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

2019 South Dakota Corn Silage Trial Results Volga

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Location:	1.5 miles south of Volga (57101) in Brookings County, SD GPS: 44.298742°, -96.920945°
Cooperator:	SDSU Volga Research Farm - Jack Ingemansen, manager
Soil Type:	Brandt silty clay loam, 0-2% slope
Fertilizer:	80 lb/acre 30-10-10 starter + 180-40-40-7S preplant
Previous crop:	Soybeans
Tillage:	Conventional
Row spacing:	30 inches
Seeding Rate:	32,000/acre
Herbicide:	Pre: 1.8 pt Staunch II (acetochlor + flumetsulam + clopyralid) Post: 1 pt Buctril (bromoxynil)
Date seeded:	5/17/19
Date harvested:	9/25/19

Table 1. Corn silage hybrid variety performance results (average of 3 replications) at Volga, 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	30100	28.7	36.4	10.5	8.0	33.3	3.6	6.2	41.4	70.5	3408	232
Dekalb	DKC51-38RIB	101	29500	30.3	35.7	10.8	8.0	38.0	3.0	6.3	37.3	71.6	3670	268
Dekalb	DKC52-35RIB	102	30900	31.1	37.9	11.8	8.0	39.1	2.8	8.4	34.7	71.3	3691	280
Dekalb	DKC56-45RIB	106	19600	29.9	35.9	10.7	7.6	37.0	3.1	7.0	38.0	71.7	3628	266
Legend Seeds	LNG 9800RR	100	24000	31.1	33.6	10.4	8.9	30.8	3.4	9.0	40.0	69.4	3466	243
Legend Seeds	LNG 9895RR	95	22400	27.4	37.8	10.4	8.9	35.6	2.9	7.6	36.4	72.1	3564	266
Legend Seeds	LR 97S05 GENSSRIB	105	22100	30.4	33.9	10.4	8.3	32.5	3.0	10.0	37.9	72.2	3587	269
Legend Seeds	LR 98S08 GENSSRIB	108	22500	32.9	34.2	11.3	8.3	25.6	3.8	9.9	44.7	70.8	3242	227
Master's Choice	MCT4572	95	25300	25.9	38.4	9.9	8.4	40.9	2.7	6.5	33.0	71.8	3663	278
Master's Choice	MCT4933	99	24100	28.4	34.9	9.9	8.7	34.6	3.6	5.5	39.4	68.8	3394	229
Master's Choice	MCT5375	103	21900	29.1	33.7	9.8	8.5	35.4	3.3	6.7	37.8	69.3	3491	241
Master's Choice	MCT5454	104	26000	27.9	35.1	9.8	8.1	35.9	3.1	8.7	36.8	70.2	3595	258
Master's Choice	MCT5663	106	22900	32.8	31.6	10.4	8.5	38.6	2.8	7.5	34.6	71.2	3720	272
Peterson Farms Seed	2MD02	102	22100	29.6	32.6	9.7	8.2	36.8	3.1	7.2	36.5	70.9	3632	261
Peterson Farms Seed	2MD95	95	17400	29.9	37.3	11.2	8.2	39.6	2.9	7.3	34.8	72.1	3720	283
Peterson Farms Seed	89C99	99	29300	29.1	36.2	10.5	9.2	34.1	3.5	5.0	39.1	70.3	3403	239
Proseed	STS 103 RR	103	15800	27.1	36.2	9.8	8.3	33.5	3.1	8.8	38.2	70.9	3600	263
Proseed	STS 104 GT	104	18400	30.6	33.8	10.3	8.2	38.0	2.9	7.6	35.3	70.7	3704	270
Proseed	STS 105 GT	105	20000	28.2	35.1	9.9	8.3	37.6	3.0	7.4	35.7	71.5	3614	265
Trial Average			23400	29.5	35.3	10.4	8.3	35.6	3.1	7.5	37.5	70.9	3568	259
LSD(0.05)†			3000	5.8	3.5	2.2	0.9	8.1	0.9	3.1	6.7	3.5	331	47

¹⁻¹² Performance statistics are explained on page 3.

† Value required (\geq LSD) to determine if varieties are significantly different from one another.

- 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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