

## Trial Objective

- In order to get the most out of corn silage, the corn product should produce high tonnage with favorable silage quality characteristics.
- This study was conducted to determine the silage quality characteristics of various corn products.

## Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Gothenburg, NE	Hord silt loam	Soybean	Strip-till	04/28/18	09/2018	270	34K

- The study was set up as a randomized complete block with three replications.
- Twenty corn products were evaluated.
- Corn was sprinkler irrigated and weeds were controlled as needed. No fungicide or insecticide was applied.
- Silage quality was sampled for each corn product between ½ to ¾ milk line. Sampling date varied by relative maturity, but all sampling occurred in the first two weeks of September.
- Corn products were hand-harvested one inch above the soil surface to provide a representative sample and were then chopped with a wood chipper.
- A subsample of the freshly-chopped material was collected and sent to Dairyland Laboratories Inc. for silage quality analysis.

## Understanding the Results

- Corn products did vary in silage quality as there were significant differences in all characteristics tested as reported in Table 1.
- Producers should work with their local seed sales team to identify how their branded corn products performed in this study.

## What Does This Mean for Your Farm?

- Silage quality characteristics varied across the twenty corn products tested.
- This silage quality test should help farmers choose corn products that provide more value to their operation.



**Figure 1. Corn product 109RM-A (left), 105RM (center), and 114RM-B (right) at silage harvest.**

# Corn Product Silage Quality

Table 1. Silage quality characteristics of the 20 corn products.

Corn Product	Kernel Milk Line at Harvest	% DM	% Starch	%NDF	NDFD 24 hr % of NDF	NDFD 48 hr % of NDF	uNDF 24 hr % DM	uNDF 240 hr % DM	IVSD 7 hr	%ADF	% CP	TFA	Sugar	2006 % TDN	Lignin % DM	2006 NEL (Mcal/lb)	NEG (Mcal/lb)	2006 Silage Milk/Ton
109RM-A	1/2	32.43	37.35	35.70	51.58	60.67	16.88	10.46	66.91	22.01	7.14	2.27	6.93	74.3	2.86	0.74	0.51	3543.3
110RM-A	1/2	31.38	36.77	37.30	50.62	60.23	17.97	10.85	64.95	22.71	7.85	2.29	5.49	73.04	3.33	0.73	0.50	3447.0
114RM-A	1/2	29.64	35.31	41.79	47.29	59.56	21.27	11.81	62.64	25.55	8.11	2.12	3.38	70.33	3.78	0.70	0.47	3244.7
115RM-A	1/2	30.17	34.72	39.14	49.58	59.40	19.24	11.69	65.03	23.94	8.27	2.08	5.26	71.48	3.36	0.71	0.48	3329.3
97RM	3/4	37.61	39.73	38.36	51.74	61.41	18.11	10.72	61.77	23.13	7.56	2.38	3.71	72.4	3.06	0.72	0.51	3388.0
98RM	3/4	36.09	38.09	37.42	49.78	60.15	18.33	10.86	64.93	22.79	7.64	2.26	5.56	73.08	3.2	0.73	0.51	3454.7
102RM	1/2	34.41	34.52	39.61	48.91	59.55	19.7	11.58	65.28	24.28	7.56	2.08	5.25	70.95	3.46	0.70	0.47	3287.7
105RM	1/2	34.52	38.27	36.56	51.37	61.04	17.36	10.36	64.00	21.92	8.01	2.40	5.15	73.4	3.2	0.73	0.51	3471.0
109RM-B	1/2	30.37	33.44	39.66	50.35	60.23	19.19	11.57	65.02	24.32	8.22	2.13	5.56	71.41	3.41	0.71	0.48	3316.7
110RM-B	1/2	29.65	35.49	40.78	48.45	59.33	20.45	11.94	64.97	25.04	7.73	2.04	4.67	71.39	3.37	0.71	0.48	3327.7
113RM	1/2	33.18	35.63	37.90	50.89	60.47	18.12	10.96	63.63	23.12	8.73	2.18	5.03	72.25	3.35	0.72	0.49	3379.7
115RM-B	1/2	31.00	37.67	36.86	48.23	58.88	18.64	10.96	65.16	22.57	7.67	2.35	5.21	72.78	3.19	0.73	0.50	3441.3
114RM-B	1/2	31.57	40.69	35.32	48.70	58.94	17.71	10.46	65.72	21.90	7.52	2.33	5.05	73.99	3.08	0.74	0.51	3535.9
118RM	1/2	30.57	34.17	38.57	50.43	59.90	18.59	11.42	66.32	23.60	7.59	2.19	6.32	72.34	3.32	0.72	0.49	3391.3
104RM	3/4	35.57	38.01	36.64	52.67	62.83	16.94	9.81	63.76	22.33	8.01	2.33	4.94	73.11	3.09	0.72	0.51	3435.7
108RM COMP	1/2	29.34	37.67	35.74	52.46	60.57	16.59	10.68	67.15	22.44	8.15	2.14	4.95	73.52	2.96	0.73	0.51	3476.0
113RM COMP	1/2	29.96	37.47	37.86	49.22	59.81	18.75	11.06	64.64	23.92	8.28	2.22	4.06	71.89	3.11	0.71	0.49	3362.7
117RM COMP	1/2	31.38	33.24	38.82	49.25	59.64	19.17	11.42	65.53	24.67	8.03	1.98	5.76	70.83	3.45	0.70	0.48	3275.3
114RM COMP	1/2	30.32	31.96	40.74	62.51	71.04	14.92	8.20	63.96	24.13	8.06	2.05	5.49	75.15	2.33	0.72	0.52	3509.4
109RM COMP	1/2	32.23	32.71	39.26	57.43	66.28	16.29	9.60	64.55	23.96	7.88	2.09	6.04	73.51	2.86	0.72	0.50	3427.3
LSD (0.1)		2.75	5.30	3.93	3.75	2.89	2.16	1.20	1.83	2.44	0.50	0.21	1.22	2.22	0.38	0.03	0.03	173.2

DM – Dry Matter; NDF – Neutral Detergent Fiber; NDFD - incremented measurement of NDF; uNDF - undigested NDF residue; IVSD 7 hr - in vitro starch digestibility after 7 hrs; ADF – Acid Detergent Fiber; CP – Crude Protein; TFA – Total Fat; TDN – Total Digestible Nutrients; NEL – Net Energy for Lactation; NEG – Net Energy for Gain

## Legal Statements

The information discussed in this report is from a single site non-replicated demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

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