



2018

Ontario Hybrid Corn Performance Trials

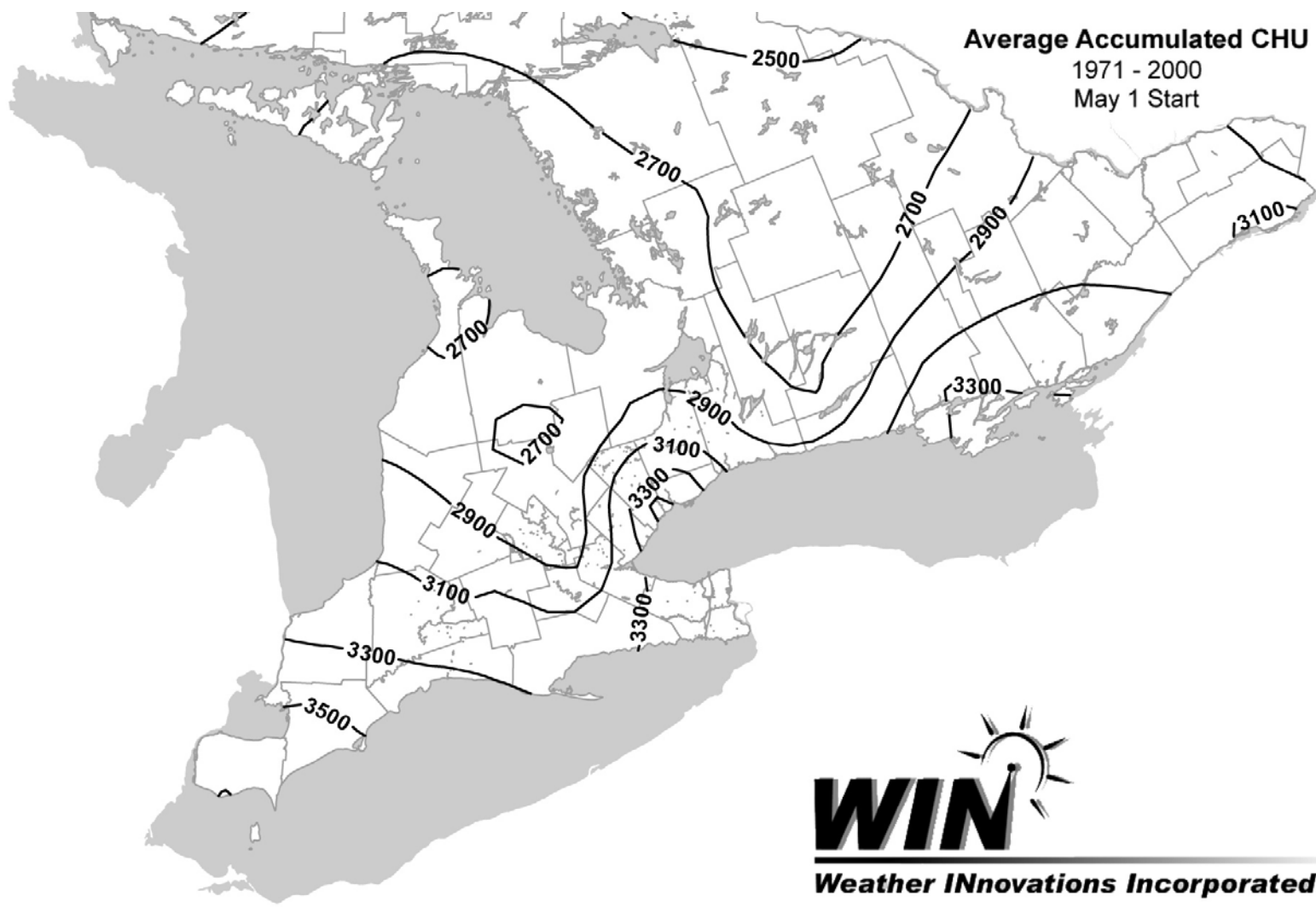
Data collected 2017-2018

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 procedures recommended by the Canada Grain Commission.

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For further information, contact
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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, whereas 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 consistently 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.

% 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.

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

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 |
| 3 | YieldGard VT Triple |
| 4 | Roundup Ready Corn 2 |
| 6 | Genuity VT Double PRO |
| 7 | Genuity VT Triple PRO |
| 8 | Dow AgroSciences SmartStax or Genuity 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 |

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 2018. 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 <http://cdnseed.org/list-of-corn-hybrids>

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, Agriculture Division of DowDuPont | 2400, 215 2 Street SW, Calgary, AB T2P 1M4 | 1-403-735-8800 |
| 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 |
| Legend Seeds | Sevita International | 11451 Cameron Rd., Inkerman, ON K0E 1J0 | 1-613-989-3000 |
| 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 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 |

2018 Trial Locations and General Information - Ontario Hybrid Corn Performance Trials

| Location | See Table Number | Heat Unit Rating | 5 Year Heat Unit Average ¹ | 2018 CHU Total ² | Soil Type | Co-operator | Final plants per acre ³ | Date planted ⁴ | Date Harvested |
|---------------|------------------|------------------|---------------------------------------|-----------------------------|------------|---------------------------------|------------------------------------|---------------------------|----------------|
| Orangeville | 1 | 2700 | 2836 | 3213 | Sandy Loam | Timstar Farms Ltd. | 34000 | May 09 | Oct 17 |
| Dundalk | 1 | 2600 | N/A | 2830 | Sandy Loam | Leo Blydorp | 34000 | May 09 | Oct 19 |
| Elora | 2 | 2800 | 2946 | 3292 | Silt Loam | University of Guelph | 34000 | May 10 | Oct 04 |
| Port Hope T2 | 2 | 2800 | N/A | 3065 | Sandy Loam | Bruce Hendry | 34000 | May 12 | Nov 12 |
| Winchester T2 | 2 | 3000 | N/A | 3336 | Silt Loam | Winchester Ag. Research Station | 34000 | May 08 | Oct 30 |
| Wingham | 2 | 2800 | N/A | 3237 | Silt Loam | Rob Warwick | 34000 | May 09 | Oct 24 |
| Bainsville | 3E | 3000 | N/A | 3037 | Clay Loam | Rob McDonald | 30000 | May 13 | Nov 09 |
| Ottawa | 3E | 3000 | N/A | 3302 | Sandy Loam | AAFC- ORDC | 34000 | May 12 | Oct 01 |
| Winchester | 3E | 3000 | N/A | 3336 | Silt Loam | Winchester Ag. Research Station | 32000 | May 11 | Oct 25 |
| Blyth | 3W | 3000 | 3024 | 3266 | Silt Loam | Peter Heinrich | 34000 | May 09 | Oct 25 |
| Port Hope | 3W | 3000 | N/A | 3065 | Sandy Loam | AAFC- ORDC | 34000 | May 12 | Nov 12 |
| Waterloo | 3W | 2900 | 3097 | 3545 | Sandy Loam | Rosendale Farms Ltd | 34000 | May 08 | Oct 16 |
| Exeter | 4 | 3050 | N/A | 3244 | Silt Loam | Cliff Hicks | Trial discarded - weed escapes | | |
| Ilderton | 4 | 3100 | 3152 | 3540 | Silt Loam | John Walls | 34000 | May 14 | Dec 08 |
| Woodstock | 4 | 3150 | 3082 | 3218 | Loam | Wes Hart | 34000 | May 18 | Nov 21 |
| Belmont | 4 | 3250 | 3166 | 3166 | Clay Loam | Mark Taylor | 34000 | May 30 | Nov 22 |
| Ridgetown | 5 | 3450 | N/A | 3485 | Loam | University of Guelph | 34000 | May 24 | Nov 08 |
| Tilbury | 5 | 3650 | 3483 | N/A | Clay | Dan Sullivan | Trial discarded - uneven stands | | |
| Dresden | 5 | 3600 | 3350 | 3402 | Sandy Loam | Brent Mcfadden | 34000 | May 28 | Nov 08 |

Notes:

1 Average total heat unit accumulation 2013 - 2017, 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.

2018 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 | Product | Rate | Date | Method | May | Jun | Jul | Aug | Sep | Total |
| Orangeville | 1 | Potatoes (oat cover crop) | Disc | Disc | LR | MR | 6.6 | 152 | 30 | 98 | Primextra Callisto Accent | 4.0 l/ha 0.3 l/ha 33 g/ha | May 05 Aug 06 Jun 06 | ppi post post | 55 | 47 | 96 | 136 | 42 | 376 |
| Dundalk | 1 | Soybeans | | Cultivator x3 | MR | HR | 7.5 | 145 | 45 | 90 | Primextra Callisto Accent | 4.0 l/ha 0.3 l/ha 33 g/ha | May 17 May 17 May 17 | pre pre pre | 77 | 53 | 69 | 142 | 35 | 376 |
| Elora | 2 | Winter Wheat | Chisel Plow | Cultivator x2 | MR | MR | 7.5 | 152 | 75 | 90 | Primextra Callisto Accent | 4.0 l/ha 0.3 l/ha 33 g/ha | May 16 May 16 Jun 08 | pre pre post | 62 | 56 | 38 | 74 | 43 | 273 |
| Port Hope T2 | 2 | Winter Wheat | None | Cultivate 2X | LR | MR | 7.5 | 180 | 80 | 95 | Primextra Calysto | 1.4l/a 120ml/a | May 12 May 12 | pre pre | 69 | 64 | 25 | 74 | 85 | 317 |
| Winchester T2 | 2 | Soybeans | Chisel Plow | Cultivator | | | | 140 | 64 | 22 | Dual II Magnum Aatrex Accent Distinct | 0.5 L/ac 0.5 L/ac 13 g/ac 115 g/ac | May 07 May 07 Jun 18 Jun 18 | ppi ppi post post | 34 | 95 | 122 | 35 | 96 | 382 |
| Wingham | 2 | Winter Wheat | RTS | RTS 2x | LR | MR | 7.6 | 180 | 48 | 24 | Roundup Frontier Marksman | | May 08 May 08 May 08 | ppi ppi ppi | 73 | 72 | 82 | 128 | 35 | 390 |
| Bainsville | 3E | Soybeans | None | RTS, Cultivate | MR | MR | 5.7 | 180 | 75 | 95 | Primextra Calysto | 1.4l/a 120ml/a | May 13 May 13 | pre pre | 41 | 42 | 181 | 102 | 68 | 434 |
| Ottawa | 3E | Soybeans | Soil Save | Disc/Mulch Finisher | HR | HR | 7.2 | 200 | 20 | 0 | Primextra II Magnum Calisto Ultim 75DF Distinct | 3L/Ha 0.3L/Ha 33.7g/Ha 285g/Ha | May 11 May 11 May 11 May 11 | ppi ppi post post | 31 | 59 | 126 | 58 | 65 | 339 |
| Winchester | 3E | Winter Wheat | Chisel Plow | Cultivator | | | | 180 | 52 | 20 | Dual II Magnum Aatrex Accent Distinct | 0.5 L/ac 0.5 L/ac 13 g/ac 115 g/ac | May 07 May 07 Jun 20 Jul 20 | ppi ppi post post | 34 | 95 | 122 | 35 | 96 | 382 |
| Blyth | 3W | Winter Wheat | Strip Till | Strip Till | MR | MR | 7.6 | 205 | 48 | 24 | Roundup Integrity | | May 07 May 07 | pre pre | 51 | 75 | 55 | 180 | 50 | 411 |
| Port Hope | 3W | Winter Wheat | none | cultivate 2X | LR | MR | 7.5 | 180 | 80 | 95 | Primextra Calysto | 1.4l/a 120ml/a | May 12 May 12 | pre pre | 69 | 64 | 25 | 74 | 85 | 317 |
| Waterloo | 3W | Wheat (Oat cover crop) | Vertical Tillage | Cultivator x2 | RR | LR | 6.7 | 180 | 80 | 90 | Primextra Callisto | 3.5 l/ha 0.3 l/ha | May 03 Jun 06 | ppi post | 79 | 61 | 65 | 109 | 62 | 376 |
| Exeter | 4 | Winter Wheat underseeded to Red Clover | Plough | Cultivate 2x | MR | LR | 7.6 | 190 | 48 | 24 | Dual Marksman Accent Peak, Banvel | | May 16 Jun 05 Jun 05 Jun 21 | ppi post post post | 47 | 92 | 68 | 160 | 69 | 436 |
| Ilderton | 4 | Winter Wheat | Chisel | Cultivate | HR | LR | 7.1 | 180 | 48 | 24 | Frontier Marksman Accent | | May 12 Jun 05 Jun 05 | ppi post post | 60 | 120 | 130 | 150 | 40 | 500 |
| Woodstock | 4 | Soybeans | chisel | cultivate 2X | MR | HR | 6.1 | 190 | 75 | 80 | Primextra Calysto | 1.4l/a 120ml/a | May 18 May 18 | pre pre | 15 | 102 | 111 | 88 | 33 | 349 |
| Belmont | 4 | Winter Wheat | Horsch Joker | Cultivate | LR | LR | 6.7 | 190 | 32 | 2 | Engenia Primextra | 0.4 L/ac 1.3 L/ac | Jun 20 May 13 | post ppi | 31 | 59 | 80 | 137 | 60 | 367 |
| Ridgetown | 5 | Soybeans | Chisel Plow | Cultivate | LR | HR | 6.8 | 190 | 32 | 2 | Option Aatrex Callisto 28% | 630ml/ac 235ml/ac 85ml/ac 1 L/ac | Jun 15 Jun 15 Jun 15 Jun 15 | post post post post | 109 | 48 | 96 | 110 | 108 | 471 |
| Tilbury | 5 | | | Trial discarded because of poor emergence | | | | | | | | | | | | | | | | |
| Dresden | 5 | Soybean | Chisel Plow | Cultivate | MR | MR | 6.8 | 190 | 32 | 2 | Option Aatrex Callisto 28% | 630ml/ac 235ml/ac 85ml/ac 1 L/ac | Jun 14 Jun 14 Jun 14 Jun 14 | post post post post | 76 | 96 | 78 | 105 | 88 | 443 |