

2017

# Ontario Hybrid Corn Performance Trials

Data collected 2016-2017

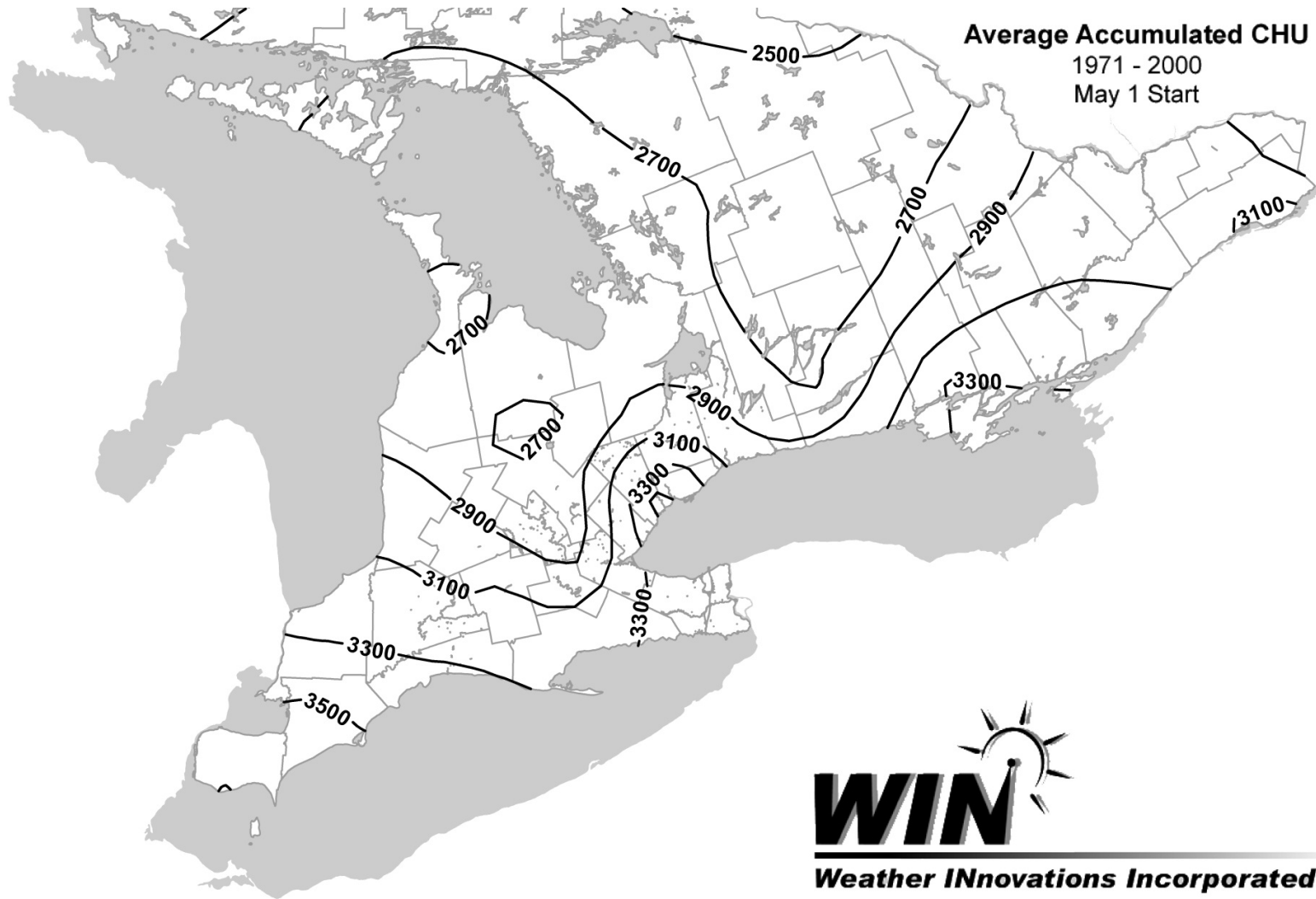
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PDF files of this report  
Sortable on-line tables  
Yield x Moisture Content

## 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 and Food, the University of Guelph, the Ontario Soil and Crop Improvement Association, the Grain Farmers of Ontario and the Canadian Seed Trade Association. Tests are conducted each year by the following cooperating agencies: Ridgetown Campus, University of Guelph, Ridgetown; Plant Agriculture Department, University of Guelph; Winchester Research Station, University of Guelph, Kent Ag Research Inc., and 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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## 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](http://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
10	Herculex I with Roundup Ready Corn 2
12	Herculex XTRA with Roundup Ready Corn
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

### 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 2017. 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
Country Farm CROPLAN	Country Farm Seeds Ltd. WinField United	Box 790, Blenheim, ON N0P 1A0 62 rue de l'Eglise, app 3, McMasterville (QC), QC J3G1G3	1-800-449-3990 1-514-220-9625
De Dell DEKALB	De Dell Seeds Inc. Monsanto Canada Inc.	7095 Century Drive, Melbourne, ON N0L 1T0 900 - One Research Road, Winnipeg, MB R3T 6E3	519-264-2676 1-800-667-4944
Dow Seeds Elite	Dow AgroSciences Canada Inc. La Coop federee	P.O. Box 1090, 5 Hyland Dr., Blenheim, ON N0P 1A0 9001, Blvd. de L'Acadie, Montreal, QC H4N 3H7	1-800-265-7403 1-514-384-6450
Horizon Legend Seeds	Horizon Seeds Canada Inc. Sevita International	531 Bostwick Rd., Courtland, ON N0J 1E0 11451 Cameron Rd., Inkerman, ON K0E 1J0	1-519-842-5538 1-613-989-3000
Maizex NK Brand	Maizex Seeds Inc. Syngenta Seeds Inc.	4488 Mint Line, R.R.#2, Tilbury, ON N0P 2L0 15910 Medway Rd., R.R.#1, Arva, ON N0M 1C0	1-877-682-1720 1-800-756-SEED
PICKSEED Pioneer	DLF Pickseed Canada Inc. Pioneer Hi-Bred Canada Comp	, 1 Greenfield Road, Lindsay, ON K9V 4S3 Box 730, 7398 Queens Line, Chatham, ON N7M 5L1	1-705-878-9240 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

## 2017 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>	2017 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	2873	2747	Sandy Loam	Woodrill Farms Ltd.	34700	May 11	Nov 21
Dundalk	1	2600	N/A	2562	Sandy Loam (Harriston)	Leo Blydorp	33900	May 18	Nov 23
Elora	2	2800	2933	2995	Silt Loam	University of Guelph	34700	May 12	Oct 27
Lindsay	2	2800	N/A	2852	Clay Loam	Ed Bagshaw	35000	Jun 03	Nov 23
Wingham	2	2800	N/A	2967	Silt Loam (Harriston)	Rob Warwick	34000	May 17	Nov 14
Ottawa	3	3000	N/A	2841	Sandy loam	Agriculture and Agri-Food Canada	32000	May 24	Nov 15
Winchester	3	3000	N/A	2922	silt loam	Holly Byker, Ian DeSchiffart	34000	May 18	Nov 13
Waterloo	3	2900	3077	3219	Sandy Loam	Rosendale Farms Ltd.	34700	May 17	Oct 31
Blyth	3	3000	3029	2976	Silt Loam	Peter Heinrich	34000	May 17	Nov 14
Exeter	4	3050	3038	N/A	Silt Loam	Cliff Hicks	34000	Jun 03	Nov 15
Ilderton	4	3100	3122	3242	Silt Loam (Brant)	John Walls	34000	May 19	Nov 24
Woodstock	4	3150	3112	3129	Clay Loam	Wes Hart	35000	May 20	Nov 10
Belmont	4	3250	3155	3356	Loam	Claire Hooker	34000	May 24	Nov 08
Ridgetown	5	3450	N/A	3596	Loam	University of Guelph-Ridgetown	34000	May 18	Nov 11
Tilbury	5	3650	3440	3657	Clay	Dan Sullivan	34000	May 23	Nov 10
Dresden	5	3600	N/A	3314	Sandy Loam	Brent McFadden	34000	May 17	Nov 09

### Notes:

1 Average total heat unit accumulation 2012 - 2016, 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.

## 2017 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	Disk	Disk, Cultivator x2	LR	MR	6.8	155	30	98	Primextra II	4.0 l/ha	May 03	ppi	129	72	83	24	48	356
											Roundup Transorb	1.7 l/ha	May 03	ppi						
											Callisto	0.3 l/ha	May 31	post						
Dundalk	1	Wheat		Cultivator x2	MR	HR	7.6	145	40	85	Primextra II	4.0 l/ha	May 31	post	124	110	69	75	45	423
											Callisto	0.3 l/ha	May 31	post						
Elora	2	Wheat	Disk ripper	Cultivator x2	MR	MR	7.5	162	76	90	Primextra II	4.0 l/ha	May 29	post	132	112	32	65	39	380
											Callisto	0.3 l/ha	May 29	post						
Lindsay	2	Soybean	None	RTS x 2	LR	LR	7.8	170	50	75	Primextra	1.4l/a	Jun 09	post	183	128	55	83	49	498
											Calysto	120ml/a	Jun 09	post						
Wingham	2	Beans	None	Cultivator	LR	MR	7.4	190	48	12	Roundup	1 L/ha	May 20	pre	130	171	69	99	85	554
											Marksman	4.5 L/ha	May 20	pre						
											Accent One-Pass + Agral 90	32/13/0.3/0.5	Jun 21	post						
Ottawa	3	Winter wheat	Soil save	Disk/ mulch finisher	HR	HR		200	20	0	Primextra ii Magnum	3l/ha	May 22	ppi	79	99	139	75	45	437
											Calisto	0.3L/ha	May 22	ppi						
											Ultim 75DF	33.7g/ha	Jun 22	post						
											Distinct	285g/ha	Jun 22	post						
Winchester	3	soybean	chisel plow	cultivator (2 pass)	RR	RR	6.2	182	83	25	Frontier	0.3 L/ac	May 17	ppi	73	122	223	160	40	618
											Aatrex	0.8 L/ac	May 17	ppi						
											Accent	13 g/ac	Jun 27	post						
											Distinct	115 g/ac	Jun 27	post						
Waterloo	3	Wheat	Chisel	Cultivator x2	NR	MR	7	185	50	155	Primextra II	3.0 l/ha	May 15	ppi	139	92	81	104	33	449
											Callisto	0.3 l/ha	Jun 01	post						
											Accent	33g/ha	Jun 01	post						
Blyth	3	Wheat	Strip tillage	Strip (shallow)	MR	MR	7.5	190	48	12	Roundup	1 l/ha	May 16	pre	135	191	55	85	90	556
											Integrity	1.1 L/ha	May 16	pre						
											Accent One-Pass + Agral 90	32/13/0.3/0.5	Jun 21	post						
Exeter	4	Wheat	Plough	Tillage 2x	MR	RR	7.6	195	48	24	FrontierMax	0.95 L/ha	Jun 01	ppi	167	91	57	67	73	455
											Accent One-Pass + Agral90	32/13/0.3/0.5	Jun 21	post						
Ilderton	4	Soy		Cultivator	MR	MR	7.4	200	48	12	Primextra II Magnum	4 L/ha	May 16	ppi	120	70	50	45	60	345
											Pardner	1.2 L/ha	Jun 22	post						
Woodstock	4	Soybean	chisel plough	cultivated x 2	LR	MR	6.9	170	60	60	Primextra	1.4l/a	Jun 05	post	149	64	53	42	32	340
											Calysto	120ml/a	Jun 05	post						
											Accent	13gm/acre	Jun 17	post						
Belmont	4	Soybeans	Plow	Cultivate	MR	MR	6.2	181	53	27	Primextra Magnum	1.4 L/ac	May 31	post	117	118	40	48	35	358
											Pardner	0.4 L/ac	Jun 19	post						
Ridgetown	5	Wheat	Chisel Plow	Cultivate	NR	MR	5.5	198	53	27	Primextra Magnum	1.4 L/ac	Jun 12	post	130	106	44	78	65	423
											Calisto	120 ml/ac	Jun 12	post						
Tilbury	5	Soybeans	None	Cultivate	MR	RR	6.1	198	53	27	Primextra Magnum	1.4 L/ac	May 31	post	142	99	60	89	77	467
											Calisto	120 ml/ac	May 31	post						
Dresden	5	Soybeans	Chisel Plow	Cultivate	MR	LR	6.6	198	53	27	Primextra Magnum	1.4 L/ac	Jun 01	post	138	98	49	85	57	427
											Calisto	120 ml/ac	Jun 01	post						