	DSR
Rialto	Asg	115	39	700	2	37	147	20	HG	3	4-	4-	4-	4-	3+	4-	3.55	DR
Span Inca (XP644)	"	114	74	1311	2	14	119	33	HG	2+	4-	3+	3-	2+	2	3-	2.75	DSU
Span XPH 70 (Sierra)	"	119	54	958	3	46	108	42	G	3	4	3+	4	4-	4-	4	3.67	D
XP419	"	125	87	1542	1	18	144	33	HG	3-	4-	4+	4	3+	3	3	3.42	DSUR

ONION ADAPTATION VARIETY TRIAL - 1978

NOTES:

Seeded: May 3rd in rows 43 cm (17") apart at 53 seeds/m (16 feet). Only named varieties replicated 2 times.

Stand/m: 1 m = 3.3 feet Shape: HG=High Globe O=Oblong 5=most desirable 1=least desirable.

Score: The average of the 7 last columns

Type of Culls: D=Doubles U=Undersize W=White Rd=Red S=Sprouts R=Rot (skin rot)

Color: The onions were immediately after topping, brought into storage and heat dried. This heat drying had an effect on the color, resulting in some reps having a darker color than others.

Firmness: This was judged by means of the Shore-durometer as well as "the use of the thumb".

Note: I - In evaluating the marks given, it is well to pay attention to the stand/meter. Some cultivars had a stand/meter of less than 20 (less than 6/ft) resulting in lower marketable yield, later maturity, more culls (doubles etc) and generally poorer marks.

Note: II - The cultivars Keep Well, Top Keeper, Tropic Ace and Dragon Eye matured extremely early and were partly evaluated at August 22nd. At the regular evaluation date in December, these cultivars had gone past the dormant stage, become soft and started sprouting. Both evaluations are given.

POTATO VARIETY TRIAL - 1978

in order of appearance
No Nitrogen applied
Best yield a No Nitrogen

In blue ink = Hardee result

Variety	Mkble.Yield 50-90 mm Yield t/ha	Mkble.Yield 50-90 mm Yield Bu/Acre	% Oversize	% Culls	Reason Culls	Tuber Appearance Shape	Tuber Appearance Color	Tuber Appearance Eye Depth	Culinary Quality Specific Gravity	Culinary Quality Boiled	Culinary Quality Baked	Culinary Quality Chipped	Culinary Quality French Fried
WHITE SKINNED VARIETIES - In Order of Tuber Appearance and Color									washability at Hardee				
Oneida	49	785 (1)	3	2	--	FR	W	S	1.068	92	86	75	60
Ontario	35	549	0	5	OG	RF	W (1)	MD	1.054	78	67	35	30
Nipigon	42	671 (3)	0	5	G	FR	W (3)	M	1.064	85	76	45	70
							YUKON (2) low yield, smooth yellow flesh						
Kennebec	39	621 (4)	2	10	→ GC	FO	W	S	1.065	88	85	85	70
F68039	32	514	0	4	C	FR	OW	S	1.080	94	85	75	70
Norchip	30	474	1	9	CO	FR	OW	MD	1.069	86	88	65	70
Alamo	29	462	0	11	→ GC	FR	OW	MD	1.062	82	80	70	50
Trent fair	37	587 (6)	2	16	→ CG	R	OW (3)	MD	1.066	90	86	80	40
Superior	35	556	0	1	--	FR	OW	S	1.070	95	84	80	70
Jemseg (F67072)	38	613 (5)	4	2	--	FR	OW	S	1.064	85	84	45	60
5280-267	44	714 (2)	1	3	--	R	OW	S	1.059	84	76	50	50
Abnaki	35	560	4	11	CGO	FR	OW	M	1.067	87	86	45	60
RED SKINNED VARIETIES		Hardee notes in blue ink											
Bison	34	540 2.	0	7	G	RF	DR	MS	1.057	75	71	75	70
Chieftain	30	483 3.	1	7	CGO	FR	DR	MS	1.060	75	73	55	30
Rideau (Hardee yellow flesh)	35	567 1 (Hardee poor low)	0	2	--dry rot	R pale	R	M	1.064	93	92	55	30
G7015-11RY (Hardee yellow flesh)	25	396	0	2	--	R pale	PR	MS Deep	1.060	88	74	70	70
Norland	18	291	0	3	--	R	PR		1.056	88	76	70	70

EXPLAIN

Yield: 50-90 mm = 2 - 3-1/2"

Culls: O=Off Shape G=Green ~~S=Sunscald~~ M = mechanical injury
C=Growth cracks
Type of Culls found most is mentioned first

Shape: R=Round F=Flat O=Oblong

Culinary Qualities:

	Specific Gravity	Boiled	Baked	Chipped	French Fried
Excellent-	1.080+	85+	85+	85+	80+
Poor-	1.070-	75-	75-		
Unacceptable				50-	50-

Color: W=White OW=Off White R=~~DR=Deep~~ Red ~~PR=Pale Red~~ P = purple

Eye Depth: S=Shallow M=Medium D=Deep

Row

No Nitrogen fertilizer was applied to reduce excessive top growth. Rows at 80 cm (32"), spacing 25 cm (10") in row, replicated 3 times. Water table kept at 60 cm up to September, no overhead irrigation used.

45

IN ORDER OF YIELD

RADISH MAIN VARIETY TRIALS I and II - 1978

Variety	Source	Av. Days to Harvest	Harvestable Days	Stand/Meter	t/ha	Bu/Acre	Av. Wt/ root (g)	Strength of Tops	Size of Tops	Shape of Root	Root Color	Flesh Quality
						BEST						
Robyn	Nun	25	4	45	28	505	14	3.9	VL	3.8	4.0	3.6
Comet	Sto	25	3	32	23	406	16	3.5	VL	3.1	3.9	4.7
Champion	"	25	8	29	22	380	16	3.5	VL	2.7	3.8	4.3
Rondeel	RZW	25	5	36	21	375	13	2.9	VL	3.7	3.9	5.0
Scarlet Globe Special	Sto	25	3	30	21	369	16	4.1	M	3.9	3.9	3.9
Stop-Lite	Sto	24	5	32	21	362	14	4.5	VL	4.0	3.7	4.5
Cavalier	"	25	4	36	20	351	12	4.5	L	3.7	3.5	4.9
Cherry-Belle	"	25	6	36	19	342	12	4.0	M	3.1	3.9	4.8
Scarlet Knight	Har	25	4	31	16	288	12	4.0	L	4.2	4.0	4.8
Red Prince Improved	Sto	27	5	28	16	271	12	4.2	S	3.7	3.9	4.4
						LOWEST						

NOTES:
Listed in order of Yield

The first trial was seeded on June 6 and repeated on Aug. 3. Rows at 22 cm (9") at 45 seeds/m (13/ft).
The main trial was replicated 3 times. Stand/m: 1m = 3.3 ft. Strength of Tops: 5=very strong, 1=weak
Size of Tops: VL=Very Long M=Medium S=Short Muck soils will encourage heavy top growth.
Shape of Root: 5=perfect globe 1=long and thin Flesh Quality: 5=most desirable 1=least desirable
Root Color: 5=Dark deep red 1=mostly white

Summary:

Varieties having good qualities for packaging are:

	t/ha	Root Shape	Flesh Quality	Top Strength	Top Size
Comet	22.5	3.1	4.7	3.5	VL
→ Champion	21.5	2.7	4.3	3.5	VL
Stop Lite	20.5	4.0	4.5	4.5	VL
Scarlet Gl.Spec.	21.0	3.9	3.9	4.1	M
Robyn	28.0	3.8	3.6	3.9	VL

Varieties very suitable for bunching are:

	t/ha	Top Strength	Top Size	Root Shape	Flesh Quality
Sc.Globe Special	21.0	4.1	med	3.9	3.9
Red Prince Impr.	15.5	4.2	short	3.7	4.4
Cavalier	20.0	4.5	long	3.7	4.9
Scarlet Knight	16.0	4.0	long	4.2	4.8
Cherry Belle	19.0	4.0	med	3.1	4.8

IN order of yield

RADISH ADAPTATION TRIALS I and II - 1978

	Variety	Source	Av. Days to First Harvest	Harvestable Days	Stand/Meter	t/ha	Bu/Acre	Av. Wt./ root (g)	Strength of Tops	Size of Tops	Shape of Root	Root Color	Flesh Quality	
	Tripler	Hui	25	4	37	23	406	14	4.0	M	2.5	4.0	3.8	
	Rota	R.Zw	25	5	31	22	396	17	3.5	M	2.5	4.3	4.8	good
E	K 19	S&G	26	6	36	22	385	14	4.0	M	3.0	4.0	4.3	excellt
	Novitas	Nun	25	5	36	22	384	13	3.5	M	3.0	4.3	3.5	good
E	Red Devil	F.M.	25	6	37	22	384	13	4.5	L	3.0	4.0	3.5	good
	Vroko	Hui	25	5	31	19	341	14	4.0	L	3.3	4.0	3.2	
	Minitas	Nun	25	5	34	19	340	13	3.5	S	2.5	4.3	3.5	
	Real	E.Za	28	4	32	19	338	13	4.0	M	3.0	4.0	3.8	
E	SG 454	S&G	25	7	32	19	331	13	4.0	M	3.5	4.3	3.8	excellt
E	Inca	"	25	6	31	19	328	13	4.5	L	3.5	4.0	4.5	good
	Saxafire	E.Za	25	4	32	19	325	13	3.0	S	3.5	4.0	4.5	good
E	Fancy Red	Har	25	6	33	18	318	12	4.0	L	4.0	4.3	4.3	excellt
	Red Prince	N.K.	24	4	29	18	315	13	4.0	M	3.3	4.5	3.5	
	Radar	S&G	25	6	30	17	306	13	4.0	S	2.3	4.0	4.3	
	Red Boy	Sto	24	6	34	17	294	11	4.0	S	3.0	3.0	4.5	
	Neoro	S&G	25	4	35	16	282	11	4.0	L	3.0	4.3	3.5	
	Revosa	BEE	25	6	29	15	259	13	4.0	S	4.5	4.0	4.3	good (low Y)
	Red Devil B	F.M.	25	4	29	14	253	11	4.0	L	3.5	4.0	4.8	good
	Katra	S&G	25	6	34	14	248	10	4.0	S	3.8	4.0	3,5	
	Novired	Rog.	27	3	22	13	229	13	3.0	VS	3.4	4.0	2.8	
	Long Root Types													
	White Icicle	Asg	28	6	32	32	577	22	5.0	VL	1.0	1.0	4.5	
	Rico	E.Za	25	4	25	22	382	16	2.0	L	1.0	2.0	4.5	
	Bup	S&G	25	4	33	21.5	380	15	2.0	L	1.0	2.3	4.5	

Notes: Listed in order of YIeld. For explanation of marks given, see Main Trial.
The following varieties did very well: K19, SG454, Inca, Fancy Red and Red Devil.

in order of D.T.M.

look at

REASONS LOW yield: ① Culls. - first one is worst one
② seeders
③ plants dead (stand)
④ size

R = SKINROT
D = doubles
S = Seeders
} Not on sheet.

SPANISH ONION VARIETY TRIAL TRANSPLANTED - 1978

Yld. 75mm+ = 3"+

Variety	1977	Source	Maturity Date	Tonnes/ha	Bu/Acre	% Yield 50-75 mm	Ave. Bulb Wt. (g)	% Seeders	% Culls	Type of Culls	Uniformity	Firmness	Neck Finish	Skin Tightness	Skin Rot	Score	
Brahma	(1)	Des	20-8	61	1090	1	419	0	12	RD	4.1	4.1	4.2	3.9	3.7	4.00	(5)
Cima	(2)	Key	28-8	61	1088	0	500 (4)	0	26	R	3.7	3.4	4.0	3.8	3.2	3.62	
XP496	(7)	Asg	28-8	44	787	0	403	0	44	DR	4.0	4.0	4.3	4.0	3.7	4.00	(6)
Matador		Nia	28-8	58	1027	5	388	3	14	DSR	3.8	3.8	4.1	3.7	4.1	3.90	
XP428		Asg	29-8	75	1338 (2)	1	464	2	7	RD	3.9	3.7	4.2	3.3	3.7	3.76	
Inca (XP644)		"	29-8	66	1177	1	476	8	18	RD	4.2	4.2	3.9	3.8	3.9	4.00	(7)
Fiesta		Sto	30-8	36	639	13	358	0	31	D	3.4	3.9	3.9	4.0	3.4	3.72	
XP70B		Asg	30-8	63	1125	1	396	1	21	DSR	4.2	4.1	4.3	4.0	3.9	4.10	(2)
XP264		"	30-8	65	1160	1	400	4	13	R	3.7	4.3	4.3	3.3	3.7	3.86	
Exp. Ringer		Cro	01-9	57	1021	2	390	0	14	RD	3.7	3.8	4.0	4.0	3.8	3.86	
Sierra (XP70)	(5)	Asg	01-9	29	520	0	418	0	55	DR	3.7	4.7	4.0	4.0	3.7	4.02	(4)
Exp. X70B12		F.M	04-9	76	1359 (1)	1	527 (2)	3	8	DR	3.9	3.7	4.2	3.7	4.0	3.90	
Bullring		Des	04-9	53	935	0	439	6	24	RS	3.7	3.9	3.9	3.9	3.5	3.78	
Fiesta		Key	05-9	49	869	0	407	0	26	D	3.7	4.0	4.0	3.3	3.7	3.74	
Spanish Beauty		Nia	05-9	58	1027	1	433	3	28	RD	4.3	4.1	4.4	4.3	3.3	4.08	(3)
NCX 1008		Nia	06-9	26	462	0	420	41	65	SRD	3.9	3.8	4.0	3.6	3.2	3.70	
Exp. X56B12		F.M	08-9	73	1292 (3)	2	503	5	14	SDR	4.1	3.8	4.1	3.2	3.9	3.82	
Yellow Sweet Spanish		Asg	09-9	50	895	1	444	15	32	RS	3.5	3.8	4.0	4.0	3.3	3.72	
620 Yellow Sw. Spanish		Har	10-9	60	1060	1	432	4	20	RD	4.1	3.8	4.2	4.0	3.3	3.88	
Exp. S	(6)	F.M	11-9	67	1184	2	445	5	4	S	4.3	4.0	4.3	4.0	4.3	4.18	(1)
Valdez		Des	14-9	56	994	0	513 (3)	8	21	RD	4.2	3.5	4.0	4.2	4.0	3.98	
Durango	(4)	Des	14-9	62	1102	0	528 (1)	16	39	SRD	4.3	3.7	4.0	4.0	3.3	3.86	
Amigo		"	14-9	33	582	0	371	21	18	S	3.3	3.7	3.7	3.7	4.0	3.68	

late

SPANISH ONION VARIETY TRIAL TRANSPLANTED - 1978

R = Skinrot
D = doubles
S = Seeders

Notes:

Listed in order of Maturity

Seeded: March 13 in flats in greenhouse and foliage trimmed regularly at the 20 cm level to develop strong plants. On May 16, the plants were transplanted to the field in rows spaced 43 x 12 cm (17" x 5"), replicated 3 times. Cool weather and cold nights encouraged seedstalk development in several varieties.

To control the onion maggot, granular Ethion 7.5% + Thiram at 60 kg/ha was drilled in before transplanting, followed by a spray program with Diazinon to control the first generation flies.

75mm and up = 3 inches and up 50 mm = 2 inches
5=most desirable 1=least desirable

Best cultivars considering early maturity, quality, yield and seedstalk development were:

	M.D.*	t/ha		%seeders	Score
1977 rating (1) → Brahma, Des	Aug. 20	61.3	1090	0	4.0
Matador, Nia	" 28	57.0	1027	3	3.9
(8) XP70B, Asg	" 30	63.2	1125	1	4.1
(7) XP644,(Inca), Asg	" 29	66.2	1177	8	4.0
(5) XP428, Asg	" 29	→ 75.2	1338	2	3.7
Exp. X70B12, F.M.	Sep. 4	→ 76.3	1359	3	3.9
(9) XP 264, Asg	Aug. 30	65.2	1166	4	3.9
Exp. Ringer, Cro	Sep. 1	57.4	1021	0	3.9
(6) Sp.Beauty, Nia	" 5	57.7	1029	3	4.1

M.D. * = Maturity Date

Brahma: both years: high yielder
early
good quality
no seeders.

SPRING TOMATO VARIETY TRIAL - 1978

Cultivar	Source	Yield mkb.frt. /plant To June 2 grams	lbs	Total Yield mkb.fruit /plant grams	lbs	Yld.x-lge /plant (g)	Yield large /plant (g)	Yield med. /plant (g)	Yield small /plant (g)	Yield #2's /plant (g)	Yield non-mkb /plant (g)	# Mkb.Fruit /plant	Av.Wt. Mkb.Fruit (g)	Roots Volume	Roots Health
MAIN TRIAL															
Jumbo	Bru	2591	5.7	6760	14.9	2066	2803	92	39	1763	535	35	191	3.5	4.0
Ont.763	Kerr	2982	6.5	6160	13.5	875	2697	297	123	2188	487	39	159	4.2	3.8
Ont.764	"	3290	7.2	6741	14.8	854	3111	610	225	1963	546	46	147	4.3	4.2
Mich.Ohio	Burg	3474	7.6	7672	16.9	492	4526	484	163	2007	353	56	137	3.5	3.8
GC213TmVFN	S&G	3661	8.0	8147	17.9	419	5416	908	334	1068	93	65	125	3.8	3.8
GC204	"	3974	8.7	8000	17.6	832	3808	349	153	2859	204	54	147	3.5	3.7
732/76	Bru	2314	5.1	5637	12.4	414	1923	123	75	3102	375	36	156	2.7	3.8
ADAPTATION TRIAL															
Ont.765	Kerr	3009	6.6	6884	15.1	237	3906	478	196	2068	325	50	139	5.0	5.0
Ont.771	"	2422	5.3	6222	13.7	112	3519	1568	457	568	34	60	105	4.0	4.0
Ont.772	"	2793	6.1	5976	13.1	483	2747	1658	586	502	247	53	112	3.0	3.0
Ont.775	"	4663	10.2	9026	19.9	1038	4308	1611	575	1496	641	67	135	5.0	4.0
Ont.776	"	2770	6.1	6708	14.7	180	3720	704	356	1748	156	54	125	5.0	4.0
Ont.777	"	3067	6.7	6088	13.4	66	3327	1447	383	862	187	53	116	5.0	5.0
Hg77.451TmC3F2	VDB	3370	7.4	7315	16.1	640	3882	798	428	1568	334	58	127	4.0	5.0
Hg77.452TmC3F2	"	2319	5.1	7519	16.5	346	4150	1110	749	1261	0	65	115	5.0	4.0
Hg77.455TmC3F2	"	4252	9.3	8827	19.4	49	5300	807	126	2545	512	70	127	5.0	5.0
Vendor	Kerr	2818	6.2	6802	15.0	281	3986	660	269	1607	418	50	136	4.0	4.0
Mr 13 pink	"	2894	6.3	7029	15.5	550	4163	411	116	1790	875	49	143	5.0	4.0
GC135TmVFN	S&G	2585	5.7	7060	15.5	1237	969	0	0	4854	746	35	202	4.0	3.0
WR25 pink	Kerr	3286	7.2	6579	14.5	228	4817	255	199	1081	870	45	148	5.0	4.0

GREENHOUSE TOMATO VARIETY TRIAL - 1978 SPRING

Seven varieties (8 plants each x 3 reps) with thirteen observational varieties (4 plants each, no reps) were transplanted in muck on February 22. A basic pre-plant fertilizer equivalent to 12 kg/100 m^2 0-20-20 and 3.5 kg/100 m^2 Magnesium sulphate was applied primarily to raise the total salts level in the soil. Total salt readings at planting time averaged 185. Night temperature was maintained at 17°C; day temperature was raised to 22°C on dull days and to 25°C on bright days. cv Michigan Ohio 3 was used for comparison in the replicated trial. All rough and catfaced fruit was removed from the bottom clusters on March 22, one month before first picking date. In the replicated trial, cv GC213 (Sluis & Groot) produced the best yield, producing a total of 8.14 kg per plant. This cultivar also produced the highest yield of extra large and large fruit, a total of 5.83 kg per plant. It also had the lowest percentage of No.2 quality fruit (13.1%) compared to cv Michigan Ohio, with 26.1%.

Cultivar	Yield t/ha	X-Lge & lge frt /plant g	# Mkb.frt /plant	Ave. Wt. mkb frt g	Gross return /plant $ *
GC213 (Sl.& Groot)	217	5835	65	125	7.05
GC204 "	213	4640	54	147	6.23
Michigan Ohio 3 (Burghart)	204	5018	56	137	6.29
Jumbo (Bruinsma)	180	4869	35	191	5.88
Ont.Hyb. 764 (Kerr)	179	3965	46	147	5.39
Ont.Hyb. 763 "	164	3572	39	159	4.24
732/76 (Bruinsma)	150	2337	36	156	3.82

* $ Value given: x-lge - $5.00/10 pounds
large - $4.50 "
medium - $3.00 "
small - $2.25 "
#2 - $2.00 "

In the observation trial, cv Ont.Hyb. 775 came first overall with 9.02 kg/plant. It also produced the highest yield of early fruit. Others worthy of mention were:
cv HG77.455 (vdBerg-deRuiter) and cv Ont.Hyb. 772. (Kerr).

EFFECT OF NITROGEN ON YIELD, QUALITY AND HOLLOW STEM IN BROCCOLI

In a previous experiment (1977) hollow stem showed up only in the early maturing plants, which had developed more rapidly due to favorable growing conditions. To investigate this further, cv Cape Queen, spaced 60 x 30 cm was direct seeded in muck on June 9. The basic pre-seeding fertilizer consisted of 600 kg 0-5-15 plus 25 kg Borax/ha. Ammonium nitrate (34%N) was applied broadcast, prior to seeding at 0, 30, 60 and 90 kg/ha. Sidedressing with Ammonium Nitrate was done at similar rates on July 26, when plants were 25 cm tall. There was no significant difference in yield due to a sidedressing. Total yield increased as pre-seeding nitrogen rates increased. Due to higher and severer cull rate, marketable yield decreased when Nitrogen rates were increased but especially when sidedressing rates were increased. Quality decreased as Nitrogen sidedressing increased from 20% being of mediocre quality to 50% being mostly culls. Quality also decreased as pre-seeding nitrogen rates increased from 25% being mediocre to 40% poor quality.

Best quality was obtained with 0-60 kg/ha pre-seeding with 0 or 30 kg/ha sidedressing. As nitrogen applications increased, so did the incidence of hollow stemmed plants from a high score of 3.50 to a low score of 2.77.

Average Weight Unmarketable included

		Sidedressing 0	30	60	90	Average
Broadcast	0	530	486	523	542	520
	30	600	568	543	567	569.5
	60	532	518	645	513	552
	90	606	574	581	638	599.75
Average		567	536.5	573	565	560.3

* *

% Mediocre Quality and Culls

		Sidedressing 0	30	60	90	Average
Broadcast	0	20	15	35	30	25
	30	20	10	45	40	29
	60	10	15	45	40	28
	90	30	30	50	50	40
Average		20	18	44	40	30

Good (0, 30 / 0, 60) Bad (60, 60 / 60, 90)

* *

Average Hollow Stem

5.00 = no hollow stem 1.00 = severe hollow stem

		Sidedressing 0	30	60	90	Average
Broadcast	0	3.50	3.00	3.15	3.10	3.18
	30	3.23	3.57	2.95	2.77	3.13
	60	3.35	3.41	2.89	3.30	3.23
	90	3.27	3.21	2.88	2.88	3.06
Average		3.33	3.29	2.96	3.01	3.14

These percentages include mild discoloration, some dead florets or off-shape heads to severe black and wet rot. The higher the percentages, the higher the degree of dead florets and black wet rot.

HORIZONTAL LESIONS I

Effect of fertilizer on the incidence of horizontal lesions and rusty root in carrots.

Twenty-one of the most common packaging type carrot cultivars were seeded in muck on May 20, and replicated three times. N, P_2O_5 and K_2O was applied at the following rates - kg/ha 0-0-0, 0-30-150 and 50-30-150.
The soil analysis showed the phosphorus to be H+ to H and the potassium L to L-.
Giving the complete fertilizer application a rating of 100, the zero fertilizer and the zero nitrogen treatments gave the following results.

Evaluation	50-30-150	0-30-150	0-0-0	
Total Yield	100	103	107	Slightly higher yield
Mkble Yield	100	107	116	" " "
Culls	100	83	96	Less culls
Lgth of root	100	97	101	No significant difference
Appearance	100	99	102	" " "
Horizontal Lesions	100	84	59	Less horizontal lesions

Only traces of Rusty Root were found.
The preliminary study gave a strong indication that commercial fertilizer has an influence on the severity of horizontal lesions in carrots.

* *

HORIZONTAL LESIONS II

Evaluation of carrot cultivars for tolerance to horizontal lesions.

Two years of evaluation has been done. This preliminary investigation does not give sufficient information on the commercially grown cultivars. Many of the new hybrids appear to have good tolerance to horizontal lesions. The most promising cultivars in this respect were: Grenadier, Spartan North "A", Spartan Winner, Trophy, Candy Pak and Fanci Pak.
Most susceptible cvs were: Gold Pak, Long Imperator and Chantenay types.

* *

NITROGEN ON ONIONS

For three years, the effect of rates and sources of nitrogen on the yield of onions were studied on muck soils.

Urea 46%, Ammonium Nitrate 34%, Ammonium Sulphate 20% and Ammonium Phosphate 18-46-0 were used all three years, while in the 1st year, also Calcium Nitrate and Sodium Nitrate were used.
The rates varied from 0 to 180 kg/ha for each source used.
A sidedressing application of 40 kg N/ha was applied of the same source as the broadcast application.

Phosphate, Potash and Copper were applied as per soil test recommendations.
Each year, a plot was used that was treated uniformly in the preceeding 2 years. The plots were in a different location each year. Standard practices were used during the growing season.

Results

I. Average yield all plots

1976	39.6 t/ha	(704 b/a)
1977	40.2 t/ha	(715 b/a)
1978	71.7 t/ha	(1276 b/a)

II. When combining all sources, rates higher than 60 kg N/ha reduced yields.
The differences in yield were: 11%, 10% and 6% respectively in the three years.

III. When combining all rates, the sources that gave the higher yields were: Ammonium Nitrate, Urea and for 1976, Calcium Nitrate and Sodium Nitrate. The lower yielding sources were: Ammonium Sulphate and Ammonium Phosphate. The differences in yield were 9%, 9% and only 1-1/2% respectively in the 3 years.

IV. The very high rates reduced the stand. In the case of Ammonium Sulphate at 180 kg/ha, plant stand was reduced by as much as 20%.

V. Sidedressing with 40 kg N/ha had no significant effect on yield in 1977 and 1978. In 1976, all plots received a sidedressing and a comparison with "no sidedressing plots" could not be made. In 1977, an 80 mm (3") rainstorm on the day after the sidedressing application reduced the effect. The year 1978 was ideally suited for the growing of onions and resulted in excellent yields.

VI. In the 1976 study, 180 kg/ha delayed maturity dates with all sources of N. At 0 to 120 kg N/ha, the maturity was advanced in both cultivars.

Of the sources of N used, the Nitrate fertilizers (Sodium Nitrate and Calcium Nitrate) did better in advancing maturity than Urea and Ammonium Sulphate (18%). Ammonium Nitrate and Ammonium Phosphate were between both groups.

SUMMARY

Under good growing conditions as in 1978, a crop of onions requires little additional Nitrogen to produce maximum yield. Very high rates of Nitrogen will reduce stand, decrease yield and delay maturity.
A sidedressing of 40 kg N/ha is only required under cool and wet soil conditions when little "N" is released in the soil. Disregarding Calcium Nitrate and Sodium Nitrate which were tried for only one year, Ammonium Nitrate is the source which consistently has shown good results at 20 to 80 kg/ha as a pre-seeding application and at 40 kg/ha as a sidedressing. Although Urea produced a 9% lower yield than Ammonium Nitrate in the 1977 season when the rainfall in July and August was much above average, it appears that it is a useful alternative source of nitrogen.

ONION SPACING STUDY

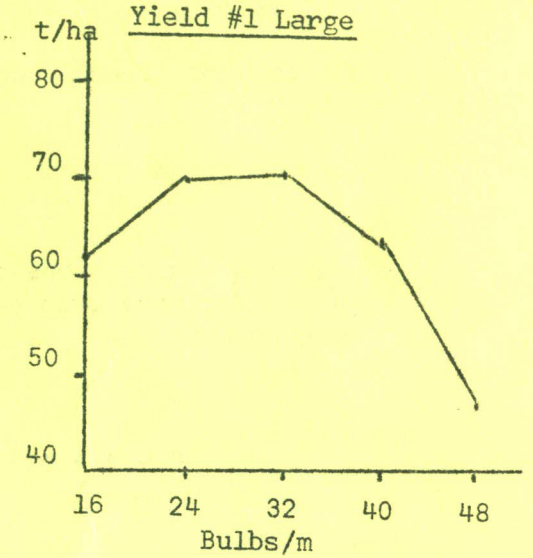
The influence of spacing on the maturity dates of onions.

Late maturity cultivars generally produce a higher yield than earlier ones, however, ground frost and consequent lower quality is a risk which a grower is reluctant to take. The purpose of this experiment was to find out if closer spacing would influence the maturity date of the cv Gladiator, which averages 117 days from seeding to maturity in 9 years of trials in the Bradford area.

Rows were spaced at 30 cm (12"). The seeding rate was adjusted from 50 to 80 seeds per meter (15 to 26 per foot). Normal seeding rate for a late maturing variety would be 53 seeds/m (16/ft) with rows at 40 cm (16").

Result: The year 1978 was a year with generally above average yield and earlier maturity dates for late varieties. The maturity date was advanced by 4 to 9 days with a population density of 32 to 38 bulbs/m (10 to 12/ft). In this range, the yield of #1 large (1-3/4+") was 67.4 t/ha (1200 b/a), well above the average over the last 9 years and about par for 1978.

* *

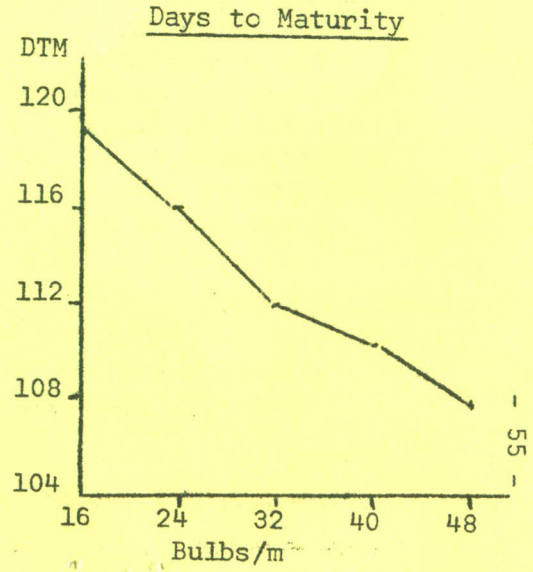


Seeds /m	Bulbs/m at Harvest	Yield #1 Large t/ha	Yield #1 Large b/a	% Small	Days to Mat	Av.Bulb Wt. (g)	Av.Diam mm
50	16	63	1118	5	119	126	63
50	20	63	1120	10	116	106	58
50	22	71	1258	14	116	108	58
50	28	77	1371	10	116	94	55
60	31	63	1116	12	116	74	50
70	31	60	1075	16	114	74	50
60	32	66	1171	18	114	76	51
60	32	65	1164	19	109	77	51
70	35	80	1415	15	112	82	52
70	36	58	1038	26	109	67	49
70	38	68	1218	21	112	68	49
60	41	69	1221	19	113	64	48
85	41	47	829	43	109	62	48
85	44	54	952	35	109	58	47
85	50	56	990	38	109	56	46
85	50	44	783	46	104	51	45

Good Yield

Good Maturity Dates

Good Mat.Dates With Good Yields



CYTEX ON LETTUCE

Cytex was sprayed on Ithaca lettuce at 5 and at 3 weeks before harvest at rates of 5.6 and 7.3 litres/ha material (4 and 5 pints/acre) replicated three times.

Very little difference was found in yield and quality at harvest, but the preliminary shelf life test showed an improvement in trim loss and a better color up to 2 weeks after harvest of the heads treated.

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PLASTIC FILM COVER

The purpose of this experiment was to study the effect of a plastic plant protection film on the growth and advancement of maturity date of celery, lettuce, tomatoes and peppers. The material used is made in Switzerland by XIRO AG. The plastic film has more than 35,000 slits per square meter and automatically adapts itself to the different shapes of growth and expands while the crop develops. Celery was seeded and transplanted in muck on May 12. The plant protection film (P.P.F.) was placed immediately over the plots which were 4.5 m long and 132 cm wide. There was no significant difference in the growth of the transplanted celery. The seeded celery emerged much poorer under the P.P.F. than in the uncovered plots and the plants also grew more slowly. Under the P.P.F., the weed population and growth was much heavier. The transplanted lettuce was ready to harvest 4 days earlier under the P.P.F. than the uncovered lettuce. There was no significant difference in yield and days to maturity in the seeded lettuce.
Four weeks after transplanting, tomatoes had developed much better under the P.P.F. although the plants had difficulty pushing up the slitted film. After the film was removed, the plants suffered more severely from wind damage as they were softer than the uncovered plants.
The peppers under the P.P.F. grew faster, had better color and were more vigorous. The fruits of the P.P.F treated plants were larger in size. No other yield data were taken.

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SEEDER TESTING

The Nibex Seeder of Nibe-Verken A.B. Sweden was tried out for various vegetable crops. The machine has different sizes and shapes of cups to suit the type of seed. These cups are placed on a rotating plastic disc. The press wheel presses the seed before the seed is covered with soil. The seeds do not have to be coated.
Parsnips: fair to good uniform stand
Broccoli and Cauliflower: When direct seeded to a stand such as one seed every 25 cm, the results were very good.
Lettuce: Quite well for clump seeding as well as standard seeding..
Close spacing such as carrots, onions: The machine performs as well as most regular seeders, but not as well as precision seeders with coated seed.
The wider row system (double or triple row) is arrived at by means of a "scatter" shoe of 6 cm wide.