Prince Edward Island Agriculture and Forestry CANADA

2015 GUIDE TO CORN HYBRID SELECTION

Table 1. Grain Hybrids: Combined data from current year and all prior years from all maritime testing locations

Zone	Hybrid	Traits	Yield at 15.5% moisture (t/ha)	Moisture at Harvest (%)	PI*	Site Years	Harrington 2014	
							Yield at 15.5% moisture (t/ha)	Stalk Breakage %
1+2+3	P7890HR (PIONEER)	Bt/RR/LL	9.1	25.6	100.1	9	5.64	2.0
1+2+3	E44A02 R (ELITE)	VT2/RR	8.9	25.8	98.7	13	5.74	0.0
1+2+3	E47A12 R (ELITE)	VT2/RR	10.4	26.3	103.9	14	8.15	0.0
1+2+3	P7632AM (PIONEER)	Bt/RR/LL	9.1	26.7	100.6	9	4.68	0.0
1+2+3	E48A29 R (ELITE)	VT3/RR	9.3	26.9	101.9	14	7.11	0.0
1+2+3	DKC 27-55 (DEKALB)	VT2/RR	9.2	26.9	101.5	14	6.46	1.0
1+2	DKC 30-07 (DEKALB)	VT2/RR	10.6	27.1	102.8	14	7.39	1.0
1+2	A4177G3 RIB (PRIDE)	VT3/RR	9.0	27.4	99.2	30	n/a	n/a
1+2	4093 (HYLAND)	Bt/RR/LL	9.6	27.5	102.1	9	6.35	3.0
1+2	PS 2305 VT3P RIB (PICK)	VT3/RR	9.5	27.7	101.3	18	5.76	1.0
1+2	N15T-3110 (SYNGENTA)	Bt/GT/LL	9.5	27.8	101.3	9	6.14	2.0
1+2	PS 2348VT2P RIB (PICK)	VT2/RR	9.3	28.0	100.4	14	7.61	2.0
1+2	A4631G2 RIB (PRIDE)	VT2/RR	9.4	28.0	100.8	9	6.44	1.0
1+2	DKC 31-09 RIB (DEKALB)	VT3/RR	11.0	28.2	101.3	14	7.81	0.0
1+2	HL R219 (HYLAND)	RR	9.5	28.2	100.7	8	n/a	n/a
1+2	E53B22 R (ELITE)	VT2/RR	9.9	28.3	101.1	9	5.53	0.0
1+2	PS SilEx VT3P RIB (PICK)	VT3/RR	9.5	28.5	100.4	50	n/a	n/a
1	E50G22 R (ELITE)	VT2/RR	9.7	28.9	100.3	18	6.85	2.0
1	8105RA (HYLAND)	SS/RR/LL	9.7	29.9	98.8	18	7.43	0.0
1	P8210HR (PIONEER)	Bt/RR/LL	10.2	29.9	98.8	14	6.45	2.0
1	8166RA (HYLAND)	SS/RR/LL	9.6	30.5	97.9	18	5.78	0.0

Traits: Bt = Corn borer protection; RR = Roundup Ready; LL = Liberty tolerant; GT = Glyphosate Tolerant; AV= Agrisure Viptera insect protection, SS = SmartStax insect protection; VT3= VT TriplePro insect protection; New hybrid = ** ; n/a = Data not available.

Data are averages for all Maritime trials as reported by the Maritime Corn Testing Committee.

*= Performance Index (**PI**) is a combined yield/maturity index. It is calculated from the performance of each hybrid compared to the performance of six standard hybrids. The PI minimizes yearly fluctuations due to weather or other factors. A PI below 100 indicates inferior performance compared to the standard (check) hybrids and those above 100 are superior. Standard hybrids for grain corn were: 3085, PS 2305 VT3P and A4177G3 for early. PS SilEx VT3P, E50G22R, and 8105RA for late hybrids.

Note to *Bt* hybrid users:
When growing *Bt* corn hybrids, include appropriate "refuge area" in the field or in adjacent fields within ¼ mile of *Bt* hybrids. For more information contact your seed representative, agronomist or the publication, "A Growers Handbook; Controlling European Corn Borer with *Bt* Corn Technology".

ZONE DESIGNATIONS FOR CORN PRODUCTION

Based on the estimated available Crop Heat Units (CHU) (Figure 1) the Maritime Provinces have been divided into zones for corn production. The zone designations indicate the general potential of an area for corn production. Keep in mind that CHUs could vary from the average by 100 or more units from year to year. Also, within any Production Zone, areas with better or poorer corn potential may occur due to topography, soil type, drainage, or frost potential. The ultimate test is to evaluate corn production and new hybrids on a small scale at your location prior to attempting any major production.

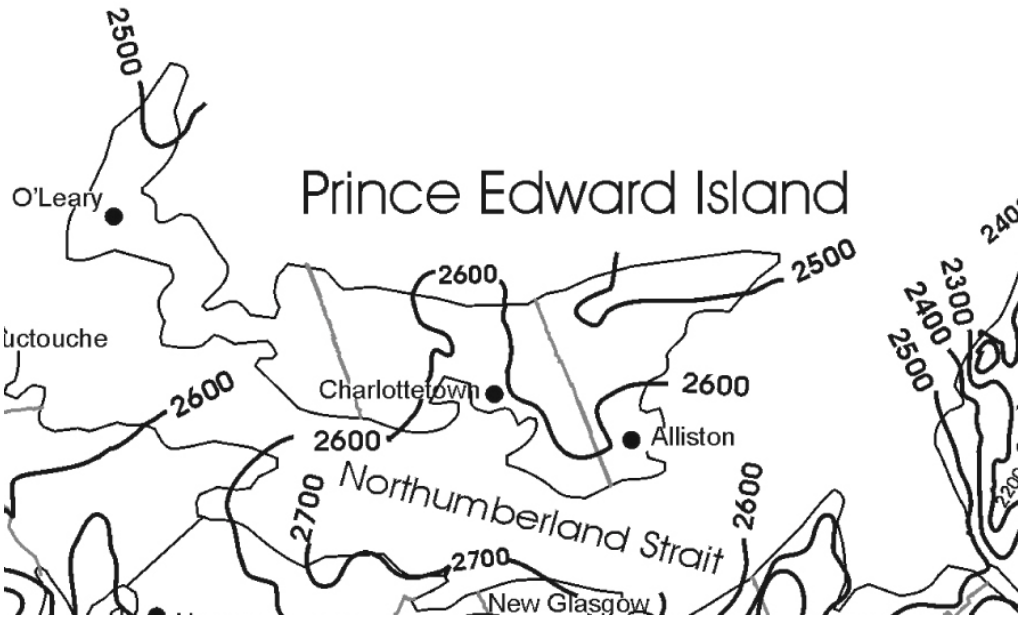

Figure 1. Average Corn Heat units on PEI

ZONE 1: (Over 2500 CHU's) Greatest potential for corn production as either silage or high moisture grain exists in this zone. Soil variations should be considered when selecting corn hybrids.

ZONE 2: (2300-2500 CHU's) Early hybrids are required for good silage maturity. The earliest grain hybrids will produce acceptable high moisture ear or grain corn.

ZONE 3: (2200-2300 CHU's) Only the earliest hybrids will produce acceptable silage on this zone. High moisture grain corn is quite risky.

ZONE 4: (Less than 2200 CHU's) Corn production is risky.

Table 2. Silage Hybrids: Combined data from current year and all prior years from all maritime testing locations

Zone	Hybrid	Traits	Dry Matter Yield (t/ha)	Dry Matter at Harvest (%)	PI*	Site Years	Harrington 2014	
							Dry Matter Yield (t/ha)	Stalk Breakage %
1+2+3	P7890HR (PIONEER)	Bt/RR/LL	14.4	38.4	90	10	9.75	0.0
1+2+3	P7632AM (PIONEER)	Bt/RR/LL	15.2	37.3	95.6	10	11.61	0.0
1+2+3	PS 2305VT3P RIB (PICK)	VT3/RR	15.0	37.1	94.4	19	11.46	0.0
1+2+3	PS 2348VT2P RIB (PICK)	VT2/RR	15.3	36.5	96	10	11.99	0.0
1+2+3	A4177G3 RIB (PRIDE)	VT3/RR	15.8	36.1	99.4	28	11.66	0.0
1+2	P8210HR (PIONEER)	Bt/RR/LL	16.5	36.0	101	15	10.41	0.0
1+2	HL R219 (HYLAND)	RR	16.9	35.4	100.8	28	12.39	5.4
1+2	Fusion RR (ELITE)	RR	16.3	35.0	98	33	12.41	6.3
1+2	DKC 30-07 RIB (DEKALB)	VT2/RR	17.5	34.8	100.3	15	11.83	0.0
1+2	PS SilEx VT3P RIB (PICK)	VT3/RR	16.9	34.6	98.5	49	11.96	1.7
1+2	P8622AM (PIONEER)	Bt/RR/LL	16.7	34.6	98	19	11.88	0.0
1	DKC 31-09 RIB (DEKALB)	VT2/RR	16.7	34.4	97.5	15	12.09	0.0
1	PS ExTend VT3P RIB (PICK)	VT3/RR	18.9	34.3	99	28	14.36	2.7
1	P8673AM (PIONEER)	Bt/RR/LL	18.7	33.6	96.8	10	12.43	0.0

Traits: Bt. = Corn borer protection; RR = Roundup Ready; GT=Glyphosate Tolerant; LL= Liberty Tolerant hybrid

****** = New Hybrid

Data are averages for all Maritime trials operated by the Maritime Corn Testing Committee.

[#] = Performance Index (**PI**) is a combined yield/maturity index. It is calculated from the performance of each hybrid compared to the performance of six standard hybrids. The PI minimizes yearly fluctuations due to weather or other factors. A PI below 100 indicates inferior performance and those above 100 are superior compared to the standard (check) hybrids. Standards for silage corn were: PS 2305, A417763 and HL R219 for early and Fusion RR, Silex VT3P, and ExTend VT3P for late hybrids. Generally the more site years a hybrid has accumulated the more reliable the data should be.

Acknowledgments
The information contained in this publication was developed through the efforts of the Atlantic Forage and Corn Team along with industry participation. Special thanks to Agriculture and Agri-Food Canada, Charlottetown; Dalhousie Agriculture Campus; Nova Scotia Crop Development Institute; Perennia; Soil and Crop Improvement Association of Nova Scotia; New Brunswick Department of Agriculture, Aquaculture, and Fisheries; and New Brunswick Soil and Crop Improvement Association, for their contributions to this publication.

Copies of this publication are available at http://www.gov.pe.ca/agriculture/Corn or from the Agriculture Information Desk 1-866-PEI Farm (734-3276).