

# Vegetable Research Program 1999

RIDGETOWN COLLEGE

UNIVERSITY  
of GUELPH

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TITLE OF PROJECT: Cultivar evaluation of supersweet processing sweet corn - Ridgetown

EXPERIMENT NUMBERS: SWCN99-1

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 4  
Treatments (cultivars): 8

FIELD PROGRAM:

Planting date: 25 May  
Seeds per row: 60 (40 000/acre)  
Final population: 30 (20 000/acre)  
Row spacing: 0.75 m  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Plot size: 3.0 m x 8.0 m (4 rows 0.75 m spacing)  
Fertilizer: 90 kg/ha N PBI  
P and K as per soil test  
Herbicide: Primest Light (3.0 kg ai/ha) preplanned  
Basagran Forte (1.0 kg/ha ai) post emerge for broadleaf  
Insect control: Sevin XLR Plus (3.0 l/ha) or Ambush 500 EC (250 ml/ha) weekly in early morning or evening  
Harvest timing: 74-78% moisture

ASSESSMENTS:

4 weeks: percent plant stand  
extended leaf height  
When appropriate: days to 80% silking  
corn heat units  
days to maturity  
Prior to harvest: percent of plants with head smut  
percent of plants with common smut  
percent leaf area with leaf rust  
Harvest: plant height - average of 5 plants (to tip of tassel)  
cob height - average of 5 plants measured to base of cob  
number of tillers - average number per row taller than 30 cm  
number of lodged plants - average number per row 30 degrees from ground

tip cover - 5 cobs rated on a scale of 1-5 where

- 1 = exposed                      4 = 2.5 cm
- 2 = just covered                5 = greater than 5.0 cm
- 3 = up to 2.5 cm

shank cover - 5 cobs rated on a scale of 1-5 where

- 1 = 0 - 2.5 cm    4 = 7.5 - 10.0 cm
- 2 = 2.5 - 5.0 cm    5 = greater than 10 cm
- 3 = 5.0 - 7.5 cm

total yield - total weight of cobs from one row expressed as t/ha or T/ac

marketable yield - cobs from one row greater than 5 cm diameter expressed as t/ha or T/ac

percent marketable yield =  $\text{marketable yield} / \text{total yield} * 100$

cob weight (husk on) = average weight of 10 marketable cobs with the husk on

cob weight (husk off) = average weight of 10 marketable cobs with the husk off

husking percentage =  $\text{husk weight} / \text{cob weight (husk on)} * 100$

fresh kernel weight = average weight of cut corn from 10 cobs

processing recovery (%) =  $\text{kernel weight} / \text{marketable cob weight (husk on)} * 100$

field recovery (%) =  $\text{processing recovery} * \text{percent marketable yield}$

percent moisture =  $(\text{fresh kernel weight (1 cup)} - \text{dry kernel weight (1 cup)}) / \text{fresh kernel weight} * 100$

## TREATMENTS:

Trt. No.	Cultivar	Source	Plot number by replication			
1.	ACX 427	A+C	101	207	306	402
2.	ACX 97CN420 BC	A+C	102	208	301	409
3.	GSS 0975	Rogers	103	201	302	407
4.	GSS 9299	Rogers	104	205	309	403
5.	HMX 5375 S	Harris Moran	105	203	305	405
6.	HMX 6383 S	Harris Moran	106	209	308	406
7.	HM 701	Harris Moran	107	204	303	404
8.	Bandit	Harris Moran	108	202	304	401
9.	Samson	Crookham	109	206	307	408

**TITLE OF PROJECT:** Cultivar evaluation of standard and sugar-enhanced processing sweet corn - Ridgetown

**EXPERIMENT NUMBERS:** SWCN99-2

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block

Replications: 4

Treatments (cultivars): 8

**FIELD PROGRAM**

- see Cultivar evaluation of supersweet processing sweet corn - Ridgetown

**ASSESSMENTS**

- see Cultivar evaluation of supersweet processing sweet corn - Ridgetown

Harvest timing: 68-72% moisture

**TREATMENTS**

<b>Trt. No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Endosperm</b>	<b>Plot number by replication</b>			
1.	EX 8410347	Asgrow	Se	101	202	302	402
2.	El Toro'	Asgrow	Se	102	207	304	406
3.	Esquire	Asgrow	Su	103	204	305	408
4.	GH 2547	Rogers	Su	104	203	308	401
5.	GH 1861	Rogers	Su	105	205	303	405
6.	Legacy	Harris Moran	Su	106	201	306	403
7.	HMX 5372	Harris Moran	Se	107	208	301	407
8.	Conquest	Crookham	Su	108	206	307	404

TITLE OF PROJECT: Coordinated cultivar evaluation of supersweet fresh market sweet corn

EXPERIMENT NUMBERS: SWCN99-3

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 4  
Treatments (cultivars): 10

FIELD PROGRAM:

Planting date: 25 May  
Seeds per row: 60 (40 000/acre)  
Final population: 30 (20 000/acre)  
Row spacing: 0.75 m  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Plot size: 1.5 m x 8.0 m (2 rows 0.75 m spacing)  
Fertilizer: 90 kg/ha N PBI  
P and K as per soil test  
Herbicide: Primest Light (3.0 kg ai/ha) preplanned  
Basagran Forte (1.0 kg/ha ai) post emerge for broadleaf  
Insect control: Sevin XLR Plus (3.0 l/ha) or Ambush 500 EC (250 ml/ha) weekly in early morning or evening

ASSESSMENTS:

4 weeks: percent plant stand  
extended leaf height  
When appropriate: days to 80% silk  
corn heat units  
days to maturity  
Prior to harvest: percent of plants with head smut  
percent of plants with common smut  
percent of plants with leaf rust  
Harvest: cob height - average height of 5 plants measured to base of cob  
tillers - the total number of tillers taller than 30 cm per row  
lodging - the number of lodged plants per row (30 degrees from ground)

tip cover

- mean of 5 cobs evaluated on a scale of 1-5 where:

- |                  |                         |
|------------------|-------------------------|
| 1 = exposed      | 4 = 2.5 - 5.0 cm        |
| 2 = just covered | 5 = greater than 5.0 cm |
| 3 = up to 2.5 cm |                         |

husk tightness

- mean of 5 cobs evaluated on a scale of 1-5 where:

- |           |           |
|-----------|-----------|
| 1 = loose | 4 =       |
| 2 =       | 5 = tight |
| 3 =       |           |

flag leaf appearance

- mean of 5 cobs evaluated on a scale of 1-5 where:

- |                           |                   |
|---------------------------|-------------------|
| 1 = too long or too short | 4 =               |
| 2 =                       | 5 = moderate size |
| 3 =                       |                   |

cob appearance

- mean of 5 cobs evaluated on a scale of 1-5 where:

- |                   |                      |
|-------------------|----------------------|
| 1 = short and fat | 4 =                  |
| 2 =               | 5 = long and slender |
| 3 =               |                      |

ear fill

- mean of 5 cobs evaluated on a scale of 1-5 where:

- |                                       |
|---------------------------------------|
| 1 = 5 cm from the tip is not filled   |
| 2 =                                   |
| 3 = 2.5 cm from the tip is not filled |
| 4 =                                   |
| 5 = perfectly filled                  |

roadside rating

- mean of 5 cobs evaluated on a scale of 1-5 where:

- |          |          |
|----------|----------|
| 1 = poor | 4 =      |
| 2 =      | 5 = good |
| 3 =      |          |

(this is an average of tip cover, husk tightness, flag leaf appearance, cob appearance, ear fill divided by five)

ease of snapping

- mean of 5 cobs evaluated on a scale of 1-5 where:

- |  |
|--|
| 1 = difficult to snap (the stalk comes with the ear) |
| 2 =  |
| 3 = moderate (second tug to get off)                 |
| 4 =  |
| 5 = easy (one yank and it's off)                     |



husk colour

- mean of 5 cobs evaluated on a scale of 1-5 where:

1 = light green      4 =  
2 =                      5 = dark green  
3 =

shank length

- mean of 5 cobs evaluated on a scale of 1-5 where:

1 = 0 - 2.5 cm      4 = 7.5 10.0 cm  
2 = 2.5 - 5.0 cm    5 = greater than 10 cm  
3 = 5.0 - 7.5 cm

taste test

- to be done on a cooked sample at Kemptville

(overall impression based on flavour, texture, starchiness, skin strength etc.)

cob length (cm) - mean of 10 cobs

cob width (cm) - mean of 10 cobs

cob weight (husk on) (g) - mean of 10 cobs.

cob weight (husks off) (g) - mean of 10 cobs.

yield (dozens/acre).

yield (dozens/hectare)

## TREATMENTS

<b>Trt. No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>			
1.	Double Dots	Harris Moran	101	201	303	409
2.	Fantasy	Harris Moran	102	205	307	410
3.	HMX 6361 BS	Harris Moran	103	210	305	407
4.	A-maizingly Sweet	Harris Moran	104	207	306	404
5.	HMX 5352 BS	Harris Moran	105	204	309	402
6.	HMX 6364 BS	Harris Moran	106	203	301	405
7.	A-maizingly	Harris Moran	107	209	308	403
8.	Everprime	Stokes	108	206	302	406
9.	EX 8414607	Asgrow	109	202	304	401
10.	Sweet Scarlet	Seedway	110	208	310	408

**TITLE OF PROJECT:** Coordinated cultivar evaluation of standard/sugar enhanced fresh market sweet corn

**EXPERIMENT NUMBERS:** SWCN99-4

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 4  
Treatments (cultivars): 11

**FIELD PROGRAM:**

- see Coordinated cultivar evaluation of supersweet fresh market sweet corn - Ridgetown

**ASSESSMENTS**

- see Coordinated cultivar evaluation of supersweet fresh market sweet corn - Ridgetown

**TREATMENTS**

**Trt.            Cultivar            Source            Endosperm    Plot number by replication**  
**No.**

---

1.	HMX 5348 BES	Harris Moran	SB	101	201	207	408
2.	HMX 7366 BES	Harris Moran	SB	102	210	305	404
3.	HMX 8342 BES	Harris Moran	SB	103	202	311	411
4.	HMX 6357 BSB	Harris Moran	SB	104	205	302	401
5.	Sweet Riser	Harris Moran	SB	105	211	306	405
6.	Double Choice	Harris Moran	Su	106	209	303	407
7.	HMX 5346 E	Harris Moran	Su	107	206	301	406
8.	Temptation	Stokes	Se	108	207	310	410
9.	Ecstace II	Seedway	Se	109	204	309	403
10.	Twilight	Seedway	Se	110	208	304	402
11.	Table Treat	Seedway	Se	111	203	308	409

TITLE OF PROJECT: Evaluation of Liquimulch as a soil stabilizer on sweet corn

EXPERIMENT NUMBERS: SWCN99-5

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 4

TREATMENTS:

1. Clear plastic
2. Liquimulch @ 1.0 litre/m<sup>2</sup>
3. Bare soil

FIELD PROGRAM:

Planting date: 04 June  
Cultivar: Crookham 710  
Seeds per row: 60 (40 000/acre)  
Final population: 30 (20 000/acre)  
Row spacing: 0.75 m  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Plot size: 1.5 m x 8.0 m (2 rows 0.75 m spacing)  
Fertilizer: 90 kg/ha N PBI  
P and K as per soil test  
Herbicide: Primest Light (3.0 kg ai/ha) preplanned  
Basagran Forte (1.0 kg/ha ai) post emerge for broadleaf  
Insect control: Sevin XLR Plus (3.0 l/ha) or Ambush 500 EC (250 ml/ha) weekly  
in early morning or evening  
Harvest timing: 74-78% moisture

ASSESSMENTS

4 weeks: percent plant stand  
extended leaf height  
When appropriate: days to 80% silking  
days to maturity  
corn heat units to 80% silking  
corn heat units to maturity  
Harvest: cob length (cm) - mean of 10 cobs  
cob width (cm) - mean of 10 cobs

cob weight (husk on) (g) - mean of 10 cobs.  
cob weight (husks off) (g) - mean of 10 cobs.  
yield (dozens/acre).  
yield (dozens/hectare)

**TREATMENTS**

**Trt.**  
**No.** **Plot number by replication**

---

1. Clear plastic mulch	101	201	301	401
2. Liquimulch	102	202	303	403
3. Bare soil	103	203	302	402

TITLE OF PROJECT: Cultivar evaluation of supersweet processing sweet corn -  
Huron Park

EXPERIMENT NUMBERS: SWCN99-1H

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 4  
Treatments (cultivars): 9

FIELD PROGRAM:

Planting date: 08 June  
Seeds per row: 60 (40 000/acre)  
Final population: 30 (20 000/acre)  
Row spacing: 0.75 m  
Location: Huron Park Research Station  
Soil type: Brockton clay loam  
Plot size: 3.0 m x 8.0 m (4 rows 0.75 m spacing)  
Fertilizer: 90 kg/ha N PBI  
P and K as per soil test  
Herbicide: Primest Light (3.0 kg ai/ha) preplanned  
Insect control: Sevin XLR Plus (3.0 l/ha) or Ambush 500 EC (250 ml/ha) weekly  
in early morning or evening  
Harvest timing: 74-78% moisture

ASSESSMENTS:

4 weeks: percent plant stand  
extended leaf height  
When appropriate: days to 80% silking  
corn heat units  
days to maturity  
Prior to harvest: percent of plants with head smut  
percent of plants with common smut  
percent leaf area with leaf rust  
Harvest: plant height - average of 5 plants (to tip of tassel)  
cob height - average of 5 plants measured to base of cob  
number of tillers - average number per row taller than 30 cm  
number of lodged plants - average number per row 30 degrees  
from ground

tip cover - 5 cobs rated on a scale of 1-5 where

1 = exposed                      4 = 2.5 cm  
2 = just covered                5 = greater than 5.0 cm  
3 = up to 2.5 cm

shank cover - 5 cobs rated on a scale of 1-5 where

1 = 0 - 2.5 cm    4 = 7.5 - 10.0 cm  
2 = 2.5 - 5.0 cm    5 = greater than 10 cm  
3 = 5.0 - 7.5 cm

total yield - total weight of cobs from one row expressed as t/ha or T/ac

marketable yield - cobs from one row greater than 5 cm diameter expressed as t/ha or T/ac

percent marketable yield = marketable yield/total yield \* 100

cob weight (husk on) = average weight of 10 marketable cobs with the husk on

cob weight (husk off) = average weight of 10 marketable cobs with the husk off

husking percentage = husk weight/cob weight (husk on) \* 100

fresh kernel weight = average weight of cut corn from 10 cobs

processing recovery (%) = kernel weight/marketable cob weight (husk on) \* 100

field recovery (%) = processing recovery \* percent marketable yield

percent moisture = (fresh kernel weight (1 cup) - dry kernel weight (1 cup)) / fresh kernel weight \* 100

## TREATMENTS:

Trt. No.	Cultivar	Source	Plot number by replication			
1.	ACX 427	A+C	101	205	302	405
2.	ACX 97CN420 BC	A+C	102	202	307	404
3.	GSS 0975	Rogers	103	207	305	407
4.	GSS 9299	Rogers	104	206	301	402
5.	HMX 5375 S	Harris Moran	105	204	304	406
6.	HMX 6383 S	Harris Moran	106	201	309	401
7.	HM 701	Harris Moran	107	209	308	408
8.	Bandit	Harris Moran	108	208	303	403
9.	Samson	Crookham	109	203	306	409

**TITLE OF PROJECT:** Cultivar evaluation of standard and sugar-enhanced processing sweet corn - Huron Park

**EXPERIMENT NUMBERS:** SWCN99-2H

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 4  
Treatments (cultivars): 8

**FIELD PROGRAM**

- see Cultivar evaluation of supersweet processing sweet corn - Huron Park

Harvest timing: 68-72% moisture

**ASSESSMENTS**

- see Cultivar evaluation of supersweet processing sweet corn - Huron Park

**TREATMENTS**

<b>Trt. No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Endosperm</b>	<b>Plot number by replication</b>			
1.	EX 8410347	Asgrow	Se	101	208	303	407
2.	El Toro	Asgrow	Se	102	202	302	402
3.	Esquire	Asgrow	Su	103	206	306	404
4.	GH 2547	Rogers	Su	104	201	301	401
5.	GH 1861	Rogers	Su	105	204	304	403
6.	Legacy	Harris Moran	Su	106	207	307	406
7.	HMX 5372	Harris Moran	Se	107	203	308	405
8.	Conquest	Crookham	Su	108	205	305	408

TITLE OF PROJECT: Split application studies using ethrel on processing tomatoes

EXPERIMENT NUMBER: TOM99-1

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 4

TREATMENTS:

Main plots: cultivar (3)  
- H9474 (small bush- early season)  
- H9478 (large vine - main season)  
- H9144 (late season)

Sub plots: rate of ethrel (3)  
- 1 l/ha  
- 3 l/ha  
- 5 l/ha

Sub-sub plots: timing of application (4)\*  
- single application  
- split;  $\frac{1}{2} + \frac{1}{2}$  rate  
- split;  $\frac{1}{3} + \frac{2}{3}$  rate  
- split:  $\frac{2}{3} + \frac{1}{3}$  rate

\* note: initial applications will be made when 5-15% of fruit is colored; second applications of splits will be made 7 days later

FIELD PROGRAM:

Planting date: 13 May - H9474  
19 May - H9478  
21 May - H9144  
Planting equipment: 2 row RJ transplanter  
Plot size: 1.5 m x 8.0 m  
Row arrangement: double rows, 15" (38 cm) apart. Plants spaced at 18" (45 cm) in row  
Plant population: 14 000/acre (35 000/ha)  
Harvest area: entire bed (machine harvest)  
Location: Ridgetown College Research Farm



Soil type	Brockton clay loam sand spot phase
Fertilizer:	N @ 100 kg/ha; P and K as per soil test
Herbicide:	Dual (2.1 L/ha) and Sencor (0.6 L/ha) PBI Sencor (0.30 L/ha) post every 2 weeks
Disease control	Bravo as per TOM-CAST

**ASSESSMENTS:**

At planting:	fill in gaps
Late August	set up weather station
At harvest:	red, green, and total yield
Fruit quality:	soluble solids, agtron, bostwick, pH

**TREATMENTS:**

Trt No.	Cultivar	Rate (l/ha)	Timing	Plot number by replication			
1	H9474	1	single	101	206	307	405
2	H9474	1	½ + ½	102	208	308	407
3	H9474	1	⅓ + ⅔	103	205	306	408
4	H9474	1	⅔ + ⅓	104	207	305	406
5	H9474	3	single	105	202	301	411
6	H9474	3	½ + ½	106	203	304	412
7	H9474	3	⅓ + ⅔	107	204	302	409
8	H9474	3	⅔ + ⅓	108	201	303	410
9	H9474	5	single	109	212	309	402
10	H9474	5	½ + ½	110	210	311	403
11	H9474	5	⅓ + ⅔	111	211	312	404
12	H9474	5	⅔ + ⅓	112	209	310	401
13	H9478	1	single	113	218	319	420
14	H9478	1	½ + ½	114	220	317	419
15	H9478	1	⅓ + ⅔	115	217	320	418
16	H9478	1	⅔ + ⅓	116	219	318	417
17	H9478	3	single	117	222	321	422
18	H9478	3	½ + ½	118	223	324	424
19	H9478	3	⅓ + ⅔	119	224	322	421
20	H9478	3	⅔ + ⅓	120	221	323	423
21	H9478	5	single	121	215	313	416
22	H9478	5	½ + ½	122	213	315	414
23	H9478	5	⅓ + ⅔	123	214	314	413
24	H9478	5	⅔ + ⅓	124	216	316	415
25	H9144	1	single	125	225	331	431
26	H9144	1	% + %	126	226	332	430
27	H9144	1	⅓ + ⅔	127	228	330	432
28	H9144	1	⅔ + ⅓	128	227	329	429
29	H9144	3	single	129	232	325	435
30	H9144	3	½ + ½	130	229	328	434
31	H9144	3	⅓ + ⅔	131	231	327	433
32	H9144	3	⅔ + ⅓	132	230	326	436
33	H9144	5	single	133	234	336	426
34	H9144	5	% + %	134	236	335	425
35	H9144	5	⅓ + ⅔	135	235	334	428
36	H9144	5	⅔ + ⅓	136	233	333	427

**TITLE OF PROJECT:** Effect of nitrogen rates on yield and quality of H9492, H9553, and H9478 processing tomatoes.

**EXPERIMENT NUMBERS:** TOM99-2

**EXPERIMENTAL DETAILS:**

Experimental design: split plot  
Replications: 4

**TREATMENTS:**

Main plots: nitrogen rates (5)\*  
- 0 kg/ha  
- 50 kg/ha  
- 100 kg/ha  
- 150 kg/ha  
- 200 kg/ha

\*note: calcium ammonium nitrate applied pre-plant incorporated

Sub plots: cultivar (3)  
- H9492  
- H9553  
- H9478

**FIELD PROGRAM:**

Planting date: 21 May  
Planting equipment: 2 row RJ transplanter  
Plot size: 1.5 m x 8.0 m  
Row arrangement: double rows, 15" (38 cm) apart. Plants spaced at 18" (45 cm) in row  
Plant population: 14 000/acre (35 000/ha)  
Harvest area: entire bed (machine harvest)  
Location: Ridgetown College Research Farm  
Soil type: Brookston clay loam sand spot phase  
Fertilizer: N as per treatment  
P: 190 kg/ha actual  
K: 340 kg/ha actual  
Herbicide: Dual (2.1 L/ha) and Sencor (0.6 L/ha) ppi  
Sencor (0.30 L/ha) post every 2 weeks  
Disease control: Bravo as per TOM-CAST

TREATMENTS:

Trt No.	Cultivar	Rate (l/ha)	Timing	Plot number by replication			
1	H9474	1	single	101	206	307	405
2	H9474	1	% + %	102	208	308	407
3	H9474	1	$\frac{1}{3} + \frac{2}{3}$	103	205	306	408
4	H9474	1	$\frac{2}{3} + \frac{1}{3}$	104	207	305	406
5	H9474	3	single	105	202	301	411
6	H9474	3	% + %	106	203	304	412
7	H9474	3	$\frac{1}{3} + \frac{2}{3}$	107	204	302	409
8	H9474	3	$\frac{2}{3} + \frac{1}{3}$	108	201	303	410
9	H9474	5	single	109	212	309	402
10	H9474	5	% + %	110	210	311	403
11	H9474	5	$\frac{1}{3} + \frac{2}{3}$	111	211	312	404
12	H9474	5	$\frac{2}{3} + \frac{1}{3}$	112	209	310	401
13	H9478	1	single	113	218	319	420
14	H9478	1	% + %	114	220	317	419
15	H9478	1	$\frac{1}{3} + \frac{2}{3}$	115	217	320	418
16	H9478	1	$\frac{2}{3} + \frac{1}{3}$	116	219	318	417
17	H9478	3	single	117	222	321	422
18	H9478	3	$\frac{1}{2} + \frac{1}{2}$	118	223	324	424
19	H9478	3	$\frac{1}{3} + \frac{2}{3}$	119	224	322	421
20	H9478	3	$\frac{2}{3} + \frac{1}{3}$	120	221	323	423
21	H9478	5	single	121	215	313	416
22	H9478	5	$\frac{1}{2} + \frac{1}{2}$	122	213	315	414
23	H9478	5	$\frac{1}{3} + \frac{2}{3}$	123	214	314	413
24	H9478	5	$\frac{2}{3} + \frac{1}{3}$	124	216	316	415
25	H9144	1	single	125	225	331	431
26	H9144	1	% + %	126	226	332	430
27	H9144	1	$\frac{1}{3} + \frac{2}{3}$	127	228	330	432
28	H9144	1	$\frac{2}{3} + \frac{1}{3}$	128	227	329	429
29	H9144	3	single	129	232	325	435
30	H9144	3	% + %	130	229	328	434
31	H9144	3	$\frac{1}{3} + \frac{2}{3}$	131	231	327	433
32	H9144	3	$\frac{2}{3} + \frac{1}{3}$	132	230	326	436
33	H9144	5	single	133	234	336	426
34	H9144	5	% + %	134	236	335	425
35	H9144	5	$\frac{1}{3} + \frac{2}{3}$	135	235	334	428
36	H9144	5	$\frac{2}{3} + \frac{1}{3}$	136	233	333	427

**TITLE OF PROJECT:** Effect of nitrogen rates on yield and quality of H9492, H9553, and H9478 processing tomatoes.

**EXPERIMENT NUMBERS:** TOM99-2

**EXPERIMENTAL DETAILS:**

Experimental design: split plot  
Replications: 4

**TREATMENTS:**

Main plots: nitrogen rates (5)\*  
- 0 kg/ha  
- 50 kg/ha  
- 100 kg/ha  
- 150 kg/ha  
- 200 kg/ha

\*note: calcium ammonium nitrate applied pre-plant incorporated

Sub plots: cultivar (3)  
- H9492  
- H9553  
- H9478

**FIELD PROGRAM:**

Planting date: 21 May  
Planting equipment: 2 row RJ transplanter  
Plot size: 1.5 m x 8.0 m  
Row arrangement: double rows, 15" (38 cm) apart. Plants spaced at 18" (45 cm) in row  
Plant population: 14 000/acre (35 000/ha)  
Harvest area: entire bed (machine harvest)  
Location: Ridgetown College Research Farm  
Soil type: Brookston clay loam sand spot phase  
Fertilizer: N as per treatment  
P: 190 kg/ha actual  
K: 340 kg/ha actual  
Herbicide: Dual (2.1 L/ha) and Sencor (0.6 L/ha) ppi  
Sencor (0.30 L/ha) post every 2 weeks  
Disease control: Bravo as per TOM-CAST

**ASSESSMENTS:**

At planting: till in gaps

At harvest: sub-sample for soluble solids, agron, Bostwick (Heinz)  
red, green, rot, marketable fruit

<b>Trt No.</b>	<b>Cultivar</b>	<b>N Rate (kg/ha)</b>	<b>Plot number by replication</b>			
1.	H9492	0	101	211	305	402
2.	H9553	0	102	210	306	401
3.	H9478	0	103	212	304	403
4.	H9492	50	104	208	301	412
5.	H9553	50	105	207	303	411
6.	H9478	50	106	209	302	410
7.	H9492	100	107	215	313	406
8.	H9553	100	108	213	314	405
9.	H9478	100	109	214	315	404
10.	H9492	150	110	206	307	414
11.	H9553	150	111	205	308	413
12.	H9478	150	112	204	309	415
13.	H9492	200	113	203	312	407
14.	H9553	200	114	202	310	408
15.	H9478	200	115	201	311	409

**TITLE OF PROJECT:** Evaluation of Liquimulch as a soil stabilizer on processing tomatoes

**EXPERIMENT NUMBER:** TOM99-3

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 4

**TREATMENTS:**

1. Black plastic mulch
2. Liquimulch @ 1.0 litre/m<sup>2</sup>
3. Bare soil

**FIELD PROGRAM:**

Planting date: 04 June  
Cultivar: H9553  
Planting equipment: 2 row RJ transplanter  
Plot size: 1.5 m x 8.0 m  
Row arrangement: double rows, 15" (38 cm) apart. Plants spaced at 18" (45 cm) in row  
Plant population: 14 000/acre (35 000/ha)  
Harvest area: entire bed (machine harvest)  
Location: Ridgetown College Research Farm  
Soil type: Brookston clay loam sand spot phase  
Fertilizer: N @ 100 kg/ha;  
P and K as per soil test  
Herbicide: Dual (2.1 L/ha) and Sencor (0.6 L/ha) ppi  
Sencor (0.30 L/ha) post every 2 weeks  
Disease control: Bravo as per TOM-CAST

**ASSESSMENTS:**

At planting: fill in gaps  
At harvest: red, green, and total yield

**TREATMENTS:**

<b>Trt No.</b>	<b>Treatment</b>	<b>Plot number by replication</b>			
1.	Black plastic	101	201	301	401
2.	Liquimulch	102	203	302	403
3.	Bare soil	103	202	303	402

**TITLE OF PROJECT:** Processing cucumber advanced multipick trial

**EXPERIMENT NUMBERS:** CUC99-1

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 3  
Treatments (cultivars): 12

**FIELD PROGRAM:**

Planting date: 03 June  
Seeds per row: 107 (88 888 plants/ha)  
Final population: 44 444 plants/ha  
Row spacing: 1.5 m  
Plant spacing: 15 cm (in row)  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Plot size: 1.5 m x 8.0 m  
Fertilizer: 100 kg/ha N PBI  
P and K as per soil test  
Herbicide: Alanap (20 l/ha PBI)  
Insect control: Apply insecticide when plants break through and repeat if cucumber beetles reappear. Alternate between Thiodan 4 EC (1.5 l/ha) and Guthion 240 SC (2.25 l/ha)

**ASSESSMENTS:**

Harvest: harvest twice weekly and record fruit weight of each grade



**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>		
1	Bradley C	Sun Seeds	101	209	310
2	Pik-Rite	Ferry Morse	102	206	306
3	Duke	Harris Moran	103	212	303
4	XP 1903 T	Asgrow	104	208	307
5	Patton C	Sun Seeds	105	201	309
6	Vlasset B	Asgrow	106	202	302
7	Flurry B	Asgrow	107	211	305
8	Picklet (XVC 8406)	Asgrow	108	205	308
9	Calypso M	Asgrow	109	204	311
10	Endeavour	Novartis	110	207	312
11	Fancipak M	Asgrow	111	210	304
12	Flurry S	Asgrow	112	203	301

**TITLE OF PROJECT:** Processing cucumber main multipick trial

**EXPERIMENT NUMBERS:** CUC99-2

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block

Replications: 3

Treatments (cultivars): 12

**FIELD PROGRAM:**

Planting date: 03 June

Seeds per row: 107 (88 888 plants/ha)

Final population: 44 444 plants/ha

Row spacing: 1.5 m

Plant spacing: 15 cm (in row)

Location: Ridgetown College Research Farm

Soil type: Brookston clay loam sand spot phase

Plot size: 1.5 m x 8.0 m

Fertilizer: 100 kg/ha N ppi

P and K as per soil test

Herbicide: Alanap (20 l/ha ppi)

Insect control: Apply insecticide when plants break through and repeat if cucumber beetles reappear. Alternate between Thiodan 4 EC (1.5 l/ha) and Guthion 240 SC (2.25 l/ha)

**ASSESSMENTS:**

Harvest: harvest twice weekly and record fruit weight of each grade

**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>		
1.	Jackson C	Sun Seeds	101	202	306
2.	Vlasstar B	Asgrow	102	207	309
3.	Patton Supreme	Sun Seeds	103	210	310
4.	SXQP 3538 Supreme	Sun Seeds	104	203	302
5.	SRQP 1888 Supreme	Sun Seeds	105	212	306
6.	XP 1911	Asgrow	106	208	312
7.	Royal	Harris Moran	107	204	303
8.	XP 1901	Asgrow	108	201	305
9.	HMX 3469	Harris Moran	109	209	307
10.	HMX 8461	Harris Moran	110	205	311
11.	FMX 5020	Harris Moran	111	211	301
12.	EX 1915 B	Asgrow	112	206	304

TITLE OF PROJECT: Processing cucumber once-over machine harvest trial

EXPERIMENT NUMBERS: CUC99-3

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block

Replications: 3

Treatments (cultivars): 12

FIELD PROGRAM:

Planting date: 02 July

Seeds per row: 120 (300 000 plants/ha)

Final population: 200 000 plants/ha (80 plants/row)

Row spacing: 0.5 m

Plant spacing: 10 cm

Location: Ridgetown College Research Farm

Soil type: Brockton clay loam sand spot phase

Plot size: 0.5 m x 8.0 m

Fertilizer: 100 kg/ha N PBI

P and K as per soil test

Herbicide: Alanap (20 l/ha PBI)

Insect control: Apply insecticide when plants break through and repeat if cucumber beetles reappear. Alternate between Thiodan 4 EC (1.5 l/ha) and Guthion 240 SC (2.25 l/ha)

ASSESSMENTS:

Harvest: fruit weight of each grade (single harvest)

**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>		
1.	SRQP 2393 C	Sun Seeds	109	215	319
2.	SRQP 1864 C	Sun Seeds	101	204	310
3.	SXQP 3529 C	Sun Seeds	112	209	307
4.	SRQP 1882 C	Sun Seeds	116	220	302
5.	Napoleon C	Sun Seeds	117	214	314
6.	Lafayette C	Sun Seeds	108	206	309
7.	HMX 8460	Harris Moran	106	210	318
8.	Atlantis	Harris Moran	1111	216	320
9.	Royal	Harris Moran	114	212	311
10.	Vlaspik M	Asgrow	1107	219	317
11.	Vlasspear B	Asgrow	103	217	312
12.	Picklet	Asgrow	1110	205	306
13.	EX 1911	Asgrow	104	213	313
14.	Calypso M	Asgrow	118	211	316
15.	Discover M	Asgrow	102	207	303
16.	XVC 12361	Asgrow	115	203	304
17.	Wellington	Asgrow	119	201	301
18.	Excel M	Asgrow	118	205	302
19.	EX 1913	Asgrow	120	208	308
20.	EX 1914	Asgrow	113	218	315

**TITLE OF PROJECT:** Processing cucumber once-over machine harvest trial

**EXPERIMENT NUMBERS:** CUC99-3

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 3  
Treatments (cultivars): 12

**FIELD PROGRAM:**

Planting date: 02 July  
Seeds per row: 120 (300 000 plants/ha)  
Final population: 200 000 plants/ha (80 plants/row)  
Row spacing: 0.5 m  
Plant spacing: 10 cm  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Plot size: 0.5 m x 8.0 m  
Fertilizer: 100 kg/ha N PBI  
P and K as per soil test  
Herbicide: Alanap (20 l/ha PBI)  
Insect control: Apply insecticide when plants break through and repeat if cucumber beetles reappear. Alternate between **Thiodan 4 EC** (1.5 l/ha) and **Guthion 240 SC** (2.25 l/ha)

**ASSESSMENTS:**

Harvest: fruit weight of each grade (single harvest)

**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>		
1.	SRQP 2393 C	Sun Seeds	109	215	319
2.	SRQP 1864 C	Sun Seeds	101	204	310
3.	SXQP 3529 C	Sun Seeds	112	209	307
4.	SRQP 1882 C	Sun Seeds	116	220	302
5.	Napoleon C	Sun Seeds	117	214	314
6.	Lafayette C	Sun Seeds	108	206	309
7.	HMX 8460	Harris Moran	106	210	318
8.	Atlantis	Harris Moran	1111	216	320
9.	Royal	Harris Moran	114	212	311
10.	Vlaspik M	Asgrow	1107	219	317
11.	Vlasspear B	Asgrow	103	217	312
12.	Picklet	Asgrow	1110	205	306
13.	EX 1911	Asgrow	104	213	313
14.	Calypso M	Asgrow	118	211	316
15.	Discover M	Asgrow	102	207	303
16.	XVC 12361	Asgrow	115	203	304
17.	Wellington	Asgrow	119	201	301
18.	Excel M	Asgrow	118	205	302
19.	EX 1913	Asgrow	120	208	308
20.	EX 1914	Asgrow	113	218	315

TITLE OF PROJECT: Processing cucumber once-over machine harvest trial

EXPERIMENT NUMBERS: CUC99-3

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 3  
Treatments (cultivars): 12

FIELD PROGRAM:

Planting date: 02 July  
Seeds per row: 120 (300 000 plants/ha)  
Final population: 200 000 plants/ha (80 plants/row)  
Row spacing: 0.5 m  
Plant spacing: 10 cm  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Plot size: 0.5 m x 8.0 m  
Fertilizer: 100 kg/ha N PBI  
P and K as per soil test  
Herbicide: Alanap (20 l/ha PBI)  
Insect control: Apply insecticide when plants break through and repeat if cucumber beetles reappear. Alternate between **Thiodan 4 EC** (1.5 l/ha) and **Guthion 240 SC** (2.25 l/ha)

ASSESSMENTS:

Harvest: fruit weight of each grade (single harvest)



**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>		
1.	SRQP 2393 C	Sun Seeds	109	215	319
2.	SRQP 1864 C	Sun Seeds	101	204	310
3.	SXQP 3529 C	Sun Seeds	112	209	307
4.	SRQP 1882 C	Sun Seeds	116	220	302
5.	Napoleon C	Sun Seeds	117	214	314
6.	Lafayette C	Sun Seeds	108	206	309
7.	HMX 8460	Harris Moran	106	210	318
8.	Atlantis	Harris Moran	1111	216	320
9.	Royal	Harris Moran	114	212	311
10.	Vlaspik M	Asgrow	1107	219	317
11.	Vlasspear B	Asgrow	103	217	312
12.	Picklet	Asgrow	1110	205	306
13.	EX 1911	Asgrow	104	213	313
14.	Calypso M	Asgrow	118	211	316
15.	Discover M	Asgrow	102	207	303
16.	XVC 12361	Asgrow	115	203	304
17.	Wellington	Asgrow	119	201	301
18.	Excel M	Asgrow	118	205	302
19.	EX 1913	Asgrow	120	208	308
20.	EX 1914	Asgrow	113	218	315

**TITLE OF PROJECT:** Processing Pepper Cultivar Evaluation

**EXPERIMENT NUMBERS:** PEP99-1

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 4

**FIELD PROGRAM:**

Planting date: 02 June  
Planting equipment: 1 row Mechanical Transplanter  
Plot size: 2.0 m x 8.0 m  
(2 rows per plot - harvest 1 row when mature green, the other when mature red)  
Row spacing: 1.0 m  
Plant spacing: 45 cm  
Plant population: 8 888/acre (22 222/ha)  
Harvest area: entire row  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Fertilizer: N @ 35 kgha PBI; an additional 35 kgha should be applied at first fruit set, if required  
P and K as per soil test  
Herbicide: Treflan@ 1.155 kgha ai  
Insect control: Corn borer - apply Ambush 500 EC (140 ml/ha) weekly beginning when the fruit is walnut size  
Aphids - apply Thiodan 4 EC (1.5 l/ha) when aphids are present

**ASSESSMENTS:**

At planting: fill in gaps  
At harvest: total yields  
culls (sun scald, rot,)  
number of fruit with blossom end rot (BER)  
average fruit weight  
number of fruit per plant  
Fruit quality: (only on green fruit)  
fruit length (10 per plot)  
fruit width (10 per plot)

wall thickness (10 per plot)

shape rating

1 = flattened

2 = short

3 = square, blocky

4 = elongated

5 = very long

plant type

1-5 rating; higher rating = vigorous, larger plant type

## TREATMENTS:

Trt No.	Treatment	Source	Plot number by replication			
1.	PX 304496	Peto	101	215	311	415
2.	PX 333694	Peto	102	210	311	414
3.	PS 213896	Peto	103	212	302	420
4.	PS 334094	Peto	104	216	320	401
5.	Sweet Spot	Peto	105	213	314	418
6.	Hot Spot	Peto	106	205	308	407
7.	EX 12285	Asgrow	107	206	306	402
8.	EX 12262	Asgrow	108	217	303	410
9.	PR 9701R-4	Pepper Research	109	207	310	419
10.	PR 9701R-3	Pepper Research	110	219	304	408
11.	Boynton Bell	Harris Moran	111	201	318	403
12.	Victoria	Enza Zaden	112	203	313	412
13.	Diego	Enza Zaden	113	209	305	404
14.	ACX 209	Abbott and Cobb	114	202	301	411
15.	ACX 217 Y	Abbott and Cobb	115	211	317	417
16.	SS 830	Abbott and Cobb	116	218	315	416
17.	Aladdin X3R	Peto	117	214	309	409
18.	King Arthur	Peto	118	208	316	406
19.	Camelot X3R	Peto	119	204	319	405
20.	Wizard X3R	Peto	120	220	312	413

TITLE OF PROJECT: Evaluation of Liquimulch as a soil stabilizer on peppers

EXPERIMENT NUMBER: PEP99-2

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 4

TREATMENTS:

1. Black plastic
2. Liquimulch @ 1.0 litre/m<sup>2</sup>
3. Bare soil

FIELD PROGRAM:

Planting date: 04 June  
Cultivar: Wizard X3R  
Planting equipment: transplanter  
Plot size: 1.0 m x 8.0 m  
Row spacing: 1.0 m  
Plant spacing: 45 cm  
Plant population: 8 888/acre (22 222/ha)  
Harvest area: entire row  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Fertilizer: N @ 35 kgha PBI; an additional 35 kgha should be applied at first fruit set, if required  
P and K as per soil test  
Herbicide: Treflan@ 1.155 kgha ai  
Insect control: Corn borer - apply Ambush 500 EC (140 ml/ha) weekly beginning when the fruit is walnut size  
Aphids - apply Thiodan 4 EC (1.5 l/ha) when aphids are present

ASSESSMENTS:

At planting: fill in gaps  
At harvest:(green fruit)  
total yields  
culls (sun scald, rot,)  
number of fruit with blossom end rot (BER)  
average fruit weight  
number of fruit per plant

**TREATMENTS:**

<b>Trt No.</b>	<b>Treatment</b>	<b>Plot number by replication</b>			
1.	Black plastic	101	201	301	401
2.	Liquimulch	102	203	303	402
3.	Bare soil	103	202	302	403

**TITLE OF PROJECT:** Processing pea cultivar evaluation I (Ridgetown)

**EXPERIMENT NUMBERS:** PEA99-1

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block

Replications: 4

Treatments (cultivars): 40

**FIELD PROGRAM:**

Planting date: May 07

Seeding depth: 2.4 - 4 cm (dependant upon soil moisture)

Final population: 1 375 000 plants/ha (550 000/acre)

Row spacing: 18 cm (7")

Location: Ridgetown College Research Farm

Soil type: Brookston clay loam sand spot phase

Plot size: 2.13 m x 11.0 m (7' x 36')

Fertilizer: 15 kg/ha N ppi if P and K required  
P and K as per soil test

Herbicide: Pursuit 240 g/L @ 0.31 L/ha ppi

Seed treatment: As per supplier

**ASSESSMENTS:**

4 weeks after planting:

a) emergence counts

Harvest:

a) Canopy height - distance from the soil surface to the top of the plant canopy

b) Vine length - distance from the first node to the top of the stem

c) Lowest pod node - lowest node at which a harvestable pod appeared

d) Tenderometer - average of 3 tenderometer measurements

e) Sieve size - weight of each sieve size from harvest sample, expressed as a percentage of the total sample weight

f) Yield - expressed as t/ha and t/acre

g) Harvest date and heat unit accumulation

**TREATMENTS:**

Trt. No.	Cultivar	Source	Plot number by replication			
			101	212	329	431
1.	Jaguar	Sharpes	101	212	329	431
2.	Griffin	Sharpes	102	218	316	415
3.	Balmoral	Sharpes	103	222	309	424
4	Sancho	Sharpes	104	234	335	421
5	Oasis	Sharpes	105	224	303	426
6	Gemini	Sharpes	106	210	330	423
7	Dakota	Novartis	107	205	306	412
8	Ripon	Novartis	108	231	332	430
9	Gallant	Novartis	109	220	318	405
10	FP 2275	Novartis	110	230	322	403
11	PLS-27	Pure Line	111	235	331	434
12	PLS-105-1	Pure Line	112	236	336	427
13	PLS-155	Pure Line	113	202	337	406
14	PLS-182	Pure Line	114	203	308	414
15	PLS-482-2	Pure Line	115	208	313	404
16	PLS-144	Pure Line	116	233	307	433
17	PLS-152	Pure Line	117	227	325	422
18	PLS-876	Pure Line	118	201	324	428
19	PLS-12	Pure Line	119	211	320	407
20	CGM-330F	Crites-Moscow	120	221	319	402
21	CGM-322F	Crites-Moscow	121	207	327	411
22	CGM-322F	Crites-Moscow	122	209	333	436
23	<b>Bolero</b>	Asgrow	123	214	310	409
24	FR698	Brotherton	124	237	311	435
25	FR664	Brotherton	125	225	334	420
26	Emblem	Brotherton	126	228	328	413
27	Tonic	Brotherton	127	204	304	408
28	Polar	Brotherton	128	226	315	416
29	<b>Spring</b>	Asgrow	129	215	301	429
30	<b>Encore</b>	Asgrow	130	213	323	425
31	Twin	Asgrow	131	217	317	410
32	Monico	Asgrow	132	206	302	437
33	Durango	Asgrow	133	229	314	418
34	Estancia	Asgrow	134	232	312	401
35	Ex 8500017	Asgrow	135	216	305	419
36	EX 353	Asgrow	136	219	326	432
37	Lil' Mc	Asgrow	137	223	321	417
38	13046	Upper Valley	138	239	340	438
39	4120	Upper Valley	139	240	338	439
40	12094	Upper Valley	140	238	339	440

TITLE OF PROJECT: Processing pea cultivar evaluation II (Huron Park)

EXPERIMENT NUMBERS: PEA99-2

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 4  
Treatments (cultivars): 40

FIELD PROGRAM:

Planting date: May 11  
Population: 1 375 000 plants/ha (550 000/acre)  
Row spacing: 18 cm (7")  
Location: Ridgetown College research farm  
Soil type: Brockton clay loam sand spot phase  
Plot size: 2.13 m x 8.0 m (7' x 26')  
Fertilizer: 15 kg/ha N PBI if P and K required  
P and K as per soil test  
Herbicide: Pursuit 240 g/L @ 0.31 L/ha PBI  
Seed treatment: As per supplier

ASSESSMENTS:

Rate for yield potential, plant type, canopy height



TREATMENTS:

Trt. No.	Cultivar	Source	Plot number by replication			
			101	216	328	427
1.	Jaguar	Sharpes	101	216	328	427
2.	Griffin	Sharpes	102	233	305	424
3.	Balmoral	Sharpes	103	234	327	406
4.	Sancho	Sharpes	104	209	339	416
5.	Oasis	Sharpes	105	222	301	404
6.	Gemini	Sharpes	106	204	332	401
7.	Dakota	Novartis	107	238	319	438
8.	Ripon	Novartis	108	218	304	402
9.	Gallant	Novartis	109	223	306	418
10.	FP 2275	Novartis	110	212	322	426
11.	PLS-27	Pure Line	111	236	309	436
12.	PLS-105-1	Pure Line	112	202	310	420
13.	PLS-155	Pure Line	113	224	313	414
14.	PLS-182	Pure Line	114	214	314	432
15.	PLS-264-2	Pure Line	115	239	336	412
16.	PLS-144	Pure Line	116	228	318	435
17.	PLS-152	Pure Line	117	208	321	405
18.	PLS-876	Pure Line	118	225	308	428
19.	PLS-12	Pure Line	119	226	323	430
20.	CGM-330F	Crites-Moscow	120	205	331	422
21.	CGM-324F	Crites-Moscow	121	240	334	407
22.	CGM-322F	Crites-Moscow	122	203	333	440
23.	<b>Bolero</b>	Asgrow	123	213	329	403
24.	FR698	Brotherton	124	206	320	429
25.	FR664	Brotherton	125	227	330	409
26.	Emblem	Brotherton	126	229	312	431
27.	Tonic	Brotherton	127	235	324	408
28.	Polar	Brotherton	128	210	340	437
29.	<b>Spring</b>	Asgrow	129	231	335	411
30.	<b>Encore</b>	Asgrow	130	230	315	423
31.	Twin	Asgrow	131	207	338	415
32.	Monico	Asgrow	132	217	307	439
33.	Durango	Asgrow	133	220	326	413
34.	Estancia	Asgrow	134	219	316	419
35.	EX 8500017	Asgrow	135	211	311	421
36.	EX 353	Asgrow	136	221	337	410
37.	Lil'Mo	Asgrow	137	215	303	433
38.	13046	Upper Valley	138	232	317	434
39.	4120	Upper Valley	139	201	325	425
40.	12094	Upper Valley	140	237	302	417

**TITLE OF PROJECT:** Sugar Beet Cultivar Evaluation I (plant to stand)

**EXPERIMENT NUMBERS:** SBT99-1

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 6  
Cultivars: 13

**FIELD PROGRAM:**

Planting date: May 03  
Planting equipment: 4 row J.D. Max Emerge planted with Almaco cone seeders  
Row spacing: 30 inches (76 cm)  
Seeding rate: 80 seeds/8.0 m row  
Final population: 48 plants/8.0 m row (180 plants/100 feet of row)  
Plot size: 4 rows x 8.0 m (3.04 m x 8.0 m)  
Harvest area: entire plot  
Location: Wayne Van Damme, Wallaceburg  
Soil type: Normandale sandy loam  
Fertilizer: as per grower  
Herbicide: as per grower  
Insect control: as per grower

**ASSESSMENTS:**

At planting: soil samples  
3-4 weeks after seeding: emergence counts  
At harvest: root #  
root yield (t/ha)  
# of bolters  
*Cercospora* leaf spot incidence  
samples taken and forwarded to Michigan Sugar for analysis

**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>					
1	HM E4	Hilleshog	101	207	303	406	502	611
2	HM E10	Hilleshog	102	209	301	408	512	602
3	HM E17	Hilleshog	103	212	308	412	511	604
4	HM E33	Hilleshog	104	210	312	403	510	603
5	HM 2738	Hilleshog	105	202	311	413	509	608
6	C 319	Crystal	106	208	304	407	513	612
7	C 503	Crystal	107	203	306	409	505	607
8	C 648	Crystal	108	213	307	405	503	613
9	C 1353	Crystal	109	201	310	410	506	610
10	B 5216	Beta	110	211	313	401	507	609
11	B 5504	Beta	111	204	302	411	501	605
12	B 5823	Beta	112	205	305	404	508	601
13	BG 5977	Beta	113	206	309	402	504	606

**TITLE OF PROJECT:** Sugar Beet Cultivar Evaluation II (plant to thin)

**EXPERIMENT NUMBERS:** SBT99-2

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 6  
Cultivars: 15

**FIELD PROGRAM:**

Planting date: May 03  
Planting equipment: 4- row J.D. Max Emerge planter with Almaco cone seeders  
Row spacing: 30 inches (76 cm)  
Seeding rate: 150 seeds/8.0 m row  
Final population: 48 plants/8.0 m row (180 plants/100 feet of row)  
Plot size: 4 rows x 8.0 m (3.04 m x 8.0 m)  
Harvest area: entire plot  
Location: Wayne Van Damme, Wallaceburg  
Soil type: Normandale sandy loam  
Fertilizer: as per grower  
Herbicide: as per grower  
Insect control: as per grower

**ASSESSMENTS:**

At planting: soil samples  
3-4 weeks after seeding: emergence counts  
At harvest: root #  
root yield (t/ha)  
# of bolters  
*Cercospora* leaf spot incidence  
samples taken and forwarded to Michigan Sugar for analysis

**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>					
1	HM E4	Hilleshog	101	212	308	408	507	602
2	HM E10	Hilleshog	102	201	313	412	514	604
3	HM E17	Hilleshog	103	209	307	406	505	608
4	HM E33	Hilleshog	104	207	315	414	509	613
5	HM 2738	Hilleshog	105	215	310	415	512	610
6	C 319	Crystal	106	202	305	405	501	609
7	C 503	Crystal	107	204	314	411	511	601
8	C 648	Crystal	108	203	301	409	510	615
9	C 1353	Crystal	109	214	311	401	515	605
10	B 5216	Beta	110	208	309	410	504	606
11	B 5504	Beta	111	205	306	413	513	603
12	B 5823	Beta	112	206	302	404	508	612
13	BG 5977	Beta	113	210	312	402	503	614
14	BG K732	Beta	114	213	303	407	502	607
15	BG K736	Beta	115	211	304	403	506	611

TITLE OF PROJECT: Sugar Beet Cultivar Evaluation III (plant to stand)

EXPERIMENT NUMBERS: SBT99-3

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 6  
Cultivars: 13

FIELD PROGRAM:

Planting date: April 30  
Planting equipment: 4 row J.D. Max Emerge planted with Almaco cone seeders  
Row spacing: 30 inches (76 cm)  
Seeding rate: 80 seeds/18.0 m row  
Final population: 48 plants/ 8.0 m row (180 plants/1100 feet of row)  
Plot size: 4 rows x 8.0 m (3.04 m x 8.0 m)  
Harvest area: entire plot  
Location: Glenn Jack, Chatham  
Soil type  
Fertilizer: as per grower  
Herbicide: as per grower  
Insect control: as per grower

ASSESSMENTS:

At planting: soil samples  
3-4 weeks after seeding: emergence counts  
At harvest: root #  
root yield (t/ha)  
# of bolters  
*Cercospora* leaf spot incidence  
samples taken and forwarded to Michigan Sugar for analysis

**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>					
1	HM E4	Hilleshog	101	208	307	401	505	602
2	HME10	Hilleshog	102	213	313	403	510	605
3	HME17	Hilleshog	103	201	301	410	506	604
4	HM E33	Hilleshog	104	211	303	412	513	612
5	HM 2738	Hilleshog	105	209	305	405	508	608
6	C 319	Crystal	106	210	308	411	512	607
7	C 503	Crystal	107	205	312	402	511	609
8	C 648	Crystal	108	207	310	413	509	601
9	C 1353	Crystal	109	203	306	407	507	603
10	B 5216	Beta	110	204	311	406	503	606
11	B 5504	Beta	111	202	304	404	501	613
12	B 5823	Beta	112	212	302	408	504	611
13	BG 5977	Beta	113	206	309	409	502	610

TITLE OF PROJECT: Sugar Beet Cultivar Evaluation IV (plant to thin)

EXPERIMENT NUMBERS: SBT99-4

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 6  
Cultivars: 15

FIELD PROGRAM:

Planting date: April 30  
Planting equipment: 4-row J.D. Max Emerge planter with Almaco cone seeders.  
Row spacing: 30 inches (76 cm)  
Seeding rate: 150 seeds/8.0 m row  
Final population: 48 plants/ 8.0 m row (180 plants/100 feet of row)  
Plot size: 4 rows x 8.0 m (3.04 m x 8.0 m)  
Harvest area: entire plot  
Location: Glenn Jack, Chatham  
Soil type  
Fertilizer: as per grower  
Herbicide: as per grower  
Insect control: as per grower

ASSESSMENTS:

At planting: soil samples  
3-4 weeks after seeding: emergence counts  
At harvest: root #  
root yield (t/ha)  
# of bolters  
*Cercospora* leaf spot incidence  
samples taken and forwarded to Michigan Sugar for analysis



**TREATMENTS:**

<b>Trt No.</b>	<b>Cultivar</b>	<b>Source</b>	<b>Plot number by replication</b>					
1	HM E4	Hilleshog	101	212	308	408	507	602
2	HM E10	Hilleshog	102	201	313	412	514	604
3	HM E17	Hilleshog	103	209	307	406	505	608
4	HM E33	Hilleshog	104	207	315	414	509	613
5	HM 2738	Hilleshog	105	215	310	415	512	610
6	C 319	Crystal	106	202	305	405	501	609
7	C 503	Crystal	107	204	314	411	511	601
8	C 648	Crystal	108	203	301	409	510	615
9	C 1353	Crystal	109	214	311	401	515	605
10	B 5216	Beta	110	208	309	410	504	606
11	B 5504	Beta	111	205	306	413	513	603
12	B 5823	Beta	112	206	302	404	508	612
13	BG 5977	Beta	113	210	312	402	503	614
14	BG K732	Beta	114	213	303	407	502	607
15	BG K736	Beta	115	211	304	403	506	611

**TITLE OF PROJECT:** Effect of bulb size on yield and quality of garlic

**EXPERIMENTAL NUMBER:** GA99-1

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block

Replications: 4

Treatments: 4

**FIELD PROGRAM:**

Planting date: November 13 1998

Planting equipment: hand

Row spacing: 26 inches (66 cm)

Clove spacing: 4" between cloves; 6" deep

Final population: 149 000 cloves/ha (60 000 cloves/ac)

Plot size: 1 row x 6.0 m

Harvest area: entire length of row

Location: Ridgetown College Research Farm

Soil type: Brockton clay loam sand spot phase

Fertilizer: N: 35 kgha on 30 March 1999

35 kgha on 10 May 1999

P and K as per soil test

Weed control: Dacthal @ 11.0 kgha ai on 31 March 1999

hand hoe to control escapes

**ASSESSMENTS:**

Late March: emergence

At harvest: bulbs/plot

total yield

stem weight

stem diameter

weight and number of bulbs per grade

**TREATMENTS:**

<b>Trt. No.</b>	<b>Treatment</b>	<b>Plot number by replication</b>			
1.	size 3 & 4 (1 ½ to 1 5/8")	101	203	303	404
2.	size 5 & 6 (1 3/4 to 1 7/8")	102	204	301	402
3.	size 7 & 8 (2" to 2 1/4")	103	202	302	403
4.	size 9 & 10 (2 ½ to 2 3/4")	104	201	304	401

**TITLE OF PROJECT:** Effect of clove size on yield and quality of garlic

**EXPERIMENTAL NUMBER:** GA99-2

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block

Replications: 4

Treatments: 3

**FIELD PROGRAM:**

Planting date: November 13 1998

Planting equipment: hand

Row spacing: 26 inches (66 cm)

Clove spacing: 4" between cloves; 6" deep

Final population: 149 000 cloves/ha (60 000 cloves/ac)

Plot size: 1 row x 6.0 m

Harvest area: entire length of row

Location: Ridgetown College Research Farm

Soil type: Brockton clay loam sand spot phase

Fertilizer: N: 35 kg/ha on 30 March 1999

35 kg/ha on 10 May 1999

P and K as per soil test

Weed control: Dacthal @ 11.0 kg/ha ai on 31 March 1999

hand hoe to control escapes

**ASSESSMENTS:**

Late March: emergence

At harvest: bulbs/plot

total yield

stem weight

stem diameter

weight and number of bulbs per grade

**TREATMENTS**

<b>Trt. No.</b>	<b>Treatment</b>	<b>Plot number by replication</b>			
1.	< 5.0 g	101	201	303	401
2.	6.0 -10.0 g	102	203	301	402
3.	> 11.0 g	103	202	302	403

**TITLE OF PROJECT:** Effect of straw mulch on yield and quality of garlic

**EXPERIMENTAL NUMBER:** GA99-3

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 4  
Treatments: 2

**FIELD PROGRAM:**

Planting date: November 13 1998  
Planting equipment: hand  
Row spacing: 26 inches (66 cm)  
Clove spacing: 4" between cloves; 6" deep  
Final population: 149 000 cloves/ha (60 000 cloves/ac)  
Plot size: 3 rows x 6.0 m  
Harvest area: entire length of center row  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Fertilizer: N: 35 kg/ha on 30 March 1999  
35 kg/ha on 10 May 1999  
P and K as per soil test  
Weed control: Dacthal @ 11.0 kg/ha ai on 31 March 1999  
hand hoe to control escapes

**ASSESSMENTS:**

Late March: emergence  
At harvest: bulbs/plot  
total yield  
stem weight  
stem diameter  
weight and number of bulbs per grade

**TREATMENTS**

<b>Trt. No.</b>	<b>Treatment</b>	<b>Plot number by replication</b>			
1.	Straw mulch at planting	101	201	302	401
2.	No straw mulch	102	202	301	402

**TITLE OF PROJECT:** Effect of timing of scape removal on yield and quality of garlic

**EXPERIMENTAL NUMBER:** GA99-4

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 4  
Treatments: 5

**FIELD PROGRAM:**

Planting date: November 13 1998  
Planting equipment: hand  
Row spacing: 26 inches (66 cm)  
Clove spacing: 4" between cloves; 6" deep  
Final population: 149 000 cloves/ha (60 000 cloves/ac)  
Plot size: 1 row x 6.0 m  
Harvest area: entire length of row  
Location: Ridgetown College Research Farm  
Soil type: Brockton clay loam sand spot phase  
Fertilizer: N: 35 kg/ha on 30 March 1999  
35 kg/ha on 10 May 1999  
P and K as per soil test  
Weed control: Dacthal @ 11.0 kg/ha ai on 31 March 1999  
hand hoe to control escapes

**ASSESSMENTS:**

Late March: emergence  
At harvest: bulbs/plot  
total yield  
stem weight  
stem diameter  
weight and number of bulbs per grade

**TREATMENTS**

<b>Trt. No.</b>	<b>Treatment</b>	<b>Plot number by replication</b>			
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1.	Remove scape when 4" long	101	202	302	401
2.	Remove scape when 8" long	102	203	305	402
3.	Remove scape when 12" long	103	204	301	405
4.	Remove scape when 16" long	104	201	304	403
5.	No scape removal	105	205	303	404

**TITLE OF PROJECT:** Effect of seed quality on yield and quality of garlic

**EXPERIMENTAL NUMBER:** GA99-5

**EXPERIMENTAL DETAILS:**

Experimental design: randomized complete block  
Replications: 4  
Treatments: 3

**FIELD PROGRAM:**

Planting date: November 13 1998  
Planting equipment: hand  
Row spacing: 26 inches (66 cm)  
Clove spacing: 4" between cloves; 6" deep  
Final population: 149 000 cloves/ha (60 000 cloves/lac)  
Plot size: 1 row x 6.0 m  
Harvest area: entire length of row  
Location: Ridgetown College Research Farm  
Soil type: Brookston clay loam sand spot phase  
Fertilizer: N: 35 kg/ha on 30 March 1999  
                  35 kg/ha on 10 May 1999  
                  P and K as per soil test  
Weed control: Dacthal @ 11.0 kg/ha ai on 31 March 1999  
                  hand hoe to control escapes

**ASSESSMENTS:**

Late March: emergence  
At harvest: bulbs/plot  
                  total yield  
                  stem weight  
                  stem diameter  
                  weight and number of bulbs per grade

**TREATMENTS**

<b>Trt. No.</b>	<b>Treatment</b>	<b>Plot number by replication</b>			
1.	Control	101	202	302	403
2.	Burnt	102	201	303	401
3.	Browned	103	203	301	402

TITLE OF PROJECT: Effect of foliar fertilizer on yield and quality of garlic

EXPERIMENTAL NUMBER: GA99-6

EXPERIMENTAL DETAILS:

Experimental design: randomized complete block  
Replications: 4

TREATMENTS

1. Control
2. Growers program  
- 10-20-10 @ 1 gal/acre every 7-10 days
3. Alpine program
  - a. 9-18-9 @ 2 gal/acre every 7-10 days
  - b. 9-18-9 @ 3 gal/acre every 7-10 days once the plants are half grown (mid-May)
  - c. 3-18-18 @ 3 gal/acre 2-3 weeks prior to harvest (01 July)

Applications were made on 29 April, 13 May, 03 June, 16 June.

FIELD PROGRAM:

Planting date: November 13 1998  
Planting equipment: hand  
Row spacing: 26 inches (66 cm)  
Clove spacing: 4" between cloves; 6" deep  
Final population: 149 000 cloves/ha (60 000 cloves/ac)  
Plot size: 1 row x 6.0 m  
Harvest area: entire length of row  
Location: Ridgetown College Research Farm  
Soil type: Brookston clay loam sand spot phase  
Fertilizer: N: 35 kg/ha on 30 March 1999  
35 kg/ha on 10 May 1999  
P and K as per soil test  
Weed control: Dacthal @ 11.0 kg/ha ai on 31 March 1999  
hand hoe to control escapes

**ASSESSMENTS:**

Late March: emergence  
At harvest: bulbs/plot  
total yield  
stem weight  
stem diameter  
weight and number of bulbs per grade

**TREATMENTS**

<b>Trt. No.</b>	<b>Treatment</b>	<b>Plot number by replication</b>			
1.	Control	101	202	301	403
2.	"Growers" program	102	201	303	401
3.	"Alpine" program	103	203	302	402