

**Background**

New sweet corn hybrids are being bred all the time. These new hybrids need to be tested in an Ontario growing environment in order to select those with optimum performance in an Ontario climate. Having data to support future hybrid purchases will ensure maximum productivity for Ontario sweet corn growers.

**Objective**

1. Evaluate the suitability of available corn hybrids to the Ontario climate and their relative performance as compared to hybrids grown extensively in Nortera's Ontario sweet corn program.
2. Identify hybrids that will fit into gaps in Nortera's Ontario sweet corn program

**Deliverables**

1. Each cultivar was evaluated on the following plant characteristics
  - a. Emergence/vigour
  - b. Relative maturity
  - c. Relative tolerance to diseases and lodging
  - d. Relative plant height and ear characteristics (aperture, kernel depth, cob length, ear height, number of ears per plant)
  - e. Yield
2. Each hybrid was compared to its closest check hybrid currently grown in Nortera's sweet corn program in Ontario

**Materials & Method**

**Setup:** The trial area was planted to winter wheat in 2023 and chisel plowed in the fall. 2 cultivator passes were made in the spring of 2024. Each hybrid was planted to 4 replications, 4 rows per replication, 17.5 feet in length.

**Crop Nutrition:** OMAFRA recommendations for phosphorus and potassium fertilizer were followed. 120 lbs N/ac were applied prior to planting as a broadcast application that was incorporated into the soil.

**Planting:** Each plot was planted four rows wide in 30" row spacing to a length of 17.5', replicated 4 times. The trial was planted June 11, 2024

**Harvest Data Collection:** All cobs deemed large enough to be mechanically harvested in one of the middle two rows of each replication were removed by hand from the plant. Cobs will be counted and weighed. 4 random cobs were selected to evaluate further for cob length, ear diameter and cob diameter, in order to calculate kernel depth. A 30 cob representative subsample was removed to be analysed for theoretical recovery and kernel moisture. Should a second harvest day be required, this was completed using the remaining middle row of the plot.

**Cob Length:** Ears will be husked and placed in a measuring tray. Measurements will be taken as the distance from the butt end of the ear to the end of the ear tip.

**Ear Diameter:** after husking, a calliper will be used to measure the diameter of the ear.

**Cob Diameter:** the husked cob will be broken in half and enough kernels were removed to expose the bare cob. A calliper will be used to measure the cob diameter.

Results

Harvest Date	Supplier	Hybrid	Ear Count	Average Ear Length (inches)	Average Ear Diameter (mm)	Average Aperture (mm)	Kernel Depth (mm)	Avg. Lbs/Ear	AVG YIELD (T/AC)	Moisture (%)	THEORETICAL RECOVERY (%)
Aug 30	Crookham	Double Eagle (CSHYP18-1449)	18	8.1	44.18	25.5	9.3	0.87	7.69		Below Average
Aug 30	Syngenta	BSS5234	19	7.6	42.23	25.5	8.4	0.94	8.94		Above Average
Sep 3	HM Clause	HMC592107	16	7.1	52.13	27.3	12.4	0.81	6.54	78.1	Above Average
Sep 3	IFSI / Pure Line	Shenandoah XR	21	8.4	51.95	30.6	10.7	0.94	9.91	77.4	Above Average
Sep 5	Syngenta	BSS8040	21	7.6	49.13	24.3	12.4	0.85	8.84	75.3	Average
<b>Trial Average</b>			<b>19</b>	<b>7.7</b>	<b>47.92</b>	<b>26.6</b>	<b>10.6</b>	<b>0.88</b>	<b>8.38</b>	<b>76.9</b>	

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Sep 2	Syngenta	GSS9444	SSY	24	8.5	49.33	26	11.7	0.91	10.83	72.0	Below Average
Sep 2	Seminis	SVSK4540	SSY	20	7.9	54.10	27.5	13.3	0.85	8.58	76.5	Average
Sep 2	HM Clause	Driver R (HMX 3346 YS)	SSY	23	9.3	51.98	27	12.5	0.98	11.07	71.5	Above Average
Sep 3	Crookham	Land Cruiser (CSHYP19-1531)	SSY	21	7.1	47.73	28.2	9.8	0.87	9.02	75.1	Below Average
Sep 3	Crookham	Triple Threat (CSHYP16-1029)	SSY	19	8.1	50.90	26.5	12.2	0.92	8.48	76.6	Average
Sep 3	Gallatin Valley	GVS6227	SSY	21	8.1	52.50	29.5	11.5	0.94	9.88	75.7	Below Average
Sep 3	Gallatin Valley	GVS6188	SSY	17	8.1	52.50	28.6	12.0	0.99	8.31	77.0	Below Average
Sep 3	IFSI / Pure Line	Zion MXR	SSY	21	7.4	54.25	32.1	11.1	0.92	9.63	74.4	Average
Sep 3	Seminis	SVSK0279	SSY	19	8.2	52.05	29.8	11.1	0.89	8.33	77.4	Below Average
Sep 3	IFSI / Pure Line	H20-676-0107	SSY	18	8.1	51.28	29.6	10.8	0.95	8.69	77.2	Average
Sep 5	Seminis	SVSK5217	SSY	17	8.1	55.15	26.5	14.3	0.96	8.26	77.7	Above Average
Sep 5	Syngenta	GSS3951	SSY	25	7.1	50.83	26.8	12.0	0.89	11.02	76.6	Above Average
Sep 5	IFSI / Pure Line	Teton	SSY	19	8.3	54.83	28	13.4	1.00	9.38	77.2	Above Average
Sep 5	Syngenta	GSS4628	SSY	25	8.0	53.03	27.2	12.9	0.88	10.98	77.0	Above Average
Sep 5	Syngenta	GSS8871	SSY	20	7.9	51.45	25.5	13.0	0.88	8.94	77.0	Above Average
Sep 5	HM Clause	HMC592312	SSY	15	8.7	49.40	26.5	11.5	0.97	7.31	76.4	Above Average
Sep 5	Crookham	Townsend	SSY	12	7.5	49.55	26.7	11.4	0.83	4.97	77.8	Below Average
Sep 5	IFSI / Pure Line	Sequoia XR	SSY	18	6.9	49.90	27	11.5	0.92	8.20	78.1	Below Average
<b>Trial Average</b>				<b>20</b>	<b>7.9</b>	<b>51.71</b>	<b>27.7</b>	<b>12.0</b>	<b>0.92</b>	<b>8.99</b>	<b>76.2</b>	

Harvest Date	Supplier	Hybrid	Type	Ear Count	Average Ear Length (inches)	Average Ear Diameter (mm)	Average Aperture (mm)	Kernel Depth (mm)	Avg. Lbs/Ear	Yield (tons/ac)	Moisture (%)	THEORETICAL RECOVERY (%)
Aug 30	IFSI / Pure Line	IFU-7073	SU	17	8.7	50.88	28.5	11.2	1.10	9.34		Below Average
Aug 30	HM Clause	Azlan	SU	20	7.4		27		0.92	9.27		Above Average
Aug 30	Syngenta	GH1662	SU	25	7.7		26.5		0.87	11.04		Below Average
Sep 2	Syngenta	GH3840	SU	22	8.4	58.65	29.5	14.6	1.04	11.40	66.0	Average
Sep 3	Syngenta	GH6462	SU	23	6.8	49.68	27.1	11.3	0.87	10.12	76.0	Average
Sep 3	Seminis	SVSU5824	SU	24	6.0	48.18	28.9	9.6	0.77	9.34	68.2	Above Average
Sep 3	IFSI / Pure Line	Highlander	SU	19	7.3	54.15	29.8	12.2	0.94	8.90	72.6	Above Average
Sep 3	Seminis	SVSU5255	SU	18	8.4	52.60	29.5	11.6	1.14	10.27	76.3	Above Average
Sep 5	Crookham	Camden	SU	17	0.0	0.00			0.77	6.42		Below Average
<b>Trial Average</b>				<b>21</b>	<b>6.8</b>	<b>44.88</b>	<b>28.4</b>	<b>11.7</b>	<b>0.93</b>	<b>9.57</b>	<b>71.8</b>	

