



2022

Ontario Hybrid Corn Performance Trials

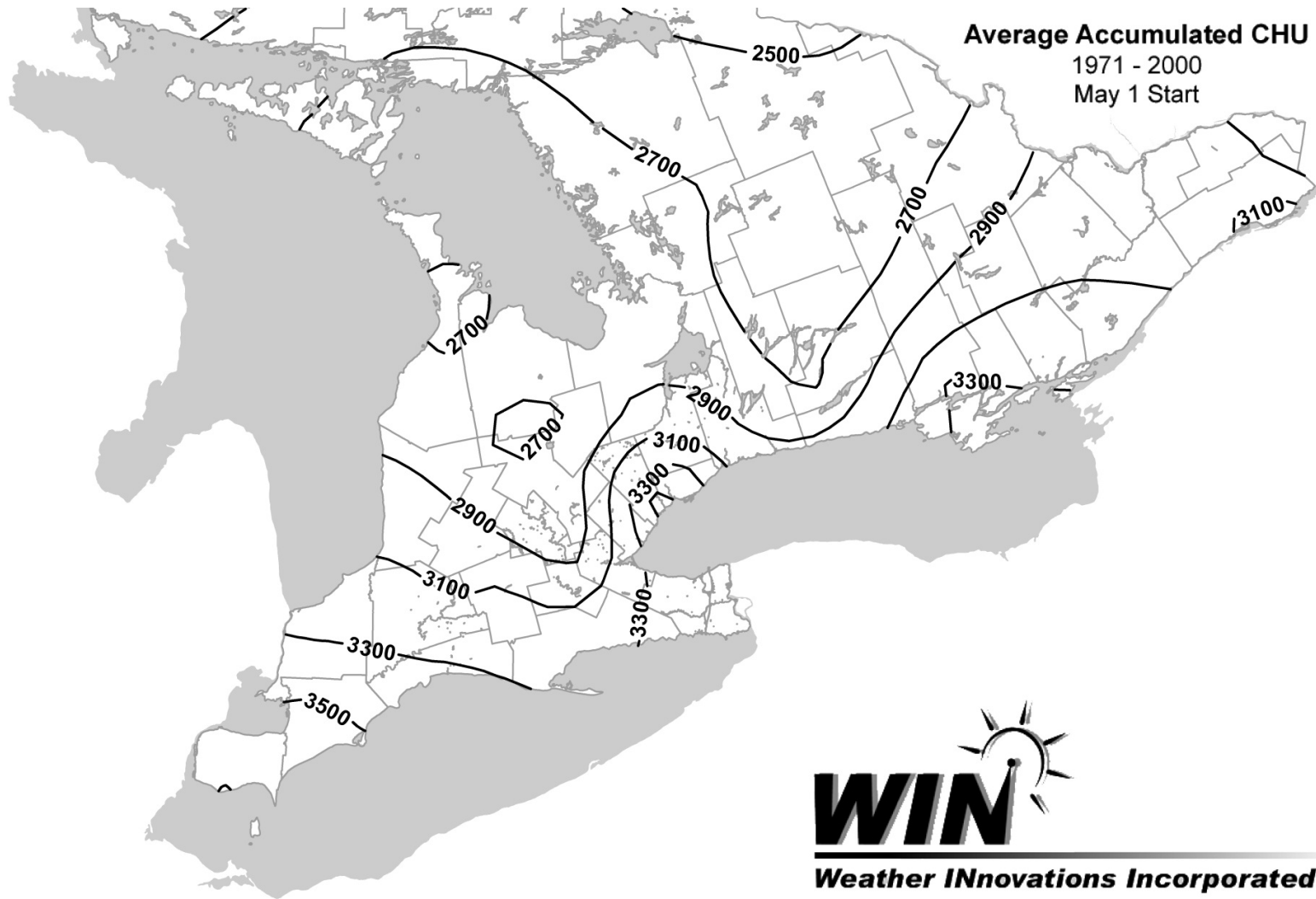
Data collected 2021-2022

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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 OMAFRA 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.

Explanation of Codes for Special Genetic Traits

Code	GM Traits
0	Conventional Hybrid
4	Roundup Ready Corn 2
6	VT Double PRO
8	SmartStax
14	Agrisure GT
20	Agrisure Viptera 3111
24	Optimum AcreMax Xtreme
25	Optimum AcreMax Xtra
27	Viptera
28	Agrisure Above
30	PowerCore Enlist
31	SmartStax Enlist
32	Trecepta
33	Duracade
34	DuracadeViptera
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 2022. 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 "Corn Hybrid Database under the Resources tab" 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

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	613-323-6846
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	DLF Canada Inc.	1 Greenfield Road, Box 304, 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 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	514-609-0881

2022 Trial Locations and General Information - Ontario Hybrid Corn Performance Trials

Location	See Table Number	Heat Unit Rating	5 Year Heat Unit Average ¹	2022 CHU Total ²	Soil Type	Co-operator	Final plants per acre ³	Date planted ⁴	Date Harvested
Orangeville	1	2700	N/A	2967	Sandy Loam	Timstar Farms Ltd	34000	May 06	Oct 24
Dundalk	1	2600	N/A	2962	Silt loam	Blydorp Farms Ltd	34000	May 11	Oct 25
Elora	2	2800	N/A	2890	Silt loam	University of Guelph	34000	May 12	Oct 13
Port Hope T2	2	2800	N/A	3155	Clay Loam	Bruce Hendry	35000	May 11	Nov 14
Winchester T2	2	3000	N/A	3133	Clay Loam	Ontario Crops Research - Winchester	37000	May 12	Oct 26
Wingham	2	2800	N/A	3077	Harriston Silt Loam	Rob Warwick	34000	May 14	Oct 27
Bainsville	3E	3000	N/A	3197	Clay Loam	Rob McDonald	35000	May 12	Nov 13
Williamsburg	3E	3000	N/A	3145	Loam	Devries	35000	May 11	Nov 13
Winchester	3E	3000	N/A	3133	Clay Loam	Ontario Crops Research - Winchester	37000	May 09	Nov 03
Blyth	3W	3000	N/A	3072	Listowel Silt Loam	Peter Heinrichs	34000	May 14	Oct 28
Port Hope	3W	3000	N/A	3155	Clay Loam	Bruce Hendry	34000	May 11	Nov 14
Waterloo	3W	2900	N/A	3100	Sandy Loam	Rosendale Farms Ltd	34000	May 09	Oct 14
Exeter	4	3050	N/A	3078	Silt Loam	Cliff Hicks	34000	May 20	Nov 02
Ilderton	4	3100	N/A	3173	Huron Silt Loam	Ralph Kuebler	34000	May 13	Nov 09
Woodstock	4	3150	N/A	3394	Silt Loam	Wes Hart	35000	May 20	Nov 05
Belmont	4	3250	N/A	3361	Clay Silt	Claire Hooker	34000	May 13	Nov 03
Ridgetown	5	3450	N/A	3426	Loam	University of Guelph	34000	May 10	Oct 24
Tilbury	5	3650	N/A	3264	Clay	Gus Ternoey	34000	May 12	Nov 07
Dresden	5	3600	N/A	3400	Sand Loam	Brent McFadden	34000	May 11	Nov 04

Notes:

1 Average total heat unit accumulation 2017 - 2021, 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.

2022 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		Cultivator X2	LR	MR	6.6	165	42	92	0	Primextra	4.0 l/ha	May 26	post	81	59	74	111	29	354
Dundalk	1	Wheat Red Clover Cover		Cultivator X2	HR	MR	7	170	56	96	10	Callisto	0.3 l/ha	May 26	post	50	62	67	99	59	337
Elora	2	Wheat Oats Cover		Disc And Cultivator	LR	MR	7.1	175	100	100	10	Acuron	4.9 l/ha	Apr 26	ppi	78	46	30	70	33	257
Port Hope T2	2	Soybeans		Conventional	MR	MR	6.8	200	75	100	0	Roundup	1.5 l/ha	Apr 26	ppi						
Winchester T2	2	Soybean	Chisel Plough	Cultivator	LR	MR	5.8	183	51	19	17	Frontier Max	0.35 L/ac	May 12		58	68	88	100	35	349
Wingham	2	Wheat		Vertical Till	MR	LR	7	190	14	3	21	Marksman	1.8 L/ac	May 12							
Bainsville	3E	Soybeans		Conventional	MR	MR	5.3	200	75	100	0	Acuron	1.96 l/ac	May 27	post	118	104	91	128	96	537
Williamsburg	3E	Soybeans		Conventional	MR	MR	5.3	200	75	100	0	Frontier Max	0.35L/ac	May 13		97	137	55	82	118	489
Winchester	3E	Spring Cereals	Chisel Plough	Cultivator	LR	MR	5.5	200	75	100	0	Marksman	1.8 L/ac	May 12	pre	105	73	127	104	81	490
Blyth	3W	Wheat	None	Strip Till	RR	RR	5.8	183	51	19	17	Acuron	1.96 l/ac	May 23	post	118	104	91	128	96	537
Port Hope	3W	Soybeans		Conventional	MR	MR	7.2	185	50	18	25	Acuron	1.96 L/ac	May 27	post	75	70	48	130		N/A
Waterloo	3W	Wheat Oats/Radish Cover	Vertical Till	Cultivator X2	MR	MR	6.8	200	75	100	0	Frontier Max	0.35 L/ac	May 12		58	68	88	100	35	349
Exeter	4	Summer Fallow	Tile	High Speed Disk	RR	RR	6.9	200	90	100	10	Marksman	1.8 L/ac	May 12							
Ilderton	4	Wheat	Chisel	Cultivate	RR	RR	6.9	200	90	100	10	Primextra	3.0 l/ha	Apr 29	ppi	95	42	11	42	29	219
Woodstock	4	Soybeans		Conventional	RR	RR	6.9	200	90	100	10	Callisto	0.3 l/ha	Jun 02	post						
Belmont	4	Soybeans	Chisel Plow	Cultivator	MR	RR	6.8	200	75	100	0	Frontier Marksman	1.5 L/ac	May 18	ppi	80	60	40	120		N/A
Ridgetown	5	Wheat	Chisel Plow	Cultivator	MR	LR	7.2	210	13	3	1	Acuron	1.96 L/ac	May 27	post	90	50	55	165	60	420
Tilbury	5	Soybeans	Chisel Plow	Cultivator	MR	HR	7	220	75	100	0	Fungicide			post						
Dresden	5	Wheat	Chisel Plow	Cultivator	MR	RR	5.9	210	13	3	1	Corvus	133 ml/ac	May 21	pre	63	47	42	76	69	297
					MR	RR	5.9	210	13	3	1	AAtrex 480	1 L/ac	May 21	pre						
					MR	RR	5.9	210	13	3	1	Engenia	0.25	May 09	pre	56	59	95	96	39	345
					MR	LR	6.5	206	13	3	1	Acuron	2 L/ac	May 23	post	62	49	42	68	31	252
					MR	LR	5.6	206	13	3	1	Acuron	2 L/ac	May 23	post	73	47	61	66	38	285
					HR	RR	7	250	13	3	1	Acuron	2 L/ac	May 26	post	70	75	41	85	44	315