



2023

Ontario Hybrid Corn Performance Trials

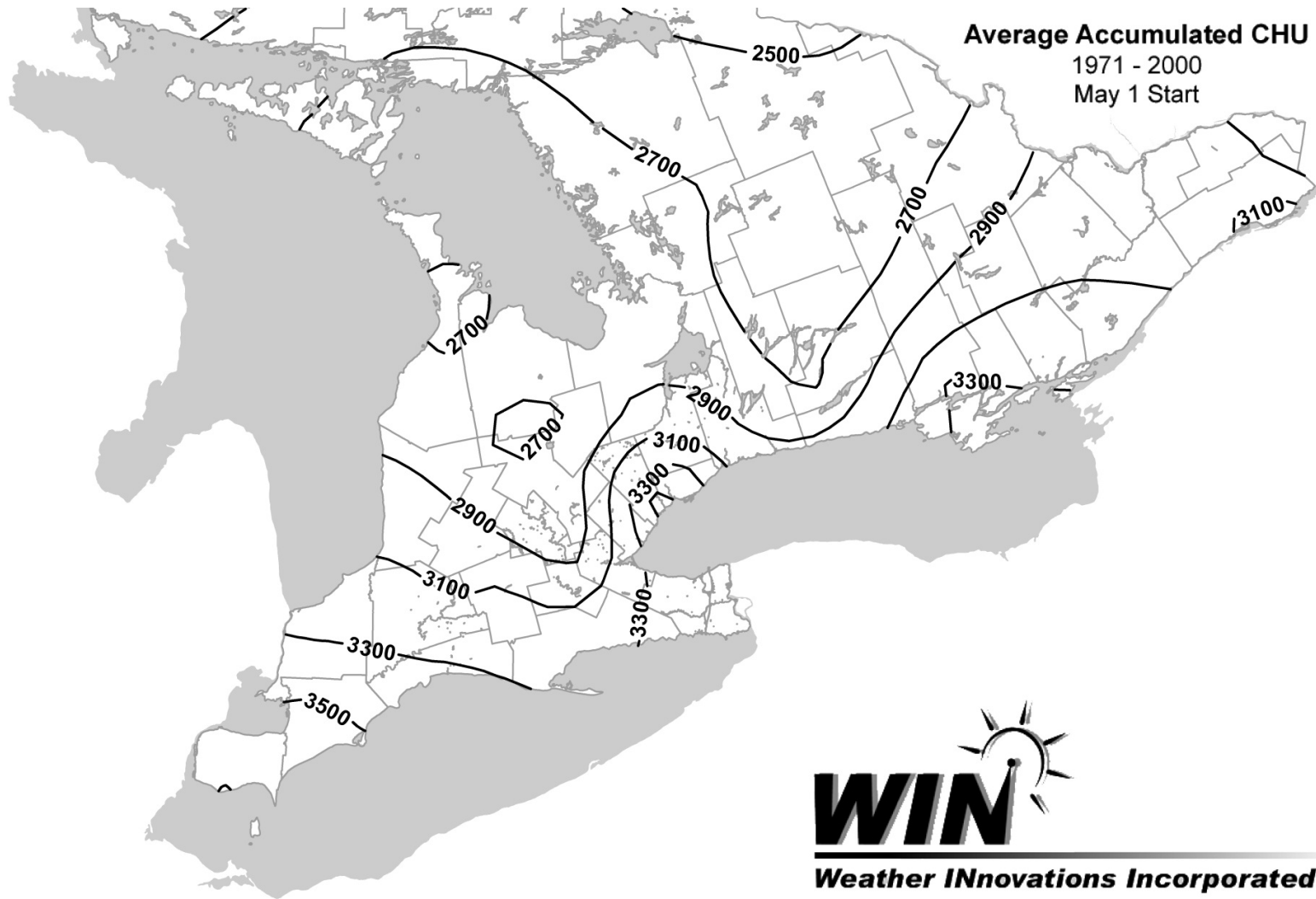
Data collected 2022-2023

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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.

DUPLICATION OF THIS REPORT:

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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
38	SmartStax PRO

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 2023. 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 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	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	888-283-6847
DLF	DLF Canada Inc.	3043 County Road 2, Port Hope, ON L1A 3V5	705-878-9240
Horizon	Horizon Seeds Canada Inc.	531 Bostwick Rd., Courtland, ON N0J 1E0	519-842-5538
Maizex	Maizex Seeds Inc.	4488 Mint Line, R.R.#2, Tilbury, ON NOP 2L0	877-682-1720
NK Brand	Syngenta Seeds Inc.	15910 Medway Rd., R.R.#1, Arva, ON NOM 1C0	800-756-SEED
Pioneer	Pioneer Hi-Bred Canada Comp	Box 730, 7398 Queens Line, Chatham, ON N7M 5L1	800-265-9435
PRIDE Seeds	AgReliant Genetics Inc.	P. O. Box 1088, 6836 Pain Court Line, Chatham, ON N7M 5L6	519-354-3210
Saatbau	Saatbau Linz	201 rue st louis . 412, St Jean/Richelieu, QC J3B 1X9	514-609-0881

2023 Trial Locations and General Information - Ontario Hybrid Corn Performance Trials

Location	See Table Number	Heat Unit Rating	5 Year Heat Unit Average ¹	2023 CHU Total ²	Soil Type	Co-operator	Final plants per acre ³	Date planted ⁴	Date Harvested
Harriston	1	2700		2770	Clay Loam	Max von Westerholt	35000	May 15	Nov 15
Dundalk	1	2600	N/A	2784	Clay Loam	Leo Blydorp	35000	May 01	Nov 04
Elora	2	2800	N/A	N/A	Silt Loam	University of Guelph	32000	May 11	Nov 01
Port Hope T2	2	2800	N/A	3021	Clay Loam	Bruce Hendry	35000	May 17	Nov 13
Kinburn	2	3000	N/A	N/A	Silt Loam	Panmure Farms	34000	May 18	Nov 8
Wingham	2	2800	N/A	N/A	Silt Loam	Rob Warwick	34000		
Bainsville	3E	3000	N/A	2980	Clay Loam	Rob McDonald	35000	May 17	Nov 12
Ottawa	3E	3000	N/A	2993	Clay	AAFC -- ORDC	n/a ⁵	May 23	n/a ⁵
Winchester	3E	3000	N/A	N/A	clay loam	Ontario CRC - Winchester	34000	May 12	
Blyth	3W	3000	N/A	N/A	Silt Loam	Peter Heinrich	34000		
Port Hope	3W	3000	N/A	3021	Clay Loam	Bruce Hendry	35000	May 17	Nov 13
Waterloo	3W	2900	N/A	N/A	Sandy Loam	Rosendale Farms Ltd.	34000	May 10	Nov 03
Exeter	4	3050	N/A	N/A	Silt Loam	Cliff Hicks	34000		
Ilderton	4	3100	N/A	N/A	Silt Loam	Ralph Kuebler	34000	Jun 01	
Woodstock	4	3150	N/A	3260	Silt Loam	Wes Hart	35000	May 13	Nov 14
Belmont	4	3250	N/A	N/A	Silt Loam	Claire Hooker	34000	May 12	Nov 16
Ridgetown	5	3450	N/A	N/A	Loam	University of Guelph	34000	May 10	Nov 02
Tilbury	5	3650	N/A	N/A	Clay	Gus Ternoey	33000	May 18	Nov 20
Dresden	5	3600	N/A	N/A	Sandy Loam	Brent McFadden	34000	May 11	Nov 18

Notes:

- 1 Average total heat unit accumulation 2018 - 2022, 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.
- 5 Data not included due to emergence issues

