UK COOPERATIVE EXTENSION SERVICE
University of Kentucky – College of Agriculture

LEXINGTON, KY 40546

Kentucky Silage Corn Hybrids Performance: Lincoln County, 2003

Hybrid	Moisture (%)	Yield Fresh Wt (tons/A)	Yield Dry Wt (tons/A)	TDN	NE lact	CP	value $ per ton	value $ per acre
Syngenta NX8201	71.1	**26.8**	7.7	67.5	0.68	5.1	34.54	926.00
Garst 8118RR	73.3	**26.1**	7.0	68.1	0.69	5.2	32.39	845.00
Garst 8230	71.1	**25.8**	7.5	**70.3**	0.73	**6.0**	37.65	971.00
Southern States SS900 Bt	74.1	**25.8**	6.7	68.3	0.70	4.6	31.10	802.00
Caverndale Farms Exp RR	70.5	**25.1**	7.4	**70.6**	**0.74**	**5.8**	38.58	968.00
Mycogen F2F797	77.8	**25.1**	5.6	68.5	0.70	5.4	27.43	688.00
Pioneer 32D99	71.0	**24.4**	7.1	68.4	0.70	**5.8**	36.33	886.00
Caverndale Farms CF940	71.0	**23.8**	6.9	**70.5**	**0.74**	**5.7**	37.80	900.00
Syngenta N91-R9	75.9	**23.8**	5.7	66.3	0.66	4.4	27.41	652.00
Exegen 213 ND	71.2	**23.7**	6.8	69.7	0.72	**5.6**	36.62	868.00
Exegen ES112	70.7	**23.5**	6.9	**70.1**	0.73	5.5	37.53	882.00
DeKalb 69-71	73.3	**23.3**	6.2	67.3	0.68	5.1	31.91	744.00
Garst ND113 RR	75.2	**23.1**	5.7	67.4	0.68	4.7	29.21	675.00
Pioneer 31A13	72.0	**22.2**	6.2	68.5	0.70	**5.8**	35.08	779.00
Purple Ribbon 621 RR Bt	70.0	22.1	6.6	69.8	0.72	5.0	37.37	826.00
Southern States 842 RR	74.9	21.9	5.5	68.7	0.70	4.8	30.36	665.00
Pioneer 31Y43	73.8	20.9	5.5	66.7	0.67	4.9	30.73	642.00
DeKalb 66-00RR	68.0	20.8	6.7	**71.5**	**0.76**	**6.5**	43.70	909.00
Purple Ribbon 930 RR	67.8	20.6	6.6	**70.3**	0.73	**5.8**	41.67	858.00
Garst 8464 wx	70.0	16.7	5.0	69.7	0.72	5.3	37.76	631.00
LSD (0.1)		*4.7*		*1.7*	*0.03*	*1.0*		
CV		13.1		1.8	3.30	13.1		
study average		23.3	6.5	68.9	0.71	5.4	34.76	805.85
study high		26.8	7.7	71.5	0.76	6.5	43.70	971.00
study low		16.7	5.0	66.3	0.66	4.4	27.41	631.00

Note: The hybrids are placed in order of fresh weight yields. Numbers in bold are statistically similar to the highest number in the column. For example, even though the fresh weight yield of 26.8 tons/acre is numerically higher than the fresh weight yield of 22.2 tons/acre, the statistics indicates that the two yields are the same.

Objective:

To provide unbiased silage yields and quality performance information for seed corn hybrids commonly sold in Kentucky. Every effort has been made to conduct the test in an unbiased manner according to accepted agronomic practices.

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Explanation of terms:

- TDN-"Total Digestible Nutrients", An energy value. Energy value is the most important factor of silage for milk production and cattle gains
- NE Lact – "Net Energy for Lactation", Main energy value in dairy ration balancing
- CP – "Crude Protein", protein content.
- Value $/acre & Value $/ton is based on the University of Missouri "Feed Value" program which estimates feeding value based on expected animal nutritional performance. Feed costs were averaged from local mills. The cost of the cracked corn was $131.50/ton, and of the soybean meal 48% was $298.00/ton.
- LSD – "Least Significant Difference", Statistically determines the differences between hybrids.
- CV – Measures variability in the test. The lower the number, the better the data.

Test Location & Farm Cooperator:

Lincoln County, Eddie Reynolds Farm

Test Procedures:

Seed Corn companies submitted hybrids for testing. Twenty hybrids were planted into a randomized complete block design with three replications. All plots were harvested, weighed, chopped and sampled by Extension and/or University of Kentucky personnel. Quality analysis was conducted by Burkmann Feeds in Danville, KY. Fresh weight yields, TDN, NE lact, and CP values are based on three replications of data and were statistically analyzed. The LSD was used to determine differences among hybrid performance.

The corn was planted on May 14, 2003 at a target population of 26,600 seeds/A. Corn was harvested for silage on August 28, 2003. Standard agronomic practices were used.

Other Comments:

Fourteen out of 20 hybrids had statistically similar fresh weight yields, and eight hybrids had statistically similar levels of crude protein. Six hybrids had statistically similar levels of TDN, while only three hybrids had statistically similar values of NE-lact. Keep these values in mind when evaluating the Feed Value per Ton and per Acre. Hybrids that scored high in all yield and quality columns have greater potential to perform well next growing season.

These yield and forage quality ratings are based one field in Lincoln County, Kentucky and may not represent conditions in another location.

Research conducted by:

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Available online at: http://www.uky.edu/Ag/GrainCrops/varietytesting.htm