

Corn Silage Yields in Central Oregon

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Abstract

Due to interest in establishing dairy locations in central Oregon, a corn silage evaluation trial was initiated to determine if corn silage could be productively grown in the area. Average yields were in the neighborhood of 30 tons per acre for seven varieties tested in experiment station and on-farm trials. Yields at the experiment station averaged 29 tons per acre. At the on-farm site, yields averaged about 36 tons per acre in the trial plots and about 27 tons per acre across the whole field. Except for a little warmer than usual temperatures in late September, this growing season provided a good test for corn growth in central Oregon.

Introduction

Corn is a tropical grass, native to Central and South America. Central Oregon presents a relatively cool environment for growing this crop, and there was some doubt about how well it would perform in the area. With the help of several companies, a number of different of corn varieties varying in maturity were tested to determine optimum days to maturity as well as assessing yield potentials for the area. The objective of this study was to determine if corn varieties could be profitably grown for silage. The cool spring and typical summer temperatures from this last season provided a good test for the crop, and it still performed well, so OSU researchers and farmers involved with the study were pleased with the outcome.

Materials and Methods

Seven varieties ranging in maturity from 80 to 115 days were planted in 6-row strip plots at the Madras experiment station on June 1 and on May 29 at Ed Hemenway's farm south of Gateway near Mud Creek. The varieties tested were:

<u>Variety</u>	<u>Maturity</u>	<u>Company</u>
Cargil 2610	89	Cargil Seeds
Cargil HS60A	115	Cargil Seeds
Croplan 156	80	Cenex/Land O'Lakes
Croplan 357	94	Cenex/Land O'Lakes
Croplan TMF2202	90	Cenex/Land O'Lakes
Germain BH460	100	Germain Seeds
Germain HT4310	100	Germain Seeds

Corn varieties were planted at both locations using a John Deere 7000 planter. Plots consisted of six rows with 30-inch row spacing and were seeded at 28,000 seeds per acre running for a length of 300 feet. A solid set sprinkler system was used at Madras for irrigation and a center pivot

Table 2. Performance of corn silage varieties planted in a commercial field near Gateway on May 29 and at COARC, Madras, OR on June 1. Harvest date for Gateway was September 14 and for COARC was September 28. Quality was done using near-infrared spectrometry at a commercial lab (Agri-King, Inc. Fulton, IL).

Variety	Quality										
	Oil	Lignin	Calcium	Phosphorus	Magnesium	Potassium	Sulfur	Sodium	Chlorine	Net Energy Maintenance	Net Energy Gain
Gateway, OR											
Croplan 357	1.35	2.9	0.18	0.21	0.20	1.55	0.11	0.04	0.19	0.68	0.42
Cargil 2610	1.27	2.6	0.20	0.2	0.20	1.76	0.10	0.04	0.18	0.69	0.42
Croplan TMF2202	0.96	2.8	0.21	0.23	0.24	2.23	0.15	0.04	0.30	0.66	0.40
Croplan 357	1.19	2.8	0.23	0.24	0.21	1.81	0.12	0.04	0.25	0.66	0.39
Germain BH460	0.91	3.7	0.20	0.21	0.21	2.13	0.12	0.03	0.24	0.62	0.36
Cargil HS60A	0.89	3.3	0.23	0.17	0.24	2.26	0.11	0.03	0.34	0.62	0.36
Germain HT4310	0.69	3.7	0.18	0.19	0.20	2.19	0.12	0.03	0.25	0.60	0.34
Mean	1.04	3.10	0.20	0.21	0.21	1.99	0.12	0.04	0.25	0.65	0.38
Madras, OR											
Croplan 156	1.64	3.95	0.26	0.37	0.27	1.99	0.13	0.04	0.29	0.65	0.39
Cargil 2610	1.19	3.57	0.30	0.36	0.25	2.25	0.11	0.04	0.25	0.64	0.37
Croplan TMF2202	1.67	2.71	0.21	0.25	0.23	2.66	0.13	0.04	0.32	0.64	0.38
Croplan 357	1.12	4.34	0.25	0.34	0.26	2.23	0.12	0.04	0.3	0.59	0.33
Germain BH460	0.84	4.03	0.24	0.30	0.26	2.16	0.13	0.04	0.3	0.59	0.33
Cargil HS60A	0.76	4.88	0.30	0.28	0.29	2.62	0.11	0.03	0.41	0.56	0.30
Germain HT4310	0.6	5.75	0.25	0.29	0.28	3.15	0.15	0.04	0.35	0.56	0.30
Mean	1.12	4.18	0.26	0.31	0.26	2.44	0.13	0.04	0.32	0.60	0.34