SDSU Extension

agronomy

South Dakota Agricultural Experiment Station Research at SDSU

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SOUTH DAKOTA STATE UNIVERSITY®
AGRONOMY, HORTICULTURE & PLANT SCIENCE DEPARTMENT

2019 South Dakota Corn Silage Trial Results South Shore

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Location:	8.5 miles west of South Shore (57263) in Codington County, SD GPS: 45.106938°, -97.098725°
Cooperator:	SDSU Northeast Research Farm - Allen Heuer, manager
Soil Type:	Kranzburg-Brookings silty clay loams, 0-2% slope
Fertilizer:	80 lb/acre 30-10-10 starter + 200-0-60 broadcast preplant
Previous crop:	Soybeans
Tillage:	Conventional
Row spacing:	30 inches
Seeding Rate:	32,000/acre
Herbicide:	Pre: 1.5 qt/acre Harness Xtra (acetochlor + atrazine) Post: 1 qt Roundup (glyphosate)
Date seeded:	5/14/19
Date harvested:	9/26/19

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Table 1. Corn silage hybrid variety performance results (average of 3 replications) at South Shore, SD (green chop samples).

Hybrid Information			Agonomic & Nutritional Performance											
Brand	Hybrid	Maturity Rating	Harvest Population[1]	Harvested[2] (T/A)	DM[3] (%)	DM[4] (T/A)	CP[5] (%DM)	Starch[6] (%DM)	Lignin[7] (%DM)	WSC[8] (%DM)	NDF[9] (%DM)	NDFD240[10] (%NDF)	Milk2006[11] (lbs/T DM)	ISU Beef[12] (lbs/T DM)
Check	CHECK	100	32400	34.9	32.1	11.2	7.8	35.3	3.2	7.8	39.1	69.3	3544	251
Dekalb	DKC47-55RIB	97	31500	31.7	33.4	10.6	7.3	35.3	3.4	6.8	40.3	70.5	3525	249
Dekalb	DKC52-35RIB	102	31800	37.2	30.9	11.5	7.7	33.2	3.5	7.5	41.0	69.4	3442	238
Dekalb	DKC49-45RIB	99	32100	33.2	32.5	10.8	7.8	36.1	3.5	6.3	40.1	68.4	3449	233
Dekalb	DKC51-38RIB	101	32700	32.5	32.3	10.5	7.6	32.5	3.7	6.4	43.6	69.5	3409	233
Master's Choice	MCT4933	99	26300	32.9	38.0	12.5	8.4	34.0	3.4	7.3	39.3	68.2	3323	234
Master's Choice	MCT5375	103	29200	34.1	30.9	10.5	8.1	34.4	3.6	6.3	40.8	68.6	3382	227
Master's Choice	MCT5454	104	29800	33.8	29.2	9.8	8.1	31.4	3.8	7.6	42.1	65.7	3255	204
Master's Choice	MCT4572	95	31500	34.4	31.0	10.7	8.6	30.2	3.8	7.1	43.1	66.5	3239	204
Peterson Farms Seed	2MD95	95	28000	29.7	33.1	9.9	7.8	31.7	3.8	7.0	43.6	68.8	3394	233
Peterson Farms Seed	89C99	99	31900	34.8	30.5	10.6	7.8	33.9	3.5	7.4	41.1	67.6	3388	226
Peterson Farms Seed	2MD02	102	29500	32.3	29.1	9.4	8.3	32.7	3.7	6.1	42.8	68.3	3308	218
Proseed	STS 104 GT	104	31900	33.7	32.0	10.8	7.8	33.9	3.3	7.8	40.0	70.7	3514	248
Proseed	STS 105 GT	105	30300	30.6	33.2	10.1	8.1	34.8	3.5	7.4	39.2	68.2	3472	239
Proseed	STS 103 RR	103	28600	35.3	32.5	11.5	7.9	31.0	3.8	7.2	43.5	68.1	3373	227
Thunder Seed	6902 VT2P	102	29600	36.7	32.4	11.8	7.5	34.8	3.2	7.7	40.5	70.2	3511	246
Thunder Seed	6004 VT2P	104	31200	31.4	34.0	10.7	8.1	38.9	3.1	6.5	36.0	67.5	3538	243
Thunder Seed	4900 HDRR	100	31500	29.1	33.3	9.6	8.3	31.3	3.6	8.3	41.6	69.6	3417	238
Thunder Seed	EXHD 19-01	99	30200	33.9	30.0	10.1	7.9	28.0	4.0	8.6	45.4	66.7	3231	207
	Trial Average		30500	33.3	32.1	10.7	7.9	33.3	3.6	7.2	41.2	68.5	3406	232
	LSD(0.05)†		2800	5.1	4.3	2.0	0.6	7.7	0.7	1.8	6.3	2.8	291	38

[1-12] Performance statistics are explained on page 3.
† Value required (≥LSD) to determine if varieties are significantly different from one another.

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[1] Plant population at harvest (plants/acre).

[2] Tons per acre harvested on an “As Is” or wet basis.

[3] Dry matter (DM) percentage of harvested corn silage.

[4] Tons per acre of dry matter (DM).

[5] Crude protein (CP), % of dry matter.

[6] Starch, % of dry matter.

[7] Lignin, % of dry matter.

[8] Water Soluble Carbohydrates (WSC), % of dry matter.

[9] Neutral detergent fiber (NDF), % of dry matter.

[10] 240 hour digestibility of NDF (NDF240) is the amount of NDF digested in 240 hours as a percentage of NDF.

[11] Milk2006 is the prediction of the amount of milk produced per ton of corn silage dry matter.

[12] ISU Beef is the prediction of the amount of beef produced per ton of corn silage dry matter.

Procedure:
Corn was harvested for silage by hand cutting at 6 – 8 inches from the ground.
Material was weighed.
Material was chopped through a chipper/shredder.
Green chop samples were frozen.
Samples submitted to a commercial laboratory for nutrient analyses using calibrated NIR instrumentation.

For Further Information:

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