Vegetable Cultivar Evaluation Trials Research Report, 1989

General Introduction

This report summarizes the activities of the vegetable cultivar evaluation work at Ridgetown College of Agricultural Technology during the 1989 growing season. The results should be treated as preliminary since most of this work is based on only one year of evaluation. In addition to the cultivar evaluation work, this research program is also involved in breeding activities. At present breeding is concentrated on two crops, tomatoes for wholepack processing and peppers (both sweet and hot) for processing.

For evaluation of other vegetable crop cultivars current plans are to conduct trials as the need arises. A supersweet processing sweet corn cultivar trial was initiated in 1989. This trial will be conducted for two more years and then, if appropriate, will be terminated until the need arises again.

It is regretful that resources and time did not permit evaluation of fresh market tomato cultivar seed samples received this past year. Due to the recent change in leadership and mandate of this research program, fresh market tomato cultivar trials will not be a regular part of this research project although they may be evaluated from time to time as the need arises.

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Table of Contents

Section I: WHOLEPACK TOMATO RESEARCH

Introduction

This section of the report summarizes the results of the activities of the Wholepack tomato breeding and cultivar evaluation program at Ridgetown College of Agricultural Technology during the 1989 season. Of the estimated 30,000 acres of tomatoes grown in Ontario in 1989 approximately one third of this acreage is planted to cultivars suited for wholepack. The objective of the Ridgetown research is to identify and recommend the most desirable tomato cultivars, whether from public or private sources, to the Ontario industry.

A wholepack tomato cultivar trial was conducted at several locations in the 1989 season. Three locations were at government research stations and the remaining locations were in growers fields. Locations were chosen to represent the range of soil types on which tomatoes are grown in Southern Ontario.

There were six cultivars being evaluated this year. Ohio 7983 has been evaluated under Ontario conditions for several years and has been adopted for use by a few processors. It was felt that this cultivar merited wider use and was evaluated for one additional season. Ohio 7814 is widely used by the industry and was included as a standard. Ont 871 is a new line developed by the Ontario breeding program and evaluated for the first time in 1989. Three lines from Petoseed, Peto 2196, Peto 2296, and Peto 696 have looked promising in initial trials and were tested over various locations to learn more of their performance under Ontario growing conditions.

At all grower sites rows were planted as twin rows, at Ridgetown the trial was planted in both single and twin rows, at Simcoe the trial was planted in single rows.

Samples of ripe fruit were harvested and submitted to the RCAT lab for a lye peeling loss evaluation.

Requests for new material were sent to a wide variety of seed companies and research stations in order to evaluate the new lines and cultivars available. This trial serves to screen material for adaptability to Ontario conditions and provides material for the multilocation trials in the future. This trial was conducted at Ridgetown only.

Materials and Methods

Location: Ridgetown College of Agricultural Technology, Ridgetown, Ontario.

Soil: clay loam.

Fertilizer: 300 kg/ha, 20-10-10, in April.

Herbicide: Treflan applied just prior to planting at 0.84 kg active or 1.55 l/ha of product.

Plants: Greenhouse grown in 288 cell plug trays, seeded April 10, 1989.

Transplanting: May 17, a one row carousel plug planter using 6-24-24 starter solution at 200 kg/ha, constant flow of solution.

Plot Size and Spacing: Single row plots, 40 plants/plot spaced 35 cm within the row, and 1.5 m apart, replicated 4 times.
Twin row plots, 80 plants/plot spaced 45 cm within the row, 30 cm between rows and 1.5 m apart from center to center, replicated 4 times.

Insect and Disease Control: Colorado Potato Beetle and Tomato Hornworm, 1 spray each of Ambush 500 EC at 200 ml/ 1000 l of water.
Diseases- a standard recommended

program followed for disease control with the help of the TOM-CAST program.

Other Locations:

Soil: Leamington - sand
Stoney Point - clay
Jeanette's Creek - organic black sand
Dresden - silty loam
Simcoe - sand

Transplanting: Leamington - May 12, 1989, hand planted, used no starter solution, used 250 ml of water to firm in plants.
Stoney Point - May 11, 1989, planted same as Leamington.
Jeanette's Creek - May 11, 1989, planted same as Leamington.
Dresden - May 16, 1989, planted same as Leamington.
Simcoe - May 19, 1989, single row tobacco planter, using 10-34-0 at 182 kg/ha, 250 ml to each plant.

Plot Size and Spacing: Leamington, Stoney Point, Jeanette's Creek, and Dresden locations were planted in twin rows, with 80 plants/plot spaced 45 cm in each row, 1.5 m apart from center to center, replicated 4 times.

Insect and Disease Control: As required, managed by the growers at respective locations.

Results and Discussion

The trial location at Harrow Research Station was affected by very severe weather conditions this past season. As a result is was decided that the trial did not reliably reflect the potential of the cultivars under test and data from that trial are not reported.

Data for total yield (= total harvestable fruit), deliverable yield (= total yield minus the fruit normally sorted out on a tomato harvester), per cent peelable (= deliverable yield minus fruit not peelable due to blotchy ripening and other gross defects, expressed as a per cent of deliverable yield), and average weight of 50 fruit per plot were collected. Only measurements which showed statistically significant differences are reported.

Due to difficulties in scheduling harvest dates at different sites, and differences in maturity between cultivars, yield data in Table 1 are reported as total yield or yield potential (= total harvestable fruit).

Table 1. Yield Potential (tons/acre) for Six Wholepack Tomato Cultivars grown on twin rows at locations in Kent and Essex Counties, 1989

Location	Ridgetown	Leamington	Jeannette's Creek	Stoney Point	Dresden
Cultivar Name					
Ohio 7983	24.0	31.7	49.4 B	19.1	48.1
Ohio 7814	27.7	27.6	50.0 B	16.6	51.4
Ont 871	22.3	28.1	72.7 A	19.1	46.3
Peto 2196	28.7	33.6	54.0 B	19.3	67.0
Peto 2296	31.1	33.2	54.0 B	18.2	53.5
Peto 696	31.5	32.2	72.5 A	18.8	56.8
	NS	NS		NS	NS

Means within columns followed by the same letter are not significantly different, (protected LSD at 5%).

Table 1 shows the results of each location analysed separately. Significant differences between cultivars were found at only one location with Ont 871 and Peto 696 significantly higher in total yield than the other cultivars. Total yield for all cultivars at this location is relatively high, although not unexpected since this soil type has a record of producing very high yields.

Table 2 shows the yield potential (total yield) of each cultivar over all locations. In this case significant differences were found between cultivars for total yield. The Peto lines show a numerically higher yield and both Peto 696 and Peto 2196 have a significantly higher yield than Ohio 7814 and Ohio 7983.

Table 2. Yield Potential (tons/acre) for Six Wholepack Tomato Cultivars grown on twin rows over five locations in Kent and Essex Counties, 1989

Cultivar	Yield Potential (tons/acre)	
Peto 696	42.33	A
Peto 2196	40.31	A
Peto 2296	37.97	AB
Ont 871	37.68	AB
Ohio 7814	34.65	B
Ohio 7983	34.45	B

Means followed by the same letter are not significantly different (protected LSD at 5%).

Deliverable yield summarized over five locations, (Table 3), shows some interesting results in comparison to the total yield or yield potential shown in table 2. Peto 696 and Peto 2196 are still ranked as the top two cultivars for deliverable yield, as they were in total yield but Ohio 7983 ranks third overall, and is significantly higher than Ohio 7814.

Table 3. Deliverable Yield (tons/acre) for Six Wholepack Tomato Cultivars grown on twin rows over five locations in Kent and Essex Counties, 1989

Cultivar	Deliverable Yield (tons/acre)	
Peto 696	27.17	A
Peto 2196	26.35	A
Ohio 7983	25.25	AB
Ont 871	23.36	ABC
Peto 2296	20.49	BC
Ohio 7814	18.67	C

Means followed by the same letter are not significantly different (protected LSD at 5%).

A comparison of the performance of the cultivars on single rows between Simcoe and Ridgetown showed no statistically significant differences between cultivars for any of the measurements taken.

A comparison between cultivars, when grown on single rows, within each location also showed no significant differences for the measurements taken. Although not significantly different, the total yields for each cultivar at each location are shown in Table 4.

Table 4. Yield Potential (tons/acre) for Six Wholepack Tomato Cultivars grown on single rows at Ridgetown and Simcoe, 1989

Location	Ridgetown	Simcoe
Cultivar Name		
Ohio 7983	30.0	43.0
Ohio 7814	35.1	37.3
Ont 871	31.8	41.2
Peto 2196	39.9	35.9
Peto 2296	37.5	33.3
Peto 696	43.3	41.6
	NS	NS

Means within columns are not significantly different, (protected LSD at 5%).

The trial at Ridgetown was planted in both single rows (to compare with the Simcoe site) and twin rows (to compare with the grower sites). This afforded the opportunity to set up the experiment as a split plot and not only compare the cultivars but also differences between single and twin rows. Analysis of the results showed that for the 1989 growing season there were no significant differences between single and twin rows for total yield, deliverable yield, per cent peelable or average fruit size for the cultivars tested.

The results of the analysis for twin rows alone at Ridgetown has already been discussed in Table 1 above. The results of the analysis for differences between cultivars in total yield over both row types at Ridgetown is shown in Table 5.

Table 5. Yield Potential (tons/acre) for Six Wholepack Tomato Cultivars grown on single and twin rows at Ridgetown, 1989

Cultivar	Yield Potential (tons/acre)
Peto 696	37.41 A
Peto 2296	34.29 A
Peto 2196	34.28 A
Ohio 7814	31.39 AB
Ont 871	27.05 B
Ohio 7983	26.98 B

Means followed by the same letter are not significantly different (protected LSD at 5%).

The similar analysis for deliverable yield showed no significant differences between cultivars for the Ridgetown site over both row types. Per cent peelable, as estimated in the field, was found to be significantly different when compared over both row configurations, but no significant differences were found between single and twin rows. The results of this analysis are shown in Table 6. It is interesting to see that although Peto 696 performs well in terms of total field yield, it has a tendency to yield a lower percentage of peelable fruit compared to the other cultivars under test.

Table 6. Per cent Peelable (Field estimate) for Six Wholepack Tomato Cultivars grown on single and twin rows at Ridgetown, 1989

Cultivar	Per cent Peelable (Field estimate)
Ohio 7814	90.26 A
Peto 2196	89.82 A
Ohio 7983	89.11 A
Peto 2296	87.56 AB
Ont 871	87.26 AB
Peto 696	83.64 B

Means followed by the same letter are not significantly different (protected LSD at 5%)

The trend found in Table 6 for the per cent peelable at the Ridgetown site was not consistent with the trend for per cent peelable over five locations. In this case Peto 2296 was found to have the lowest per cent peelable (based on a field estimate) as shown in Table 7.

Table 7. Per cent Peelable (Field estimate) for Six Wholepack Tomato Cultivars grown on twin rows at five locations in Essex and Kent counties, 1989

Cultivar	Per cent Peelable (field estimate)
Peto 2196	85.87 A
Ont 871	85.45 A
Ohio 7983	84.32 A
Ohio 7814	83.99 A
Peto 696	83.85 A
Peto 2296	77.29 B

Means followed by the same letter are not significantly different (protected LSD at 5%).

Although no significant differences were found between single and twin rows for average fruit size, when compared over both row types, significant differences between cultivars were found. At the Ridgetown site, under 1989 growing conditions it was found that the Peto lines generally had a larger fruit size than the Ohio material (Table 8).

Table 8. Average fruit size (grams) for Six Wholepack Tomato Cultivars grown on single and twin rows at Ridgetown, 1989

Cultivar	Average fruit size (g)
Peto 2196	50.5 A
Peto 696	49.0 A
Peto 2296	47.5 AB
Ont 871	45.5 AB
Ohio 7814	42.8 B
Ohio 7983	42.3 B

Means followed by the same letter are not significantly different (protected LSD at 5%).

In addition to the measurements taken, visual ratings were made on all of the plots at the Ridgetown location. The results of this rating are shown in Table 9. The visual ratings were based on a scale of 1 to 9 with 1 generally being least desirable and 9 being most desirable except in the cases noted: Season 1 = early, 9 = late maturity; Disease 1 = heavily diseased, 9 = disease free; Fruit size 1 = very small, 5 = desirable wholepack size, 9 = too large; Blossom end 1 = inverted, 5 = rounded, 9 = nipple.

Tomato samples were collected from each of 7 locations and evaluated for peeling and processing characteristics. The locations represented different soil types and row configurations (single or twin row). A representative sample of "deliverable" fruit from each site was lye peeled and lye peeling losses were measured. These results are shown in Table 10.

Table 10. Processing Characteristics of Six Wholepack Tomato Cultivars grown at seven locations in Southern Ontario, 1989

Cultivar	Agtron	Soluble Solids	% Peeling Loss
Ohio 7983	26.5 b	5.05 a	7.1 b
Ohio 7814	26.1 b	4.96 a	8.3 b
Ont 871	24.4 b	4.48 b	8.5 b
Peto 2196	25.9 b	5.10 a	8.8 ab
Peto 2296	30.4 a	5.21 a	10.9 a
Peto 696	30.1 a	5.03 a	7.8 b

Means followed by the same letter are not significantly different (protected LSD at 5%)

No significant differences between cultivars were found for pH, or the percent of cannable fruit after peeling (= defects due to blotchy ripening or difficulty in peel removal).

The cultivars discussed so far are at advanced stages of testing. In additions to these, new material from a variety of public and private sources was evaluated at Ridgetown only, in replicated trials. Tables 11 and 12 show the results of the visual ratings of these lines for the 1989 season. The ratings are the same as for the previous table. Emphasis was placed on lines with good yield and good fruit colour. The predominating problem with most entries submitted to the trial was blotchy ripening.

Table 13 shows acceptable lines that have been evaluated for only one year. Table 14 shows lines that have been evaluated for two years. These lines were considered to be acceptable for wholepack use based on 1989 season performance and will be evaluated for at least one more year.

The reported ratings are means based on evaluation of 2 replications of 10 plants grown in single rows. Any line with an overall rating of 4.5 or greater was considered acceptable for additional evaluation since overall ratings were generally quite low.

Table 13. Ratings for Wholepack Tomato Lines Evaluated For The First Time in 1989 at RCAT. (Summary of Table 11)

Name	Yield	Shoulder Colour	Interior Colour	Overall Rating
Ohio 8444	5	5.5	7.5	4.5
NS 213	7	6.5	7.5	5
Pur 882	7	6.5	7.5	5.5
Ohio 7814	6.5	8	7.5	6

Table 14. Ratings for Wholepack Tomato Lines Evaluated For The Second Year in 1989 at RCAT. (Summary of Table 12)

Name	Yield	Shoulder Colour	Interior Colour	Overall Rating
Har 84-193-5-1	7	5	6	4.5
Peto 1196	7	6	6	5
Peto 30496	5.5	4.5	7	5
Ohio 7814	7.5	7.5	6.5	5.5
Peto 1996	8	7.5	5.5	6.5

Conclusions

Based on this year's results and those of previous seasons, the cultivar `Ohio 7983' is recommended for use in Ontario. When evaluated over several locations in the 1989 season Ohio 7983 had a slightly, but not significantly, lower total yield potential than Ohio 7814 but a significantly higher deliverable yield. This suggests that there would be less sorting on the harvester, on average, with Ohio 7983 as compared to Ohio 7814. Ohio 7983 was observed to be about 3 days earlier in maturity than Ohio 7814 in the 1989 season. Results show that Ohio 7983 has the ability to produce desirable Agtron readings and low peeling losses.

The remaining cultivars (Ont 871, Peto 696, 2196, 2296) have only been widely tested in Ontario for one year and merit further testing for an additional year before any firm recommendations can be made. Both Peto 696 and 2196 look promising based on 1989 results alone. Initial results suggest that Peto 2296 may have higher, although not necessarily unacceptable, peeling losses when compared with the other cultivars tested.

Section II: PROCESSING PEPPER RESEARCH

Introduction

The processing pepper research program at RCAT is concerned with evaluating pepper cultivars from both public and private seed sources in order to identify the best suited material for Southwestern Ontario conditions. In this part of the province sweet bell peppers are processed as a diced frozen product, and hot cherry and banana peppers are grown for pickling. Although no mechanical harvesting of peppers in done in Ontario at the present time the industry may begin a move in this direction if harvest labour continues to be difficult to find.

Most of the activity in pepper cultivar evaluation in the 1989 season was concentrated on two areas: (a) on identifying the main fruit types of the cultivars submitted for evaluation, along with those in the RCAT pepper collection, so that proper comparisons can be made in future years, and (b) since the pepper breeding and cultivar evaluation work is in a state of transition, a reassessment of the objectives of the pepper research at RCAT.

Because of this the report for 1989 is very brief. Future reports will contain more detailed information on performance of the material submitted for test.

Materials and Methods

Location: Ridgetown College of Agricultural Technology, Ridgetown, Ontario.

Soil: sandy to clay loam

Fertilizer: 300 kg/ha, 20-10-10, May.

Herbicide: Treflan applied just prior to planting at 0.84 kg active or 1.55 l/ha of product.

Plants: Greenhouse grown in "200" size Plastomer trays, hand seeded, March 28, 1989.

Transplanting: May 19, 1989. one row carousel plug planter using 6-24-24 starter fertilizer at 200 kg/ha, constant flow of solution.

Plot Size and Spacing: one row plots, 10 plants/ plot, spaced 45 cm in the row, 1 m between rows, replicated 2 times.

Insects and Disease: Standard recommended program followed for insect and disease control.

Results and Discussion

Table 15. Summary of Observations on Sweet Pepper Lines Submitted for Evaluation at RCAT in 1989.

Cultivar	Source	Type	Comments
Bell Boy	Dom	bell	retain for further trial
Bell Captain	Stokes	bell	retain
Bell Tower	NK	bell	retain
Ringer	JSS	bell	early, retain
Valley Giant	NK	bell	retain
Ace Hybrid	Stokes	bell	fr. tend to be small, retain
Apollo	A & C	bell	fr. very large, retain
Sunnybrook Pimento	Stokes	cheese	good yield
Butter Belle	Stokes	bell	ripens yellow to red
California Wonder	Stokes	bell	retain
Calumet	RS	bell	large fr., retain
Canada Cheese	Stokes	cheese	good yield
Canape	Sakata	bell	fr. small, good yield
Castle	Ternier	cone	ripens yellow to red
Chocolate Bell	Stokes	bell	ripens green to brown
Crispy	Burpee	bell	small fr., retain
Delgado	DeRuit	bell	compact plant, large fr., retain
Early Canada Bell	Stokes	bell	retain
Early Niagara Giant	Stokes	bell	retain
Early Bountiful	Sakata	cone	small fr., variable maturity
Early Prolific	Dom	bell	retain
Galaxy		bell	good fr. size, retain
Giant Yellow Banana	Stokes	banana	retain
Gold Crest	JSS	bell	ripens green to yellow
Golden Summer	JSS	bell	ripens green to yellow, attractive
Greenboy	Agway	bell	good yield, retain
Italia	JSS	Italian	
Italian Sweet	Agway	Italian	
Karlo	JSS		fr. small
Kondike Bell	Stokes	bell	ripens green to yellow, very large fr.
Lamuyo	RS	bell	very large fruit, retain
Laparie	Stokes	Italian	
Liberty Belle	A & C	bell	good yield, retain
Lipari	A & C	Italian	
Lipstick	JSS	cone	good plant habit, small fr., retain
LM 6982	L de M	long	very good yield
LM 9040	L de M	bell	late maturity
Marengo	Asgrow	bell	ripens green to yellow
Mayata	RS	bell	large fruit size, retain
Melody	Asgrow	bell	very large fr., retain
Pepperoncini	Stokes	Italian	
Pick-A-Peck	Sakata	cone	fr. small
Plutona	DeRuit	bell	good yield, retain
Prima Belle	Stokes	bell	retain
PSX 56685	Peto	banana	good yield, retain
PSX 68185	Peto	banana	good fruit size, retain
Purple Bell	Stokes	bell	ripens purple to red
Quattro	L de M	bell	shape variable, retain
Skipper	Asgrow	bell	retain
Ssupersweet 860	A & C		good fr. size
Staddon's Select	Stokes	bell	variable, late
Stokes Early Hybrid	Stokes	cone	fr. small
Super Red Pimento	Stokes	cheese	
Super Shepherd	Stokes	Italian	
Superstuff	Stokes	cone	very good yield
Super Sweet Banana	Stokes	banana	good yield, retain
Super Sweet Cherry	Stokes	cherry	retain
Sweetheart 901	Twilley	cone	fr. small, retain
Sweet Hung. Banana	Stokes	banana	some short fr., retain
Top Banana	Territ	banana	some short fr., cracks
Whopper Improved	NK	bell	
Yolo Wonder	Stokes	bell	

Table 16. Summary of Observations on Hot Pepper Lines Submitted for Evaluation at RCAT in 1989.

Cultivar	Source	Type	Comments
Country Girl	Alfrey	rough	poorly adapted
Crimson Hot	Stokes	long	immature fr. very dark green
Diablo Grande	Stokes	banana	retain for further trial
Eastern Rocket	Territ	"bell"	v.good yield, fr. large
Escort	L de M		fr. cracks severely
Hot Shot	JSS	banana	good yield, fr. too short
Hungarian Yellow Wax	Asgrow	banana	retain for further trial
Jalapa	Peto	Jalapeno	
Jalapeto	Peto	Jalapeno	good yield, late maturity
Kisser	Alfrey	rough	poorly adapted
Kreta	L de M	long	
Large Red Cherry Hot	Stokes	cherry	fr. very large
Peter Pepper	Alfrey	rough	poorly adapted
PSX 53485	Peto	cherry	good yield, early, retain
PSX 57585	Peto	banana	fair yield, early, retain
Surefire	Territ	banana	good yield, retain
Szentesi Semi Hot	Stokes	"bell"	
Yellow Peter	Alfrey	rough	poorly adapted
Zippy	Burpee	long	

Conclusions

Many of the lines submitted for evaluation this year will be retained for further testing in 1990. Even though some of the cone, long, Italian, or other special types were not retained, that is not to say that they did not perform well. Rather than evaluate all the different types of pepper cultivars the RCAT program will focus on a limited number of pepper types, namely: (a) sweet bell types that ripen green to red, (b) Hot Hungarian banana types, (c) hot cherry types, and (d) sweet cherry types. Cultivars with plant types that are particularly appropriate for machine harvest are of special interest. The processing pepper breeding program at RCAT will continue with a focus on these four areas mentioned.

Section III: PROCESSING SWEET CORN RESEARCH

Introduction

Twenty six cultivars of supersweet sweet corn cultivars considered suitable for processing were evaluated at RCAT in 1989. The primary objective was to determine which of these cultivars were well adapted to Southwest Ontario growing conditions and also had acceptable processing characteristics. This summary covers the 1989 results of the Supersweet sweet corn cultivar evaluations at Ridgetown College.

Materials and Methods

Location: Ridgetown College of Agricultural Technology, Ridgetown, Ontario.

Soil: Clay loam

Fertilizer: 300 kg/ha. 20-10-10, May; 150 kg/ha. 42-0-0, May.

Herbicide: pre plant incorporate, Dual 2.5 l/ha product
Bladex 80WP 3 kg/ha product
Atrazine 90 1kg/ha product

Plants: Seeded June 9, 1989. sown by John Deere Flex 71 seeding units.

Plot Size and Spacing: 76 cm between rows, plants spaced at 23 cm, replicated 4 times.

Insect and Disease Control: Standard recommended program followed for insect and disease control.

Plots were harvested 22 days after 50 % of the plants in the plot were showing silk. At harvest all ears with useable kernels were weighted (unhusked) and reported as total yield. Ears less than 2 inches in diameter were discarded and the remianing unhusked ears weighed and reported as marketable yield. Kernels were cut from five representative ears and % recovery was calculated. Kernel depth was measured from 5 representative ears. Average ear height was based on measurements from 5 typical plants and large tillers on all plants were counted.

Results and Discussion

The results of this trial are summarized in Table 17. The cultivars Showcase, Crisp'n Sweet 710, and MSI 3161Y all had a significantly higher marketable yield than SS Jubilee and ranked among the top five cultivars for marketable yield. The cultivars GSS 3590 and FMX 285 were also ranked among the top 5 for marketable yield. High yield is often associated with later maturing cultivars but GSS 3590 was the earliest cultivar evaluated this year. FMX 285 had the highest % recovery of all the culitvars tested but had very poor emergence (48%). MSI 3161Y also had very poor emergence (53%). Although the cultivar Paragon had a high per cent recovery and early maturity it showed up as a bicolour type. Pegasus, Phenomenal, and How Sweet It Is also showed up as bicolours in this trial.

Conclusions

The performance of these cultivars is based on only 1 year of evaluation. The trial will be repeated in order to evaluate cultivar performance over several years.

Acknowledgements

Recognition must be given to the diligent work of summer assistants M. Kotsier, G. Quinton, C. Turner, and K. Shaw.

The contribution of the grower co-operators and the processors who helped to provide the locations for the wholepack tomato cultivar trial, representing a wide variety of soil types in Kent and Essex Counties is gratefully acknowledged. Thanks go to Mr. E. Tomecek for helping with the initial co-ordination of these locations. The work of Dr. R. Brammall at HES, Simcoe and Mr. R. Garton at HRS, Harrow is greatly appreciated.

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The financial support provided by the Ontario Vegetable Grower's Marketing Board for the processing sweet corn cultivar trial is gratefully acknowledged.

Seed Sources

A & C	Abbott and Cobb, Box 307, Feasterville, PA USA 19047
	ADI Inc., Box 643, Carmel, IN USA 46032
	Agway Seed Div., Box 4741, Syracuse, NY USA 13221
	Alfrey Seeds, Box 415, Knoxville, TN USA 37091
	Arco Seed Co. See Sun Seeds.
	Asgrow Seed Co., Hort. Dept., Kalamazoo, MI USA 49001
	Campbell Soup Co. Ltd., Napoleon, OH USA 43545
DeRuit	De Ruiter Seed, Box 20228, Columbus, OH USA 43220
Dom	Dominion Seed House, Georgetown, Ontario, L7G 4A2
FM	Ferry Morse Seed Co., Box 4938, Modesto, CA USA 95352-4938
	Harris Moran Inc., 3670 Buffalo Rd., Rochester, NY USA 14624
	H.J.Heinz Co. Ltd., Leamington, Ontario. N8H 3W8
	I.P.P.O. H2766, Tapiozole, Hungary.
JSS	Johnny's Selected Seed, Box 701, Albion, ME USA 04910
L de M	Leen de Mos, Box 54, 2690 AB's, Gravenzande, Holland
	NCSU., Box 7609, Raleigh, NC USA 27695-7609
	N.D. Greiner, PO. Box 19, Brisbane Market, Queensland, Australia, 4106
	Neuman Seed, Box 1530, El Centro, CA USA 92244
NK	Northrup King Ltd., Box 1827, Gilroy, CA USA 95020
	Nunhem Zaden, Box 4005, 6080 AA, Haelen, Holland.
	NYARC Box 642, Geneva, NY USA 14456
	Otis Twilley Seed Co., Box 65, Trevose, PA USA 19047
Peto	Petoseed Co., Box 4206, Saticoy, CA USA 93003
	Purdue U., Dept. of Hort., West Lafayette, IN USA 47907
	R.C.A.T., Ridgetown, Ontario. N0P 2C0
RS	Royal Sluis, 4105 David St. Madison WI USA 53704
	Sakata & Co., 2 Kiribatake Kanagawa-Ku, Yokohama, Japan 220-91
	Stokes Seeds Ltd., Box 10, St. Catharines, Ontario, L2R 6R6
	Sun Seeds, 9800 Fairview Rd., Hollister, CA USA 95023
Ternier	Ternier's Seed, Box 118, Cochin, Sask., S0M 0L0
Territ	Territorial Seed Co., Box 27, Lorane, OR USA 97451
Burpee	W. Atlee Burpee, 300 Park Ave., Warminister, PA USA 49001