

Research

H.R.I.O.

HORTICULTURAL RESEARCH INSTITUTE OF ONTARIO


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MUCK VEGETABLE CULTIVAR TRIALS and RESEARCH REPORTS

1984

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 Ministry of
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ONTARIO

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Kettleby, Ontario

RESEARCH AND CULTIVAR TRIAL REPORT FOR 1984

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SEED SOURCES - 1984

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

- A&C Abbott & Cobb Inc., Box 307, Feasterville, Pa., U.S.A., 19047
A.Ch. Alf. Christianson Seed Co., Box 98, Mount Vernon, Washington, U.S.A. 98273
Agri Agri-Seed & Chemical Corp., 850 Dryden Rd., Metamora, Mi., U.S.A. 48455
Agw Agway Inc., Seed Division, Box 4933, Syracuse, New York, U.S.A., 13221
AREC Agricultural Research and Education Centre, University of Florida,
P.O. Drawer A, Belle Glade, Florida, U.S.A., 33430
ARCO ARCO Seed Co., Box 181, El Centro, California, U.S.A., 92244-0181
ARZ See: Nickerson Zwaan
Asg Asgrow Seed Co., Box 610, Bradford, Ontario, Canada, LOG 1C0
Asm Asmer Seeds Ltd., Ash St., St. Leicester, England, LE5 0DD
BEJO Beemsterboer & Jacob Jong Seed Co.Ltd., Box 9 Noordscharwoude, Holland
BrS Bradford Shippers Ltd., 270 Holland St. E., Bradford, Ontario, Canada, LOG 1C0
Attention: Mr. McAlliston or Mr. Dorowski
Bru Bruinsma BV, Box 24 Naaldwijk, 2670AA, Holland
Cro Crookham Company, Box 520, Caldwell, Idaho, U.S.A. 83605
DeR DeRuijter Zonen BV, Bleiswijk, Holland
DES Dessert Seed Co., See: ARCO
DP See: Nickerson Zwaan
E.J. Erie James Produce, P.O. Box 457, Leamington, Ontario, Canada, N8H 3W5
ES Elsoms Seeds Ltd., Spadling, Lincolnshire, England, PE1 1QG
EZ EnzaZaden, P.O. Box 7 Enkhuisen, Holland
FM Ferry-Morse Seed Co., 111 Ferry Morse Way, P.O. Box 7274, Mountainview,
California, U.S.A. 94942
Glo Global Seeds, Box 1617, Gilroy, California, U.S.A. 95020
Gebroeders Broersen BV, See: Nickerson Zwaan
Guz Prof. V.L. Guzman, See: AREC
HM Harris Moran Seeds of Canada, R.R.#2 Hamilton, Ontario, Canada, L8N 2Z7
IPB International Plant Breeders S.A., Chemin de St-Marc, 84120 Pertuis, France
JHK J.H. Klitgord, Box 87, Mayville, New York, U.S.A. 14757.

Jung J.W. Jung Seed Co., Randolph, Wisconsin, U.S.A. 53956
K.Br. Kees Broersen, Bogtmanweg 7, 1747 HV Tuitjenhorn, Holland
Key Keystone Seed Co., See: Sun Seeds
Kru Krummrey & Sons Inc., Stockbridge, Michigan, U.S.A. 49285
MSU Michigan State University, Dept. of Horticulture, East Lansing, Michigan, U.S.A. 48824
NIPB Nickerson International Plant Breeders, S.A., P.O. Box 1787 Gilroy, California, U.S.A. 95021-1787
NK Northrup King & Co., 1500 Jackson St., N.E. Minneapolis, Minn., U.S.A. 55413
NZ Nickerson-Zwaan BV, Gebroken Meeldyk 74, Box 19 2900A Barendrecht, Holland
NUN Nunhem's Zaden BV, Box 4005, 6080AA, Haelen, Holland
OhE J.E. Ohlsens Enke, NY Munkegaard, DK-2630 Taastrup, Denmark
PES Peter Edward Seed Co., 115 Cardinal Lane, Eustris, Florida, U.S.A. 32726
PETO PetoSeed Co., Inc., Box 4206, Saticoy, California, U.S.A. 93004
Qua Quali-Sel-Seeds, Box 311 Parma, Idaho, U.S.A., 83660
RS Royal Sluis Inc., 1293, Harkins Rd., Salinas, California, U.S.A. 93901
Royal Sluis Inc., Box 22, 1600AA, Enkhuizen, The Netherlands
Sak Sakata & Co., C.P.O. Box Yokohama No. 11, Yokohama, 220-91, Japan
SG Sluis en Groot, Box 13 Enkhuizen, The Netherlands and/or Sluis en Groot of America Inc., 124 Griffen, St., Salinas, California, U.S.A. 93901-3786
Sha Charles Sharpe & Co. Ltd., Seaford Lincs, England, NG3 47HA
SS Seed Service Inc., See: J.W. Jung Seed Co.,
Sto Stokes Seeds Ltd., 39 James St., P.O. Box 10 St. Catherines, Ontario, Canada, L2R 6R6
Sun Sun Seeds, 9531 West 78th St., Suite 229, Eden Prairie, Minn., U.S.A. 55344
Swy Seedway Inc., Hal, New York, U.S.A. 14463
Tak Takii Co. Ltd., Box 7, Kyoto Central 180 Umbekosi-Inokuma, Kyoto, Japan, 600-91
Toz A.L. Tozer Ltd., Cobham, Surrey, England, KT11-3EH
Twi Otis S. Twilley Seed Co., Box 65 Trevosa, PA., U.S.A. 19047
UnS Union Seed Co., Box 339, Nampa, Idaho, U.S.A., 83651
USDA U.S. Dept. of Agriculture, Dr. C.E. Peterson, Dept. of Horticulture University of Wisconsin, Madison, Wisconsin, U.S.A. 53706
UW University of Wisconsin, Dept. of Hort., 1575 Linden Drive, Madison, Wisconsin, U.S.A. 53706. Attention Dr. Gabelman.
VDH Vandershave, Box 1, 4420AA, Kapelle 3648, Holland
Ves Vesey's Seeds Ltd., York, Prince Edward Island, Canada, COA 1P0
Vil Vilmorin La Menitre, 49250 Beaufort-en-Vallee, France

SUBSIDENCE AND WATER TABLE CONTROL - 1984

Subsidence, or the lowering of the surface elevation of organic soils, will, if unchecked, eventually lead to the disappearance of the layer of peat soil, as has already happened in the fringe areas of the Holland Marsh.

This process can be slowed down by maintaining a proper water table. The water table should be kept high enough to reduce the rate of subsidence, and at the same time low enough for optimum growth and crop yields.

Rate of Subsidence: Dr. R.S. Irwin of the School of Engineering of the University of Guelph, found that the rate of subsidence at the Muck Research Station was 2.8 cm per year when the water table was maintained below 1.17 m (3' 10").

Other research showed that the rate of subsidence is 7½ times higher at a water table of 1.50 m (5 ft) below the surface, compared to a water table only 70 cm below the surface (Zubets 1974).

Tile drainage combined with water table control: In 1975 a new tile-drain system was installed at the Muck Research Station according to a plan drawn up by Ralph Gregg, P. Eng. and Ralph Elliott, Eng. Assistant, of the O.M.A.F. office in Newmarket. The lateral lines were 10 cm (4") plastic tubing 17 m (57 ft) apart at a depth of 90 cm (3 ft) at the upper end and 1.40 m at the main drain. The outlet of each lateral line can be raised or lowered to regulate the water table in the area serviced by the drain. The upper end of the drains are connected by pipeline to the canal and by gravity, or pumps and valves, the water can be fed into the tile drains. After the initial spring drainage period, the water table was maintained at 90 cm for carrots, and at 50-70 cm for onions, celery, lettuce, potatoes, and cauliflower. During the winter season the water table was kept at 50 cm or less.

SUBSIDENCE AT THE MUCK RESEARCH STATION:

<u>Drainage Method</u>	Subsidence Per period	Subsidence Per year
1945-'55: Open ditches widely spaced	11 cm (4.3")	1.1 cm
1955-'75: Tile drains (installed in 1957):	61.6 cm (24.3")	3.1 cm
1975-'83: New tile drains and water table control system:	6.4 cm (2.5")	0.8 cm
1945-'83: Total subsidence	* 79.0 cm or 31 inches in 28 years	

* According to independent surveys by Dr. Irwin and R. Elliott

The results show that a good water table control system, closely monitored, can reduce the subsidence from 3.1 cm (1¼ inches) to 0.8 cm (0.3 inches) per year. This means that if a layer of 60 cm (2 ft) of organic soil is tile drained without water table control, it will last less than 20 years, but if the water table is rigidly controlled it will last 75 years.

ONION CULTIVAR TRANSPLANT TRIAL - 1984

On January 12, 1984 in a replicated trial, 6 seeds of cv. Tamarack were seeded in 10 cm plastic pots. On Feb 22, 6 seeds of the cultivar Norstar were seeded in each 3 X 3 X 7 cm cell of the "Speedling " trays (200 per tray) and similarly in 4 X 4 cm compressed soil blocks. All treatments were replicated 3 times. The plants were grown in a greenhouse, kept trimmed at a height of 12 cm, and transplanted to the field on May 8 in rows 43 cm apart and 15 cm in the row being the equivalent of 40 plants/m. Half of each treatment was covered with "Reemay" a white spun-bounded polyester, which is porous to water and transmits 75% of incident light. The cover was removed on June 15. When the tops went down on July 23 the bulbs were pulled. The bulbs were harvested on July 31.

Treatments	Marketable		# Weeds/ Plot	Height of Weeds(cm)	% Seeders
	Yield t/ha	b/a			
Speedling	45.9	816	4	2.5	0
Speedling + row cover	50.0	890	14	10	0
Soil Blocks	39.7	706	3	3	0
Soil Blocks + row cover	46.2	823	11	6	0
Pots + row cover	47.5	846	--	--	37

In a comparable direct seeded trial the tops of the cv. Norstar went down on August. 17. The bulbs were lifted on Sept. 14 and at harvest on Sept 25 the yield was 65.1 t/ha (1159 b/a).

At 2 ¢ per cell of 5 to 6 plants, the cost of transplants would be \$2,900/ha (\$1,200/acre).

Onion sets in the Leamington area are harvested approximately July 20. The average yield is approximately 400 bags/acre (Fruit and Vegetable Report - Economics Branch).

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WEED CONTROL AND BARLEY WINDBREAK ERADICATION IN ONIONS - 1984

The onion cultivar Aries was seeded May 7 in rows 43 cm apart. Each plot consisted of 8 rows, 43 cm apart and 5 m long. Replicated 3 times.

1 row of barley (Bruce) was added to each plot to study the effect of herbicides on barley. The tractor mounted boomsprayer applied 550 L/ha at 140 kPa (20 psi) except in the case of Poast + Assist when 300 L/ha was applied.

Dates applied and plant stage:

May 16:	Pre-emergence to onions, barley less than 5 cm high
May 23:	Onions early loop stage, early a.m., cloudy
June 13:	Post 1; onions early 2nd leaf, early a.m., after light rain
June 15:	Post 2; 2nd true leaf, a.m., sunny, cool after
June 22:	Post 3; early 3rd true leaf, leaves dry
June 25:	Post 4; 3rd leaf, applied in evening
June 26-29:	Post 5; Radox mixtures and CIPC mixtures applied early a.m., with dew; all others applied in evening.
July 4:	Post 6; 1 L Totril/ha applied on cloudy day with drop nozzles to prevent crop damage
July 6:	Post 7; early a.m., very foggy and humid
July 18:	Post 8; a.m.
July 25:	Post 9; treatments applied early a.m., with dew on leaves except Goal which was applied in the afternoon, clear, mostly sunny.
July 31;	Post 10; middle of day, humid.

The main weeds present were: barnyard grass, pigweed, prostrate pigweed, potato weed, lamb's-quarters, and purslane. In view of the extremely high numbers of barnyard grass it was decided to spray the check plots with Poast as well. However, the not-weeded plot had to be destroyed as the weeds interfered with the adjoining plots.

Results:

By far the best results were obtained by the Ramrod treatments; only 3 applications controlled broadleaf weeds as well as grass, with practically no hand weeding. Also, the Goal and Poast treatments were very good, very low weeding cost and good yields/ha. The highest yield per ha was received from the Radox mixtures, although the weeding cost offset the better yield. The high cost of weeding the CIPC-Totril tank-mixture treatment was the result of very poor prostrate pigweed control.

WEED CONTROL AND BARLEY WINDBREAK ERADICATION IN ONIONS - 1984 -continued

Treatments: Rate (product)/ha			Post Plant Stages	% Crop Damage	July 5			\$ Weeding Cost /ha	Yield t/ha
Pre	Loop	Post			% Barley Control	% BLW Control	% Grass Control		
2.5 L Gramoxone	18 L CIPC	6 L CIPC + 200 ml Totril 1.9 L Poast + Assist	1,5,7,9 3,5,6*,7,9 2,8,10	3	96	57	78	2,637	62
2.5 Gramoxone	18 L CIPC	6 L CIPC + 208 ml Goal 1.9 L Poast + Assist	1,5,7,9 1,5,9 4,8,10	7	93	88	95	1,499	61
625 ml Goal***	- - -	208 ml Goal 1.9 L Poast + Assist	1,5,7 2,8,10	12	90	95	57	140	61
2.5 L Gramoxone	16 L Ramrod (early loop)	16 L Ramrod	1,7	1	52**	97	100	48	63
** Poast applied to barley only									
2.5 L Gramoxone	2 kg Bladex	200 ml Totril 1.9 L Poast + Assist	3,5,6*,9 2,8,10	17	90	65	72	783	57
2.5 L Gramoxone	14L Radox 5L CIPC	5 L Radox + 2.5L Tok or 200 ml Totril	1,5,7,8 5,7 3,6*,9	5	88	90	97	572	66
Check Hand Weeded		1.9 L Poast + Assist	2,8,10	10	90	Hand Weeded		9,831	36
Check Not Weeded		1.9 L Poast + Assist	2,8,10	100	93	0	93	Plots destroyed	

* Treatment: Post 6 consisted of 1 L/ha Totril applied with drop nozzle to weeds only.

*** Research done in New York State by Dr. Roy Ellerbrock indicated that Goal, applied at 364 and 728 ml/ha pre-emergence to the onions caused a severe reduction in stand, when rain followed the application.

1 ha = 2.5 acre 1 fl. oz. = 28 ml + means: tankmixed

1
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1

EFFECT OF HERBICIDES ON BUCKWHEAT USED FOR WINDABATEMENT IN CARROTS - 1984

The carrot cultivar Chancellor was seeded on May 30 in rows 43 cm apart at 80 seeds/m. A row of buckwheat was seeded between each two carrot rows at 100 seeds/m. Each plot consisted of 8 carrot rows and 7 buckwheat rows 4 m long. Each treatment was replicated 3 times. A tractor mounted boomsprayer was used, equipped with T jet #8006 nozzles, applying 550 L per ha at 140 kPa (20 psi).

TREATMENTS

Pre-emergence: Gesagard at 0; 1kg; and 2 kg/ha applied one day after seeding. Weed control was good at both rates, although not many weeds emerged in the non-sprayed check plots. The Gesagard treatments had no apparent effect on the development of the buckwheat. It emerged very quickly in all plots, and grew much faster than the carrots, providing excellent wind protection.

Post-emergence: Applied on June 21, 3 weeks after seeding when the carrots had only 2 true leaves. The buckwheat was already 20 cm (8") high, growing very fast, and appeared to be getting past the stage of effective weed control with herbicides.

EFFECT OF HERBICIDES ON BUCKWHEAT USED FOR WINDABATMENT IN CARROTS - 1984 -continued

Trade Name	Rate of Product/ha	% BLW Control July 3	% Buckwheat Control July 3	% Crop Damage July 3	# Weeds/m ² July 24					Mkb Yield t/ha
					GR	PP	PW	PU	0	Oct. 9
Lorox (50WP)	2 X 1.1 kg	96	100	4	1	1	1	1	0	71
Lorox (50WP)	2.2 kg	88	98	14	4	2	0	0	1	67
Maloran (50W)	2.2 kg	82	94	6	4	1	0	2	1	70
Patoran (50WP)	2.0 kg	78	98	36	16	1	0	3	2	72
Afesin (200g/L)	5.0 L	92	100	37	2	2	3	3	2	65
Herbicideal Oil	660.0 L	66	54	2	3	6	7	3	2	61
Check, not weeded	--	0	0	0	PLOTS DESTROYED					

BLW = broadleaf weeds
GR = groundsel

PP = prostrate pigweed
PW = pigweed

BY = barnyard grass
0 = others
PU = Purslane

Results:

All herbicides, except herbicidal oil, eradicated the buckwheat over a period of two weeks, during which time it still acted as a windbreak. Herbicidal oil killed the buckwheat very quickly, thereby eliminating the usefulness of the buckwheat as a windbreak at a time when some protection was still needed. Shortly after, 46% of the plants started to grow again and were removed by hand on July 17.

From this trial, done for only one year, it appears that buckwheat is very well suited as a windbreak in carrots, provided it is eradicated in time. The buckwheat does not seem to be affected by Gesagard applied pre-emergence. Most post-emergence herbicides, provided they are applied before the buckwheat is over 20 cm high, will eradicate the buckwheat over a 2 to 3 week period.

EFFECT OF GRANULAR FURROW INSECTICIDE ON CAVITY SPOT IN CARROTS, 1984

The cultivar Six-Pak, which is considered tolerant to cavity spot and the cv. Royal Chantenay, considered to be susceptible to cavity spot were seeded on May 31 in a deep muck soil at 100 seeds/m.

Granular insecticides chlorfenvinfos (BIRLANE) at 2.2 kg ai/ha and carbofuran (FURADAN) at 2.2 kg ai/ha were applied in the seed furrow with the seed and compared to an untreated check.

All treatments replicated three times. Normal management practices were followed.

Results: From this trial it appears there is a varietal difference and secondly that Furadan and Birlane adversely affect the incidence of cavity spot in a susceptible cultivar.

	No Furrow Treatemnt	Carbofuran (FURADAN)	Chlorfenvinfos (BIRLANE)	Average
<u>Yield/Plot (g)</u>				
Six-Pak	4133	3883	4200	4072
Royal Chantenay	4783	4233	5183	4733
Average	<u>4458</u>	<u>4058</u>	<u>4692</u>	
%	100%	91%	105%	
<u># Plants/Meter</u>				
Six-Pak	48.3	42.7	49.3	46.4
Royal Chantenay	50.7	44.7	48.7	48.0
Average	<u>49.5</u>	<u>43.7</u>	<u>49.0</u>	
	100%	88%	99%	

<u>% Unmarketable Roots Due to Cavity Spot</u>				
Six-Pak	0	0	1.67	
Royal Chantenay	0	5.0	8.33	

CARROT STORAGE ENVIRONMENT STUDY 1983-84

470 kg carrots of the variety Chancellor were stored in each of 3 types of storages.

1. A common storage, where the temperature was lowered as quickly as the weather permitted to 0°C and the relative humidity (RH) was kept as high as possible by using the exhaust fans on high humidity days only. The temperature reached 1°C by December first and the RH was usually between 60 and 80%.
2. A refrigerated temperature and relative humidity controlled storage where the temperature was kept at 0°C to 1°C and the relative humidity at 90 to 95%.
3. A "Filacell" type of storage where the temperature was kept at 1.5°C and the relative humidity at 98%.

The roots were harvested mechanically on Oct. 28/83 and data was taken 7 months later on May 29/84

Storage Type	Shrinkage %	Decay %	Marketable wt %	Quality *
Common	13.5	1.9	84.5%	3
Refrigerated	9.6	7.0	83.4%	4+
"Filacell"	6.9	6.9	86.2%	4

The roots kept in the common storage showed more signs of shrinking, some wilting and had less eye appeal. The decay in all three storage environments was mostly Sclerotinia sclerotiorum.

* 5 = most desirable

CELERY STORAGE ENVIRONMENT TRIAL 1984/85

In a 5 times replicated trial, 60 celery stalks (per replication) were harvested, weighed, trimmed, and placed upright in pallet boxes. The celery was drenched with a solution of 3.3 L of 6% sodium hypochlorite per 1000 L water, and stored in a "Filacell" type of storage where the temperature was controlled at 1.5°C and the relative humidity at above 95%. The pallet boxes with celery were placed so that the air stream flow of the "Filacell" unit was passing by these boxes, but not directly in the air stream flow.

The 15 cm wide boards of the boxes are spaced 2 to 3 cm apart to allow for air circulation. Data was taken after a storage period of 80 days. It was found that the celery stalks placed near the outer edge of the boxes wilted much more than those in the centre of the box.

TREATMENT	Quality*	% Mkb1	Reason unmarketable % by weight				
			Storage Shrinkage	Wilted Stalks	Black Stem	Decay	Loss of Color
Outer Edge	2.3	12	16	60	3	7	2
Center of box	3.3	40	13	13	4	24	6

* 5 = most desirable

MICRO-MIST TREATMENT OF CELERY FOR STORAGE - 1984

The cv. Florida 683 was seeded in a greenhouse on April 30 and planted by hand in a deep peat soil on June 18 at a spacing of 57 X 15 cm. Fertilizer was broadcast prior to planting at 750 kg/ha of 10-0-50 + 20 kg/ha Borax as required by soil tests. Two times a sidedressing of 200 kg/ha of Chilean Nitrate was drilled into the soil and irrigation was applied when less than 22 mm of precipitation per week was received. The water table was kept at 50 cm below soil level. Normal crop management procedures were followed. Foliar sprays of 1 kg/ha Solubor were added to the fungicide sprays on two occasions.

Micro-Mist, a liquid Norwegian seaweed extract, was applied as a foliar spray to part of the plot at a rate of 3 L/500 L water/ha on June 20, July 16, Aug. 2, 17 and 31. After harvest on Sept. 10 the Micro-Mist treated celery stalks were drenched with a solution of 1 L Micro-Mist per 100 L water. All treatments replicated three times.

The celery stalks were placed upright in open rigid plastic containers with small holes in the sides and bottom. They were stored in two storage types: a refrigerated storage where the temperature was kept between 0 and 1°C with a relative humidity between 80 and 100% and secondly in a "Filacell" type of storage at a forced air controlled temperature of 1.5°C and a relative humidity of 95 to 100%.

After 82 days in storage data was taken.

Treatments	Quality*	Marketable %	Reasons Unmarketable % by Weight		
			Shrinkage and Wilting	Decay and Blackstem	Loss of Color
Refrigerated Storage:					
Micro-Mist treated	3.7	65	17	14	4
Untreated	3.4	62	19	16	3
"Filacell" Storage:					
Micro-Mist treated	3.2	48	17	30	5
Untreated	3.1	49	18	27	6

* 5 = most desirable. A mark less than 4 indicates the stalks are not suitable for the fresh market, only for the processing trade.

The average stalk weight at harvest was 1.17 kg for the Micro-Mist treated and 1.25 kg for the untreated stalks of celery.

These results seem to indicate that under these, close to ideal, growing and storing conditions, the treatments had very little effect on the quality of the celery.

CELERY STORAGE TREATMENT TRIAL - 1984/85

The cv. Florida 683 was seeded on April 30 and transplanted to the field on June 18 at a spacing of 57 cm X 15 cm. Normal management procedures were followed and harvest took place on Sept. 6 to 10.

Type of Treatments:

Two types of storage were used. One, a "Filacell" storage with a forced air controlled temperature of $1\frac{1}{2}$ °C and a relative humidity of 95 to 100%. The second storage is a refrigerated storage where the temperature was kept at 0°C to 1°C and the relative humidity between 80 and 100% by an air jet nozzle.

The celery stalks were placed upright in the following types of containers:

1. Open rigid plastic containers with small holes in sides and bottom.
2. Sealed black plastic bags.
3. Wooden pallet boxes with 2-3 cm spacing between the boards on sides and bottom. One half of each box was wrapped in black plastic film leaving the bottom and 20% of the top open for air movement.

All celery stalks were drenched with a solution of 3.3 ml of 6% sodium hypochlorite (Javex) per L water. This season no benomyl (Benlate) drench was used as was done in previous years. All treatments were replicated 3 times.

Conclusions:

1. The celery kept better in the refrigerated storage due mostly to more decay in the "Filacell" storage. In previous years, much less decay and more loss of color developed in all treatments. This year the celery was not treated with benomyl (Benlate).
2. The rigid plastic container was generally the better container to store celery in. The sealed plastic bag was fairly good up to 82 days, but the amount of the decay was already increasing rapidly.
3. A storage period of 82 days seems already too long in view of the treatments given in this trial.

CELERY STORAGE TREATMENT TRIAL - 1984-85 -continued

	Quality*	% BY Weight Marketable	% Shrinkage Wilting	% Decay & Black Stem	% Loss of Color
<u>I Comparing Storage Types:</u>					
After a storage period of 82 days.					
Refrigerated	3.4	62	19	16	3
"Filacell"	3.1	49	18	27	6
<u>II Comparing Containers:</u>					
After a storage period of 82 days.					
a) <u>In Refrigerated Storage:</u>					
rigid plastic containers	3.5	72	12	12	4
sealed bags	3.5	71	1	27	1
pallet box wrapped	3.3	59	19	20	2
pallet box	3.2	61	20	15	4
b) <u>In "Filacell" Storage:</u>					
rigid plastic container	3.3	51	19	27	3
sealed bag	3.2	60	1	34	5
pallet box wrapped	3.2	50	16	27	7
pallet box	3.0	46	18	29	7
<u>III Comparing Length of Storage Period:</u>					
a) <u>In refrigerated Storage:</u>					
82 day	3.2	64	16	17	3
105 days	2.9	35	19	41	5
b) <u>In "Filacell" Storage:</u>					
82 days	3.2	51	15	28	6
105 days	2.8	20	24	55	1

* 5 = most desirable

CELERY STORAGE DURATION TRIAL 1984-'85

In a 5 times replicated trial 300 stalks of celery were placed upright in pallet boxes, drenched with a solution of 3.3 L of 6% sodium hypochlorite per 1000 L water and placed in a "Filacell" type of storage where the temperature was controlled at 1.5°C and the relative humidity at above 95%.

5 replications of 20 stalks each, were examined for marketability after 64 days, 81 days and 96 days in storage. The results were as follows:

Days in Storage	Quality *	% Marketable	Reason Unmarketable % by Weight				
			Storage Shrinkage	Wilting	Black Stem	Decay	Loss of Color
After 64 days	3.9	66	7	16	1	5	5
After 81 days	3.5	42	8	12	11	23	4
After 96 days	2.7	20	14	10	6	45	5

* 5 = most desirable

After 2 months in storage the losses became too great to warrant further storing of celery. The amount of decay increased rapidly after 64 days. In previous years' experiments there was evidence that benomyl could have prevented some of this decay. Benomyl is not registered for use on celery. Wilting and black-stem losses on a percentage basis were lower as the storage period was extended.

CARROT CULTIVAR TRIALS - PACKAGING TYPES

Management Procedures:

The soil was rotovated to a depth of 25 cm, after fertilizer was applied in the form of 500 kg/ha 10-0-0 + 20 kg/ha Borax.

The trials were seeded on May 24 in rows 50 cm apart, with a V belt seeder equipped with a 5 cm scatter shoe, at 82 seeds/m. The Main Trial was replicated 3 times. The plants were thinned to approximately 40 per m. The water table was kept at 90 cm.

A regular fungicide spray program was discontinued after Sept. 1st. to evaluate the cultivars for tolerance to leaf blights.

The roots of the Main and Adaptation Trials were harvested on Oct. 10 and placed in a "Filacell" storage at 1.5°C and 95% relative humidity. Data was taken November 5.

On October 25 field notes were taken of the Observation Trial.

Legend:

Yield: 56 t/ha = 1000 b/a, 84 t/ha = 1500 b/a

Length and Width: 25 cm = 10 inches, 3.8 cm = 1.5 inches.

Quality marks: 5 = most desirable 1 = least desirable

Rusty Root: Most cvs showed signs of a late attack of rusty root, usually without effect on the root development. See marks in Main Trial. In the Adaptation Trial the marks are not listed. The cvs affected to a light degree were Imperator L58, Nantes, PW Imperator, Rondino, A Plus, Figaro, and EXP 642.

Horizontal Lesions and Degree: The percentage of roots that have horizontal lesions or cavity spots and to what degree they appear on the roots. 72 VL means that 72% of the roots have very few and small lesions
VL = very light, M = medium, VH = very many and large cavity spots, roots not marketable.

Slicer Types: The degree to which the shape of the root makes it suitable for slicers. For a list of cultivars suitable for slicers see index.

Score: The average of uniformity of shape and size, appearance, resistance to greening, interior and exterior color and core size.

The Main Trial is listed in order of length and slenderness of roots.

CARROT CULTIVAR MAIN TRIAL - 1984 - PACKAGING TYPES

Cultivar	Source	YIELD MARKETABLE		% Over Size	% Marketable	ROOTS		UNIFORMITY		Appearance	Resist. to Greening	COLOR		Core Size	Rusty Root	% Hort. Lesions & Degree	Blight	Slicers	Score
		t/ha	b/a			Length (cm)	Width (cm)	Shape	Size			Interior	Exterior						
—Six Pak	HM	81	1449	14	89	24	3.6	4.2	4.2	4.0	3.4	3.9	3.9	4.0	5.0	53VL	4.3	3.4	3.94
—Orlando Gold	Sto	73	1305	13	87	23	3.5	4.1	4.3	3.8	4.3	3.9	4.2	3.9	5.0	77L	4.3	3.5	4.07
Charger	HM	66	1173	10	89	23	3.1	4.1	4.2	3.3	4.3	3.8	4.0	4.0	4.3	60L	3.3	3.2	3.96
—Orange Sherbet	Sto	77	1363	23	91	23	3.4	4.0	4.0	3.5	4.3	3.7	3.8	4.1	5.0	53L	4.3	3.4	3.91
Cimarron	HM	79	1401	9	89	23	3.5	3.7	4.2	3.7	3.8	3.5	3.9	3.6	5.0	62L	3.0	3.1	3.77
—Six Pak II	HM	82	1460	14	92	23	3.7	4.3	4.3	4.1	4.2	3.8	3.8	3.9	5.0	23VL	4.7	3.6	4.06
—Candy Pak	Cro	77	1365	10	93	23	3.5	4.1	4.3	4.1	4.6	3.9	3.9	3.8	5.0	54L	4.7	3.3	4.10
Goldmine	PES	69	1234	25	88	23	3.8	3.7	3.7	3.2	4.1	3.1	3.6	3.8	4.7	90VL	3.7	3.0	3.60
—Dagger 78	ARCO	76	1347	25	84	22	3.7	4.0	4.1	4.0	3.9	4.0	4.2	4.1	5.0	43L	4.3	3.7	4.04
—Sweet-N-Crisp	Cro	80	1431	28	83	22	3.9	3.7	3.8	3.8	4.0	3.7	3.7	4.0	5.0	66L	4.3	3.1	3.81
Golden State	Asg	65	1157	14	83	22	3.5	3.8	4.1	3.7	4.5	4.3	4.0	4.1	4.3	60M	4.3	2.8	4.07
Cellobunch	Asg	89	1588	14	88	22	3.5	3.8	4.0	4.0	3.1	3.8	4.0	3.7	5.0	60VL	4.0	3.8	3.77
Dart	ARCO	73	1303	14	81	21	3.7	3.5	3.7	3.2	4.0	4.0	3.9	3.8	4.7	93L	3.0	3.2	3.73
—Flavor Pak	Cro	72	1278	19	86	21	3.6	3.9	3.8	3.3	4.2	3.6	3.8	3.7	5.0	63L	4.0	3.1	3.76
—Top Pak	HM	87	1547	29	90	21	4.0	3.3	3.7	3.4	3.8	3.6	4.0	3.7	4.7	40L	4.3	2.1	3.64
Dominator	Sun	74	1315	28	86	21	4.0	4.1	3.8	3.2	4.3	3.4	3.8	3.9	5.0	100VL	4.3	2.2	3.79
—Aristo Pak	Cro	82	1467	24	93	21	3.8	3.7	3.8	3.6	4.2	3.6	3.9	3.3	5.0	60L	3.3	3.0	3.73
Debut	Asg	68	1212	18	77	21	3.5	3.5	3.4	3.1	4.1	3.9	3.8	4.4	5.0	70VL	4.7	3.0	3.74
Fancy Pak	Agri	78	1392	27	82	21	3.6	3.3	3.8	3.4	4.3	3.2	3.7	3.4	4.7	70L	4.3	3.4	3.59
—Polaris	HM	88	1568	12	87	21	3.7	3.7	4.7	4.0	3.3	3.4	4.1	4.0	5.0	90VL	2.7	3.7	3.89
—Saber 78	ARCO	70	1239	5	92	21	3.0	3.7	4.1	2.9	4.4	3.5	3.7	4.1	3.7	56L	4.0	3.7	3.77
—Pak Mor	HM	75	1335	19	86	20	3.6	3.6	4.0	3.0	4.3	3.1	3.8	3.4	5.0	63L	4.7	3.0	3.60
—Sierra	Agri	64	1143	14	82	20	3.4	3.4	3.9	3.1	4.3	3.1	3.9	3.5	4.7	80VL	4.0	2.5	3.60
A Plus	Asg	61	1093	8	71	19	3.5	3.8	4.0	3.5	4.7	4.0	4.1	4.2	4.0	83L	3.3	3.4	4.04

Listed in order of Length

LONG TERM AVERAGES OF CARROT CULTIVARS - PACKAGING TYPES

Cultivar	Source	# Years Tested	LTA Length		LTA Yield		% Mkble	LTA Score
			cm	Inches	t/ha	b/a		
Orlando Gold	Sto	3	23.99	9.44	68.93	1228	85	4.18
Javelin 80	ARCO	4	23.60	9.29	55.75	991	85	4.13
Spartan North	Cro	7	23.25	9.15	66.95	1192	85	4.20
Candy Pak	Cro	8	23.22	9.14	66.91	1192	85	4.28
Dagger 78	ARCO	6	23.13	9.11	70.28	1250	85	4.25
Spartan Delite 80	MSU	4	22.88	9.01	75.25	1376	89	4.08
Orange Sherbet	Sto	5	22.76	8.96	66.62	1185	86	3.86
Sweet-n-crisp	Cro	3	22.63	8.91	71.91	1280	88	3.94
Cutlass	ARCO	6	22.58	8.89	67.57	1203	81	4.02
Six Pak	HM	5	22.58	8.89	74.08	1319	90	4.18
Saber 78	ARCO	5	22.48	8.85	61.32	1091	85	4.10
Flavor Pak	Cro	3	22.47	8.85	73.90	1316	89	3.99
Debut	Asg	2	22.08	8.69	72.30	1287	82	3.91
Nuggeteer	FM	7	22.05	8.68	65.00	1158	80	3.91
Spartan Fancy 80	Cro	4	22.00	8.66	68.50	1219	84	4.01
Brite Pak	A&C	4	21.98	8.65	65.40	1164	79	3.92
Six Pak II	HM	2	21.85	8.60	76.50	1358	91	4.16
Imperator 58	Cro	9	21.69	8.54	50.34	896	78	3.64
Trophy	HM	10	21.60	8.50	64.02	1140	84	3.99
Gold Pak 263	Asg	6	21.58	8.50	60.67	1079	85	3.91
Diplomat	Asg	4	21.50	8.46	73.00	1297	87	3.99
Cellobunch	Asg	3	21.43	8.44	82.32	1465	87	3.82
Chancellor	Asg	4	21.40	8.43	67.75	1206	81	3.86
Lance	ARCO	6	21.22	8.35	64.98	1156	83	4.08

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LONG TERM AVERAGES OF CARROT CULTIVARS - PACKAGING TYPES -continued

Cultivar	Source	# Years Tested	LTA Length		LTA Yield		% Mkble	LTA Score
			cm	Inches	t/ha	b/a		
Spartan Premium 80	Cro	4	21.20	8.35	80.75	1437	86	3.95
Pak Mor	HM	4	21.17	8.34	65.00	1157	83	3.81
Grenadier	HM	14	21.11	8.31	65.94	1173	84	3.98
Spartan Winner 80	Cro	3	21.10	8.31	73.33	1306	82	3.78
Sierra	Agri	4	20.96	8.25	67.43	1200	84	3.92
Canuck	Sto	15	20.94	8.24	62.69	1116	82	3.99
Gold Pak 28	FM	12	20.76	8.17	55.91	996	85	3.84
Paramount	Asg	6	20.52	8.08	84.33	1502	87	3.92
Spartan Sweet 'A'	Cro	13	20.33	8.00	69.68	1240	82	4.12
King Imperator	NK	10	20.19	7.95	52.71	938	83	3.75
Spartan Deluxe	MSU	9	19.96	7.86	70.80	1260	84	3.97
Dominator	Sun	13	19.74	7.77	63.88	1137	85	3.85
Klondike Nantes	Sto	10	19.59	7.71	72.10	1283	85	3.87
Hipak	HM	13	19.26	7.58	65.46	1166	86	3.84
Spartan Classic 80	Cro	3	17.93	7.05	63.33	1127	78	3.78
Pioneer	HM	10	16.60	6.54	64.00	1139	81	3.61
Scarlet Nantes	Asg	8	14.50	5.71	66.00	1175	75	3.46

5 = most desirable

Listed in order of Length

EARLY MATURITY OF CARROT CULTIVARS - 1984 - PACKAGING TYPES

Cultivar	Source	Marketable t/ha		Bags/Acre		Weight/Root		Acceptability		Earliness
		July 31	Aug. 9	July 31	Aug. 9	July 31	Aug.9	July 31	Aug. 9	
Dart	ARCO	23.0	35.0	409	623	44	63	4.2	4.5	2
Polaris	HM	22.0	31.0	392	552	41	60	3.9	3.9	6
Spartan Classic	Cro	21.3	35.3	380	629	43	55	4.0	3.8	3
Cimarron	HM	20.2	35.7	359	635	42	71	4.2	4.1	1
Six-Pak	HM	20.2	31.2	359	555	39	54	3.9	4.1	11
Pak Mor	HM	19.7	30.7	350	546	41	70	3.8	3.7	9
Cellobunch (XPH 568)	Asg	19.5	34.3	347	611	42	53	3.7	4.1	8
Grenadier	HM	19.5	33.0	347	587	42	61	3.6	3.9	10
A Plus (VNH 425)	Asg	18.7	31.5	332	561	41	58	3.5	4.0	13
Dagger 78	ARCO	18.7	27.6	313	491	41	55	3.7	3.8	15
Trophy	HM	18.3	30.8	326	549	46	64	3.8	4.1	4
Top Pak	HM	18.2	31.8	323	567	45	69	3.7	3.7	5
Paramount	Asg	17.8	28.3	318	504	42	79	3.9	3.7	12
Klondike Nantes	Sto	17.7	29.8	314	531	40	68	3.7	3.2	16
Diplomat	Asg	17.5	31.2	312	555	49	65	3.8	4.0	7
Six-Pak II	HM	17.2	29.3	305	522	37	59	3.8	4.1	14
Orange Sherbet	Sto	17.2	24.5	305	436	41	58	3.6	3.4	18
Aristo Pak	Cro	15.8	30.8	282	549	40	59	3.2	3.8	17
Spartan Premium '80'	Cro	15.7	27.5	279	490	31	47	3.7	3.8	20
Goldmine	PES	15.7	28.5	279	507	41	55	3.6	3.6	19
Charger	HM	15.7	26.5	279	472	34	53	3.6	3.8	22
Fancy Pak	Agri	13.3	24.0	237	427	37	67	3.3	3.2	21
Golden State (XPH 5068)	Asg	11.3	23.0	202	409	35	44	3.1	3.1	24
Debut (XPH 979)	Asg	10.7	24.5	190	436	36	45	2.7	3.1	23

Seeded: May 17 at 60 seeds/m

5 = most desirable

Listed in order of July 31 marketable t/ha

Earliness: order of earliness of maturity considering all data

CARROT CULTIVAR STORAGE TRIAL - 1983/84 - PACKAGING TYPES

CULTIVAR	Source	% Marketable	% Weight Loss In Storage	% Decay	Degree of Decay *
Top Pak	HM	84	15	1	5
Candy Pak	Cro	83	14	3	5-
Saber 78	ARCO	82	14	4	4+
Paramount	Asg	82	12	6	4+
Canuck	Sto	80	15	5	5-
Goldpak 28C	A.Ch.	80	15	5	4-
Nuggeteer	FM	79	16	5	5
Spartan North	Sto	79	16	5	5-
Dagger 78	ARCO	79	18	3	5-
Flavor Pak	Cro	79	18	3	5-
Javelin 80	ARCO	78	17	5	5-
Six Pak	HM	78	17	5	5-
Spartan Fancy	Sto	78	13	9	4+
Orange Sherbet	Sto	78	13	9	4+
Aristo Pak	Cro	78	14	8	4-
Diplomat	Asg	77	14	9	4+
Chancellor	Asg	77	17	6	3-
Pak Mor	HM	76	12	12	3+
Six Pak II	HM	76	13	11	2+
Brite Pak	A&C	75	16	9	3+
Orlando Gold	E.J.	75	17	8	3
Sweet-N-Crisp	Cro	74	18	8	4+
Sierra	NK	74	16	10	2+
Polaris	HM	73	15	12	4+
Averages		78.1	15.2	6.7	4

* 5 = most desirable

Harvested and placed in "Filacell" storage on Oct. 13, 1983 at 1½ °C and 95 % relative humidity
 Replicated 3 times
 Judged 10 months later on August 22/84

LONG TERM AVERAGE - CARROT CULTIVAR STORAGE TRIAL - PACKAGING TYPES

Cultivar	Source	# Years Tested	% Mkb	% Wt Loss in Storage	% Decay	Degree of Decay *
Spartan Classic 80	Sto	4	90.8	6.8	2.4	3.5
Spartan Delux	Cro	4	88.5	8.0	3.5	3.8
Trophy	HM	5	88.2	9.0	2.8	3.8
King Imperator	Sto	3	88.0	7.3	4.7	3.7
Canuck	Sto	6	87.0	8.6	4.4	4.5
Spartan Fancy 80	Asg	3	87.0	9.7	3.3	3.5
Gold Pak 28	Sto	3	86.7	10.0	3.3	4.2
Candy Pak	Cro	6	86.3	10.0	3.7	3.3
Hipak	HM	4	86.2	9.3	4.5	4.1
Spartan Swwet 'A'	Cro	4	86.1	7.6	6.3	3.5
Spartan North 'A'	Cro	5	85.8	9.4	4.8	3.6
Spartan Fancy	Sto	3	85.7	9.3	5.0	3.8
Klondike Nantes	Sto	4	85.6	8.1	6.3	3.7
Dominator	Sun	3	85.3	8.0	6.7	3.7
Orange Sherbet	Sto	3	85.0	10.0	5.0	3.4
Lance	Sto	4	84.8	8.5	6.7	2.9
Grenadier	HM	5	84.6	8.8	6.6	3.6
Cutlass	ARCO	4	84.3	9.3	6.4	3.5
Golpak 263	Asg	4	83.9	9.0	7.1	3.7
Saber 78	ARCO	3	83.3	10.0	6.7	3.7
Spartan Delite 80	Asg	3	83.3	11.0	5.7	3.5
Dagger 78	ARCO	3	82.3	12.0	5.7	4.3
Six Pak	HM	3	80.7	13.3	6.0	4.0
Pak Mor	HM	3	80.3	11.0	8.7	3.7
Chancellor	Asg	3	80.0	11.3	8.7	2.3

* 5 = most desirable

Storage period was uually 9 months.

CARROT ADAPTATION TRIAL - 1984 - PACKAGING TYPES

Cultivar	Source	Yield		% Over Size	% Mkb	Type	Roots		Uniform		Appearance	Resist. to Green.	Color		Core Size	Hort. Lesions & Degree	Blight	Slicer	Score
		t/ha	b/a				Length cm	Width cm	Size	Shape			Interior	Exterior					
Britepak	A&C	95	1691	28	89	LDG	20	3.8	3+	4-	4-	4+	4-	4-	4-	70/L	5	3-	3.73
Vitasweet tm 500	A&C	105	1869	25	86	NLD	18	4.0	4	4	4-	3+	3+	4	4+	30/M	2	4+	3.80
Vitasweet tm 721	A&C	75	1335	14	85	IN	23	3.7	4+	3+	4-	4+	4+	4	4+	60/L	3	4-	4.03
Vitasweet tm 750	A&C	90	1602	17	94	NG	23	3.6	4+	4	4+	4	4-	4	4+	80/L	2	4+	4.09
NVH 1001	Agri	73	1299	22	79	GI	24	3.6	4	4-	3+	4	4	4-	4	60/L	2	3+	3.81
El Presidente	ARCO	62	1104	16	81	G	23	3.6	4	4-	4-	4-	4+	4+	4	80/L	3	3+	3.96
Javelin 80	ARCO	81	1442	24	86	GI	24	3.7	4-	4-	3+	4-	4-	4	4	100/L	4	3+	3.69
Orlando Gold	ARCO	73	1299	18	87	GI	23	3.6	4	3-	3+	4	4	4-	4-	60/VL	4	3+	3.63
ARCO 101	ARCO	68	1210	8	84	G	23	3.4	4+	4	4-	5-	4+	4-	4-	100/L	3	3	4.06
(3475 X 4367) X 9253	ARCO	85	1513	23	87	LDG	22	4.1	4	4	4	4	4+	4+	4+	100/L	4	3+	4.13
Chancellor	Asg	85	1513	18	84	GLD	23	3.9	4	4-	4-	4	4-	4	3+	60/L	5	3	3.77
Diplomat	Asg	75	1335	33	79	GLD	23	3.7	4-	3	3+	4+	4-	4-	4-	70/L	3	3	3.63
Paramount	Asg	91	1614	18	87	G	23	3.5	4	3+	4-	4	4	4-	4-	90/VL	4	4-	3.77
Spartan Delite 80	Asg	68	1204	13	80	GI	24	3.4	4-	4-	4-	4	4	4-	4+	100/VL	4	3+	3.87
Spartan Fancy 80	Asg	70	1240	18	85	GI	24	3.6	4	4-	4-	4	4	4-	4+	50/L	3	3	3.91
XPH 569	Asg	77	1365	3	80	GI	22	3.3	4-	4-	4-	5-	4-	4-	4-	90/VL	4	3	3.84
Harvestmore	Cro	71	1258	26	86	GI	27	3.9	4	4	4-	4-	4-	4	4	80/L	4	4-	3.83
Orlando Gold	Cro	46	813	6	65	IG	22	3.2	4-	3+	3	4+	4-	4	4+	100/VL	3	3+	3.76
Packer	Cro	68	1204	16	78	GILD	23	3.5	4-	4-	4-	4	4-	4-	4-	60/L	4	3+	3.74
CRK N124	Cro	33	587	12	45	G	24	3.8	4-	4+	4-	4	4-	4	4-	60/M	2	3-	3.87

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CARROT ADAPTATION TRIAL - 1984 - PACKAGING TYPES - continued

Cultivar	Source	Yield		% Over Size	% Mkb	Type	Roots		Uniform		Appearance	Resist. to Green	Color		Core Size	Hort. Lesions & Degree	Blight	Slicer	Score
		t/ha	b/a				Length cm	Width cm	Size	Shape			Interior	External					
CRK N125	Cro	56	997	17	73	LDI	25	3.8	4	4	4+	4-	4-	4+	4	80/L	3	3+	4.00
CRK W243	Cro	71	1264	18	85	GI	24	3.7	4	4-	4	3+	4+	5-	4+	70/L	3	3	4.04
CRK W458	Cro	70	1252	41	81	ILD	28	4.0	4+	4-	3+	4+	4	4	4	60/L	4	3-	3.94
E 371	EZ	48	860	8	66	GN	18	3.8	4+	3+	3+	3	4	4+	4	80/M	4	4	3.74
Candy Pak	FM	74	1323	32	81	GI	25	4.0	3+	4	4	4-	4+	4-	5-	50/M	5	3	3.96
Madamoiselle	FM	80	1418	15	79	GN	18	3.6	4-	3	3+	3	4-	4	4+	90/L	4	3+	3.57
Nantes Strong Top	FM	65	1157	4	79	NG	16	3.5	4	3-	3	2	4-	4	4	70/M	4	4	3.34
Texsun	FM	79	1412	28	78	LD	20	4.2	4-	4-	3+	4	4	4	4-	80/L	5	3	3.77
FMX 151	FM	78	1394	19	83	LDG	23	3.8	3+	4-	4-	4+	4	4-	4-	40/L	4	3	3.77
FMX 166	FM	89	1584	21	89	G	25	4.0	4+	4+	5-	4	4-	4-	4-	70/L	4	3+	4.06
FMX 268	FM	73	1293	10	87	NG	16	3.5	4-	3+	3	4	5-	4-	4+	90/L	3	4	3.81
Pak Mor	HM	88	1560	22	83	GLD	23	3.9	4	3+	4-	4+	3+	4	3	90/L	4	4-	3.66
EXP 2101	HM	75	1329	36	83	LDI	25	4.1	4	4-	4	4+	4-	4	4	50/L	4	3+	3.96
HXP 10042	HM	96	1715	44	88	GI	27	4.0	4	4+	4	4+	4-	4+	3+	70/VL	4	3+	3.99
HXP 10061	HM	57	1021	0	77	IG	23	3.0	4	4	4	5-	4	4	4+	50/L	3	4-	4.14
HXP 10062	HM	76	1353	29	86	I	29	3.6	4	4+	4-	4-	4-	4-	4-	60/VL	3	3+	3.83
HXP 10072	HM	69	1228	19	79	GI	25	3.5	4	4	4+	4	4-	4+	4	100/VL	4	3+	4.04
HXP 10082	HM	88	1572	30	91	IG	25	3.5	3+	4	4	4+	3+	4	4-	90/VL	4	4-	3.80
HXP 10092	HM	69	1234	33	77	IG	28	3.8	4	4-	4-	4+	4	4-	4	50/L	4	3	3.91

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CARROT ADAPTATION TRIAL - 1984 - PACKAGING TYPES - continued

Cultivar	Source	Yield				Type	Roots		Uniform		Appearance	Resist. to Green.	Color		Core Size	Hort. Lesions & Degree	Blight	Slicer	Score
		t/ha	b/a	% Over Size	% Mkb		Length cm	Width cm	Size	Shape			Interior	Exterior					
Six-Pak	HM	75	1335	13	78	IG	23	3.3	4	4-	4-	4-	4-	4	30/VL	4	4-	3.79	
Top Pak	HM	102	1816	47	85	GI	23	3.7	4-	4-	4-	4	4-	4	60/L	5	4-	3.83	
EXP 2127	HM	57	1015	16	69	GI	23	3.5	3	4	4-	4+	4-	4	80/L	4	3	3.77	
EXP 2914	HM	85	1513	20	81	GI	22	3.6	3	4	4	4+	4-	4	70/L	4	3+	3.81	
Orlando Gold	JHK	51	908	6	88	G	23	3.1	4	3	4-	5-	5-	4	4+	70/L	3	3	4.06
Amsterdam	NZ	36	641	11	66	IN	20	2.8	4	4-	3	3+	4	4	4+	60/M	4	4	3.76
Nantes Robin	NZ	80	1419	19	83	NG	20	3.9	5-	4+	4	3-	4	4+	4	40/L	4	4+	4.00
Nantes Titan	NZ	87	1554	16	78	GN	21	3.6	4+	4+	4	4	4-	4-	4+	50/M	5	4	4.04
Touchon Echo	NZ	58	1038	0	87	NI	21	2.8	5-	4-	4	2+	4+	4-	4	60/L	4	4+	3.86
NIZ 149 F1	NZ	106	1882	45	96	LDG	21	4.2	4-	4-	3+	4	4+	4	4	90/VL	5	4-	3.86
Tahoe	NK	73	1308	31	91	DG	15	4.1	4	3-	3	4+	4-	4	4	90/L	4	2+	3.67
Fanci Pak	NK	104	1857	30	91	GLD	23	3.8	4-	4	4	4+	4	4-	4-	60/L	4	3+	3.91
Woodland	NK	84	1490	28	86	GI	24	3.8	4	4-	4-	5-	4-	4+	4-	50/L	4	3+	3.97
EXP 107	PES	92	1632	27	86	IG	24	3.8	4	4	4-	4	3	4	3+	90/L	5	3	3.71
EXP 642	PES	86	1537	25	87	G	20	3.9	4	4-	3+	4	4-	4-	2	90/M	4	4	3.49
VK 44	PES	66	1175	19	71	IG	26	3.7	4	4	3+	4	3+	4-	3+	80/VL	4	3	3.66
#9081	PES	81	1436	16	76	GI	22	3.9	4	4	4-	5-	4	4-	4	70/L	5	3	4.01
#9082	PES	96	1703	33	85	GLD	20	4.2	4	3	3+	4	4-	4-	4	90/VL	4	4-	3.67
Imperator L58	PETO	66	1169	12	89	I	21	3.6	4	4	4	4	4-	4	3+	90/L	4	3	3.86
Nantes PW Imp	PETO	64	1145	18	68	LDN	15	4.0	4-	3	2	4-	3	4	4	80/H	4	3+	3.34

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CARROT ADAPTATION TRIAL - 1984 - PACKAGING TYPES - continued

Cultivar	Source	Yield		% Over Size	% Mkb	Type	Roots		Uniform		Appearance	Resist. to Green.	Color		Core Size	Hort. Lesions & Degree	Blight	Slicer	Score
		t/ha	b/a				Length cm	Width cm	Size	Shape			Interior	Exterior					
Orlando Gold	PETO	58	1032	5	82	IG	24	3.2	4+	3	4	5-	5-	5-	4	70/L	4	3-	4.20
PSR 682	PETO	89	1584	7	99	G	22	3.4	4-	4	4	4+	4+	4+	5-	90/VL	4	3+	4.19
Clairon	RS	55	974	7	59	N	19	3.5	3+	4-	3+	4	4	4	4	55/L	4	4	3.76
Lindoro	RS	92	1632	19	63	N	17	4.0	4	4+	4-	4	3+	4-	3+	70/H	5	5-	3.76
Nevesta	RS	73	1305	14	69	NG	19	3.8	4	4	4	4	4-	4+	4-	80/L	4	4+	3.96
Rondino	RS	69	1228	8	75	N	18	3.6	4	4	3+	3	4-	4-	4-	70/M	4	4+	3.63
Tamino	RS	110	1963	31	95	NG	21	3.8	4+	4-	4	3-	4-	4+	4-	100/L	4	4	3.67
Adorno	RS	112	1994	47	88	LD	21	4.6	4	3+	3+	4+	3+	4-	3	90/VL	5	4-	3.56
Figaro	RS	71	1264	36	79	LD	22	4.5	3+	4-	3	4	4	4-	3	70/L	5	3-	3.53
Lucky's Gold	SS	78	1388	30	84	LD	17	4.6	4	4-	4-	4	4+	4+	4	70/L	2	3+	3.96
Elvy	SG	90	1597	22	74	NG	19	3.9	4-	3+	3	3+	4-	4+	4-	85/M	4	4+	3.57
Tip Top	SG	92	1643	27	69	N	18	4.2	4+	4+	3+	4	3+	4	3+	65/H	4	4+	3.79
Nanthya	SG	71	1264	15	65	N	19	3.7	4	3+	3+	3+	3+	4	3+	80/L	5	4	3.50
Goldmine	Sun	94	1673	31	87	IG	23	3.8	3	4+	4-	4+	3+	4-	4-	100/L	5	3	3.71
A Plus	USDA	50	890	10	55	GLD	22	4.2	3	4-	4	4	4	4-	4-	70/L	5	3	3.73
Golden State	USDA	53	943	12	66	GI	23	3.6	3-	3-	3	4+	4	4	4	90/L	5	3	3.53
Orlando Gold	USDA	65	1157	18	69	I	30	3.9	4+	5-	4-	4+	4	4	4+	50/L	5	3+	4.19
Nanco	VIL	53	943	3	58	NG	17	3.2	4	3+	3	4-	4-	4-	4-	60/H	4	4	3.59
Tarengo	VIL	57	1015	4	62	NG	16	3.1	4-	4-	4-	4	4-	4+	4+	50/H	5	4	3.91

CARROT CULTIVAR TRIAL ON MINERAL SOIL - 1984

This three times replicated trial was seeded on May 16 in a Granby sandy loam, on raised beds 140 cm wide at the top, with 3 rows per bed, spaced 57 cm apart.

Normal growing practices were followed, no irrigation was used.

Harvest took place on Oct. 12 and the roots were placed in a refrigerated storage.

Data was taken the 6th day of November.

The cultivars are listed in order of length, acceptability, and yield.

Type of Culls: M = Misshapen F = Forked
 S = Split U = Undersize

The type mentioned first is the most prevalent one.

Acceptability combines uniformity of shape and size, smoothness, straightness, and general appearance of the sample.

For more information on these cultivars see the Main Carrot Trial on organic soil.

5 = most desirable

1 = least desirable

CARROT CULTIVAR TRIAL ON MINERAL SOIL - 1984 - PACKAGING TYPES

Cultivar	Source	MKB YIELD		% Over size	% Marketable	Type of Culls	Stand/meter	ROOTS		Acceptability	Resist.to Greening	COLOR	
		t/ha	b/a					Length (cm)	Width (cm)			Interior	Exterior
Six Pak	HM	65	1155	5	84	FUS	47	19.7	2.9	3.8	4.4	4.4	4.1
Saber 78	ARCO	67	1193	4	88	FU	48	19.5	2.7	3.7	4.9	4.0	4.0
Six Pak II	HM	65	1166	0	85	FU	47	19.7	3.0	3.7	4.9	4.2	4.1
Klondike Nantes	Sto	66	1176	2	80	FU	44	18.5	3.2	3.8	4.0	4.3	3.9
Orlando Gold	PETO	64	1140	9	84	FUM	52	19.2	3.2	3.7	4.4	4.7	4.4
Spartan Delite 80	Asg	50	885	1	74	FU	46	20.0	3.0	3.5	4.5	4.3	4.3
Pak Mor	Mor	44	791	13	56	FU	37	20.4	3.6	3.2	4.4	4.0	4.3
Spartan Fancy 80	Cro	46	812	2	78	FU	48	19.1	2.5	3.6	4.6	4.6	4.4
Trophy	Mor	54	963	0	72	FMU	49	18.9	3.0	3.5	4.0	4.0	4.2
Chancellor	Asg	55	973	7	73	FU	44	18.1	3.1	3.7	4.0	4.2	4.0
Cellobunch	Asg	63	1114	5	73	FS	44	19.0	3.3	3.0	4.2	4.3	4.2
Spartan Premium 80	Cro	54	963	5	82	FM	46	18.2	3.3	3.5	3.6	4.2	4.4
Paramount	Asg	69	1229	9	77	FUM	57	17.0	3.1	3.1	3.3	4.7	4.2
Dagger 78	ARCO	40	708	2	60	F	43	18.4	2.9	3.1	3.9	4.6	4.3
A Plus	Asg	55	979	11	70	F	48	18.0	3.6	2.8	3.9	4.8	4.6
Grenadier	HM	46	822	0	75	FU	51	17.4	2.8	2.8	4.7	4.0	4.2

CARROT CULTIVAR TRIAL - 1984 - PROCESSING TYPES

MANAGEMENT PROCEDURES:

Fertilizer: 500 kg/ha 10-0-0 + 20 kg/ha Borax worked in deeply with rotovator. Seeded May 17 with a 5 cm wide scatter shoe, rows at 50 cm, 40 seeds/m, thinned to 33/m.

The main trial was replicated 3 times.

In order to establish tolerance to leaf blights, no fungicides were applied after Sept. 1.

Harvested Oct. 16. Data taken November 7 for Main Trial and December 28 for Adaptation.

NOTES OR REPORT:

The main trial is listed in order of color scores.

Yield: 56 t/ha = 25 t/a = 1000 bushels/a

5 = most desirable 1 = least desirable

Crown shape: a hollow crown receives a lower mark

Score: The average of the 10 preceding marks.

Horizontal lesions and/or cavity spots: 43VL means that 43% of the roots have a few very small lesions
82VH means that 82% of the roots have very heavy (many) large cavity spots, roots unmarketable.
60M means that 60% of the roots have lesions or black spots of medium size and number.

Rusty Roots: Some rusty root was observed on all main trial cultivars, but none had any effect on the root development

Slicer Type: Cultivar with a perfect cylindrical shape of root, as required for slicing, received a mark of 5.

% Seeders (Not listed): with the exception of King Midas (12%); Bonanza (2%); and Midas Touch (2%) all other cvs developed less than 1% seeders.

CARROT - MAIN CULTIVAR PROCESSING TRIAL - 1984

Cultivar	Source	t/ha Mkb1	% Mkb.	Wt/root (g)	Roots				Color							Score	Horizontal Lesions	Slicer Type	Blight	
					Length cm	Width cm	Uniformity	Smoothness	Crown Shape	Core Size	Green Shoulder	Exterior	Cortex	Camb. Zone	Core					Uniformity
Processor II	Sto	92	95	265	18.1	6.0	3.8	4.1	3.4	3.2	4.0	4.0	4.1	4.5	4.2	4.4	3.97	33L	2.7	3.3
Sp. Bonus '80	Asg	72	95	201	19.3	5.2	3.6	4.1	3.3	4.0	4.1	3.9	4.3	4.0	4.2	4.2	3.97	30L	3.2	4.0
Camden	Sto	83	97	231	18.3	5.8	3.9	4.2	3.2	3.4	4.0	3.9	4.2	4.2	4.1	4.2	3.93	80VL	3.0	4.0
Dess Dan	ARCO	77	94	264	20.4	5.7	3.7	4.0	3.0	3.8	4.0	3.9	4.3	4.0	4.0	4.1	3.88	37VL	2.8	3.7
Danvers Gold	SS	75	91	255	18.7	5.6	3.9	4.2	3.2	3.9	3.9	3.8	4.2	4.3	3.9	4.2	3.95	43VL	2.9	3.0
Spartan Bonus	Sto	76	95	239	21.4	5.2	3.8	4.1	3.5	3.8	4.1	3.8	4.3	4.0	3.9	4.0	3.93	43L	3.0	4.0
XPH 875	Asg	75	94	238	21.8	5.2	3.7	4.1	3.2	3.8	4.2	4.0	4.3	3.5	4.2	3.9	3.89	57VL	3.1	4.3
XPH 985	Asg	81	94	228	20.5	5.5	3.8	4.3	3.3	3.7	3.9	4.0	4.3	3.6	4.2	3.9	3.90	33VL	3.0	4.3
Touche	ARCO	83	94	253	18.8	5.8	3.9	4.0	2.6	3.8	4.0	3.9	4.0	3.9	4.0	4.1	3.82	60VL	2.9	4.0
Casey	Asg	73	95	210	19.9	5.1	3.6	4.1	3.4	3.8	4.2	4.0	4.1	3.6	4.0	3.8	3.86	27VL	2.9	5.0
King Midas	FM	58	89	258	17.3	5.9	3.9	4.1	3.1	3.4	3.2	3.7	4.2	4.1	4.0	4.1	3.78	37L	2.7	4.0
Tahoe	Agri	83	91	222	19.8	5.3	3.7	4.0	3.3	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.81	33M	3.0	3.3
XPH 886	Asg	84	95	220	20.3	4.9	4.2	4.3	3.0	4.2	4.1	3.9	4.0	3.7	3.7	3.7	3.88	34L	3.3	4.0
Midas Touch	FM	80	92	205	16.9	5.7	3.9	4.1	3.3	3.6	3.3	3.8	4.1	3.6	3.8	3.8	3.73	33VL	2.8	4.7
Bonanza	NK	66	93	260	26.6	4.6	4.3	4.0	3.4	3.8	3.4	3.8	4.2	3.2	3.8	3.6	4.21	67VL	3.7	4.3
Chanton	ARCO	92	94	272	18.2	6.4	3.8	3.9	3.7	3.5	2.7	3.7	4.1	3.4	3.9	3.8	3.65	58M	2.3	4.0

5 = most desirable
Listed in order of color

CARROT CULTIVAR STORAGE TRIAL - PROCESSING TYPES - 1983/84

Cultivar	Source	% Marketable	% Weight Loss In Storage	% Decay	Degree Of Decay *
Dess Dan	ARCO	84	11	4	4.7
A&C #126	A&C	78	11	11	4.5
Spartan Bonus	Glo	70	10	20	4.0
Chantenay Supreme Lg. Tp.Sto		68	10	22	2.8
Royal Chantenay	Sto	65	11	24	3.2
Spartan Bonus '80	Asg	63	12	25	3.2
Chrisma	A.Ch.	62	12	26	3.5
Casey	Asg	60	10	30	2.9
Chantenay Red Cored	A.Ch.	59	10	31	3.7
Berlanda	BEJO	58	12	30	2.3
Midas Touch	FM	58	13	29	3.4
Spartan Classic '80	Cro	56	15	29	2.8
Triple Gold	Jung	56	12	32	3.3
Lucky's Gold	Glo	54	16	30	3.0
Giant 114	PES	51	19	30	4.1
Royal Danvers	Agw	50	11	39	3.1
Averages		62.0	12.2	25.8	3.4

* 5 = most desirable, no decay
 1 = many roots, completely decayed

Stored in a "Filacell" storage at 1½°C and 95 % relative humidity from Oct. 14/83 to June 28/84 for a period of 8½ months.

LONG TERM AVERAGE - CARROT PROCESSING CULTIVAR STORAGE TRIAL

Cultivar	Source	# Years Tested	% mkb	% weight loss in storage	% decay	Degree of decay *
Spartan Premium	ARCO	2	89.5	7.0	3.5	4.5
Danvers Gold	Jung	2	89.1	7.7	3.2	4.0
Target	HM	2	88.5	5.5	6.0	3.5
Red Core Chantenay	Asg	4	85.9	6.9	7.2	3.3
Dess Dan	ARCO	5	84.9	9.6	5.5	3.9
Spartan Deluxe	Cro	3	84.8	6.9	8.3	3.0
Spartan Winner	Sto	3	84.7	9.7	5.6	4.3
Gold King	NK	2	84.5	8.0	7.5	3.5
Can Pak	ARCO	3	84.3	9.0	6.7	4.0
Spartan Classic	Cro	4	84.3	7.1	8.6	3.5
Spartan Bonus	Glo	5	82.9	7.4	9.7	4.0
Spartan Bonus 80	Asg	3	80.0	9.3	10.7	3.7
Danvers 126	Asg	4	72.2	9.4	18.4	2.5
Lucky's Gold	Glo	2	71.5	12.0	16.5	3.5
Casey	Asg	2	71.0	9.5	19.5	3.5
Chantenay Red Cored	A.Ch.	2	68.0	10.5	21.5	3.4
Royal Danvers	Agw	3	66.0	9.3	24.7	2.7

* 5 = most desirable

Storage period was usually 8½ months.

Stored in temperature and relative humidity controlled storages

LONG TERM AVERAGE OF CARROT CULTIVARS - PROCESSING TYPES

Cultivar	Source	# Years Tested	LTA Yield		LTA Color	LTA Score
			t/ha	t/a		
Berlicum Bierma	NZ	3	64.0	28.7	4.23	3.84
Spartan Bonus 80	Asg	5	68.2	30.4	4.19	4.02
Dess-Dan	ARCO	9	76.8	34.3	4.15	4.00
Triple Gold	Jung	4	58.0	25.9	4.11	3.98
Tahoe	Agri	3	73.7	32.9	4.10	3.98
Spartan Bonus	Sto	11	75.0	33.5	4.08	3.94
Casey	Asg	4	66.0	29.3	4.05	3.97
Spartan Delux	Jung	6	69.0	30.8	4.00	3.92
Lucky's Gold	Glo	4	52.9	23.6	3.99	4.20
Spartan Winner	Jung	8	65.0	29.0	3.98	3.89
Midas Touch	FM	7	64.4	28.8	3.95	3.90
All Season Cross	Tak	4	76.0	34.2	3.95	3.84
Can-Pak	ARCO	6	66.3	29.6	3.90	3.81
King Midas	FM	6	61.4	27.4	3.94	3.83
Spartan Classic	Cro	9	78.7	35.1	3.88	3.86
Ch. Red Cored	Asm	5	67.6	30.1	3.88	3.72
Royal Danvers	Agw	4	70.0	31.2	3.86	3.84
Berlicum Berlinda	Asm	3	72.0	32.1	3.84	3.62
Spartan Premium	Cro	7	70.6	31.5	3.83	3.79
Oranza	BEJO	3	74.0	33.0	3.82	3.66
Danvers 126	Asg	9	63.2	28.2	3.78	3.66
Royal Chantenay	Sto	2	74.0	33.0	3.74	3.66
Gold King	NK	4	71.0	31.6	3.71	3.56
Red Core Chantenay	Asg	8	71.9	32.1	3.65	3.55

Listed in order of color

CARROT CULTIVAR ADAPTATION TRIAL - 1984 - PROCESSING TYPES

Cultivar	Source	t/ha Mkb	% mkb	Wt/root	Length (cm)	Width (cm)	Uniform	Smooth	Crown Shape	Core Size	Green Shoulder	COLOR					Score	Hort. Lesions	Blight
												Exterior	Cortex	Camb. Zone	Core	Uniform			
Camden	ARCO	100	84	253	19.0	6.0	3+	4+	2+	3-	4	4+	4	4	4-	4-	3.63	65L	4
ARCO 127	ARCO	78	85	216	20.3	5.8	4+	4-	2+	4-	4+	4	4	4-	4-	4-	3.74	90VL	4
ARCO 154	ARCO	65	87	325	24.2	5.0	4-	4-	4	3	3+	4	4	4-	4-	4-	3.68	100VL	4
ARCO 158	ARCO	85	88	326	24.8	5.8	4	4-	4-	3+	4	4	4+	4-	3+	4-	3.77	80VL	5
ARCO 164	ARCO	80	80	227	24.2	4.5	4	4-	4-	4-	4	4-	4+	4-	4	4-	3.85	50L	5
XPH 875	Asg	97	92	292	22.5	5.3	3+	4	2+	3+	4	4+	4	4	4	4	3.72	80L	5
XPH 985	Asg	85	89	241	21.4	5.6	3	4	3+	3+	3	4+	4+	3+	4-	3+	3.55	40VL	5
XPH 886	Asg	80	84	233	21.8	5.4	3+	4+	2+	4	4-	4+	4	4-	4	4-	3.73	100VL	4
Spartan Bonus 80	Cro	55	73	213	24.7	4.5	4-	4+	4-	4-	4+	4+	4+	3	3+	3+	3.79	100VL	4
XPH CRK W61	Cro	89	81	270	19.8	6.0	4-	4-	2-	4-	3	4	4+	3+	4-	4-	3.48	60H	4
XPH CRK W69	Cro	74	85	253	19.8	5.6	3+	4	2	4	4-	4+	4	3-	3+	3+	3.46	60L	4
XPH CRK W105	Cro	90	92	281	23.3	5.8	3+	4	2+	3+	4	4	4	4-	4-	4	3.63	90VL	4
XPH CRK W477	Cro	49	80	263	18.6	6.3	4	4+	3-	4-	3+	4	4+	4	4	4-	3.80	80VL	4
XPH CRK W487	Cro	93	90	269	18.6	5.9	4	4	2	4-	3-	4	4	3+	4-	4-	3.51	60M	5
Charon	EZ	76	82	220	15.8	5.7	4+	4+	2-	3	3	4+	4+	3+	4-	3+	3.52	60L	5
Fannia	EZ	69	71	254	23.8	4.4	4-	4+	4	3+	2-	4	4	4	4-	4	3.67	50VL	5
Flex	EZ	77	80	273	24.2	5.1	4	4+	5-	2	2-	4	4	4-	4-	4-	3.58	60L	4
FMX 105	FM	104	92	248	19.7	6.4	4	4	2	4-	3	4	4+	3+	4	4-	3.60	80VL	5
FMX 106	FM	98	92	276	18.4	5.9	4	4	3	4-	3-	4	4	4	4	4+	3.77	70L	5
GRX 2207	Glo	77	79	264	21.1	6.1	4-	4+	4-	3+	3	4	4	4-	4-	4-	3.71	80VL	5
GRX 2210	Glo	60	78	331	23.9	6.3	3+	4+	3-	4-	2+	4-	4	3+	3+	3+	3.39	60VL	4
GRX 2212	Glo	56	67	231	18.5	5.9	4-	4	2	4-	3	4-	4	4-	4-	4-	3.52	60M	4
EXP 2023	HM	98	88	335	19.6	6.4	4-	4	3	3+	2+	4	4	3+	4-	4-	3.50	80VL	5
Chantenay Comet	NZ	87	82	247	16.2	6.7	4	4+	2	3	3+	4	4+	4+	4+	5-	3.82	60/L	3

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CARROT CULTIVAR ADAPTATION TRIAL - 1984 - PROCESSING TYPES - continued

Cultivar	Source	t/ha - Mkb.	% mkb	Wt/root	Length (cm)	Width (cm)	Uniform	Smooth	Crown Shape	Core Size	Green Shoulder	COLOR					Score	Hort. Lesions	Blight
												Exterior	Cortex	Camb. Zone	Core	Uniform			
Flakkee Karaf	NZ	39	61	236	21.2	4.6	3	3+	5-	3-	4	4-	4	4	4-	4	3.71	60M	5
N1Z 68 F1	NZ	84	87	300	22.6	6.0	4-	4	3	3	3	4	4	3+	4-	4-	3.54	90VL	5
N1Z 134 F1	NZ	88	81	244	19.3	5.2	4-	4+	2	3+	4-	4	4	4-	4-	4-	3.61	55L	4
N1Z 135 F1	NZ	61	75	263	21.7	5.0	3	4	2	3+	3+	4+	4+	4+	4+	4+	3.71	70L	4
N1Z 137 F1	NZ	89	95	263	18.9	6.0	4-	4+	2-	3	3	4+	4+	4-	4	4-	3.57	50L	4
N1Z 147 F1	NZ	77	85	237	22.3	5.6	4	4+	2+	4	3+	4+	4+	4+	4	4+	3.91	100VL	5
VK 30	PES	99	91	279	15.2	7.1	4+	4	2+	3	3-	4-	4	4-	4-	4-	3.51	80L	5
VK 32	PES	73	77	373	21.5	4.0	4	4	3	4-	3+	4+	4+	3+	4-	4-	3.73	100VL	4
VK 34	PES	61	79	261	20.8	5.1	4-	4+	3-	2-	2	4	3	4-	3+	3	3.14	80L	5
VK 747	PES	95	93	285	20.2	6.3	3+	4+	2-	4-	3	4+	4+	4-	4-	4-	3.57	60L	4
Royal Chantenay	PETO	86	87	230	16.9	6.6	4-	4	3-	3-	4	4+	4-	3+	4-	3	3.51	60L	4
Danvers 126	PETO	101	91	281	20.6	6.2	4+	4	3	3	4	4	4-	3+	4-	3+	3.63	60L	5
Triple Gold	SS	54	76	194	17.3	5.6	4-	4	2	4-	3+	4	4+	4-	4	4	3.67	60L	3
EXP 5056	Sto	64	91	240	21.2	5.9	4	4-	3+	3	3+	4	4+	3-	4	3+	3.56	70VL	5
EXP 5057	Sto	93	86	262	23.1	5.1	4-	4	3-	3+	4-	4	4	4-	4	4	3.71	100VL	4
EXP 5058	Sto	74	88	252	18.7	5.9	4-	4	2+	4	3	4+	5-	4-	4	4-	3.74	60M	5
EXP 5059	Sto	96	92	271	18.8	6.1	4-	4+	1+	4-	3-	4+	4	3+	3+	3	3.36	60/M	4
EXP 5060	Sto	79	81	329	21.0	6.6	4	4	2	4-	4-	4+	4+	3+	4	4-	3.70	60L	5
(4367 X 3640 2)																			
X 6345	USDA	61	70	222	19.6	5.5	4	4-	4-	4-	4+	4+	4-	4+	3+	3	3.80	60M	5
(8532 X 6345)	USDA	42	61	205	16.7	5.8	4-	4+	3	4-	4-	4+	4+	5-	4	4	3.97	90H	5

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CARROT CULTIVAR ADAPTATION TRIAL - 1984 - PROCESSING TYPES - continued

Cultivar	Source	t/ha Mkb	% Mkb	Wt/root	Length (cm)	Width (cm)	Uniform	Smooth	Crown Shape	Core Size	Green Shoulder	COLOR					Score	Hort. Lesions	Blight
												Exterior	Cortex	Camb. Zone	Core	Uniform			
Danvers Gold	UW	67	72	281	18.8	5.9	4-	4	2	4	3+	4+	4+	4-	4	4	3.73	100L	4
Lucky's Gold	UW	38	76	285	18.4	5.5	4-	4	3+	4-	4	4+	4+	4	4	4	3.93	90VL	5
Campestra *	Sha	31	55	220	19.1	5.6	3.2	3.8	3.2	3.3	3.8	4.0	4.0	3.9	3.9	4.1	3.72	93VL	4.7
Camberley *	Sha	38	77	184	21.0	4.7	3.7	4.2	3.3	3.3	3.7	4.2	4.4	4.0	4.1	4.2	3.91	85VL	4
Campus *	Sha	39	78	250	18.6	5.8	3.7	4.0	3.4	3.2	3.5	4.1	4.3	4.1	4.1	4.0	3.84	57L	4.7
Camden *	Sha	59	83	216	18.3	5.9	3.9	4.2	2.9	3.5	4.0	4.2	4.2	4.0	4.2	3.1	3.82	87VL	4.7

* Samples received late in season. Yield + % marketable effected by herbicide application and poor soil conditions.

5 = most desirable

1 = least desirable

Seeders: (not listed) 20% of the cultivars developed seeders, but never in excess of 1% of plants.

Rusty Root: (not listed) This disorder developed very late in season and all though observed on many cultivars, did not restrict the root development, with the exception of Flakkee Karaf, and to a lesser degree on Danvers 126, and 8532 X 6345.

Slicer Types: (not listed) None of the cultivars in this trial seemed suitable for slicers.

For further explanations see Main Trial - Processing Types

LIST OF SLICER TYPE CARROT CULTIVARS - 1984

Cultivar	Source	T/ha Marketable	% Over Size	% Mkb	Stand/Meter	Length (cm)	Width (cm)	Uniform		Appearance	Resist. to Greening	Color		Core Size	Horizontal Lesions	Rusty Root	Blight	Slicer	Score
								Size	Shape			Interior	Exterior						
Vitasweet tm 500	A&C	105	25	86	46	17.9	4.0	4	4	4-	3+	3+	4	4+	30M	5	2	4+	3.80
Vitasweet tm 750	A&C	90	17	94	37	22.6	3.6	4+	4	4+	4	4-	4	4+	80L	5	2	4+	4.09
E 371	EZ	48	8	66	30	17.9	3.8	4+	3+	3+	3	4	4+	4	80M	5	4	4	3.74
Nantes Strong Top	FM	65	4	79	44	15.8	3.5	4	3-	3	2	4-	4	4	70M	5	4	4	3.34
FMX 268	FM	73	10	87	40	16.5	3.5	4-	3+	3	4	5-	4-	4+	90L	5	3	4	3.81
Amsterdam	NZ	36	11	66	30	19.8	2.8	4	4-	3	3+	4	4	4+	60M	5	4	4	3.76
Nantes Robin	NZ	80	19	83	28	19.7	3.9	5-	4+	4	3-	4	4+	4	40L	5	4	4+	4.00
Nantes Titan	NZ	87	16	78	36	21.0	3.6	4+	4+	4	4	4-	4-	4+	50M	5	5	4	4.04
Touchon Echo	NZ	58	0	87	33	20.9	2.8	5-	4	4	2+	4+	4-	4	60L	5	4	4+	3.86
Clairon	RS	55	7	59	43	19.1	3.5	3+	4-	3+	4	4	4	4	55L	5	4	4	3.76
Nevesta	RS	73	14	69	34	18.6	3.8	4	4	4	4	4-	4+	4-	80L	5	4	4+	3.96
Rondino	RS	69	8	75	39	18.1	3.6	4	4	3+	3	4-	4-	4-	70M	4	4	4+	3.63
Tamino	RS	110	31	95	37	19.6	3.8	4+	4-	4	3-	4-	4+	4-	100L	5	4	4	3.67
Elvy	S&G	90	22	74	40	19.3	3.9	4-	3+	3	3+	4-	4+	4-	85M	5	4	4+	3.57
Nanthy	S&G	71	15	65	37	18.6	3.7	4	3+	3+	3+	3+	4	3+	80L	5	5	4	3.50
Exp 642	PES	86	25	87	30	20.1	3.9	4	4-	3+	4	4-	4-	2	90M	4	4	4	3.49

The above cultivars were the best slicer types in the Adaptation Packaging Trial

See also Carrot Observation Trial

Horizontal lesions and/or cavity spots: VL= very lightly affected with a few very small horizontal lesions
 VH = very heavily affected with many large cavity spots
 M = medium

* 5 = most desirable 1 = least desirable.

CAULIFLOWER MAIN CULTIVAR TRIAL - 1984

Cultivar	Source	Mean Harvest Date	% Harvested in best week	% Unmarketable	Reason Unmarketable	Ave. wt./hd. (kg)	MKB. YIELD			Color	Ricey	Bracted	Loose	Curd Prot.
							t/ha	cr/ha	cr/a					
White Top	SG	S.11	44	1.9	R	1.7	42	2102	851	4.9	4.7	4.9	4.7	3.7
Andes	RS	S.04	42	1.8	RB	1.6	40	2063	835	4.7	4.6	4.9	4.9	3.9
White Rock	SG	S.16	48	2.2	D	1.7	41	1944	787	4.8	5.0	4.9	4.6	4.2
Hormade	NZ	S.06	43	3.7	CU	1.6	39	2063	835	4.7	4.6	4.7	5.0	3.7
White Empress	Twi	A.25	58	0	--	1.2	30	2142	867	4.8	4.8	5.0	4.6	3.9
White Summer	SG	S.08	76	2.1	C	1.4	34	1983	803	4.7	4.9	5.0	4.6	3.7
White Fox	SG	S.08	60	2.2	RB	1.6	36	1904	771	4.6	4.7	4.9	4.8	3.9
Solocrop	NZ	S.13	48	12.9	RC	1.5	35	1864	755	4.7	4.0	4.7	4.9	3.3
Snow Crown	HM	A.20	56	6.2	CRB	1.1	24	1825	739	4.3	3.9	4.9	4.2	2.5

Main Trial replicated 3 times

Direct seeded on June 7, spacing 86 cm X 45 cm. Part of the row not tied to judge curd protection.

5 = most desirable

Reason Unmarketable: C= color, R - ricey, B = bracted, D = decay, U = undersize, L = loose.

The defect mentioned first is the most serious reason for unmarketability.

Black rot developed in the cvs Solocrop, Andes, and Hormade.

CAULIFLOWER CULTIVAR TRIAL - ADAPTATION - 1984

Non-replicated

Cultivar	Source	Mean Harvest Date	% Harvested in best week	% Unmarketable	Reason Unmarketable	Ave. wt/hd. (kg)	MKB YIELD			Color	Ricey	Bracted	Loose	Curd Prot.
							t/ha	cr/ha	cr/a					
Self Blanche	HM	S.20	39	5.6	U	1.6	38	2023	819	4.8	5.0	4.9	4.9	4.7
Taipan	Sto	S.07	74	10.5	BR	1.6	39	2023	819	4.5	4.7	4.9	4.4	4.0
Snow King	Tak	A.13	94	5.6	LRC	1.1	27	2023	819	4.0	4.9	5.0	3.9	2.9
White Contessa	A&C	A.11	100	15.8	L	--	--	1904	771	3.8	4.6	5.0	3.4	2.7
Ballade	NZ	S.16	35	11.8	D	1.5	32	1785	723	4.9	4.5	4.9	5.0	4.3
Cervina	RS	S.21	47	6.7	D	2.0	40	1666	674	4.6	4.9	4.7	4.8	4.2
81-831	MSU	A.21	59	17.6	RLC	1.0	20	1666	674	4.4	4.6	4.9	3.6	3.8
78-882	MSU	A.13	94	22.2	LR	.8	16	1666	674	3.9	4.2	5.0	3.5	3.6
Starlight	A&C	S.13	39	27.8	Cr	1.2	22	1547	626	3.5	4.1	5.0	5.0	3.0
Silverstar	HM	O.17	29	42.8	RCL	1.5	17	952	385	4.1	4.8	5.0	4.6	4.4
Venus	NZ	A.27	83	72.2	RB	1.2	8	595	241	3.8	3.3	5.0	4.5	1.7
Alpha-Begum	NZ	S.11	47	73.3	RBC	1.2	7	476	193	4.3	3.3	3.5	5.0	2.8
Snowdrift	Swy	S.04	38	81.3	RBC	.9	4	357	145	4.7	3.3	3.3	5.0	2.2

Direct seeded on June 7, spacing 86 cm X 45 cm. Part of row not tied to judge curd protection.

5 = most desirable

Reason Unmarketable: C= color, R = Ricey, B = bracted, D = decay, U = undersize, L = Loose.

The defect mentioned first is the most serious reason for unmarketability.

CELERY STORAGE CULTIVAR TRIAL - 1984/85

Listed in order of % marketable yield after storage

Cultivar	Source	Harv. Yield t/ha	After Storage Period of 80 Days						
			% Mkb	Quality	Reasons Unmarketable (% by weight)				Loss of Color
					Storage Loss	Wilt	Black Stem	Decay	
Strain 2-14	A&C	67	50	3.6	6	15	7	18	4
T.U. 52-70R Imp.	HM	62	50	3.4	10	10	4	22	4
Summit	Sto	48	47	3.3	8	11	4	22	8
Florida 683	HM	83	46	3.5	17	8	9	17	3
Imp. U. 52-70	Sto	75	45	3.6	9	12	8	22	4
Ventura	FM	88	43	3.2	9	2	10	30	6
Bishop	HM	62	39	3.1	10	8	1	36	6
Surepak	Sto	55	33	3.3	12	27	5	20	3
Clean Cut	HM	67	32	3.5	14	26	5	19	4
Green Giant	A&C	92	29	2.8	13	8	2	38	10

Seeded May 28 in greenhouse, planted to the field July 18 at a spacing of 60 cm X 15 cm. Replicated 3 times.

750 kg/ha 10-0-50 + 20 kg/ha Borax was applied prior to transplanting, and 2X a sidedressing was applied of 200 kg/ha Chilean Nitrate. The plot was irrigated when less than 25 mm rainfall was received. The water table was kept at 50 cm. Besides a regular pesticide spray program 2 X 1 kg/ha Solubar was applied with the sprays.

On Oct. 1, 20 stalks of each replication of each cultivar were cut, trimmed, weighed, and placed in a pallet box. The stalks were drenched with a 6% sodium hypochlorite solution at 3.3 L/1000 L of water and placed in a "Filacell" type of storage where the temperature was a constant 1.5°C and the relative humidity over 95%.

After 80 days in storage data was taken.

5 = most desirable.

CELERY CULTIVAR BOLTING - MAIN TRIAL 1984

Cultivar	Source	Mkb.Wt. t/ha	% Trim Loss	Pet.	Total	Rib- bing	Diam (cm)	Compact -ness	Boron defic.	%	Resistant
				Lgth (cm)	Lgth (cm)					Seed- ers	to Bolting
Summit	Sto	94	17	30	59	S	7.6	3.0	4.1	28	4.2
Ventura (FM 1213)	FM	102	18	32	62	R	7.9	3.9	4.1	65	3.2
Tendercrisp	Sto			NOT MARKETABLE						93	1.7
Bishop	HM			"	"					97	2.0
Clean Cut	HM			"	"					97	1.8
Florida 683	A&C			"	"					100	1.8
Deacon	HM			"	"					100	1.8
Green Giant	A&C			"	"					100	1.1
Surepak	Sto			"	"					100	1.1
Tall Utah 52-70	Sto			"	"					100	1.1
Tall Utah 52-70R IMP	HM			"	"					100	1.0
Improved 52-70R	A&C			"	"					100	0.9
Improved Utah 52-70	Sto			"	"					100	0.8
FMX-1217	FM			"	"					100	0.8

NOTES:

Seeded February 22, 1984 in greenhouse. Transplanted into flats: March 20, 1984.
 From April 24 to May 10 (16 days) placed in "Filacell" storage at 1°C and 95% relative humidity as a cold treatment.
 Planted to field on May 11, 1984.
 Replicated 3 times - spacing: 60 X 15 cm
 Harvest dates: July 26, 31, and Aug. 3, 1984
 At harvest all cultivars produced 100% seedstalks with the exception of Summit and Ventura. The cold treatment was obviously too severe.
 Minimum night temperatures on May 13 - 3°C for 7.5 hours, on May 14 - 4°C for 8.5 hours, on May 5 0°C for 0.5 hours, on May 16 - 4.5°C for 0.5 hours, and on May 17 - 4.0°C for 8 hours.
 5 = most desirable 1 = least desirable.

CELERY MIDSUMMER - OBSERVATION TRIAL - 1984

Cultivar	Source	Mkb wt t/ha	% Trim loss	Pet. Lgth. cm	Total Lgth cm	Rib- bing	Diam	Crisp ness	Stri ngy	Com- pact ness	Boron defic.	Yellow leaves	Quality Rating
Exp ss-300	Sto	174	19	33	68	R	9.0	4+	4+	3+	5-	3-	3.9
Ventura	FM	173	22	34	70	R	9.0	4+	4+	4-	5	3	4.1
FM 56	FM	152	26	32	67	R	8.4	3+	3	4	4+	3+	3.6
FM 60	FM	151	27	33	66	R	8.6	4	4	4-	4-	4-	3.8
FM 72	FM	146	28	36	67	R	8.6	4+	4+	4+	5	4+	4.4
FM 50	FM	143	32	40	70	R	8.2	4	3-	4	5	3-	3.7
T.U. 52-75 Imp	FM	130	25	33	63	MS	8.6	4	3+	3+	3-	4-	3.4
FM 75	FM	130	22	28	58	MS	9.0	4	4-	3	3-	3+	3.3
Cry 004	HM	168	31	27	60	R	10.0	4+	4	4-	4-	3+	3.8
Tall Green Light	HM	159	26	29	60	MR	10.4	4+	3+	3+	5	3	3.8
Florida 683	HM	156	29	30	63	R	10.4	4	4-	3+	4+	3+	3.7
Cry 003	HM	142	26	31	60	R	11.6	4	3	4+	4	4+	3.9
Exp 378	HM	100	43	28	55	M	8.6	4	3-	2	1+	4	2.8
K-3	MSU	164	24	30	66	MS	9.4	4+	4+	4	4	4-	4.1
81-654	MSU	160	30	36	67	R	8.8	4	4-	4	5	4+	4.2
79-57	MSU	157	17	32	63	MS	9.6	4	3	4	4-	5-	3.9
81-660	MSU	156	15	36	72	R	8.2	4+	3+	4-	4	4+	3.9
68-37	MSU	149	24	38	69	MS	9.4	4+	4+	4-	4	5-	4.2
K-4	MSU	148	28	35	62	MR	9.2	4+	4	4+	3+	4	4.0
72-109 VK	MSU	144	26	31	62	MS	8.4	4+	4+	4+	4-	5-	4.3
83-638	MSU	144	24	31	62	MR	8.6	4+	3+	4	5-	4-	4.0
74-56	MSU	142	28	33	64	MR	8.8	4+	4-	4-	4-	4-	3.8
74-75	MSU	142	28	26	55	S	9.0	4	4	3	4+	5-	4.0
79-43	MSU	141	28	27	63	R	8.4	4+	4+	3+	5-	4	4.1

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CELERY MIDSUMMER - OBSERVATION TRIAL - 1984 - continued

Cultivar	Source	Mkb wt t/ha	% Trim loss	Pet. Lgth cm	Total Lgth cm	Ribbing	Diam	Crispness	Stringy	Compactness	Boron defic.	Yellow Leaves	Quality Rating
81-619	MSU	140	43	33	68	R	8.4	4	3	4	5	4+	4.1
81-655	MSU	137	28	34	70	S	8.6	4+	4	4	4-	4+	4.1
81-604	MSU	133	21	32	70	R	8.4	4+	4	4+	5-	3+	4.1
78-74	MSU	131	31	33	64	R	8.8	4+	4+	4	5-	4+	4.3
74-100	MSU	130	26	30	55	MS	9.0	4+	4-	3+	5-	4+	4.1
77-43	MSU	128	35	28	65	M	8.8	4+	4+	3+	5-	3+	4.0
72-73	MSU	124	39	36	70	R	8.8	4	3-	4	5-	5-	4.0
72-41	MSU	122	32	30	60	MR	8.0	4	3	3+	4+	5	3.9
FL. 683K Strain	Sun	147	27	29	63	R	9.2	4	3-	4-	5	4-	3.8
T.U. 52-70 H.K.Strain	Sun	145	28	26	62	R	8.4	4	3	4	4	3-	3.5
Grande	Sun	144	30	28	65	R	9.5	4-	3+	4-	3+	4	3.6

Seeded: April 30, 1984 in flats in a greenhouse, transplanted at 78 plants per flat

Transplanted to field on June 18 in rows 57 cm apart, 15 cm apart in the row.

No cold treatment was given, no seeders were observed and no seedstalk rating was given.

Normal growing practices were followed including irrigation when deemed necessary.

Harvest took place on Sept. 5 when some cultivars such as FM 50 and FM 56 were slightly overmature.

The incidence of vertically split stems was noticed with some splits running the full length of the stem in cultivars such as Ventura, FM 50 and FM 56, Cry 003, and Cry 004, and Exp SS-300, to a lesser degree this was also observed in FM 72, 81-654, 81-655, Fla 683 K. Strain, Grande and T.U. 52-70 H.K. Strain. The cultivar 74-56 developed 20% C.M.V.

5 = most desirable 1 = least desirable

The marks for Boron deficiency indicate the incidence of cracked stem (cat scratches) and/or nodal cracking; nodal cracking usually occurred only to a light degree.

100 t/ha = 44 t/a = 1400 cr/a

MIDSUMMER HEAD LETTUCE CULTIVAR TRIAL - 1984

Cultivar	Source	Days to Harvest	Wt/carton (18 heads) (kg)	% Mkble	Reason Non-Mkble	Diameter (cm)	% Tipburn	Bottom Rot	Firmness	Uniformity	Internal Stem Length (cm)	Acceptability	Remarks
Main - Seeded June 6, 1984. Replicated 3 times													
Montello M.F.	PETO	62	18	100		15	0	4.4	4.3	4.5	5.1	4.5	
Raleigh	Guz	63	19	97	Slime	15	0	4.2	4.4	4.3	4.8	4.4	Some heads small
Shawnee	Guz	62	17	97	Slime	14	0	4.2	4.4	4.4	4.6	4.3	Some heads small
Ithaca M.F.	PETO	62	22	100		16	0	3.9	4.2	4.2	5.7	4.2	
Ithaca Str. 989	Asg	63	22	100		15	5	4.1	4.0	3.8	4.5	4.2	
Ithaca M.T.	FM	62	22	100		16	0	4.3	4.2	4.4	5.4	4.2	
XP 993	Asg	65	19	97	B. Rot	15	2	4.2	4.1	4.0	4.3	4.2	
Montello M.C.	Sun	62	19	97	Slime	16	7	4.1	4.3	4.2	5.1	4.2	
Ithaca	HM	62	25	93	Slime	16	7	4.4	4.4	4.4	5.2	4.2	
Southbay	Guz	65	17	87	Slime	14	0	4.1	4.3	4.3	4.7	4.1	Some heads small
Green Lake	Sun	63	18	90	Slime	15	3	4.3	4.3	4.4	5.6	4.1	
Green Lake M.F.	PETO	63	20	93	Slime	16	5	4.1	4.3	4.2	5.5	4.1	
Montello	HM	62	20	90	Slime	15	17	4.3	4.6	4.6	5.4	4.1	
Green Lake	HM	62	20	93		16	0	4.1	4.3	4.4	5.4	4.0	
XP 992	Asg	65	19	87	B. Rot, Slime	15	5	3.7	4.3	3.9	4.2	4.0	
Minetto M.F.	PETO	63	16	80	Slime	13	0	4.4	4.0	3.9	4.4	4.0	Poor stand
Green Lake M.T.	FM	63	19	73	Slime, B.Rot	15	10	3.6	4.3	4.6	4.8	3.7	
Yuma M.T.	HM	68	27	93	Slime	19	82	4.2	2.1	4.1	13.7	1.2	Going to seed br. r.
Van Mor	HM	68	26	87	Double heads	19	100	4.2	2.1	4.0	13.8	1.0	Going to seed, br. r.

LEGEND:

5 = most desirable

b.r. = bottom rot

br.r = brown ribs

Spacing = 43 X 30 cm

Tipburn detected by cutting heads

Wt (carton) 18 kg = 40 lbs

LATE HEAD LETTUCE CULTIVAR TRIAL - 1984

Main - Seeded June 29 - replicated 3 times

Cultivar	Source	Days to Harvest	Wt/Carton 18 heads (kg)	% Mkble	Reason Non-marketable	Diameter (cm)	% Tipburn	Bottom Rot	Firmness	Uniformity	Internal Stem Length (cm)	Acceptability
XP 992	Asg	61	21	93	Soft, bottom rot	16	0	3.6	4.2	3.7	5.1	4.3
Ithaca Str. 989	Asg	62	18	90	Bottom rot	16	0	3.4	3.7	4.0	6.2	3.9
XP 993	Asg	64	18	80	Bottom rot	16	0	3.4	4.0	3.8	4.9	3.7
XP 5277	Asg				NO EMERGENCE							
Green Lakes MT	FM	61	18	87	Bottom rot	16	0	3.7	4.1	4.1	6.3	4.0
Ithaca MT	FM	63	19	90	Soft/Bottom rot	16	0	3.8	4.0	3.9	6.1	3.9
Raleigh	Guz	62	17	97	Slime	15	0	4.2	4.0	4.0	6.1	4.0
Southbay	Guz	63	16	95	Bottom rot	15	0	3.9	3.9	3.9	6.1	3.7
Shawnee	Guz	65	15	87	Bottom rot	15	3	3.1	4.1	3.9	5.7	3.4
Ithaca	HM	60	20	97	Bottom rot	15	0	3.7	4.0	3.9	7.0	4.0
Green Lake	HM	61	17	93	Slime, Bottom rot	15	0	3.9	4.1	3.8	6.0	4.0
Montello	HM	61	17	87	Bottom rot	15	0	3.4	4.3	4.1	6.2	3.9
Van Mor	HM	67			NOT HEADING							
Yuma MT	HM	67			NOT HEADING							
Ithaca MF	PETO	60	20	100		16	0	4.1	4.0	4.2	5.9	4.3
Montello MF	PETO	61	19	90	Slime	15	0	3.7	4.4	4.4	6.5	4.1
Green Lake MF	PETO	61	18	97	Bottom rot	16	3	3.6	4.1	4.3	7.0	4.1
Minetto MF	PETO				NO EMERGENCE							
Green Lake MC	SUN	64	18	100		15	0	4.0	4.1	4.2	5.7	4.3
Montello MC	Sun	61	17	87	Bottom rot	15	0	3.6	4.3	4.3	6.0	4.1

5 = most desirable, 18 kg = 40 lbs.

MIDSUMMER HEAD LETTUCE CULTIVAR TRIAL - ADAPTATION - 1984

Seeded: June 6, 1984

Cultivar	Source	Days to Harvest	Wt/Carton (18 heads) (kg)	% Mkbte.	Reason Non-mkbte.	Diameter (cm)	% Tipburn	Bottom Rot	Firmness	Uniformity	Internal Stem Length (cm)	Acceptability	Remarks
XP 5274	Asg	62	15	60		16	10	4+	4-	4+	5.0	4	Poor stand
XP 5276	Asg	62	13	50		13	0	5-	4	4+	5.8	4	Poor stand
XP 5278	Asg				NO STAND								
65 LM-1	Asg	68	17	100		14	40	4	3+	3-	5.0	3-	Brown rib
65 LM-8	Asg	62	17	100		14	10	4	4	4+	4.4	4	Brown rib
65 LM-12	Asg	68	18	90	Slime	15	20	4-	4-	3+	5.5	3	Many brown ribs
65 LM-13	Asg	65	18	90	brown rib	16	10	4	4+	4	4.6	4	
65 LM-16	Asg	65	19	90	Slime	16	5	4	4	4+	5.6	4+	
65 LM-19	Asg	65	18	100		16	25	4+	4	3+	4.6	3-	
65 LM-20	Asg	62	18	100		16	0	4-	4	4+	5.0	4	
Malika	SG	68	17	80	Double heads	16	30	3+	3-	2	20.0	1	Seed stalks
Nabucco	RS	72	18	80	Slime	16	100	4+	3+	4-	8.0	1	
Nerone	RS	72	23	80	Slime, bot. rot	17	100	4	3	4	21.0	1	100% seeders, br.r
FL-1265	Guz	65	12	80	Slime, bot. rot	13	0	4	3+	4-	4.6	4-	Uneven stand
FL-1366	Guz	65	19	70	Slime	15	0	5-	4-	4-	6.0	4	Uneven stand
E1 Toro	HM	65	27	90	Slime	19	0	4	3-	4	14.6	3-	
Exp. 183E	HM	62	11	50		13	70	4	2-	3	11.0	1	50% seeders
Empire MF	PETO	65	19	80	Slime	15	40	4	3	4	4.4	3+	
Vanguard 75MF	PETO	65	15	80	Seeders	12	100	3+	1	4+	16.4	1	
Raleigh	Sun	65	17	60	Slime	14	60	4	4-	4	5.6	2	
Kellys	Agr				100% SEEDERS								
Lake Nyah	Sha	65	23	63	Slime	19	80	3.9	3.4	4.1	6.0	2	

MIDSUMMER ROMAINE LETTUCE CULTIVAR TRIAL - 1984

Cultivar	Source	Days to Harvest	WT/Carton (18 heads) (kg)	% Mkble.	Reason Non-mkble	Diameter (cm)	% Tipburn	Bottom Rot	Firmness	Uniformity	Internal Stem Length (cm)	Acceptability	Remarks
Main - Seeded May 30 - replicated 3 times													
Parr 15	PETO	63	18	100		15	3	4.5	4.1	4.2	9.6	4.2	Compact, harvested late
Signal	PETO	55	13	96	Slime	13	0	3.9	4.1	4.3	6.6	4.3	
Parris Island	HM	58	16	100		15	3	4.4	4.0	4.4	8.1	4.4	
Signal	Asg	55	13	100		13	15	3.9	4.0	4.4	7.1	4.2	Brown rib
XP-825	Asg	58	14	100		14	2	4.3	3.9	4.5	7.5	4.1	
XP-930	Asg	57	16	100		14	8	4.2	4.1	4.3	7.1	4.3	
XP-996	Asg	58	16	100		15	2	4.6	4.0	4.5	9.8	4.3	
XP-997	Asg	61	17	100		15	10	4.4	4.1	4.2	10.2	4.2	
XP-998	Asg	56	15	100		14	2	4.0	3.9	4.4	8.1	4.2	
XP-999	Asg	57	14	100		14	2	4.2	4.1	4.0	8.8	4.3	
Paris Island	RS	62	18	100		15	2	4.6	4.3	4.3	9.3	4.6	* Harvested late
Valmaine	HM	64	20*	97	Slime	16	10	4.2	4.2	4.4	11.1	4.2	
Parris Island	HM	56	15	100		14	3	3.6	4.1	4.1	7.6	4.3	
EXP-320	HM	57	16	100		15	5	4.4	4.1	4.4	7.4	4.4	Beautiful, but does not close in
Valmaine	FM	65	18	97	Tip burn	16	18	4.5	4.0	3.9	11.0	3.6	
FL-43008	Guz	67	24	100		14	5	4.6	4.7	4.4	14.5	4.6	
ADAPTATION - non-replicated													
EXP 320	HM	55	10	100		10	0	4	4-	5-	5.2	4	
Corsaro	RS	55	12	100		13	0	4-	4	5-	8.0	4	
Romance	SG	70	14	100		10	10	5-	4	2	7.0	4	
FUX 1564	FM	59	17	100		16	20	5	4	4+	11.2	4	

5.0 = most desirable, 18 kg - 40 lbs.

ONION CULTIVAR TRIALS - 1984

Crop Management Information

Fertilizer: 1000 kg/ha 10-0-5 + 30 kg/ha copper sulfate

Seeding: May 3 at 52 seeds/m (16/ft) with a 5 cm wide scatter shoe. The seed was coated with Thiram. 35 kg/ha 5% Dyfonate plus 10% Thiram was applied in the seed furrow.

Weed Control: pre- 2.5 L/ha Gramoxone
loop: 9 L/ha Radox + 8 L/ha CIPC
post: 5.6 L/ha Radox + 2.8 L/ha Tok applied 4 times at 2 week intervals.

Grass Control: Hoe Grass

Insect Control: 1.1 kg/ha Diazinon or 550 ml/ha Dibrom applied when necessary.

Disease Control: 2.2 kg/ha Maneb or Zineb weekly after June 28.

Minor Elements: 6 applications of 3 kg/ha Manganese Sulphate

Water Table: Kept at 60 cm, no irrigation used.

Sprout Inhibition: 8.4 L M-H30 in 550 L water/ha on August 28 when 25 to 75% of the tops were down.

The Main Trial is listed in order of maturity and is replicated 3 times.

The date of maturity is the date when at least 85% of the tops are down.

Stand/meter: 33 bulbs/m = 10 bulbs/ft.

Type of Culls: D = Double R = Rot W = White U = Undersize S = Sprouted

Yield/ha: is the marketable yield over 44 mm (1 3/4"); 56 t/ha = 25 T/A = 1000 Bags/acre.

Shape: (Marks not listed) most cultivars were globe shaped, except Sweet Sandwich which resembled more a top shape, and Downing Yellow Globe which was slightly flattened.

Ave. weight/bulb: 100 grams - 3.5 oz. = bulb 2 1/4" in size.

Score: Average of last 7 marks 5 = most desirable 1 = least desirable

ONION CULTIVAR MAIN TRIAL - 1984

Cultivar	Source	Days to Maturity	Stand/Meter	MKB YIELD		% # 1 Small	% Culls	Ave. Weight per bulb (g)	Firmness	UNIFORM		Color	Skin Thickness	Skinning	Neck Finish	Score	Tip Dieback	% Seeders
				T/ha	Bags/Acre					Size	Shape							
Norstar	Sto	106	22	65.1	1159	1	5.5	134	4.0	4.2	4.0	3.8	3.2	3.1	4.3	3.80	4.7	1.0
Eskimo	Tak	107	20	57.9	1031	1	2.5	130	3.9	4.1	4.2	4.0	3.6	3.2	4.4	3.92	4.4	0.3
Columbia	FM	113	19	58.5	1041	1	2.0	138	3.9	4.1	3.9	4.0	3.7	3.7	3.9	3.88	4.4	1.7
Capable	ARCO	113	20	57.1	1016	2	2.6	127	3.8	3.8	4.0	3.8	3.1	3.0	4.2	3.68	3.7	3.0
Buccaneer Imp.	HM	115	27	64.1	1141	4	2.0	78	4.1	4.0	4.1	4.0	3.7	3.3	3.9	3.87	4.2	2.0
Tamarack	Sto	115	23	53.0	943	3	2.9	105	4.4	3.9	3.9	4.0	3.2	3.5	3.9	3.83	3.8	0.7
Autumn Splendor	JHK	115	26	63.8	1136	2	4.2	113	4.1	3.8	3.8	3.9	3.8	3.3	4.0	3.82	4.1	1.0
Autumn Glo	Cro	116	23	56.3	1002	3	1.7	111	4.0	4.0	3.9	3.7	3.8	3.3	4.1	3.83	3.1	0.7
North Star	FM	117	19	52.2	929	1	3.8	125	3.9	4.0	3.9	4.3	3.8	3.6	3.8	3.89	3.7	0.3
Coppermine	FM	117	27	65.8	1171	3	1.3	110	3.4	3.9	3.9	4.1	3.6	3.4	4.2	3.79	3.5	0.7
Abco	A&C	117	25	65.4	1164	1	7.0	122	4.0	4.0	3.3	4.0	3.9	3.3	3.9	3.78	4.0	6.3
Autumn Keeper	JHK	118	26	59.2	1054	4	2.2	105	4.0	3.9	3.9	3.8	3.6	3.6	4.1	3.83	4.0	1.0
Early Pak	Cro	120	22	51.6	918	2	3.5	107	4.1	3.9	3.7	3.7	3.7	3.7	3.9	3.80	3.7	1.3
XPH 3288	Asg	121	21	62.4	1111	1	2.0	131	4.0	4.1	3.8	3.9	4.0	4.0	3.3	3.87	3.4	1.0
Sentinel	HM	121	25	59.9	1066	2	2.0	109	4.1	4.0	3.7	4.0	3.6	3.7	3.8	3.82	3.8	2.3
Sweet Sandwich	PETO	122	19	67.8	1207	1	0.0	160	3.8	4.1	4.1	4.3	4.0	4.0	3.4	3.97	3.1	0.3
XPH 3318	Asg	123	23	52.9	942	3	1.0	102	4.2	4.2	4.0	4.1	3.7	3.9	4.0	4.01	1.9	1.0
Russet	Sto	123	23	71.2	1267	1	2.3	140	3.8	3.4	3.7	3.9	3.8	3.9	3.7	3.74	3.2	0.7
Gibraltar	FM	125	24	59.3	1056	4	2.0	112	4.2	3.9	3.7	4.2	3.7	3.8	4.1	3.93	3.3	1.7
Surecrop	HM	125	23	62.3	1109	1	6.7	129	4.0	4.2	4.0	3.9	3.9	3.9	3.4	3.90	3.0	1.3
Cuprum	ARCO	126	25	61.9	1102	3	3.5	113	4.0	4.0	3.9	4.0	3.7	3.8	3.9	3.90	3.2	1.0
Super Sleeper	HM	127	27	61.4	1093	3	4.8	107	4.3	4.0	3.8	4.0	3.9	3.8	3.8	3.94	4.0	2.0
Canada Maple	Sto	127	24	62.3	1109	2	0.0	117	4.1	4.1	4.0	3.6	3.9	3.8	3.9	3.90	4.0	0.7
Better Banner	A&C	131	17	56.6	1007	1	6.5	151	3.6	3.6	3.3	4.2	4.0	3.7	3.1	3.64	4.3	1.0
Downing Yel.Globe	Kru	134	21	60.3	1073	1	5.0	132	3.8	4.1	3.9	3.6	3.7	3.9	2.6	3.64	4.0	1.0

ONION CULTIVAR STORAGE TRIAL - SEPT. 26, 1983 - AUG. 24, 1984

* 5 = most desirable

Cultivar	Source	% Weight Loss	% Rot	% Sprouted	% Soft	% Mkble	Firmness*
		In Storage	By Weight	By Weight	By Weight	By Weight	
Canada Maple	Sto	6	0	0	1	93	4.1
Fawn Preview	FM	7	0	0	1	92	4.0
Spartan Banner '80'	Agw	7	1	0	0	92	3.7
Abco	A&C	6	1	0	2	91	3.7
Copra	BEJO	7	1	0	1	91	4.3
Buccaneer Imp.	HM	8	1	0	0	91	4.1
Cuprum	ARCO	8	1	0	0	91	3.7
Simcoe	ARCO	7	1	0	1	91	4.0
Taurus	Asg	6	0	0	4	90	3.7
Early Pak	E.J.	7	1	0	2	90	3.6
Spartan Sleeper	USDA	8	1	0	1	90	4.5
Sentinel	HM	10	1	0	0	89	3.9
Trapp #8	Tra	7	1	0	3	89	3.9
Sweet Sandwich	A.Ch.	8	1	0	3	88	3.3
Tamarack	Sto	8	1	1	2	88	3.8
Exporter	Sto	9	1	1	2	87	3.6
Mucker	ARCO	7	1	0	5	87	3.6
Aries	Asg	8	0	1	5	86	3.4
Better Banner	A&C	8	2	0	6	84	3.1
Autumn Pride	E.J.	7	2	1	6	84	3.1
Northern Oak	Sto	9	2	1	5	83	3.2
Progress	HM	8	1	2	8	81	3.1
Russet	Sto	8	0	2	10	80	2.8
Eskimo	Tak	7	2	10	5	76	3.5
Norstar	Tak	8	1	3	15	73	2.9
AVERAGES		7.5	1.0	0.9	3.5	87.1	3.6

On August 23/83 when 50% of the tops were down Royal M.H. was applied as a foliar spray at 16L/1100 L water/ha. The bulbs were pulled on Sept. 12 and on Sept. 26/83. The tops were removed and the samples stored in a forced air and temperature controlled storage at 25°C and a relative humidity of 70%. After 10 days the temperature was gradually lowered until it reached 1°C by Dec. 15. The relative humidity varied between 50 and 70% during the storage period which lasted 11 months. On Aug. 24 data was taken.

LONG TERM AVERAGES - ONION CULTIVAR STORAGE TRIAL

Cultivar	Source	# Years Tested	% Weight Loss In Storage	% Rot, Soft and Sprouts by Weight	% Marketable by Weight	Firmness
Simcoe	ARCO	3	7.0	6.3	86.7	4.17
Canada Maple	Sto	6	7.3	9.4	83.3	4.23
Taurus	Asg	6	6.7	11.1	82.2	3.72
Exporter	Sto	3	8.7	9.2	82.1	3.63
Sentinel	HM	6	9.5	8.9	81.6	4.22
Mucker	ARCO	5	8.0	11.8	80.2	3.86
Trapp # 8	Tra	6	8.3	11.6	80.1	4.00
Copper Cache	FM	5	8.9	11.8	79.3	3.98
Fawn Preview	FM	6	8.3	12.6	79.1	4.17
Storage King	Sto	4	8.8	12.7	78.5	3.93
Autumn Pride	EJ	3	8.0	14.7	77.3	3.33
Trapp # 6	Tra	5	8.6	14.3	77.1	4.02
Tamarack	Sto	3	8.3	16.3	75.4	3.87
Rocket	Asg	5	8.0	17.5	74.5	3.96
Mustang	HM	4	8.8	17.4	73.8	3.95
Aries	Asg	5	8.0	18.8	73.2	3.54
Nutmeg	HM	4	8.0	21.1	70.9	4.03
Autumn Keeper	Cro	3	9.0	20.3	70.7	3.90
Garnet	Asg	5	8.0	21.4	70.6	3.34
Ontario M	Asg	5	7.8	21.9	70.3	3.70
Buccaneer	HM	3	7.7	22.0	69.7	4.00
Autumn Splendor	Cro	4	8.5	22.5	69.0	4.00
Early Pak	EJ	4	9.0	26.2	64.8	3.73
Progress	HM	6	8.2	29.1	62.7	2.87
Russet	Sto	4	8.8	29.7	61.5	2.98

* 5 = most desirable

Storage period was usually 11 months

Listed in order of % marketable

LONG TERM AVERAGES OF SOME OF THE ONION VARIETIES TESTED IN OUR TRIALS

Cultivar	Source	# Years Tested	LTA		LTA Days to Maturity	Firmness
			t/ha	b/a		
Eskimo	Tak	3	56.0	1014	106	3.83
Norstar	Sto	3	63.7	1133	107	3.58
Pronto S	Asg	4	48.4	862	107	2.76
Super Spice	Sto	5	37.5	668	107	4.14
Autumn Spice	Cro	9	41.2	773	108	4.17
Columbia	FM	2	56.0	998	109	4.03
Simcoe	ARCO	8	48.6	865	109	4.24
Rocket	Asg	13	54.6	970	109	3.82
Early Pak	Cro	7	52.9	941	110	4.13
Fawn Preview	FM	11	51.2	912	110	4.05
Capable	ARCO	2	55.2	983	110	3.90
Trapp #6	Tra	12	54.1	962	110	4.01
Garnet	Asg	12	54.1	962	110	3.77
Progress	HM	8	57.5	1024	110	3.70
Mirage	Sto	4	44.2	787	111	4.35
Tamarack	Sto	6	48.8	868	111	4.22
Buccaneer	HM	13	52.0	926	111	4.08
Mustang	HM	12	51.1	910	111	4.05
Aries	Asg	9	52.0	926	111	3.98
Taurus	Asg	9	53.2	947	111	3.88
Nutmeg	HM	10	51.6	919	112	4.29
Trapp #8	Tra	11	56.8	1011	112	4.23
Golden Laker	FM	5	47.4	848	112	4.00
Imp. Autumn Spice	Sto	8	45.8	815	112	3.78

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LONG TERM AVERAGES OF SOME OF THE ONION VARIETIES TESTED IN OUR TRIALS

Cultivar	Source	# Years Tested	LTA		LTA Days to Maturity	Firmness
			t/ha	b/a		
Sunburst	Asg	8	44.5	792	113	4.00
Abco	A&C	3	64.3	1145	114	4.13
Autumn Glo	Cro	5	54.0	956	114	4.02
Buccaneer Imp.	HM	3	60.1	1070	114	4.37
Mucker	ARCO	8	55.6	990	114	4.05
Cooper Cache	FM	9	53.7	956	114	3.92
Sunglow	Cro	4	51.3	909	114	3.86
Sweet Sandwich	PETO	4	69.3	1233	115	3.97
Autumn Bronze	FM	2	40.0	713	115	4.00
Autumn Splendor	JHK	4	53.6	954	115	4.06
Ontario M	Asg	7	54.7	970	116	4.11
Coppermine	FM	2	61.9	1100	116	3.78
Canada Maple	Sto	15	56.0	996	117	4.23
Autumn Keeper	JHK	7	53.9	958	117	4.13
Spartan Era	Sun	7	55.5	987	117	4.13
Storage King	Sto	8	53.9	960	117	3.90
Gladitor	Sun	10	61.5	1094	117	3.76
Exporter	Sto	14	57.9	1030	117	3.76
Bronze Age	FM	6	60.8	1082	117	3.38
Spartan Sleeper	USDA	4	61.4	1093	118	4.11
Russet	Sto	6	66.1	1177	118	3.83
Autumn Pride	Cro	4	72.2	1285	119	3.73
Sentinel	HM	11	59.4	1057	120	4.25
Harvestmore	HM	2	39.4	701	120	3.50

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LONG TERM AVERAGES OF SOME OF THE ONION VARIETIES TESTED IN OUR TRIALS

Cultivar	Source	# Years Tested	LTA		LTA Days	Firmness
			t/ha	b/a	to Maturity	
Canada Granite	Sto	5	45.1	803	121	4.04
Cuprum	ARCO	2	64.8	1151	121	4.14
Northern Oak	Sto	8	61.0	1085	121	3.80
Gibraltar	FM	2	59.7	1063	122	4.25
Surecrop	HM	4	60.7	1081	124	4.23
Spartan Banner 80	Agw	2	67.8	1207	125	3.78
Better Banner	A&C	2	59.2	1052	125	3.84
Super Sleeper	HM	3	59.6	1060	126	4.20

ONION CULTIVAR ADAPTATION TRIALS - 1984

Cultivar	Source	Days to Maturity	Stand / Meter	MKB YIELD		% # 1 Small	% Culls	Ave. Wt. of Bulb	Shape	Firmness	UNIFORM		Color	Skin Thickness	Skinning	Neck Finish	Score	Tip Dieback	% Seeders
				Tonnes/ha	Bags/a						Size	Shape							
Apollo	A&C	107	23	64	1138	1	3	127	G	3+	3+	3+	3	3	2+	4-	3.03	4.3	0
Super Apollo	A&C	107	19	47	835	1	2	109	G	4	4	4	4	3	3+	4	3.76	4.0	0
Keepsweet II	A&C	118	26	78	1394	0	0	129	G	3+	4	3-	4	4-	4-	4-	3.59	3.3	0
Spartan Banner	A&C	118	27	78	1380	2	1	130	G	4-	4	4-	4-	4-	4	4-	3.79	3.5	1
Superior	A&C	118	28	68	1214	3	5	114	G	4-	4	4-	4	3	4	4-	3.73	3.9	0
ACX-842802	A&C	107	16	52	931	2	4	138	G	4-	4-	4	4-	4-	3+	4	3.73	4.5	0
ACX-842810	A&C	114	17	54	959	0	5	146	G	4+	4	4	4	3	3-	4+	3.76	4.2	0
Golden Rocky	Agri	131	21	40	704	7	4	89	G	4-	4-	4	3+	4-	4	2+	3.53	4.5	0
Ramaron	Agri	134	22	40	704	3	9	87	G	3+	4-	4	3+	3+	4	2-	3.33	4.5	0
Agri-Seed 4-2	Agri	131	20	57	1007	3	3	131	G	4	4+	4+	4-	3+	3	4-	3.76	3.7	2
Agri-Seed #5	Agri	107	21	43	756	3	3	96	G	3+	4+	4	4-	3	3-	4+	3.61	3.9	0
DEXP 1317-1	ARCO	118	20	49	869	2	2	112	G	4+	4-	4+	4	3	3+	4	3.80	3.2	0
Aries	Asg	114	20	51	904	1	7	120	G	4-	3	4-	4	3	3	4	3.49	2.7	0
Taurus	Asg	114	27	67	1187	3	9	121	G	4	4	4	4	4-	4-	4	3.91	4.3	0
XPH 3366	Asg	124	24	65	1152	3	0	119	G	4	4	4	4-	3+	4	4-	3.81	2.9	0
XPH 3330	Asg	121	25	78	1387	1	3	138	G	4-	4	4	4	3+	4-	4-	3.77	3.5	0
XPH 3361	Asg	124	23	74	1318	1	1	139	G	4	4+	4	4	4-	3+	4	3.90	3.3	1
Golden Treasure	Cro	118	16	63	1118	1	10	197	G	3+	3+	3+	4-	3+	4-	3	3.37	3.5	0
CRK N23	Cro	114	24	44	780	8	6	90	G	4	4	4	3	4+	4+	4	3.94	3.3	0
CRK N50	Cro	112	21	52	918	3	1	111	G	4	4-	4-	4+	3	3+	4-	3.67	3.7	2

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ONION CULTIVAR ADAPTATION TRIAL - 1984 -continued

Cultivar	Source	Days to Maturity	Stand/Meter	MKB YIELD		% # 1 Small	% Culls	Ave. Wt. of Bulb	Shape	Firmness	UNIFORM		Color	Skin Thickness	Skinning	Neck Finish	Score	Tip Dieback	% Seeders
				Tonnes/ha	Bags/a						Size	Shape							
CRK N151	Cro	124	23	84	1497	0	0	158	G	4	4	4-	4	3-	4-	4-	3.69	3.0	2
CRK N53	Cro	124	21	66	1180	2	2	138	G	4+	4-	4	4-	4	3+	4-	3.81	3.7	1
Autumn Beauty	Cro	124	23	64	1145	1	3	125	G	3+	4-	4-	4-	3	3-	3+	3.30	4.2	0
Autumn Gold	Cro	131	22	73	1304	3	1	148	G	3+	4-	3+	3+	3+	3+	4-	3.41	3.0	0
Autumn Keeper	Cro	131	25	59	1056	4	5	111	G	4+	4	4	4-	3+	4	4-	3.86	3.3	1
Autumn Pride	Cro	128	24	82	1463	1	3	153	G	4-	4-	4-	4-	4-	4-	4-	3.70	3.5	2
Autumn Splendor	Cro	124	20	47	828	2	8	108	G	4-	4-	4-	4	3+	3	4-	3.59	3.9	0
Brown Beauty '80	Cro	124	24	80	1428	1	0	146	G	3+	4	3+	4-	3	3	3	3.33	3.2	1
Enterprise	Cro	124	22	48	849	4	8	105	G	4-	4-	4-	4-	4-	4-	4	3.74	3.5	1
Spartan Bounty '80	Cro	118	17	54	952	2	1	139	G	4	4	4	4-	4-	4	4-	3.87	3.9	1
Sunglow	Cro	114	22	73	1290	0	1	145	GT	3+	4	3+	4-	3-	3	4	3.43	4.0	0
Sweet Sandwich	Cro	118	28	82	1463	3	2	133	GT	4-	4+	4-	4-	3-	4-	4	3.69	3.3	1
Trapp #6	Cro	118	23	56	1000	4	2	112	G	4	3+	4	4-	4	4-	4-	3.77	3.7	0
Trapp #8	Cro	118	20	66	1166	1	2	143	G	4-	4	4-	4-	4-	3+	3+	3.63	3.9	1
Bullet	FM	124	20	67	1200	2	0	148	G	4	4-	4	4+	3	3	4-	3.67	3.2	2
Bronze Reserve	FM	118	20	51	904	2	1	113	G	4+	4-	4	4	3	3+	4	3.76	2.7	0
Goldmine	FM	124	19	72	1276	1	0	163	G	4-	4-	4	4	3+	4-	4-	3.73	2.7	0
Columbia	FM	112	17	49	869	3	3	129	G	4-	4-	4	4	3-	3+	3+	3.53	4.0	0
Mardi Gras	FM	131	17	48	862	2	4	132	G	3+	4-	4	4-	3	3+	4-	3.53	4.3	0
X 225W2	FM	124	26	72	1283	3	0	125	GS	3+	3+	4-	4-	3+	4-	4-	3.53	3.7	2

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ONION CULTIVAR ADAPTATION TRIAL - 1984 - continued

Cultivar	Source	Days to Maturity	Stand/Meter	MKB YIELD		% # 1 Small	% Culls	Ave. Wt. of Bulb	Shape	Firmness	UNIFORM		Color	Skin Thickness	Skinning	Neck Finish	Score	Tip Dieback	% Seeders
				Tonnes/ha	Bags/a						Size	Shape							
X 227W2	FM	118	20	63	1125	1	2	142	G	4-	5-	4-	4	3+	4-	3+	3.77	3.3	0
X 228W2	FM	118	21	67	1194	2	3	141	G	4-	4-	3+	4	4	4-	3	3.63	3.7	1
X 231W9	FM	128	16	57	1021	1	3	160	G	4-	4-	4	4-	3+	3	3	3.49	4.0	4
X 232W3	FM	132	20	86	1525	1	0	182	G	4	4+	4-	3	4	4	4-	3.81	4.0	0
Progress	HM	114	25	69	1235	3	1	122	G	4-	4+	4	4-	4-	3+	4-	3.77	3.7	0
Hyb. Gra. Max. Prr	HM	86	31	3	55	67	14	22		Matured very early, evaluated too late									
Uno Grande	HM	86	27	0	0	52	48	14		"	"	"	"	"	"	"	"	"	"
HXP 2610	HM	103	22	68	1214	1	3	139	G	3+	4-	4	4-	4-	3	4	3.63	4.0	0
HXP 2612	HM	114	23	68	1207	1	4	133	G	4	4	4+	4	3	4-	4-	3.81	3.9	5
HXP 2624	HM	118	21	58	1028	1	1	119	G	4	4	4-	4+	4-	4	4-	3.91	3.5	0
HXP 2618	HM	131	19	62	1104	1	4	146	G	4	4	4	4-	3+	4-	4-	3.77	3.9	3
XPH 2610	HM	105	25	76	1345	1	2	136	G	4-	4-	4-	3+	4-	3	4-	3.54	4.3	0
HXP 3636	HM	114	23	66	1166	1	1	125	G	4-	3+	4	3+	3+	4-	3+	3.51	3.7	1
HXP 3633	HM	121	25	59	1049	2	5	109	G	4-	4	4-	4	4-	4-	4-	3.79	3.2	1
Autumn Pride	JHK	124	25	81	1442	1	0	143	G	4+	4+	4	4	4-	4	4	4.04	3.5	1
Enterprise	JHK	114	24	67	1187	2	1	121	G	4	4+	4	4-	4-	3+	4	3.86	3.9	0
Fall Classic	JHK	124	26	69	1221	1	3	120	G	4	3+	4-	3+	4+	4	4-	3.76	3.9	0
N 84	JHK	118	23	58	1028	4	4	118	G	4	4-	4	4	4	4	4-	3.91	3.3	0
N 93	JHK	128	22	62	1097	5	3	130	G	4-	3+	4-	4-	4-	4-	3+	3.59	4.5	1
Rocky	K.Br	144	21	41	731	4	4	92	G	4	3+	4	4-	3	4-	2+	3.43	3.9	0

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ONION CULTIVAR ADAPTATION TRIAL - 1984 -continued

Source	Days to Maturity	Stand/Meter	MKB YIELD		% # 1 Small	% Culls	Ave. Wt. of Bulb	Shape	Firmness	UNIFORM		Color	Skin Thickness	Skinning	Neck Finish	Score	Tip Dieback	% Seeders	
			Tonnes/ha	Bags/a						Size	Shape								
Rhinestone	K.Br	138	16	26	469	5	16	91	G	3+	4-	4	4-	4	4-	3+	3.67	3.5	0
ACX 5003R	NZ	118	23	46	814	4	7	96	G	4-	3	4	3	4-	2+	4+	3.43	3.5	2
ACX 7982R	NZ	114	22	49	876	5	1	101	G	4	3	4	3	3-	3+	4	3.43	3.5	0
Sweet Sandwich	PETO	118	20	78	1387	0	0	165	T	4-	4-	4+	4	3	4	4-	3.77	3.9	0
PSR 4083	PETO	112	29	72	1283	1	8	120	G	3	4	4	3	3-	2+	4+	3.33	3.0	0
Golden Beauty	PETO	118	18	30	531	5	26	101	G	3	4-	3+	3	2-	1+	4	2.86	4.2	0
PSR 4183	PETO	121	22	84	1490	0	8	178	G	3	3+	3	4	4-	4	3+	3.47	4.2	0
Cima	Sun	121	20	61	1097	2	6	143	G	3+	3+	4-	4-	4-	3	3	3.39	3.7	0
Gladiator	Sun	118	26	68	1214	3	1	117	G	4	4+	4-	4-	4-	3+	4	3.81	3.7	2
AUX 1241	Sun	114	23	43	759	2	8	89	GT	4-	4-	4	4-	3	3-	4-	3.50	3.0	0
EXP 5003	Sto	124	19	52	931	2	3	125	G	4-	3	4-	3+	3+	4-	4-	3.49	4.2	1
EXP 5004	Sto	124	15	41	731	2	8	131	G	3+	4-	4	4-	4-	4-	4-	3.69	4.3	0
EXP 5009	Sto	131	20	58	1028	2	8	136	G	3	3+	3+	4-	3	4-	3	3.29	4.2	1
EXP 5010	Sto	131	18	29	511	1	19	85	G	4+	4	4+	4-	4	3+	4	3.94	3.9	1
EXP 5011	Sto	131	13	54	959	0	8	194	G	4	4-	4-	4	3+	4-	3	3.63	4.2	11
EXP 5023	Sto	138	19	55	987	2	1	131	G	4	4	4	3+	3+	4	4-	3.76	4.0	0

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ONION CULTIVAR ADAPTATION TRIAL - 1984 -continued

Cultivar	Source	Days to Maturity	Stand/Meter	MKB YIELD		% # 1 Small	% Culls	Ave. Wt. of Bulb	Shape	Firmness	UNIFORM		Color	Skin Thickness	Skinning	Neck Finish	Score	Tip Dieback	% Seeders
				Tonnes/ha	Bag/a						Size	Shape							
Ptarmigan	Sto	114	21	59	1042	2	8	131	G	4	4-	4-	4-	3	3	4+	3.63	4.2	0
EXP 5018	Sto	114	26	67	1200	3	2	118	G	4	4-	4	3+	3+	3	4-	3.57	2.7	1
Mirage	Sto	114	21	60	1062	1	1	124	G	4-	4-	4-	4-	3+	3+	4-	3.59	4.2	0
Imp. Autumn Spice	Sto	114	21	49	869	1	6	108	G	4-	3+	3+	4-	4-	3+	4	3.57	4.0	0
Northern Oak	Sto	128	25	96	1704	0	5	176	G	3	3+	3	3+	4-	3+	3+	3.27	3.7	5
EXP 5029	Sto	124	23	69	1221	3	1	133	G	3+	4-	3+	4-	3+	4-	4	3.57	4.0	1
Norstar	Tak	114	18	62	1104	0	2	152	G	3+	4-	4	4-	3+	2+	4+	3.51	4.2	0
VDH 82379	VDH	124	20	66	1180	1	2	146	G	3	4-	4	3+	3	4	3+	3.47	4.0	0
VDH 83397	VDH	110	25	54	966	2	1	95	G	4-	4	4	4-	4-	3+	4	3.77	3.3	0
VDH 83399	VDH	114	28	76	1359	1	4	123	G	4-	4	4-	4	3+	3+	4-	3.24	3.7	0
VDH 83407	VDH	114	23	64	1131	1	2	122	G	4-	4-	4-	4-	4-	4-	3+	3.64	4.0	0
Ambros	VIL	131	19	50	883	1	3	119	F	4+	3+	4+	3-	3	3+	4-	3.51	3.7	0
Spartan Banner '80	USDA	131	19	57	1014	0	15	151	G	4	4	4	4	4	4	3+	3.76	3.3	18
Spartan Sleeper	USDA	118	20	68	1214	1	3	155	HG	4	4	4	4+	4-	4	4-	3.96	4.2	0
Sweet Sandwich	USDA	121	23	87	1545	1	3	170	T	4	4	4-	4	4-	4	3+	3.81	3.0	1

Note: See Main Trial for explanation of marks given.

RED ONION CULTIVAR ADAPTATION TRIAL - 1984

Cultivar	Source	Days to Maturity	Stand/Meter	MKB YIELD					Ave. Wt. of Bulb	Shape	Firmness	UNIFORM		Color	Skin Thickness	Skinning	Neck Finish	Score	Tip Dieback	% Seeders
				Tonnes/ha	Bags/a	% # 1 Small	% Culls	Types of Culls				Size	Shape							
ACX 8444134	A&C	131	21	74	1325	1	4	DR	160	HG	4	4	4	4	4-	3+	4-	3.81	4.7	1
DEXP 110-4	ARCO	132	14	45	800	0	9	RD	155	G	3-	3+	4-	4+	2+	3-	3+	3.19	4.2	0
DEXP 990-3	ARCO	131	13	47	842	2	0	--	159	G	3+	4-	4	4	3-	3	3	3.39	4.0	0
Red Delite	Cro	141	21	67	1187	1	2	WR	138	G	3-	4-	3+	3+	3	3	3-	3.10	4.0	0
4 PHDR -1	FM	128	24	87	1545	2	11	DW	176	G	3	3	3+	3	2+	3-	3	2.90	4.0	0
4 PHDR -3	FM	118	18	48	849	2	2	--	122	TG	3	4-	3	4	3+	3-	3+	3.29	3.7	0
Benny's Red	HM	131	21	81	1449	0	3	R	169	G	4-	4+	3-	4-	3-	3+	4-	3.44	3.0	0
Renared	NZ	114	20	28	490	2	31	S	87	F	3-	4	4+	4	3	1	4+	3.33	4.2	0
ACX 8073 T	NZ	131	18	11	200	3	69	SDW	93	F	3+	3+	4-	3	2+	3-	3+	3.09	3.7	0
Lucifer	Sto	138	20	61	1083	1	4	WUR	140	G	4	4	4	4	3+	3+	3	3.66	3.9	0
EXP 5000	Sto	110	23	22	386	1	53	S	88	F	3	4-	4+	4-	2+	2	4-	3.24	3.3	0
EXP 5014	Sto	144	15	14	248	15	19	RDW	60	G	4	4+	4+	4	3	3-	1	3.33	4.7	0

Note: See Main Trial for explanation of marks given.

PARSNIP CULTIVAR TRIAL - 1984

In a further effort to find cultivars with better tolerance to diseases, 10 cultivars were seeded on May 9 in rows 6 m long, 50 cm apart, at 50 seeds/m and thinned to 24/m (7/ft). The trial was replicated three times. The tops were not clipped and no fungicide sprays were applied after Sept. 1 to promote development of disease. However, no disease symptoms were found on the foliage at harvest on Oct. 29.

The roots were placed in a temperature controlled storage at 1.5⁰C and a relative humidity of 98%. Data was taken on Nov. 20 and for diseases again on Jan. 24, 1985.

Expanation of marks given:

The cultivars are listed in order of acceptability; 5 = most desirable.

Size range 40-65 mm - 1½ to 2½ inches.

The yield of bushels/acre is based on 40 lbs/bushel, 10 t/ha = 225 bushels of 40 lbs/acre.

Type of culls: U = undersized, F = forked, S = split, N - navel

L/D ratio: = the length divided by the diameter, with the length being the distance from crown to the point where the diameter was still 1½ cm

The higher the mark the more slendor the root.

Shape of Root: The mark given is higher for those roots more uniformly filled and cylindrical in shape.

Acceptability: A mark given for eye appeal relating to appearance, color, smoothness, and shape.

Canker: Very few diseased roots were found at evaluation on Nov. 20, but more disease had developed by Jan. 24. 20 L means that 20% of the roots had small areas affected with canker, at 20 m these areas were larger and more severe.

Horizontal Lesions: Some defects observed on the roots were very similar to horizontal lesions in carrots and evaluated as such. 66 m means that 66% of the roots had developed lesions that were medium in number and size. These roots, so classified, were only boarder line marketable.

PARSNIP CULTIVAR TRIAL - 1984

Cultivar	Source	Stand/Meter	Mkb. t/ha		Mkb. b/a	% Culls	Type of Culls	L/D Ratio	Shape of Root	Colour	Acceptability	% & Degree of Hort. Lesions	% & Degree Canker
			40-65 mm	over 65 mm									
Tip Top	FM	25	31.3	1.8	736	23	UF	3.7	3.9	4.0	3.8	28L	24L
Harris Model	ARCO	15	26.7	14.0	905	15	USN	3.5	3.7	3.7	3.8	48M	48L
Harris Model	HM	23	29.2	3.2	721	23	UN	4.0	3.6	3.7	3.7	57L	20L
Leda **	ES	9	5.0	27.0	712	6	NU	3.8	3.7	4.0	3.7	66M	14M
Albino **	ASM	19	28.5	23.8	1164	9	UF	3.1	3.2	3.8	3.4	32M	27M
All American	ARCO	13	12.3	20.2	723	24	FUN	3.0	3.3	3.7	3.2	28L	27L
All America	HM	23	30.0	11.3	919	15	UF	3.1	2.9	3.9	2.9	50L	20L
White Gem*	Sha	36	29.7	14.0	972	14	UF	2.4	2.5	3.9	2.8	39M	17L
Cobham Imp.Mar. **	Toz	11	10.7	13.5	538	25	SU	2.8	2.3	3.7	2.7	48L	59L
Fullback	ARCO	17	19.2	13.7	732	19	FU	2.2	2.0	4.0	2.5	79M	44M

* Seed - received June 5

** 1983 seed