

8. Evaluating silage corn varieties in Interlake region

Project duration

- 2021

Collaborators

- Daryl Rex, Manitoba Crop Alliance

Objectives

To evaluate the yield potential of silage corn varieties in Interlake region.

Results

Variety trials for silage corn were conducted at Elm Creek, St. Pierre and Arborg sites during 2021. At Arborg site, the tested silage corn varieties differed in their yield potential (Table 8.1). The yield varied from 8.3 – 12.0 Mt/acre (at 65% moisture content). Among all varieties tested, MS 8022R recorded the highest yield, while variety HZ 1912 had the lowest yield. Moisture content at harvest also varied (range: 63.3-72.8%) among corn varieties. Similarly, corn varieties also differed in 50% silking period and the variety 932S took greater number of days (84) to reach this stage. The detailed results on quality analysis are presented in the Table 8.1.

Project findings

Silage corn varieties differed in their yield potential at Arborg site. For more information, please contact Manitoba Crop Alliance.

Background / References / Additional resources

Now with the short-season corn varieties available, producers have more options to grow silage corn in Manitoba especially in the Interlake region. Manitoba Crop Alliance 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 evaluation sites. This trial was conducted to see production potential of different silage corn varieties in the Interlake region.

Materials and methods

Experimental design – Randomized complete block design;

Replications: 3

Treatments – 30 silage corn varieties (Table 7.1)

Plot size – 18 m²; Plant population – 32,000 plants/acre

Data collected – plant stand, 50% silking, yield

Agronomic information

Stubble, soil type – Corn, Heavy clay

Fertilizer applied: N -72 lb /acre; P - 35 lb/acre

Pesticides applied :Glyphosate @0.67 L/acre on June 14 & 29 for the control of weeds.

Seeding date – May 21, 2021; Harvesting date - Sep 22, 2021



Table 8.1. Evaluating silage corn varieties for yield and silage quality (total digestible nutrients (TDN), acid detergent fibre (ADF), neutral detergent fibre (NDF), Milk per acre and Beef per acre) at Arborg site (Adapted from Seed Manitoba 2022, pp112).

CHU	Hybrid	Technology / Genetic Trait	Distributor	65% Yield	Moisture at harvest	50% Silk	TDN	ADF	NDF	Milk /acre	Beef /acre
				Mt/ac	%	days	%	%	%	lb/ac	lb/ac
2050	DKC20-23RIB	VT2P	DEKALB	8.7	63.3	74	77.0	20.2	36.9	7707	864
2050	Rustler	GT	Greenfield Genetics	9.8	66.4	74	76.9	20.4	39.7	8014	970
2075	DKC21-36RIB	VT2P	DEKALB	9.8	63.9	74	72.2	24.8	44.9	5468	910
2100	TH6875 VT2P	VT2P	Thunder Seed	10.1	67.4	72	75.3	21.8	38.9	7585	973
2100	DKC24-06RIB	VT2P	DEKALB	10.4	65.8	74	75.2	21.9	38.0	8796	1004
2100	CP1440VT2P/RIB	VT2P/RIB	CROPLAN	11.2	66.4	76	78.5	18.9	35.1	10232	1124
2150	TH4076 HDRR	RR2	Thunder Seed	10.0	69.1	78	77.6	19.7	36.4	8019	993
2150	913S	RR2	NorthStar Genetics	10.0	70.2	78	78.6	18.7	37.2	8170	1012
2150	AS1017RR EDF	RR2	PRIDE Seeds	10.5	66.8	78	75.5	21.7	41.5	8526	1016
2200	PS 2320RR	RR2	DLF Pickseed	11.4	65.1	74	77.0	20.2	36.2	8087	1122
2200	PV 61177SRR	RR2	Proven Seed	10.6	68.9	77	76.2	21.0	40.0	8809	1038
2200	PV 61377RIB	VT2P	Proven Seed	10.2	65.9	75	77.2	20.0	37.8	8087	1009
2200	MS 7420R	RR2	Maizex Seeds	11.1	64.1	74	75.9	21.3	39.7	7373	1084
2250	TH4126 RR	RR2	Thunder Seed	10.8	68.2	76	74.7	22.4	41.0	8651	1031
2250	X21080A/VT2P	VT2P/RIB	CROPLAN	9.5	67.1	75	71.1	25.7	45.9	6178	870
2250	PV 61479RIB	VT2P	Proven Seed	9.6	68.2	75	78.3	19.1	35.1	8379	963
2250	MS 8022R	RR2	Maizex Seeds	12.0	69.4	75	76.9	20.4	36.9	9119	1186
2275	PS 2333RR	RR2	DLF Pickseed	9.2	68.6	79	77.3	20.0	39.2	7226	915
2275	DKC29-89RIB	VT2P	DEKALB	9.3	67.3	77	76.7	20.5	39.4	6125	912
2275	A4514RR	RR2	PRIDE Seeds	9.6	68.5	77	72.6	24.4	43.3	7533	898
2300	PS 2420RR	RR2	DLF Pickseed	10.3	68.0	75	75.4	21.7	40.6	6992	993
2300	TH6180 VT2P	VT2P	Thunder Seed	11.8	66.5	77	74	23.0	40.5	9667	1122
2300	CP2123VT2P/RIB	VT2P/RIB	CROPLAN	10.5	66.4	76	75.9	21.3	37.7	7902	1019
2300	A4705HMRR	RR2	PRIDE Seeds	9.9	67.4	73	75.6	21.6	39.1	6496	964
2300	HZ 1710	Agrisure 3010	Horizon Seeds	10.5	71.1	79	77.1	20.1	38.5	8547	1040
2350	932S	RR2	NorthStar Genetics	11.8	72.8	84	74	23.1	42.2	7450	1119
2350	HZ 675	Agrisure 3010	Horizon Seeds	10.5	71.3	79	76.4	20.8	37.0	9312	1026
2375	HZ 1912	Agrisure 3120 EZR	Horizon Seeds	8.3	69.8	79	77.6	19.7	37.9	6658	827
2450	HZ 2220	Agrisure 3010	Horizon Seeds	11.6	69.1	80	77.9	19.5	36.6	9562	1160
			LSD (p = 0.05)	1.3	2.8	3					
			Sig. diff.	Yes	Yes	Yes					