



# 2020

## Ontario Hybrid Corn Performance Trials

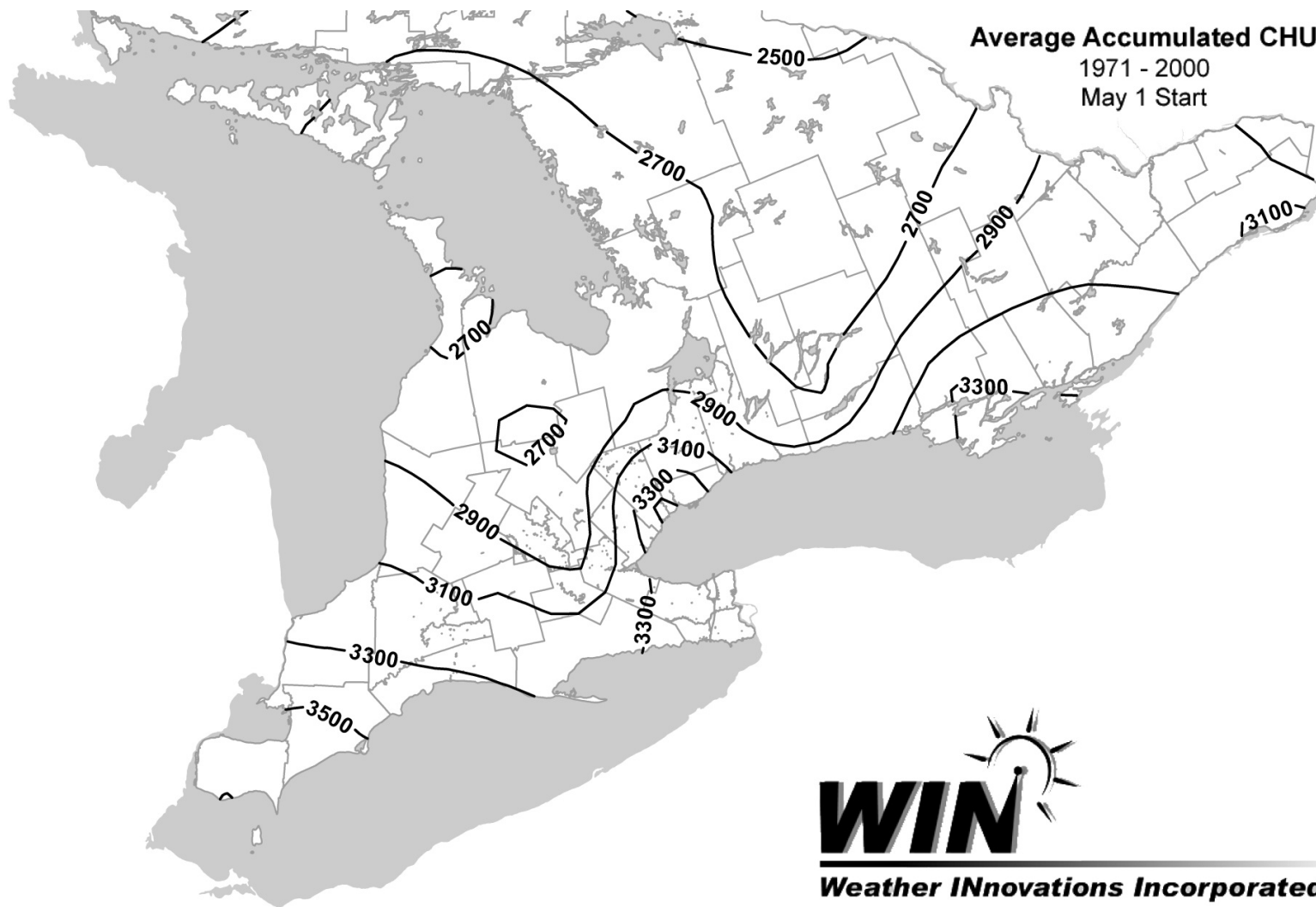
Data collected 2019-2020

Conducted by the Ontario Corn Committee • [www.gocorn.net](http://www.gocorn.net)

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PDF files of this report  
Sortable on-line tables  
Yield x Moisture Content

## Heat Units Available for Corn Production in Ontario



**Notes:** Corn Heat Unit ratings for all areas of the province are based on the average heat unit accumulation for the period from May 1 to the date in the fall when the long-term average daily temperature falls below 12°C or an occurrence of -2°C, whichever comes first.

## **ONTARIO CORN COMMITTEE**

The ONTARIO CORN COMMITTEE is made up of representatives of Agriculture and Agri Food Canada, the Ontario Ministry of Agriculture, Food and Rural Affairs, the University of Guelph, the Ontario Soil and Crop Improvement Association, the Grain Farmers of Ontario and the Canadian Seed Trade Association. Hybrid Performance trials are conducted each year by the following cooperating agencies:

Ridgetown Campus, University of Guelph;  
Plant Agriculture Department, University of Guelph;

Winchester Research Station, University of Guelph,

Kent Ag Research Inc.,

Agriculture and Agri-Food Canada at Ottawa.

## **TESTING METHODS**

Hybrids entered in the Hybrid Corn Performance Trials are selected by the seed companies. A testing fee is charged per hybrid per replication. A hybrid must be entered in all trials within a table.

In each trial, hybrids are replicated in a suitable experimental design. Trials are machine planted with an excess of seed and thinned at an early growth stage to obtain a uniform population. A row width of 30 inches is used in all trials. Plots consist of four rows of which the middle two rows are harvested for yield. Fertilizer rates may be higher than those recommended by OMAF to compensate for any variability in soil nutrient supply.

Most of the hybrids entered in the trials were treated with a seed treatment to control soil insects. Hybrids that were not treated with are not identified in the report. There was no significant damage from soil insects at any of the locations.

To determine the percentage of lodged plant, a count is made, immediately before harvest, of all plants broken below the ear and all plants which are leaning such that the ear is in the adjacent row or is otherwise unharvestable.

The moisture percentage of the grain is measured at harvest time. The weight of grain harvested from each plot is determined and the yield of shelled corn is calculated at 15% moisture. Test weights are recorded either during harvest, using combine-mounted monitoring equipment, or in the laboratory, using accepted procedures.

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## INTERPRETATION OF RESULTS

**Index** - The index in the tables indicates a percent of the average of all hybrids included in the trial(s). Index figures above 100 reflect the percentage by which a hybrid is above the average, and index figures below 100 show the percent below average. Small differences in index (i.e. less than the LSD shown at the bottom of the table) are not significant. When a hybrid has a higher index over two years, this difference is probably real and should be considered when choosing a hybrid.

Hybrid selection should be based on the most data available. Greater emphasis should be put on averages from several locations and years because these provide a more accurate prediction of future performance than do single location results.

The average yield for each table is given in bushels per acre. You can calculate the actual yield for a hybrid by multiplying the average yield times its yield index and dividing by 100.

The average test weight is given in kg/hl (kilograms per hectoliter). You can calculate the actual test weight of a hybrid by multiplying the average test weight times its test weight index and dividing by 100.

Within each table, hybrids are identified by brand and/or hybrid number or name. Hybrids are listed in approximate order of maturity based on heat unit ratings provided by the companies.

**Corn Heat Units** - Ratings for all areas of the province are based on the average heat unit accumulation for the period from May 1 to the date in the fall when the long-term average daily temperature falls below 12° C or an occurrence of -2° C, whichever comes first. Hybrid heat unit ratings have been assigned by the sponsoring company.

**% Moisture** - The accuracy of moisture measurement decreases as moisture content increases. Results for hybrids with very high moisture contents should be interpreted with caution.

**% Lodging** - "Lodged Plants" includes plants with stalks that are broken below the ear and plants leaning such that the ear is in the adjacent row or otherwise unharvestable. Because all hybrids in a trial are harvested

on the same date, the early hybrids within each table tend to show a greater amount of stalk breakage than do later hybrids. Stalk strength should be compared only with hybrids of the same maturity.

**LSD (0.10)** - The LSD is a measure of variability within the trial. There is a ninety percent probability that yield indices that differ by an amount greater than the LSD are different. Yield indices that differ by an amount less than or equal to the LSD should be considered to be equal. For example, if the LSD is 10, two hybrids with yield indexes of 110 and 101 should be considered to be equal.

**Managing Bt Corn** - When using Bt corn, it is imperative that a refuge area of non-Bt corn be planted near the Bt corn to reduce the risk of developing insect resistance to Bt. A list of potential refuge hybrids and information related to the practices that must be followed to comply with current regulations can be obtained from the Canadian Corn Refuge Hybrid Selector at [www.refugeselector.ca](http://www.refugeselector.ca)

## Explanation of Codes for Special Genetic Traits

Code	GM Traits
0	Conventional Hybrid
4	Roundup Ready Corn 2
6	VT Double PRO
8	SmartStax
10	Herculex I with Roundup Ready Corn 2
12	Herculex XTRA with Roundup Ready Corn 2
14	Agrisure GT
18	Agrisure 3000GT or Agrisure 3011
19	Agrisure GT/CB/LL or Agrisure 3010
20	Agrisure Viptera 3111
21	Agrisure Artesian 3011A
22	Agrisure 3110
23	Optimum AcreMax
24	Optimum AcreMax Xtreme
25	Optimum AcreMax Xtra
26	Agrisure 3122
27	Agrisure Viptera 3220
28	Agrisure 3120
29	PowerCore
30	PowerCore Enlist
31	SmartStax Enlist
32	Trecepta
33	Agrisure Duracade 5122
34	Agrisure Duracade 5222
35	Agrisure Viptera 3330
36	Qrome
37	Optimum AcreMax Leptra

### Notes:

The Ontario Corn Committee does not assess hybrids for Special Genetic Traits. Hybrid descriptions are based on information received from corn companies, as of November 2020. Although the Ontario Corn Committee believes the information contained in this report is accurate, growers are advised to consult dealers of the respective hybrids and products before making purchasing or management decisions. All hybrids included in this report have been fully approved for food and feed use in Canada and the United States. However, a number have not been approved for use in the European Union. Corn harvested from these non-EU approved hybrids must be delivered to a market that will not ship the grain or its processed products to Europe. For more information, contact your seed supplier. Information regarding the genetic traits carried by all commercially available hybrids and their acceptability for export can also be obtained from the Canadian Seed Trade Association's "List of Corn Hybrids Commercially Available in Canada" at:

<https://seedinnovation.ca/corn-hybrids-database/>

## Explanation of Seed Treatment Codes

	Seed Treatments
-	No Treatment
A	Acceleron 250
C	Cruiser Maxx 250
F	Fortenza
L	Lumivia
P	Poncho 250
P5	Poncho 500

## Seed Corn Dealers

Brand or Identification	Company	Address of Canadian Sponsor	Telephone
Brevant	Corteva Agriscience	7398 Queen's Line, PO Box 730, Chatham, ON N7M 5L1	1 800 265 9435
Country Farm	Country Farm Seeds Ltd.	Box 790, Blenheim, ON NOP 1A0	1 800 449 3990
CROPLAN	WinField United	62 rue de l'Eglise, app 3, McMasterville (QC), QC J3G1G3	1 514 220 9625
De Dell	De Dell Seeds Inc	7095 Century Drive, Melbourne, ON N0L 1T0	1 519 264 2676
DEKALB	Monsanto Canada Inc.	900 - One Research Road, Winnipeg, MB R3T 6E3	1 800 667 4944
DLF PICKSEED	DLF Pickseed Canada Inc.	1 Greenfield Road, Lindsay, ON K9V 4S3	1 705 878 9240
Horizon	Horizon Seeds Canada Inc.	531 Bostwick Rd., Courtland, ON N0J 1E0	1 519 842 5538
Maizex	Maizex Seeds Inc.	4488 Mint Line, R.R.#2, Tilbury, ON NOP 2L0	1 877 682 1720
NK Brand	Syngenta Seeds Inc.	15910 Medway Rd., R.R.#1, Arva, ON NOM 1C0	1 800 756 SEED
Pioneer	Pioneer Hi-Bred Canada Company	Box 730, 7398 Queens Line, Chatham, ON N7M 5L1	1 800 265 9435
PRIDE Seeds	AgReliant Genetics Inc.	P. O. Box 1088, 6836 Pain Court Line, Chatham, ON N7M 5L6	1 519 354 3210
Saatbau	Saatbau Linz	201 rue st louis . 412, St Jean/Richelieu, QC J3B 1X9	1 514 609 0881

## 2020 Trial Locations and General Information - Ontario Hybrid Corn Performance Trials

Location	See Table Number	Heat Unit Rating	5 Year Heat Unit Average <sup>1</sup>	2020 CHU Total <sup>2</sup>	Soil Type	Co-operator	Final plants per acre <sup>3</sup>	Date planted <sup>4</sup>	Date Harvested
Orangeville	1	2700	2975	2971	Sandy Loam	Timstar Farms Ltd	33896	May 13	Oct 19
Dundalk	1	2600	2666	2703	Sandy Loam	Blydorp Farms Ltd.	33896	May 12	Oct 16
Elora	2	2800	3053	3051	Silt Loam	University of Guelph	33896	May 04	Oct 14
Port Hope T2	2	2800	N/A	N/A	Sandy Loam	Bruce Hendry		May 16	Nov 10
Winchester T2	2	3000	N/A	3739	clay loam	Winchester Ag. Research Station	32000	May 12	Oct 29
Wingham	2	2800	3023	N/A	Silt Loam	Rob Warwick	34000	May 27	Oct 27
Bainsville	3E	3000	N/A	N/A	Clay Loam	Rob MacDonald		May 14	Nov 08
Iroquois	3E	3000	N/A	N/A	Loam	Ryan Devries		May 14	Nov 07
Winchester	3E	3000	N/A	3739	clay loam	Winchester Ag. Research Station	34000	May 04	Oct 29
Blyth	3W	3000	3100	3032	Silt Loam	Peter Heinrich	34000	May 27	Oct 30
Port Hope	3W	3000	N/A	N/A	Sandy Loam	Bruce Hendry		May 16	Nov 10
Waterloo	3W	2900	3203	3184	Sandy Loam	Rosendale Grain Farms Ltd	34788	May 06	Oct 08
Exeter	4	3050	N/A	N/A	Silt Loam	Cliff Hicks	34000	May 26	Oct 31
Ilderton	4	3100	3235	2729	Clay Loam	Ralph Kuebler	34000	May 26	Nov 06
Woodstock	4	3150	N/A	N/A	Loam	Wes Hart		May 21	Nov 04
Belmont	4	3250	3180	2757	Silt Loam	Claire Hooker	34000	May 25	Nov 05
Ridgetown	5	3450	3506	N/A	Clay Loam	University of Guelph	34000	May 06	Oct 31
Tilbury	5	3650	N/A	3579	Clay	Gus Ternoey	discarded - poor emergence		
Dresden	5	3600	3335	3208	Sandy Loam	Brent McFadden	34000	May 22	Oct 29

### Notes:

1 Average total heat unit accumulation 2015 - 2019, inclusive.

2 Total heat unit accumulation at location from day of planting to either occurrence of killing frost ( -2 C) or 30-year average end-of-season date.

3 These populations may not be suitable for your farm.

4 All trials planted in 30 inch row widths.

## 2020 Ontario Hybrid Corn Performance Trial Management Information

Location	Table	Previous Crop	Tillage		Soil Test Ratings			Fertilizer Applications				Herbicide or Pesticide Applications				Rainfall (mm)					
			Fall	Spring	P	K	pH	N	P2O5	K2O	S	Product	Rate	Date	Method	May	Jun	Jul	Aug	Sep	Total
Orangeville	1	Potatoes wheat cover	Disk	Cultivator x2	MR	LR	6.1	160	100	40	0	Primextra Callisto	4.0 L/ha 0.3 l/ha	May 26 May 26	post post	64	97	53	149	123	486
Dundalk	1	Wheat (red clover cover)		Cultivator x2	HR	HR	7.6	145	40	85	11	Roundup Converge XT	1.5l/ha 330ml/ha	May 21 May 21	pre pre	59	92	108	169	85	513
Elora	2	Wheat (oats cover)	Chisel Plow	Cultivator x2	HR	MR	7.7	180	86	102	12	Primextra Callisto	4.0 L/ha 0.3 l/ha	May 22 May 22	post post	57	77	71	80	89	374
Port Hope T2	2	Soybeans	None	Cultivated x 2	LR	LR	7.5	200	80	100	0	Acuron	1.96L/acre	May 16	pre	73	71	99	200	90	533
Winchester T2	2	Soybeans	Chisel plow	Cultivator	LR	MR	5.8	225	105	50	21	Integrity Accent Distinct Agral 90	0.44 L/ac 13 g/ac 115 g/ac 2.5L/1000L	May 06 Jun 09 Jun 09 Jun 09	ppi post post post	29	21	50	174	55	329
Wingham	2	Wheat		RTS 2x	HR	MR	7.3	195	42	103	20	Marksman/Roundup Converge Flexx Converge 480	1.0 L .178 L/ac 0.8 L/ac	Apr 26 Jun 09 Jun 09	pre post post	62	96	82	95	50	385
Bainsville	3E	Soybeans	None	Cultivated x 2	LR	MR	6	200	80	100	0	Acuron Accent Distinct	1.96L/acre 13g/acre 0.155kg/ac	May 14 Jun 17 Jun 17	pre post post	92	92	144	226	99	653
Iroquois	3E	Wheat		Cultivated x 2	LR	MR	5.8	200	80	100	0	Acuron Accent Distinct	1.96L/acre 13g/acre 0.155kg/ac	May 14 Jun 17 Jun 17	pre post post	85	67	120	174	70	516
Winchester	3E	Spring cereals	Chisel plow	Cultivator	LR	MR	5.9	225	105	50	21	Integrity Accent Distinct Agral 90	0.44 L/ac 13 g/ac 115 g/ac 2.5L/1000L	May 06 Jun 09 Jun 09 Jun 09	ppi post post post	29	21	50	174	55	329
Blyth	3W	Winter wheat	Strip Till	Strip Till	LR	RR	7.5	184	92	123	0	Integrity glyphosate	440 mL/ac 1 L/ac	Apr 27 Jun 22	pre post	67	96	77	110	50	400
Port Hope	3W	Soybean	None	Cultivated x 2	LR	LR	7.5	200	80	100	0	Acuron	1.96L/acre	May 16	pre	73	71	99	200	90	533
Waterloo	3W	Wheat (oats cover)	Chisel Plow	Cultivator x2	RR	RR	6.9	180	80	120	6	Primextra Callisto	3.0 l/ha 0.3 l/ha	Apr 25 May 26	ppi post	67	77	168	100	87	499
Exeter	4	Oat cover crop		HS Disk	HR	RR	7.6	195	12	123	0	Frontier Marksman/Roundup	860 mL/ac 1.5 L/ac/ 1 L/ac	May 25 Jun 01	ppi pre	96	74	32	73	66	341
Ilderton	4	Winter Wheat		Cultivation	HR	LR	7.7	174	12	3	0	Acuron Roundup	1.96 L/ac 1.7 L/ac	Jun 01 Jun 01	pre pre	66	50	38	161	110	425
Woodstock	4	Soybeans	None	Cultivated x 2	LR	HR	6.9	200	80	100	0	Accent Distinct	13 g/acre 0.155kg/ac	Jun 02 Jun 02	post post	107	70	100	84	98	459
Belmont	4	Soybeans	Chisel Plow	Cultivate	HR	MR	7.3	205	25	3	0	Primextra Engenia	1.25 L/ac 0.25 L/ac	May 22 May 22	pre pre	64	43	74	84	105	370
Ridgetown	5	Wheat	Chisel Plow	Cultivate	MR	MR	5.7	205	75	123	0	Acuron Roundup W/max	1.96 L/ac 1.0 L/ac	May 12 May 12	pre pre	68	102	82	53	81	386
Tilbury	5	Wheat	Chisel Plow	Cultivate				205	25	3	0	Acuron	1.96 L/ac	May 22	pre	77	54	84	97	109	421
Dresden	5	Soybeans	Chisel Plow	Cultivate	HR	LR	6	205	25	200	0	Acuron	1.96 L/ac	May 23	pre	101	79	69	65	93	407