



2014 Long Season Corn Silage Variety Trial



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2014 LONG SEASON CORN SILAGE VARIETY TRIAL
Dr. Heather Darby, University of Vermont Extension

TA583-22	T.A. Seeds	108	Genuity VT2Pro, RIB Complete
TMF2H699	Mycogen	110	SSX / LL / RR2
TMF2H706	Mycogen	109	SSX / LL / RR2
TMF2L538	Mycogen	101	SSX / LL / RR2
TMF2Q413	Mycogen	96	

(measured in Mcal per pound of silage), up to a certain point. High grain corn silage can have average starch values exceeding 40%, although levels greater than 30% are not considered to affect energy content, and might in fact have a negative impact on digestion. Starch levels vary from field to field, depending on growing conditions and variety.

The silage performance indices of milk per acre and milk per ton were calculated using a model derived from the spreadsheet entitled 6, developed by researchers at the University of Wisconsin. Milk per ton measures the pounds of milk that could be produced from a ton of silage. This value is generated by approximating a balanced ration meeting animal energy, protein, and fiber needs based on silage quality. The value is based on a standard cow weight and level of milk production. Milk per acre is calculated by multiplying the milk per ton value by silage dry matter yield. Therefore, milk per ton is an overall indicator of forage

RESULTS

Weather data was recorded with a Davis Instrument Vantage PRO2 weather station, equipped with a WeatherLink data logger at Borderview Research Farm in Alburgh, VT (Table 4). From May-Oct. there were an accumulated 2,310 GDDs, at a base temperature of 50° F. May and June were extremely wet, delaying planting for many growers. June had 2.40

Table 5. Harvest data for 45 long season corn varieties, 2014

TA583-22	108	23522	0.00*	41.2	27.9
TMF2H699	110	30492	5.60	37.3	34.3*
TMF2H706	109	29234	0.00*	35.0	30.6
TMF2L538	101	25749	0.00*	44.9	26.1
TMF2Q413	96	23716	1.28*	46.0	24.2
TMF2R447	98	21877	3.28*	43.2	18.1
TMF2R720	110	34461*	0.30*	38.1	36.6*
TMF2R737	112	24878	1.37*	34.4	28.9
LSD (0.10)		4602	4.40	3.53	5.65
Trial mean		28140	1.30	42.6	25.6

) 2.024 542.83 T Tt3J5.77tv72.024 542.83 T Tnats nETf 70iv1ts 42.4808 53J5.77tm202.024 542.83 T/F4Tm0 g0 G[)T306 53J5.77t<00B57<0037>

Table 6. Forage quality data for 45 long season corn varieties, 2014, Alburgh, VT.

Variety	<i>Forage quality characteristics</i>					Milk
	CP	ADF	NDF	NDFD	NSC	

TMF2H706	7.47*	28.2	47.3	45.2*	34.1	70.0	0.69	3194	34370
TMF2L538	6.33	26.0	45.1	44.4*	41.4	72.1	0.71	3363	31132
TMF2Q413	7.01	24.8	45.5	43.7	39.9	70.2	0.69	3218	26768
TMF2R447	8.17*	24.3	44.1	45.0*	38.2	70.6	0.69	3245	20436
TMF2R720	7.76*	25.8	44.5	43.8	34.7	71.5	0.71	3319	42435*
TMF2R737	8.08*	26.8	45.2	44.7*	35.5	71.1	0.70	3283	33055
LSD (0.10)	0.90	2.77	4.93	1.33	5.42	2.63	0.03	204	6535
Trial mean	7.11	25.4	44.8	43.9	39.0	71.1	0.70	3287	29457

* Treatments that did not perform significantly lower ($p=0.10$) than top-performing treatment in a particular column. Treatments shown in **bold** are top-performing in a particular column.

Milk per ton and milk per acre can indicate the yield and quality of corn silage varieties (Figure 2). Milk per ton, an indicator of corn silage quality, was significantly highest in the - (3603 lbs per ton); this was not statistically different from 10 other varieties. Milk per acre, which takes into consideration the dry matter yield of each variety, was statistically different by variety. The average milk per acre was 29,457 lbs ac⁻¹ TMF2R720 hest lbs per acre at 42,435. Other top performing varieties include; DKC61-88 (38,248 lbs ac⁻¹) and TMF2H699 (37,571 lbs ac⁻¹).

