

Hybrid Test Reports

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Franklin County

The late season hybrids at the drought stressed Franklin County site had a very wide range in dry matter concentrations (Table 8) and averaged 34.3% DM. As is typical of drought stunted sites, the yields were variable among the replications and this resulted in a high CV for yield and no significant differences among hybrids for yield. Forage quality differences were significant for all variables measured. On the average, this site has relatively high fiber levels, low starch, and low NEI and low Milk ton ratings compared to the other sites.

Conclusions

This test represents a first effort at gaining a better understanding of hybrid effects on silage yield and forage quality. While the dry weather limited our ability to combine data from three similar tests, we did learn much from this study. Considerable hybrid differences exist within each of the 5 day relative maturity groups. Some hybrids were more consistent in yield and quality than others, why this occurs is uncertain. Also, we learned that frequently many of the forage quality traits were more consistent than yield. These will all be important for future work in this area.

Using this Data

There are many opinions on how to interpret corn silage yield and forage quality information for use on dairy operations. Generally some of the most important variables to consider are yield, NDF, starch, and NDFD. The Milk 2000 spreadsheet integrates the effects of these and estimates Milk/ton and Milk/acre. Some have found these to be a useful guide for hybrid selection. The optimum combination of yield and these variables will depend on farm specific agronomic and dairy nutrition considerations.

Acknowledgement

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Prepared by Gregory W. Roth¹, John E. Allen², Wayne R. Haas¹, John Shaffer¹, and W. Scott Harkness¹
¹Department of Crop and Soil Sciences, ²Pesticide Education Program and Department of Plant Pathology

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Table 1 Performance of the early (107 to 111 day RM) silage hybrids combined over the Centre County and Lancaster County locations in 2002

Brand/Hybrid	Dry Matter		Silage Yield*		CP	NDF	Starch	Sugar	NFC	Ash	Fat	Lignin	NEI	IVTD	NDFD	Milk/ton		Milk/acre	
	%	Tons/acre	%	Tons/acre												%	lbs/ton	lbs/acre	
Mycogen TMF108	40.1	15.8	8.0	42.7	33.8	8.1	44.0	3.5	2.7	3.6	0.72	78.7	50.8	3235	17799				
Dekalb DKC59-08	38.6	16.7	7.9	39.0	37.3	8.4	50.1	3.6	2.9	2.8	0.78	78.7	44.8	3158	18758				
Dekalb DKC60-09	36.4	16.5	8.2	40.7	34.0	10.0	46.0	3.8	2.6	3.4	0.74	80.5	51.8	3324	19299				
Pioneer 34M95	36.2	16.0	7.8	44.0	31.5	10.2	45.8	3.6	2.6	3.4	0.74	84.1	64.2	3747	20473				
Pioneer 34M94	35.6	15.5	7.7	45.3	30.3	10.6	42.5	3.5	2.7	3.7	0.71	80.9	58.4	3490	19148				
Chemgro 7253 RR	35.5	15.9	8.0	42.8	31.5	11.0	44.9	3.7	2.6	3.7	0.72	81.8	57.4	3480	19921				
Pioneer 34B23	34.9	17.2	8.0	44.5	29.2	12.0	42.3	3.9	2.8	3.9	0.70	79.9	54.7	3385	19553				
NK Brand N70-D5	34.7	15.8	8.1	41.0	33.1	12.0	46.1	3.7	2.5	3.5	0.73	81.5	54.6	3468	19232				
Wolf River Valley 2114L	34.7	16.1	8.5	45.4	28.1	12.7	39.5	3.7	2.6	4.0	0.68	79.1	54.2	3283	17945				
Dekalb DKC58-78	34.5	14.9	8.0	41.0	33.9	9.0	46.5	4.2	2.6	3.1	0.74	80.5	52.4	3362	18475				
Pioneer 34B24	34.3	16.6	7.9	42.2	30.7	13.4	44.7	3.8	2.7	3.8	0.72	78.4	48.5	3168	18291				
Agway AG6001	34.1	16.4	8.5	42.6	31.8	10.3	44.7	4.0	2.7	3.7	0.73	80.2	53.4	3391	19472				
Agway AG6191	33.6	15.0	8.2	43.9	30.3	10.7	43.0	4.1	2.6	3.7	0.71	78.4	51.5	3221	18641				
Hyltest HT 7706	32.9	15.1	8.0	43.0	31.6	11.0	45.2	3.8	2.6	3.6	0.73	79.5	51.7	3247	17396				
Dekalb DKC61-25	32.8	15.3	8.0	43.1	29.8	12.9	43.7	3.9	2.5	3.7	0.71	78.6	50.9	3211	17247				
Golden Harvest H-9233	31.2	14.5	7.8	42.8	31.7	10.7	45.4	4.1	2.5	3.5	0.73	79.0	50.2	3296	17139				
Mean	35.0	15.8	8.0	42.7	31.8	10.8	44.7	3.8	2.6	3.5	0.72	80.0	53.1	3348	18549				
LSD (0.10)	1.2	NS	NS	NS	NS	1.0	NS	NS	NS	NS	0.06	2.3	3.9	187	NS	NS			
Hybrid x Location	Sig	NS	Sig	Sig	Sig	Sig	Sig	Sig	Sig	Sig	NS	NS	NS	NS	NS	NS			
CV (%)	4.4	11.4	4.6	8.8	11.4	12.0	8.2	8.3	8.1	9.6	13.9	3.5	9.2	6.9	13.9	NS			

*Silage yields are expressed on a 35%DM basis- all other parameters are expressed on a dry matter basis; CP= Crude Protein, NDF= Neutral Detergent Fiber, NFC=Non-fiber Carbohydrates, NEI= Net Energy for lactation, IVTD= In Vitro True Digestibility, and NDFD=Neutral Detergent Fiber Digestibility

Table 2 Performance of the early (107 to 111 day RM) silage hybrids at the Lancaster County location in 2002

Brand/Hybrid	Dry Matter		Silage Yield*		CP	NDF	Starch	Sugar	NFC	Ash	Fat	Lignin	NEI	IVTD	NDFD	Milk/ton		Milk/acre	
	%	Tons/acre	%	Tons/acre												%	lbs/ton	lbs/acre	
Mycogen TMF108	47.7	17.4	8.2	43.0	35.0	5.6	42.6	3.1	2.7	3.4	0.72	78.2	49.4	3082	18749				
Dekalb DKC59-08	46.0	17.4	8.6	38.2	38.8	5.5	52.3	3.2	3.0	2.3	0.81	80.5	47.8	3189	19979				
Dekalb DKC60-09	43.5	16.8	8.7	38.6	37.8	7.4	47.5	3.2	2.8	3.2	0.75	80.6	49.7	3279	19565				
Chemgro 7253 RR	42.3	14.9	8.0	43.9	32.5	8.1	44.0	3.5	2.7	3.5	0.72	79.3	53.4	3253	18313				
Pioneer 34M95	42.2	17.1	8.0	48.3	28.8	8.0	43.2	3.8	2.5	3.4	0.72	82.7	65.4	3588	20602				
Pioneer 34M94	41.6	15.2	8.0	46.4	29.7	8.6	40.6	3.8	2.5	3.5	0.69	80.8	58.9	3413	18673				
Dekalb DKC58-78	40.8	16.4	8.8	39.5	35.4	7.8	48.3	3.6	2.7	3.0	0.77	81.8	53.6	3439	21808				
NK Brand N70-D5	40.3	16.7	8.8	40.7	34.7	9.8	45.4	3.4	2.4	3.6	0.72	83.1	58.3	3591	20716				
Agway AG6001	40.1	15.8	9.3	44.7	30.6	7.8	41.9	3.8	2.7	3.4	0.72	79.2	53.7	3298	18230				
Pioneer 34B23	39.9	18.5	8.7	46.0	28.0	10.5	39.3	4.1	2.8	4.1	0.68	79.6	56.0	3349	20015				
Pioneer 34B24	39.8	18.4	8.6	43.6	29.8	11.8	42.0	3.8	3.1	3.8	0.72	78.3	50.2	3217	20356				
Agway AG6191	39.3	15.6	9.1	40.7	35.5	8.3	45.7	3.7	2.7	3.1	0.75	79.6	50.1	3316	17505				
Wolf River Valley 2114L	39.0	15.6	8.9	42.2	33.3	10.0	39.8	3.2	2.9	4.0	0.69	80.5	54.2	3447	17813				
Dekalb DKC61-25	38.6	16.5	8.7	42.2	32.5	10.4	43.2	3.8	2.5	3.5	0.71	80.1	52.9	3375	19438				
Hyltest HT 7706	37.7	16.6	8.9	45.1	30.6	8.1	43.2	3.6	2.6	3.7	0.72	78.7	54.2	3381	18904				
Golden Harvest H-9233	33.9	14.3	8.5	42.9	30.6	11.6	48.1	3.8	2.5	3.8	0.73	77.9	48.4	3235	16884				
Mean	40.8	16.4	8.6	42.9	32.7	8.7	44.1	3.6	2.7	3.5	0.73	80.1	53.5	3339	19197				
LSD (0.10)	2.2	NS	0.5	NS	4.9	1.6	5.0	0.3	0.2	0.4	0.05	NS	6.1	NS	NS	NS			
CV (%)	5.1	13.0	5.4	11.3	14.1	17.2	10.6	7.7	8.5	12.0	5.8	4.4	10.6	8.7	16.0	NS			

*Silage yields are expressed on a 35%DM basis- all other parameters are expressed on a dry matter basis; CP= Crude Protein, NDF= Neutral Detergent Fiber, NFC=Non-fiber Carbohydrates, NEI= Net Energy for lactation, IVTD= In Vitro True Digestibility, and NDFD=Neutral Detergent Fiber Digestibility

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Corn Production Down

Greg Roth
Associate Professor
Agronomy
Penn State

Corn production in Pennsylvania was estimated at 68 bushels/acre last year, according to the Nov. 1 USDA crop Report. Total production was estimated at 64.6 million bushels, down from 97 million in 2001 and 137 million in 2000.

Maryland production was estimated at 32.3 million bushels, down from 55.8 million in 2001 and 62.7 million in 2000. Compared to 2000, we produced 102.8 million bushels less in 2002 in Pennsylvania and Maryland than in 2000.

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