2021

Ontario Hybrid Corn Performance Trials

Data collected 2020-2021

Conducted by the Ontario Corn Committee • www.gocorn.net

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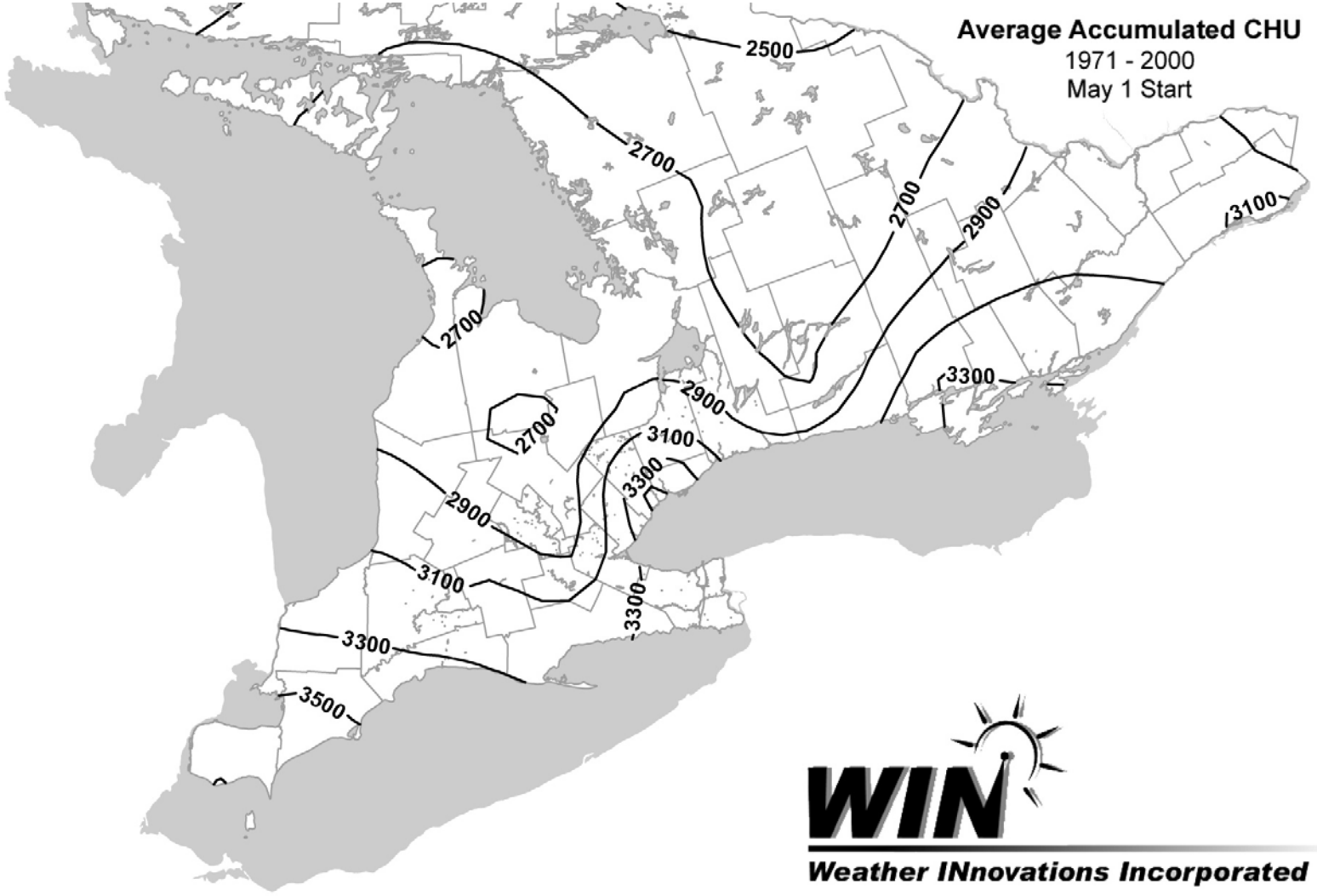
PDF files of this report
Sortable on-line tables
Yield x Moisture Content

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.

DUPLICATION OF THIS REPORT:

For further information, contact

The Secretary, Ontario Corn Committee,

109 Maple Ridge Road,

Owen Sound, Ontario N4K 5N4

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/h1 (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

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 2021. 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 Seeds Canada's "List of Corn Hybrids Commercially Available in Canada" at:
https://seeds-canada.ca/corn-hybrid-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
CROPLAN	Winfield United	3850 concession 15, St. Isidore, ON K0C 2B0	6133236846
De Dell	De Dell Seeds Inc	7095 Century Drive, Melbourne, ON N0L 1T0	519-264-2676
DEKALB	Bayer CropScience Inc.	160 Quarry Park Blvd, Calgary, AB T2C 3G3	1-888-283-6847
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 N0P 2L0	1-877-682-1720
NK Brand	Syngenta Seeds Inc.	15910 Medway Rd., R.R.#1, Arva, ON N0M 1C0	1-800-756-SEED
Pioneer	Pioneer Hi-Bred Canada Comp	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	514-609-0881

2021 Trial Locations and General Information - Ontario Hybrid Corn Performance Trials

Location	See Table Number	Heat Unit Rating	5 Year Heat Unit Average [1]	2021 CHU Total [2]	Soil Type	Co-operator	Final plants per acre [3]	Date planted [4]	Date Harvested
Orangeville	1	2700	N/A	N/A	Sandy Loam	Timstar Farms Ltd	34000	May 13	Nov 08
Dundalk	1	2600	N/A	N/A	Sandy Loam	Blydorp Farms Ltd	34000	May 14	Nov 05
Elora	2	2800	N/A	N/A	Silt Loam	University of Guelph	34000	May 10	Oct 12
Port Hope T2	2	2800	N/A	3118	Clay Loam	Bruce Hendry	35000	May 10	Nov 21
Winchester T2	2	3000	N/A	N/A	clay loam	OCRC-Winchester	34000	May 14	Nov 05
Wingham	2	2800	N/A	N/A	Silt Loam	Rob Warwick	34000	May 13	Oct 20
Bainsville	3E	3000	N/A	3174	Clay Loam	Rob McDonald	35000	May 12	Nov 17
Williamsburg	3E	3000		3101	Loam	Devries	35000	May 11	Nov 20
Winchester	3E	3000	N/A	N/A	silty clay	OCRC-Winchester	34000	May 13	Nov 08
Blyth	3W	3000	N/A	N/A	Silt Loam	Peter Heinrich	34000	May 13	Oct 28
Port Hope	3W	3000	N/A	3118	Clay Loam	Bruce Hendry	35000	May 10	Nov 21
Waterloo	3W	2900	N/A	N/A	Sandy Loam	Snyder Acres Inc	34000	May 11	Oct 18
Exeter	4	3050	N/A	3300	Loam	HRS	34000	May 14	Oct 29
Ilderton	4	3100	N/A	N/A	Clay Loam	Ralph Kuebler	34000	May 12	Nov 10
Woodstock	4	3150	N/A	3274	Silt Loam	Wes Hart	35000	May 11	Nov 11
Belmont	4	3250	N/A	N/A	Clay loam	Mark Taylor	34000	May 11	Nov 10
Ridgetown	5	3450	N/A	N/A	Sandy Loam	University of Guelph	34000	May 19	Oct 27
Tilbury	5	3650	N/A	N/A	Clay	Gus Ternoey	34000	May 18	Nov 23
Dresden	5	3600	N/A	N/A	Sandy Loam	Brent McFadden	34000	May 17	Nov 11

Notes:

1 Average total heat unit accumulation 2016 - 2020, 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.

2021 Ontario Hybrid Corn Performance Trial Management Information

		Previous	Tillage		Soil Test Ratings			Fertilizer Applications				Herbicide or Pesticide Applications				Rainfall (mm)					
Location	Table	Crop	Fall	Spring	P	K	pH	N	P2O5	K2O	S	Product	Rate	Date	Method	May	Jun	Jul	Aug	Sep	Total
Orangeville	1	Soybeans		Cutivator	LR	LR	6.7	158	42	104	0	Primextra	4.0 l/ha	May 27		37	77	76	60	144	394
												Callisto	0.3 l/ha	May 27							
Dundalk	1	Wheat with Rye Cover		Cultivator/TurboTill	MR	MR	7.4	160	42	82	10	Roundup		May 08	pre	40	85	125	88	164	502
												Primextra	4.0 l/ha	May 27	post						
												Callisto	0.3 l/ha	May 27	post						
Elora	2	Wheat	Chisel Plow	Cutivatorx2	MR	MR	7.4	170	110	110	10	Acuron	4.9 l/ha	May 19	post	25	124	102	43	187	481
Port Hope T2	2	Soybeans	None	Conventional	LR	MR	6.1	200	75	100	0	Acuron	2L/acre	May 11	pre	7	42	144	24	141	358
												Distinct	114g/acre	Jun 14	post						
												Accent	13g/acre	Jun 14	post						
Winchester T2	2	Oats	Chisel Plow	Cultivator (2x)	RR	LR	5.4				0	Integrity	0.44L/acre	May 18	pre	9	87	108	46	107	357
												Accent	13 g/acre	Jun 18	post						
												Distinct	115 g/acre	Jun 18	post						
												Agral 90	2.5 L/acre	Jun 18	post						
Wingham	2	Winter Wheat	None	Vertical Tillage	LR	RR	7.4	200	13	3	23	Acuron	1.96 L/ac	May 27	post	50	160	120	102	189	621
Bainsville	3E	Soybeans	None	Conventional	MR	HR	5.1	200	75	100	0	Acuron	2L/acre	May 14	pre	5	66	153	94	75	393
												Distinct	114g/acre	Jun 14	post						
												Accent	13g/acre	Jun 14	post						
Williamsburg	3E	Soybeans	None	Conventional	LR	MR	5.6	200	75	100	0	Acuron	2L/acre	May 13	pre	3	94	42	50	79	268
												Distinct	114g/acre	Jun 11	post						
												Accent	13g/acre	Jun 11	post						
Winchester	3E	Soybean	Chisel Plow	Cultivator (2x)	RR	RR	5.4				0	Armezon Pro	0.4L/acre	May 13	pre	9	87	108	46	107	357
												Aatrex	0.4L/acre	May 13	pre						
												Distinct	115 g/acre	Jun 18	post						
												Accent	13g/acre	Jun 18	post						
Blyth	3W	Winter Wheat	Strip Till	Strip till	RR	RR	7.2	165	13	3	0	Option	0.630 L/ac	Jun 08	post	50	150	100	65	189	554
												Aatrex	0.930 L/ac	Jun 08	post						
												UAN	1.0 L/ac	Jun 08	post						
Port Hope	3W	Soybeans	None	Conventional	LR	MR	6.1	200	75	100	0	Acuron	2L/acre	May 11	pre	7	42	144	24	141	358
												Distinct	114g/acre	Jun 14	post						
												Accent	13g/acre	Jun 14	post						
Waterloo	3W	Wheat		Vertical Tillage	MR	MR	7.6	190	85	100	15	Primextra	3.5 l/ha	May 05	ppi	28	126	89	81	205	529
												Callisto	0.3 l/ha	May 27	post						
Exeter	4	Winter Wheat	Strip till	None	LR	LR	7.4	185	13	3	0	Marksman	1.8 L/ac	May 27	pre	34	100	135	63	235	567
												Roundup	1.0 L/ac	May 27	pre						
Ilderton	4	Soy	None	Cultivate	MR	RR	7.2	180	70	36	20	Acuron	1.96 L/ac	May 27	post	40	124	103	85	162	514
Woodstock	4	Soybeans	None	Conventional	LR	MR	7.1	220	75	100	0	Acuron	2L/acre	May 26	post	21	87	93	47	210	458
Belmont	4	Soybeans	N/A	High speed disk	MR	MR	6.8	180	13	3	0	Primextra	1.25 l/ac	May 08	pre	40	165	123	79	170	577
												Engenia	0.25 l/ac	May 08	pre						
Ridgetown	5	Wheat	Chisel Plow	Cultivate	MR	MR	6.6	180	13	3	0	Acuron	1.96 L/ac	May 27	post	47	110	126	88	114	485
Tilbury	5	Soybeans	Chisel Plow	Cultivate	MR	RR	6	180	13	3	0					48	102	97	70	87	404
												Acuron	1.96L/Acre	Jun 03	post						
Dresden	5	Wheat	Chisel Plow	Cultivate	HR	LR	6.8	180	13	3	0	Acuron	1.96 L/ac	May 28	post	46	105	101	72	84	408