

Evaluating Silage corn varieties in Interlake region

Project duration

2018

Objectives

To see production potential of different silage corn varieties in Interlake region.

Collaborators

Manitoba Corn Growers Association

Results

Silage corn varietal evaluations were done at Elm Creek, St. Pierre and Arborg sites during 2018 season. With the dry spring, both the Elm Creek and St. Pierre trials had variable emergence and early plant growth. High winds prior to harvesting caused some lodging at both the St. Pierre and Arborg sites. All three trials were taken to yield. Harvesting at Arborg was delayed by wet field conditions.

Silage corn varieties tested in the trial did differ in term of yield (Table 1). The yield ranged from 11.8 – 16.5 Mt/acre and variety PV61079 RIB produced higher yield. The trial CV was 7.1% showing that the results are presentable. Different corn varieties varied in the moisture level at harvest and it ranged from 46.7 -59.0%. Please see table on the page 21 for more detailed results.

Project Findings

These results are based on one year of testing. Please use caution while using these results. For more information, please contact Manitoba Corn Growers Association.

Background / References / Additional resources

Now with the short-season corn varieties available, producers have more options to grow silage corn in Manitoba especially in Interlake region. Manitoba Corn Growers Association coordinates varietal evaluation of potential new silage corn varieties in the province. These varietal trials were done at different sites in the province and Arborg was one of the site. This trial was conducted to see production potential of different silage corn varieties in Interlake region.

Materials and Methods

Experimental Design – Randomised block design with three replications

Treatments – 27 silage corn varieties (see table 1)

Plot size – 15m²

Data collected – plant stand, plant height, yield

Agronomic info

Stubble, soil type – cereal, heavy clay

Fertilizer applied –N – 80, P – 40 lbs/acre were applied at seeding.

Pesticides applied – Glyphosate @ 0.67L/acre

Seeding/harvesting date – May 29 / Oct 18

During harvesting, 500 grams of silage sample were taken from each plot and were sent to laboratory for quality analysis. These samples were assessed for % TDN, ADF and NDF. Yield data were analyzed using ANOVA and the means were separated using least significant difference (LSD test) at $p = 0.05$.

SILAGE CORN 2018 - ARBORG

Comments:

The silage corn hybrid trial was tested and the data donated by the Manitoba Corn Committee. The data presented is for one year only. Use with caution. All hybrids were evaluated at a plant population of 32,000 plants per acre. Plots are planted at a higher rate and thinned to achieve the target population. Yields are corrected to 65% moisture content.

CHU 1		Hybrid	Technology/Genetic Trait 2	Distributor	65% Yield (Mt/ac)	Moisture3 (%)	50% Silk	TDN (%)	ADF (%)	NDF (%)	Milk/Acre4 (lbs/ac)	Beef/Acre5 (lbs/ac)	NE/Gain Mcal/kg	NE/Lact Mcal/kg
ARBORG														
2100	TH6875	VT2P	RR2/VT2PRIB	Thunder Seed	15.6	48.5	--	57.5	24.04	44.58	13814	1151	1.13	1.67
2100	E4H12	R	GENVT2P	Elite Seeds	14.2	52.2	--	58.2	32.14	54.74	12199	1062	0.89	1.46
2125	PS 2210	VT2P RIB	GENVT2P	DLF Pickseed	15.0	51.9	--	60.9	29.32	52.26	14395	1174	0.97	1.53
2150	AS1017	RR2	RR2	PRIDE Seeds	16.1	46.7	--	56.2	25.66	45.03	13412	1163	1.09	1.63
2150	A414	RR2	RR2	PRIDE Seeds	13.8	51.7	--	63.3	32.57	56.26	14010	1119	0.87	1.45
2150	PV 60075	RIB	VTDpro,RR2	Proven Seed	14.8	51.2	--	63.6	31.29	54.16	15159	1206	0.91	1.48
2150	NSTRExp31	086	GTCBLBL	NorthStar Seed	13.6	50.9	--	60.8	29.57	52.55	12669	1060	0.97	1.53
2175	TH EXS1876		RR2	Thunder Seed	11.9	58.3	--	65.9	25.76	44.82	13406	1004	1.08	1.63
2200	PS 2320	RR2	RR2	DLF Pickseed	11.8	49.6	--	60.3	26.96	49.63	11174	914	1.05	1.59
2200	NSTRExp47	068	GTCBLBL	NorthStar Seed	15.5	51.4	--	58.2	31.23	55.31	13218	1160	0.92	1.48
2200	QS 1878	GT	GT	Quarry Seed	14.3	55.2	--	66.6	29.21	51.84	15526	1220	0.98	1.54
2225	LR 9474	VT2PRIB	VT2PRIB	Legend Seeds	16.0	47.9	--	51.4	30.32	53.52	10865	1053	0.94	1.51
2225	TH7578	VT2P	RR2/VT2PRIB	Thunder Seed	14.5	52.9	--	63.0	32.12	56.05	14430	1169	0.89	1.46
2250	TH4126	RR	RR2	Thunder Seed	13.4	52.2	--	58.9	27.76	50.07	12454	1013	1.02	1.57
2250	HZ 1885		Agrisure 3010	Horizon Seeds	13.7	55.7	--	60.4	27.27	49.91	12982	1064	1.04	1.59
2250	DALTON	R	RR2	Elite Seeds	15.7	51.6	--	61.0	29.02	51.86	14797	1225	0.98	1.54
2250	PV 61079	RIB	VTDpro,RR2	Proven Seed	16.5	51.6	--	57.6	29.49	51.25	14240	1217	0.97	1.53
2250	PV 61180	RIB	VTDpro,RR2	Proven Seed	15.2	58.0	--	61.3	27.86	50.06	14723	1196	1.02	1.57
2275	PS 2333	RR2	RR2	DLF Pickseed	12.4	55.2	--	59.0	27.86	48.55	11286	939	1.02	1.57
2300	A4705	HIMRR	RR2	PRIDE Seeds	12.8	55.6	--	57.8	31.52	56.53	11026	948	0.91	1.47
2300	XP1807	8G2	VT2P	PRIDE Seeds	16.1	55.7	--	59.3	25.40	46.78	15217	1230	1.09	1.64
2300	NSTRExp13	110	GTCBLBL	NorthStar Seed	15.6	54.7	--	66.6	26.62	47.19	17480	1332	1.06	1.60
2310	LR 9957	7RR	RR	Legend Seeds	13.7	56.1	--	60.8	28.82	50.13	12937	1066	0.99	1.55
2350	HZ 675		Agrisure 3010	Horizon Seeds	13.9	59.0	--	65.1	31.33	54.50	14794	1164	0.91	1.48
2350	PV 62282	RIB	VTDpro,RR2	Proven Seed	15.2	52.8	--	61.2	29.44	51.30	14645	1192	0.97	1.53
Site Average					14.3	52.8								
CV					7.12	4.94								
Sign Diff					Yes	Yes								
LSD					1.7	4.3								
										May 29, 2018				
										October 18, 2018				

1 Each company assigns a corn heat unit (CHU) rating to each of their hybrids. The CHU rating is a measure of relative maturity and is one criteria for choosing a hybrid which is suitable for your growing region.

2 The Canadian Seed Trade Association (CSTA) website provides a database for corn hybrids available in Canada, available at <https://seedinnovation.ca/corn-hybrids-database>. Information provided includes technology brand name and refuge requirements.

3 Moisture content at harvest.

4 Milk per Acre was calculated using Milk 2006, a model developed by the University of Wisconsin Extension Service.

5 Beef per acre was calculated on the assumption that one pound of beef is produced for every six pounds of TDN.

