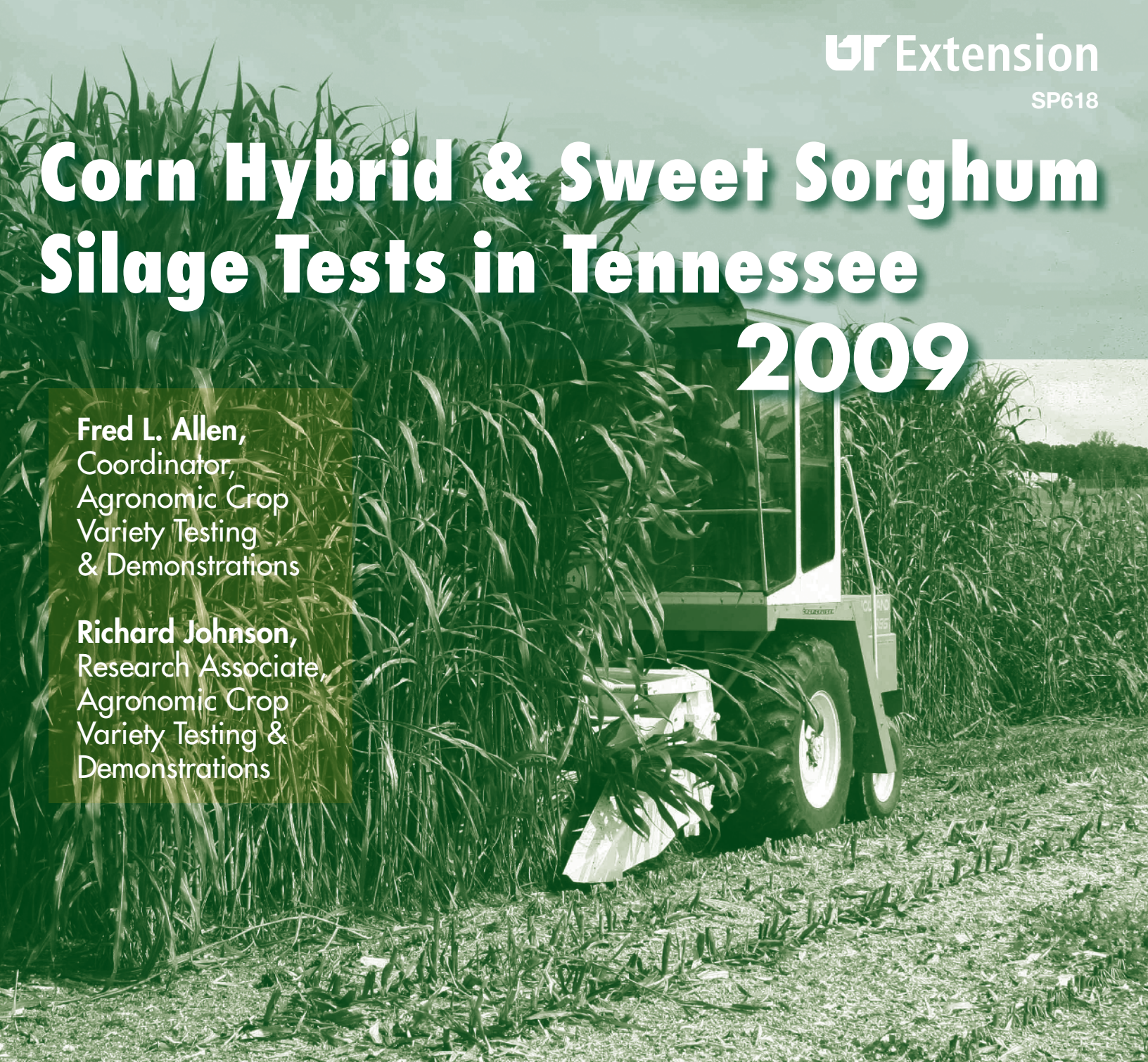


Corn Hybrid & Sweet Sorghum Silage Tests in Tennessee 2009



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Variety test results are posted on UT's Web site at
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County Standard Corn Silage Tests

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CORN & SWEET SORGHUM SILAGE YIELD TESTS

2009

Experimental Procedures

Research and Education Center Tests: Thirty corn hybrids varieties were evaluated for silage yield and quality in 2009. The tests were conducted at the East Tennessee (Knoxville), Plateau (Crossville), Dairy (Lewisburg), Highland Rim (Springfield), and Middle Tennessee (Spring Hill), Research and Education Centers (REC). The plot size at all locations consisted of two rows 30 ft. in length and replicated three times. Yields presented were adjusted to both dry weight and 65% moisture. The plant populations as well as the planting and harvesting dates are given in Table 1. Plots were harvested by commercial silage harvesters. A sub-sample from each plot of approximately 3 lbs was taken for analysis. Fresh weight and dried weight was recorded on each sample for determination of moisture at harvest. The samples were then ground and analyzed for nutrient content. Silage quality analyses were provided by the Cumberland Valley Analytical Services, Inc., Hagerstown, MD. Milk per ton and milk per acre calculations were performed using the University of Wisconsin Milk2006 program.

County Standard Tests: The County Standard Corn Silage Tests were conducted in Blount and Washington counties in Tennessee. Each hybrid was evaluated in a large strip-plot at each location, thus **each county test was considered as one replication of the test** in calculating the overall average yield and in conducting the statistical analysis to determine significant differences. At each location, plots were planted, sprayed, fertilized, and harvested with the equipment used in the cooperating producer's farming operation. The width and length of strip-plots were different in each county; however, within a location in a county, the strips were trimmed on the ends so that the lengths were the same for each variety, or if the lengths were different then the harvested length was measured for each variety and appropriate harvested area adjustments were made to determine the yield per acre.

Growing Season: Cooler and wetter than normal conditions prevailed throughout most of the growing season in Middle and East Tennessee where the tests were conducted. This resulted in good to excellent silage yields across the region with late season rains causing some delays in harvesting.

Interpretation of Data:

The tables on the following pages have been prepared with the entries listed in order of performance, the highest-yielding entry being listed first. At the bottom of the tables, **LSD** values stand for **Least Significant Difference**. The mean yields of any two varieties being compared must differ by at least the amount shown to be considered different in yielding ability at the 5% level of probability of significance. For example, given that the LSD for a test is 1.3 tons/a and the mean yield of Hybrid A was 9.3 tons/a and the mean yield of Hybrid B was 8.2 tons/a, then the two hybrids are not statistically different in yield because the difference of 1.1 tons/a is less than the minimum of 1.3 tons/a required for them to be significant. Similarly, if the average yield of Hybrid C was 10.6 tons/a then it is significantly higher yielding than both Hybrid B ($10.6 - 8.2 = 2.4$ tons/a > LSD of 1.3) and Hybrid A ($10.6 - 9.3 = 1.3$ tons/a = LSD of 1.3).

Also, the **coefficient of variation (C.V.)** values are shown at the bottom of each table. This value is a measure of the error variability found within each experiment. It is the percentage that the square root of error variance is of the overall test mean yield at that location. For example, a C.V. of 10% indicates that the size of the error variation is about 10% of the size of the test mean. Similarly, a C.V. of 30% indicates that the size of the error variation is nearly one-third as large as the test mean. A goal in conducting each yield test is to keep the C.V. as low as possible, preferably below 20 percent.

Table 1. Location information from Research and Education Centers where the corn silage variety tests were conducted in 2009.

Research and Education Center	Location	Planting Date	Harvest Date	Plant Population	Soil Type
East Tennessee	Knoxville	4/17/09	8/14/09	32,234	Sequatchie Silt Loam
Plateau	Crossville	5/26/09	8/31/09	29,621	Lilly Silt Loam
Middle Tennessee	Spring Hill	4/24/09	8/24/09	27,878	Maury Silt Loam
Highland Rim	Springfield	4/17/09	8/18/09	25,555	Dickson Silt Loam
Dairy	Lewisburg	6/08/09	9/29/09	26,426	Nesbitt Silt Loam

Table 2. Mean yields † of 30 corn hybrids evaluated for silage at five locations in Tennessee during 2009.

65% Moisture										
Brand	Hybrid	Dry Weight		Avg. Yield		Dry Weight				
		± Std Err.	(n=5)	± Std Err.	(n=5)	tons/a				
						Knoxville	Crossville	Spring Hill	Springfield	Lewisburg
Augusta	A08-13HXLL	10.2 ± 0.3	29.2 ± 0.7	12.9	7.0	9.2	9.3	12.8		
Dyna-Gro	58V69 (RR/CB)	10.0 ± 0.3	28.6 ± 0.7	12.9	7.4	8.5	8.7	12.5		
Mycogen	TMF2H918 (RR/LL/HX)	9.9 ± 0.3	28.3 ± 0.7	11.6	7.5	9.2	8.8	12.3		
Croplan	9009 RH	9.7 ± 0.3	27.9 ± 0.7	12.6	8.2	9.6	7.4	11.0		
Mycogen	TMF2N804 (RR/LL/HX)	9.7 ± 0.3	27.7 ± 0.7	13.1	7.3	8.8	9.2	10.1		
DeKalb	DKC67-87 (RR2/YGCB)	9.6 ± 0.3	27.4 ± 0.7	12.0	6.7	8.4	10.3	10.4		
Croplan	8756VT3	9.5 ± 0.3	27.3 ± 0.7	13.1	6.4	9.2	8.6	10.4		
Croplan	8221VT3	9.5 ± 0.3	27.0 ± 0.7	10.8	8.0	8.0	9.2	11.3		
Wyffels	W8681 (VT3)	9.4 ± 0.3	26.9 ± 0.8	11.5	6.7	9.0	9.5	10.3		
Croplan	8505VT3	9.4 ± 0.3	26.8 ± 0.8	12.0	8.0	8.8	8.6	9.5		
DeKalb	DKC67-23 (RR2/YGCB)	9.3 ± 0.3	26.6 ± 0.7	12.6	7.1	8.2	8.0	10.7		
Augusta	A-06-06CBLL	9.2 ± 0.3	26.3 ± 0.7	10.9	7.0	10.0	8.5	9.5		
Augusta	A008VT3	9.2 ± 0.3	26.2 ± 0.7	12.0	7.9	7.5	8.9	9.5		
Dyna-Gro	57V44 (RR/CB)	9.1 ± 0.3	26.1 ± 0.8	11.3	6.8	8.3	9.5	9.8		
Dyna-Gro	V5373VT3	9.1 ± 0.3	26.0 ± 0.7	11.5	7.5	8.1	8.8	9.7		
Augusta	A-06-04HXLL	9.0 ± 0.3	25.8 ± 0.7	11.7	6.6	8.9	8.7	9.2		
Croplan	8950 RB	9.0 ± 0.3	25.7 ± 0.7	11.3	7.4	8.5	7.8	10.0		
Augusta	A61-66CBLL	8.8 ± 0.3	25.3 ± 0.7	12.4	7.5	7.7	7.7	8.9		
Croplan	851VT3	8.6 ± 0.3	24.6 ± 0.7	11.2	7.1	8.6	8.2	8.0		
Augusta	A5175 CB	8.6 ± 0.3	24.6 ± 0.7	12.9	5.6	7.5	7.6	9.4		
Augusta	A73-64GTCBLL	8.6 ± 0.3	24.5 ± 0.7	10.7	6.6	7.0	9.0	9.6		
Dyna-Gro	V5783VT3	8.5 ± 0.3	24.4 ± 0.8	11.3	6.2	8.0	8.4	8.8		
Croplan	6831 TS	8.4 ± 0.3	24.0 ± 0.7	11.3	6.1	7.3	9.0	8.3		
Augusta	A08-01GTCBLL	8.4 ± 0.3	23.9 ± 0.7	11.5	5.7	8.5	8.8	7.3		
Wyffels	W9121 (VT3)	8.4 ± 0.3	23.9 ± 0.7	12.2	6.4	8.0	6.9	8.4		
Dyna Gro	58K40 (RR)	8.3 ± 0.3	23.8 ± 0.7	11.2	7.1	8.4	6.9	8.0		
Augusta	A62-65GTCBLL	8.3 ± 0.3	23.8 ± 0.7	10.6	7.8	8.2	7.5	7.5		
Augusta	A5337 CB	8.3 ± 0.3	23.7 ± 0.9	11.3	6.6	7.2	8.6	7.7		
Augusta	A08-20LL	7.2 ± 0.3	20.5 ± 0.7	10.5	4.7	6.8	7.6	6.3		
Mycogen	F2F725 (LL/HX/RW)	6.8 ± 0.3	19.5 ± 0.7	9.7	5.7	7.2	4.9	6.6		
Avg. (tons/a)		8.9	25.6	11.7	6.9	8.3	8.4	9.5		
L.S.D. _{.05} (tons/a)		0.7	2.0	1.8	1.6	1.2	1.6	1.8		
C.V. (%)		10.8	10.7	9.3	13.6	8.6	11.6	11.2		

† all silage yields are adjusted to dry weight basis unless otherwise indicated.

YG, YGCB, Bt, HX, CB = contains a *Bacillus thuringiensis* gene for insect resistance

LL = contains a gene for tolerance to glufosinate

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

YGRW, RW, CRW = contains a gene for rootworm resistance

RR, RR2, R, GT, R2 = contains a gene for tolerance to glyphosate

CL = contains a gene for tolerance to Imidazolinone class herbicides

Table 3. Mean yields † and agronomic characteristics of 30 corn hybrids evaluated for silage at five locations in Tennessee during 2009.

Dry Weight									65% Moisture		
Brand	Hybrid	Avg. Yield ± Std Err. (n=5) tons/a	Avg. Yield ± Std Err. (n=5) tons/a	Moisture at harvest (n=5) %	Lodging (n=2) %	Plant Height (n=5) inches	Ear Height (n=4) inches				
Augusta	A08-13HXLL	10.2 ± 0.3	29.2 ± 0.7	60.1	1	111	51				
Dyna-Gro	58V69 (RR/CB)	10.0 ± 0.3	28.6 ± 0.7	60.4	0	109	52				
Mycogen	TMF2H918 (RR/LL/HX)	9.9 ± 0.3	28.3 ± 0.7	62.5	0	114	54				
Croplan	9009 RH	9.7 ± 0.3	27.9 ± 0.7	62.6	1	115	54				
Mycogen	TMF2N804 (RR/LL/HX)	9.7 ± 0.3	27.7 ± 0.7	60.6	0	115	44				
DeKalb	DKC67-87 (RR2YGCB)	9.6 ± 0.3	27.4 ± 0.7	57.9	1	107	53				
Croplan	8756VT3	9.5 ± 0.3	27.3 ± 0.7	58.2	0	108	50				
Croplan	8221VT3	9.5 ± 0.3	27.0 ± 0.7	59.7	0	107	52				
Wyffels	W8681 (VT3)	9.4 ± 0.3	26.9 ± 0.8	59.4	1	104	46				
Croplan	8505VT3	9.4 ± 0.3	26.8 ± 0.8	57.9	1	105	49				
DeKalb	DKC67-23 (RR2YGCB)	9.3 ± 0.3	26.6 ± 0.7	56.7	1	105	50				
Augusta	A-06-06CBLL	9.2 ± 0.3	26.3 ± 0.7	58.3	2	112	50				
Augusta	A008VT3	9.2 ± 0.3	26.2 ± 0.7	60.5	1	107	47				
Dyna-Gro	57V44 (RR/CB)	9.1 ± 0.3	26.1 ± 0.8	57.4	1	106	46				
Dyna-Gro	V5373VT3	9.1 ± 0.3	26.0 ± 0.7	59.8	0	106	48				
Augusta	A-06-04HXLL	9.0 ± 0.3	25.8 ± 0.7	56.8	0	109	48				
Croplan	8950 RB	9.0 ± 0.3	25.7 ± 0.7	57.8	5	110	52				
Augusta	A61-66CBLL	8.8 ± 0.3	25.3 ± 0.7	59.0	0	104	49				
Croplan	851VT3	8.6 ± 0.3	24.6 ± 0.7	59.5	2	105	47				
Augusta	A5175 CB	8.6 ± 0.3	24.6 ± 0.7	58.6	1	107	45				
Augusta	A73-64GTCBLL	8.6 ± 0.3	24.5 ± 0.7	56.7	1	102	43				
Dyna-Gro	V5783VT3	8.5 ± 0.3	24.4 ± 0.8	57.4	5	105	45				
Croplan	6831 TS	8.4 ± 0.3	24.0 ± 0.7	58.2	0	102	44				
Augusta	A08-01GTCBLL	8.4 ± 0.3	23.9 ± 0.7	55.7	2	102	49				
Wyffels	W9121 (VT3)	8.4 ± 0.3	23.9 ± 0.7	57.0	1	100	45				
Dyna Gro	58K40 (RR)	8.3 ± 0.3	23.8 ± 0.7	61.7	0	108	52				
Augusta	A62-65GTCBLL	8.3 ± 0.3	23.8 ± 0.7	60.4	1	108	46				
Augusta	A5337 CB	8.3 ± 0.3	23.7 ± 0.9	60.2	0	104	42				
Augusta	A08-20LL	7.2 ± 0.3	20.5 ± 0.7	57.2	3	105	47				
Mycogen	F2F725 (LL/HX/RW)	6.8 ± 0.3	19.5 ± 0.7	61.8	3	99	46				
Average		8.9	25.6	59.0	1	107	48				

† all silage yields are adjusted to dry weight basis unless otherwise indicated.

YG, YGCB, CB, Bt, HX = contains a *Bacillus thuringiensis* gene for insect resistance

LL = contains a gene for tolerance to glufosinate

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

YGRW, RW = contains a gene for rootworm resistance

RR, R, RR2, R2, GT = contains a gene for tolerance to glyphosate

CL = contains a gene for tolerance to Imidazolinone class herbicides

Table 4. Mean yields † and feed quality characteristics of 30 corn hybrids evaluated for silage at five locations in Tennessee during 2009.

Dry Weight													
Brand	Hybrid	Avg. Yield	Moisture	Crude	NDF 30h				ADF	TDN	NEL	Milk/ton [†]	Milk/acre [†]
		± Std Err.	at Harvest	Protein	NDF	IV Digest	Starch						
(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)	(n=5)
tons/a	%	% dm	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre	
Augusta	A08-13HXLL	10.2 ± 0.3	60.1	7.7	44.3	50.4	29.2	27.6	71.9	0.67	3073	31468	
Dyna-Gro	58V69 (RR/CB)	10.0 ± 0.3	60.4	8.2	44.3	53.5	29.4	26.7	72.4	0.68	3172	31716	
Mycogen	TMF2H918 (RR/LL/HX)	9.9 ± 0.3	62.5	7.9	47.6	52.7	23.9	30.2	70.9	0.67	3044	30135	
Croplan	9009 RH	9.7 ± 0.3	62.6	8.1	48.3	51.6	23.7	30.3	70.5	0.67	3043	29641	
Mycogen	TMF2N804 (RR/LL/HX)	9.7 ± 0.3	60.6	8.3	44.1	56.4	28.2	27.2	72.3	0.69	3223	31196	
DeKalb	DKC67-87 (RR2/YGCB)	9.6 ± 0.3	57.9	7.8	46.0	53.2	27.5	28.0	71.4	0.66	3009	28823	
Croplan	8756VT3	9.5 ± 0.3	58.2	7.8	44.7	56.3	30.2	26.9	72.1	0.67	3101	29616	
Croplan	8221VT3	9.5 ± 0.3	59.7	7.8	42.8	53.1	30.7	26.4	72.5	0.67	3095	29277	
Wyffels	W8681 (VT3)	9.4 ± 0.3	59.4	8.8	41.3	57.7	31.4	24.8	73.4	0.70	3286	30884	
Croplan	8505VT3	9.4 ± 0.3	57.9	7.7	44.7	53.5	29.7	27.3	72.1	0.66	3034	28461	
DeKalb	DKC67-23 (RR2/YGCB)	9.3 ± 0.3	56.7	8.0	42.3	56.8	31.7	25.8	73.1	0.67	3126	29072	
Augusta	A-06-06CBLL	9.2 ± 0.3	58.3	8.0	40.6	53.1	33.9	24.8	73.3	0.67	3051	28039	
Augusta	A008VT3	9.2 ± 0.3	60.5	8.0	41.8	54.4	31.9	25.8	72.9	0.69	3247	29772	
Dyna-Gro	57V44 (RR/CB)	9.1 ± 0.3	57.4	7.8	42.0	56.4	31.7	25.8	73.2	0.67	3112	28478	
Dyna-Gro	V5373VT3	9.1 ± 0.3	59.8	7.9	41.6	54.6	32.1	25.7	73.2	0.69	3226	29454	
Augusta	A-06-04HXLL	9.0 ± 0.3	56.8	7.9	40.8	57.8	32.7	25.1	74.4	0.69	3219	29071	
Croplan	8950 RB	9.0 ± 0.3	57.8	7.9	43.4	56.1	30.0	26.4	72.5	0.67	3121	28086	
Augusta	A61-66CBLL	8.8 ± 0.3	59.0	8.0	41.8	55.9	32.5	25.0	73.2	0.68	3178	28124	
Croplan	851VT3	8.6 ± 0.3	59.5	7.5	42.2	54.0	32.0	26.0	72.8	0.67	3102	26709	
Augusta	A5175 CB	8.6 ± 0.3	58.6	7.8	42.7	56.5	31.1	26.3	72.9	0.68	3191	27444	
Augusta	A73-64GTCBLL	8.6 ± 0.3	56.7	8.1	39.6	57.9	34.1	24.0	74.2	0.68	3182	27300	
Dyna-Gro	V5783VT3	8.5 ± 0.3	57.4	8.1	45.2	55.1	28.8	27.8	71.9	0.66	3030	25845	
Croplan	6831 TS	8.4 ± 0.3	58.2	8.1	42.2	55.8	30.7	26.0	73.1	0.68	3169	26652	
Augusta	A08-01GTCBLL	8.4 ± 0.3	55.7	7.7	42.2	56.3	32.7	25.6	73.2	0.67	3084	25814	
Wyffels	W9121 (VT3)	8.4 ± 0.3	57.0	8.2	43.8	55.3	30.3	26.4	72.6	0.67	3083	25807	

Table 4 (continued)

Dry Weight														
Brand	Hybrid	Avg. Yield ± Std Err. (n=5)	Moisture at Harvest (n=5)	Crude Protein (n=5)	NDF		NDF 30h		ADF	TDN	NEL	Milk/ton [†]	Milk/acre [‡]	
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre	
Dyna Gro	58K40 (RR)	8.3 ± 0.3	61.7	8.3	46.0	52.8	27.1	28.4	71.3	0.68	3144	26189		
Augusta	A62-65GTCBLL	8.3 ± 0.3	60.4	7.8	39.9	57.1	34.1	24.3	74.0	0.70	3322	27638		
Augusta	A5337 CB	8.3 ± 0.3	60.2	8.1	39.5	57.3	34.2	23.9	74.3	0.71	3344	27686		
Augusta	A08-20LL	7.2 ± 0.3	57.2	7.9	45.2	55.2	28.7	27.5	71.4	0.66	3014	21640		
Mycogen	F2F725 (LL/HX/RW)	6.8 ± 0.3	61.8	8.7	43.5	63.7	29.1	25.5	73.8	0.73	3547	24189		

† yields reported are dry weight basis unless otherwise indicated, feed analysis reported on an "dry weight" basis

Bt, YG, YGCB, CB, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

RR, RR2 = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to imidazolinone class herbicides

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

Table 5. Mean yields † and feed quality characteristics of 30 corn hybrids evaluated for silage at five locations in Tennessee during 2009, sorted by brand.

Dry Weight														
Brand	Hybrid	Avg. Yield ± Std Err. (n=5)	Moisture at Harvest (n=5)	Crude Protein (n=5)	NDF (n=5)	IV Digest (n=5)	Starch (n=5)	ADF (n=5)	TDN (n=5)	NEL (n=5)	Milk/ton [†] (n=5)	Milk/acre [†] (n=5)		
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre		
Augusta	A08-13HXLL	10.2 ± 0.3	60.1	7.7	44.3	50.4	29.2	27.6	71.9	0.67	3073	31468		
Augusta	A008VT3	9.2 ± 0.3	60.5	8.0	41.8	54.4	31.9	25.8	72.9	0.69	3247	29772		
Augusta	A-06-06CBLL	9.2 ± 0.3	58.3	8.0	40.6	53.1	33.9	24.8	73.3	0.67	3051	28039		
Augusta	A-06-04HXLL	9.0 ± 0.3	56.8	7.9	40.8	57.8	32.7	25.1	74.4	0.69	3219	29071		
Augusta	A61-66CBLL	8.8 ± 0.3	59.0	8.0	41.8	55.9	32.5	25.0	73.2	0.68	3178	28124		
Augusta	A5175 CB	8.6 ± 0.3	58.6	7.8	42.7	56.5	31.1	26.3	72.9	0.68	3191	27444		
Augusta	A73-64GTCBLL	8.6 ± 0.3	56.7	8.1	39.6	57.9	34.1	24.0	74.2	0.68	3182	27300		
Augusta	A08-01GTCBLL	8.4 ± 0.3	55.7	7.7	42.2	56.3	32.7	25.6	73.2	0.67	3084	25814		
Augusta	A5337 CB	8.3 ± 0.3	60.2	8.1	39.5	57.3	34.2	23.9	74.3	0.71	3344	27686		
Augusta	A62-65GTCBLL	8.3 ± 0.3	60.4	7.8	39.9	57.1	34.1	24.3	74.0	0.70	3322	27638		
Augusta	A08-20LL	7.2 ± 0.3	57.2	7.9	45.2	55.2	28.7	27.5	71.4	0.66	3014	21640		
Croplan	9009 RH	9.7 ± 0.3	62.6	8.1	48.3	51.6	23.7	30.3	70.5	0.67	3043	29641		
Croplan	8221VT3	9.5 ± 0.3	59.7	7.8	42.8	53.1	30.7	26.4	72.5	0.67	3095	29277		
Croplan	8756VT3	9.5 ± 0.3	58.2	7.8	44.7	56.3	30.2	26.9	72.1	0.67	3101	29616		
Croplan	8505VT3	9.4 ± 0.3	57.9	7.7	44.7	53.5	29.7	27.3	72.1	0.66	3034	28461		
Croplan	8950 RB	9.0 ± 0.3	57.8	7.9	43.4	56.1	30.0	26.4	72.5	0.67	3121	28086		
Croplan	851VT3	8.6 ± 0.3	59.5	7.5	42.2	54.0	32.0	26.0	72.8	0.67	3102	26709		
Croplan	6831 TS	8.4 ± 0.3	58.2	8.1	42.2	55.8	30.7	26.0	73.1	0.68	3169	26652		
DeKalb	DKC67-87 (RR2/YGCB)	9.6 ± 0.3	57.9	7.8	46.0	53.2	27.5	28.0	71.4	0.66	3009	28823		
DeKalb	DKC67-23 (RR2/YGCB)	9.3 ± 0.3	56.7	8.0	42.3	56.8	31.7	25.8	73.1	0.67	3126	29072		
Dyna-Gro	58V69 (RR/CB)	10.0 ± 0.3	60.4	8.2	44.3	53.5	29.4	26.7	72.4	0.68	3172	31716		
Dyna-Gro	57V44 (RR/CB)	9.1 ± 0.3	57.4	7.8	42.0	56.4	31.7	25.8	73.2	0.67	3112	28478		
Dyna-Gro	V5373VT3	9.1 ± 0.3	59.8	7.9	41.6	54.6	32.1	25.7	73.2	0.69	3226	29454		
Dyna-Gro	V5783VT3	8.5 ± 0.3	57.4	8.1	45.2	55.1	28.8	27.8	71.9	0.66	3030	25845		
Dyna Gro	58K40 (RR)	8.3 ± 0.3	61.7	8.3	46.0	52.8	27.1	28.4	71.3	0.68	3144	26189		

Table 5 (continued)

Brand	Hybrid	Dry Weight		Moisture at Harvest (n=5)	Crude Protein (n=5)	NDF		NDF 30h IV Digest (n=5)	Starch (n=5)	ADF (n=5)	TDN (n=5)	NEL (n=5)	Milk/ton [‡] (n=5)	Milk/acre [‡] (n=5)
		Avg. Yield ± Std Err. (n=5)	tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Mycogen	TMF2H918 (RR/LL/HX)	9.9 ± 0.3	62.5	7.9	47.6	52.7	23.9	30.2	70.9	0.67	3044	30135		
Mycogen	TMF2N804 (RR/LL/HX)	9.7 ± 0.3	60.6	8.3	44.1	56.4	28.2	27.2	72.3	0.69	3223	31196		
Mycogen	F2F725 (LL/HX/RW)	6.8 ± 0.3	61.8	8.7	43.5	63.7	29.1	25.5	73.8	0.73	3547	24189		
Wyffels	W8681 (VT3)	9.4 ± 0.3	59.4	8.8	41.3	57.7	31.4	24.8	73.4	0.70	3286	30884		
Wyffels	W9121 (VT3)	8.4 ± 0.3	57.0	8.2	43.8	55.3	30.3	26.4	72.6	0.67	3083	25807		

† yields reported are dry weight basis unless otherwise indicated, feed analysis reported on an "dry weight" basis

Bt, YG, YGCB, CB, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

RR, RR2 = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to Imidazolinone class herbicides

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

Table 6. Mean yields † of 15 corn hybrids evaluated for silage in four environments for two years (2008 - 2009) in Tennessee.

Brand	Hybrid	Dry Weight		65% Moisture		Dry Weight			
		Avg. Yield ± Std Err.	(n=8)	Avg. Yield ± Std Err.	(n=8)	Knoxville	Crossville	Springfield	Lewisburg
		-----tons/a-----							
DeKalb	DKC67-87 (RR2/YGCB)	8.0 ± 0.2		22.8 ± 0.6		10.8	5.3	8.2	7.5
Croplan	8221VT3	7.9 ± 0.2		22.6 ± 0.6		9.7	7.1	7.4	7.6
Augusta	A08-13HXLL	7.7 ± 0.2		22.1 ± 0.6		10.5	5.6	6.3	8.5
Croplan	9009 RH	7.7 ± 0.2		22.0 ± 0.6		9.9	6.8	6.5	7.6
Augusta	A-06-04HXLL	7.6 ± 0.2		21.8 ± 0.6		9.9	6.4	7.4	6.8
Augusta	A008VT3	7.4 ± 0.2		21.2 ± 0.6		9.7	6.3	7.1	6.6
Croplan	8950 RB	7.4 ± 0.2		21.2 ± 0.7		9.4	5.9	7.6	6.8
DeKalb	DKC67-23 (RR2/YGCB)	7.4 ± 0.2		21.1 ± 0.6		10.2	5.9	6.1	7.3
Croplan	6831 TS	7.3 ± 0.2		21.0 ± 0.6		9.3	6.1	7.5	6.5
Augusta	A-06-06CBLL	7.3 ± 0.2		21.0 ± 0.6		9.9	5.8	7.0	6.7
Wyffels	W8681 (VT3)	7.3 ± 0.2		20.9 ± 0.7		9.6	5.3	7.2	7.3
Augusta	A5175 CB	7.2 ± 0.2		20.6 ± 0.6		10.3	5.0	7.0	6.5
Augusta	A5337 CB	7.1 ± 0.3		20.4 ± 0.7		10.0	5.3	7.5	5.7
Croplan	851VT3	7.0 ± 0.2		19.9 ± 0.6		9.6	5.3	6.8	6.2
Dyna Gro	58K40 (RR)	6.9 ± 0.2		19.7 ± 0.6		9.7	6.3	5.5	6.1
Avg. (tons/a)		7.4		21.2		9.9	5.9	7.0	6.9
L.S.D. _{.05} (tons/a)		0.8		2.3		1.4	1.4	1.8	1.6
C.V. (%)		14.4		14.4		9.8	16.0	18.4	15.7

† all silage yields are adjusted to dry weight basis unless otherwise indicated.

YG, YGCB, CB, Bt, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

RR, R, RR2, R2, GT = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to imidazolinone class herbicides

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

Table 7. Mean yields † and agronomic characteristics of 15 corn hybrids evaluated for silage in four environments for two years (2008-2009) in Tennessee.

Dry Weight 65% Moisture									
Brand	Variety	Avg. Yield ± Std Err. (n=8) tons/a	Avg. Yield ± Std Err. (n=8) tons/a	Moisture at harvest (n=8) %	Lodging (n=5) %	Plant Height (n=8) inches	Ear Height (n=5) inches		
DeKalb	DKC67-87 (RR2/YGCB)	8.0 ± 0.2	22.8 ± 0.6	58.4	0	100	46		
Croplan	8221VT3	7.9 ± 0.2	22.6 ± 0.6	62.3	0	101	48		
Augusta	A08-13HXLL	7.7 ± 0.2	22.1 ± 0.6	63.2	0	102	46		
Croplan	9009 RH	7.7 ± 0.2	22.0 ± 0.6	65.8	0	108	50		
Augusta	A-06-04HXLL	7.6 ± 0.2	21.8 ± 0.6	57.3	0	101	42		
Augusta	A008VT3	7.4 ± 0.2	21.2 ± 0.6	61.7	0	99	43		
Croplan	8950 RB	7.4 ± 0.2	21.2 ± 0.7	61.9	2	104	48		
DeKalb	DKC67-23 (RR2/YGCB)	7.4 ± 0.2	21.1 ± 0.6	59.1	0	97	45		
Croplan	6831 TS	7.3 ± 0.2	21.0 ± 0.6	56.8	0	97	40		
Augusta	A-06-06CBLL	7.3 ± 0.2	21.0 ± 0.6	59.0	1	102	44		
Wyffels	W8681 (VT3)	7.3 ± 0.2	20.9 ± 0.7	61.1	1	97	39		
Augusta	A5175 CB	7.2 ± 0.2	20.6 ± 0.6	57.6	0	99	38		
Augusta	A5337 CB	7.1 ± 0.3	20.4 ± 0.7	59.6	0	97	37		
Croplan	851VT3	7.0 ± 0.2	19.9 ± 0.6	60.4	1	96	41		
Dyna Gro	58K40 (RR)	6.9 ± 0.2	19.7 ± 0.6	64.3	0	102	49		

Codes:

† all silage yields are adjusted to dry weight basis unless otherwise indicated.

YG, YGCB, CB, Bt, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

RR, R, RR2, R2, GT = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to Imidazolinone class herbicides

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

Table 8. Mean yields † and feed quality characteristics of 15 corn hybrids evaluated for silage at four locations for 2 years (2008-2009) in Tennessee.

Dry Weight														
Brand	Hybrid	Avg. Yield ± Std Err. (n=8)		Moisture at Harvest (n=8)	Crude Protein (n=8)	NDF (n=8)	NDF 30h IV Digest (n=8)		Starch (n=8)	ADF (n=8)	TDN (n=8)	NEL (n=8)	Milk/ton [‡] (n=8)	Milk/acre [‡] (n=8)
		tons/a		%	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
DeKalb	DKC67-87 (RR2/YGCB)	8.0 ± 0.2		58.4	8.3	42.3	55.5	31.7	25.1	71.4	0.71	3293	24928	
Croplan	8221VT3	7.9 ± 0.2		62.3	8.2	43.5	54.5	29.8	26.4	71.8	0.70	3272	24658	
Augusta	A08-13HXLL	7.7 ± 0.2		63.2	8.1	45.6	52.7	27.5	27.8	71.1	0.70	3227	24373	
Croplan	9009 RH	7.7 ± 0.2		65.8	8.3	50.2	53.0	21.8	31.0	69.1	0.68	3097	23471	
Augusta	A-06-04HXLL	7.6 ± 0.2		57.3	8.2	41.0	58.8	33.3	24.3	73.8	0.72	3420	25289	
Augusta	A008VT3	7.4 ± 0.2		61.7	8.3	41.8	58.5	32.6	25.0	73.0	0.73	3478	24434	
Croplan	8950 RB	7.4 ± 0.2		61.9	8.5	44.1	56.0	28.6	26.4	72.0	0.71	3322	23535	
DeKalb	DKC67-23 (RR2/YGCB)	7.4 ± 0.2		59.1	8.4	42.5	56.3	31.8	25.5	72.2	0.71	3319	23317	
Croplan	6831 TS	7.3 ± 0.2		56.8	8.4	41.1	58.1	32.9	24.5	73.1	0.72	3407	23878	
Augusta	A-06-06CBL	7.3 ± 0.2		59.0	8.3	40.1	56.0	34.6	23.7	72.4	0.71	3297	23888	
Wyffels	W8681 (VT3)	7.3 ± 0.2		61.1	9.1	40.5	58.0	32.9	23.9	72.8	0.73	3485	24873	
Augusta	A5175 CB	7.2 ± 0.2		57.6	8.5	40.9	57.4	33.4	24.4	72.5	0.71	3376	23409	
Augusta	A5337 CB	7.1 ± 0.3		59.6	8.5	40.4	58.2	33.6	23.9	74.1	0.74	3524	24304	
Croplan	851VT3	7.0 ± 0.2		60.4	8.3	41.5	57.5	32.9	24.9	72.8	0.71	3363	22885	
Dyna Gro	58K40 (RR)	6.9 ± 0.2		64.3	8.4	47.0	54.5	26.2	28.6	70.0	0.70	3272	22122	

† yields reported are dry weight basis unless otherwise indicated, feed analysis reported on an "dry weight" basis

Bt, YG, YGCB, CB, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

RR, RR2 = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to Imidazolinone class herbicides

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

Table 9. Mean yields † of 11 corn hybrids evaluated for silage in three environments for three years (2007-2009) in Tennessee.

Dry Weight		65% Moisture		Dry Weight -----			
Avg. Yield ± Std Err.	(n=9)	Avg. Yield ± Std Err.	(n=9)	Knoxville	Crossville	Springfield	
-----tons/a-----							
Augusta	A-06-04HXLL	7.7 ± 0.2	22.1 ± 0.6	9.9	5.9	7.4	
DeKalb	DKC67-87 (RR2/YGCB)	7.6 ± 0.2	21.6 ± 0.6	10.1	5.1	7.5	
Augusta	A5337 CB	7.4 ± 0.2	21.1 ± 0.6	9.8	4.8	7.5	
Augusta	A-06-06CBLL	7.3 ± 0.2	20.7 ± 0.6	9.3	5.3	7.2	
Croplan	9009 RH	7.2 ± 0.2	20.7 ± 0.6	9.6	5.7	6.4	
Croplan	8221VT3	7.2 ± 0.2	20.6 ± 0.6	9.1	6.0	6.5	
Croplan	8950 RB	7.1 ± 0.2	20.3 ± 0.6	9.1	5.4	6.8	
Dyna Gro	58K40 (RR)	7.1 ± 0.2	20.2 ± 0.6	9.7	5.9	5.6	
DeKalb	DKC67-23 (RR2/YGCB)	7.0 ± 0.2	19.9 ± 0.6	9.5	5.4	6.0	
Augusta	A5175 CB	6.9 ± 0.2	19.8 ± 0.6	10.0	4.6	6.2	
Croplan	851VT3	6.8 ± 0.2	19.4 ± 0.6	9.2	5.0	6.1	
Avg. (tons/a)		7.2	20.6	9.6	5.4	6.7	
L.S.D. _{.05} (tons/a)		0.9	2.6	1.4	1.4	1.9	
C.V. (%)		15.4	15.4	9.9	17.9	20.5	

† all silage yields are adjusted to Dry Weight basis.

YG, YGCB, CB, Bt, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

RR, R, RR2, R2, GT = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to Imidazolinone class herbicides

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

Table 10. Mean yields † and agronomic characteristics of 11 corn hybrids evaluated for silage in three environments for three years (2007-2009) in Tennessee.

Dry Weight 65% Moisture							
Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=9) tons/a	65% Moisture Avg. Yield ± Std Err. (n=9) tons/a	Moisture at harvest (n=9) %	Lodging (n=5) %	Plant Height (n=9) inches	Ear Height (n=6) inches
Augusta	A-06-04HXLL	7.7 ± 0.2	22.1 ± 0.6	54.2	0	101	42
DeKalb	DKC67-87 (RR2/YGCB)	7.6 ± 0.2	21.6 ± 0.6	55.2	0	100	45
Augusta	A5337 CB	7.4 ± 0.2	21.1 ± 0.6	55.3	0	100	38
Augusta	A-06-06CBLL	7.3 ± 0.2	20.7 ± 0.6	56.1	0	102	41
Croplan	9009 RH	7.2 ± 0.2	20.7 ± 0.6	63.2	0	108	48
Croplan	8221VT3	7.2 ± 0.2	20.6 ± 0.6	59.3	0	102	48
Croplan	8950 RB	7.1 ± 0.2	20.3 ± 0.6	58.8	2	105	46
Dyna Gro	58K40 (RR)	7.1 ± 0.2	20.2 ± 0.6	60.1	0	103	48
DeKalb	DKC67-23 (RR2/YGCB)	7.0 ± 0.2	19.9 ± 0.6	55.4	0	98	44
Augusta	A5175 CB	6.9 ± 0.2	19.8 ± 0.6	53.8	0	98	37
Croplan	851VT3	6.8 ± 0.2	19.4 ± 0.6	56.9	0	95	39

Codes:

† all silage yields are adjusted to dry weight basis unless otherwise indicated.

YG, YGCB, CB, Bt, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

RR, R, RR2, R2, GT = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to Imidazolinone class herbicides

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

Table 11. Mean yields † and feed quality characteristics of 11 corn hybrids evaluated for silage at three locations for three years (2007-2009) in Tennessee.

Brand	Hybrid	Dry Weight		Moisture at Harvest (n=9)	Crude Protein (n=9)	NDF (n=9)	NDF 30h		ADF (n=9)	TDN (n=9)	NEL (n=9)	Milk/ton [‡] lbs/ton	Milk/acre [‡] lbs/acre
		Avg. Yield ± Std Err. (n=9)	tons/a				IV Digest (n=9)	% of NDF					
Augusta	A-06-04HXLL	7.7 ± 0.2		54.2	7.9	40.0	62.9	35.3	23.5	74.9	0.74	3565	25521
DeKalb	DKC67-87 (RR2/YGCB)	7.6 ± 0.2		55.2	8.1	39.7	59.4	35.5	23.3	72.5	0.73	3485	24655
Augusta	A5337 CB	7.4 ± 0.2		55.3	7.8	37.5	61.5	38.1	22.2	75.2	0.75	3632	24875
Augusta	A-06-06CBLL	7.3 ± 0.2		56.1	8.0	39.2	58.9	36.8	23.1	73.0	0.73	3470	24219
Croplan	9009 RH	7.2 ± 0.2		63.2	8.0	49.6	57.3	23.7	30.3	69.7	0.71	3357	23631
Croplan	8221VT3	7.2 ± 0.2		59.3	7.8	42.5	57.5	32.4	25.7	72.5	0.72	3435	23407
Croplan	8950 RB	7.1 ± 0.2		58.8	8.0	43.2	59.3	30.8	25.7	72.5	0.73	3505	23509
Dyna Gro	58K40 (RR)	7.1 ± 0.2		60.1	7.8	45.0	57.5	29.9	27.4	71.1	0.72	3453	23348
DeKalb	DKC67-23 (RR2/YGCB)	7.0 ± 0.2		55.4	8.0	41.5	58.8	33.9	24.7	71.9	0.73	3482	23032
Augusta	A5175 CB	6.9 ± 0.2		53.8	8.0	39.1	60.5	36.6	23.1	73.3	0.73	3523	23306
Croplan	851VT3	6.8 ± 0.2		56.9	8.1	38.8	61.2	36.5	23.0	74.2	0.73	3551	23017

† yields reported are dry weight basis unless otherwise indicated, feed analysis reported on an "dry weight" basis

Bt, YG, YGCB, CB, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

RR, RR2 = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to Imidazolinone class herbicides

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

COUNTY STANDARD TESTS

Table 12. Mean yields † of 15 corn hybrids evaluated for silage in two County Standard Tests in Tennessee during 2009.

Dry Weight 65% Moisture													
Brand	Hybrid	Dry Weight	Avg. Yield		65% Moisture		-----		Dry Weight -----		Moisture at harvest	Plant Height * (n=1) inches	Ear Height * (n=1) inches
		Avg. Yield ± Std Err. (n=2)	Avg. Yield ± Std Err. (n=2)	tons/a		Blount (n=1)	Washington (n=1)						
Croplan	851VT3	11.0 ± 1.1	31.4 ± 3.0	11.9	10.1	62.8	128	50					
Dyna Gro	58K40 (RR)	10.2 ± 1.1	29.2 ± 3.0	8.3	12.1	62.9	127	58					
Wyffels	W8681 (VT3)	10.1 ± 1.1	28.8 ± 3.0	10.5	9.7	64.0	120	45					
Dyna-Gro	58V69 (RR/CB)	10.1 ± 1.1	28.8 ± 3.0	8.7	11.5	65.7	129	54					
Croplan	8756VT3	10.0 ± 1.1	28.5 ± 3.0	10.7	9.2	63.3	130	60					
DeKalb	DKC67-87 (RR2/YGCB)	9.9 ± 1.1	28.2 ± 3.0	8.6	11.1	63.9	119	54					
Croplan	9009 RH	9.7 ± 1.1	27.7 ± 3.0	9.4	9.9	65.7	130	52					
Augusta	A5337 CB	9.6 ± 1.1	27.3 ± 3.0	9.2	9.9	61.5	114	40					
DeKalb	DKC67-23 (RR2/YGCB)	9.3 ± 1.1	26.4 ± 3.0	9.0	9.5	60.7	117	46					
Augusta	A-06-04HXLL	9.3 ± 1.1	26.4 ± 3.0	8.8	9.7	60.7	115	45					
Mycogen	TMF2N804 (RR/LL/HX)	9.1 ± 1.1	26.0 ± 3.0	8.0	10.2	62.8	125	45					
Wyffels	W9121 (VT3)	9.1 ± 1.1	26.0 ± 3.0	8.9	9.2	64.2	124	49					
Croplan	8221VT3	9.0 ± 1.1	25.5 ± 3.0	7.8	10.1	69.2	120	56					
NK Brand	N78N (GT/CB/LL)	7.8 ± 0.8	22.3 ± 2.1	6.6	9.1	63.2	120	46					
Mycogen	F2F725 (LL/HX/RW)	7.6 ± 1.1	21.6 ± 3.0	8.2	6.9	65.5	122	52					
Avg. (tons/a)		9.3	26.6	9.0	9.9	63.7	123	50					
L.S.D. _{.05} (tons/a)		6.4	18.0										
C.V. (%)		16.1	16.0										

† all silage yields are adjusted to dry weight basis unless otherwise indicated.

YG, YGCB, CB, Bt, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, CRW, RW = contains a gene for rootworm resistance

RR, R, RR2, R2, GT = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to Imidazolinone class herbicides

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

* Plant and ear height data from Blount County location.

Blount County: Mac Pate Dairy Farm

Planted: 4-23-09

Harvested: 8-17-09

Population: 22,000

30 inch row spacing

Washington County: Savland farm (David Saylor)

Planted: 5-21-09

Harvested: 9-14-09

Population: 28,000

30 inch row spacing

Table 13. Mean yields † and feed quality characteristics of 15 corn hybrids evaluated for silage in two County Standard Tests in Tennessee during 2009.

Brand	Hybrid	Dry Weight		Moisture at Harvest (n=12) %	Crude Protein (n=11) % dm	NDF (n=11) % dm	NDF 30h		Starch (n=11) % dm	ADF (n=11) % dm	TDN (n=11) % dm	NEL (n=11) Mcal/lb	Milk/ton [‡] (n=11) lbs/ton	Milk/acre [‡] (n=11) lbs/acre
		Avg. Yield ± Std Err. (n=12) tons/a					IV Digest (n=11) % of NDF							
Croplan	851VT3	11.0 ± 1.1		62.8	9.3	39.1	58.7		32.5	22.7	74.6	0.75	3587	39459
Dyna Gro	58K40 (RR)	10.2 ± 1.1		62.9	9.3	45.5	60.2		28.2	26.3	72.2	0.72	3427	34958
Wyffels	W8681 (VT3)	10.1 ± 1.1		64.0	9.4	40.6	61.9		32.6	23.3	74.1	0.75	3650	36862
Dyna-Gro	58V69 (RR/CB)	10.1 ± 1.1		65.7	9.4	47.6	58.2		25.0	27.9	71.0	0.71	3333	33662
Croplan	8756VT3	10.0 ± 1.1		63.3	8.6	43.7	58.3		31.3	25.8	73.0	0.73	3471	34540
DeKalb	DKC67-87 (RR2/YGCB)	9.9 ± 1.1		63.9	9.8	44.1	61.5		27.8	25.8	72.6	0.74	3530	34774
Croplan	9009 RH	9.7 ± 1.1		65.7	9.0	46.0	56.5		25.5	27.8	72.1	0.72	3396	32773
Augusta	A5337 CB	9.6 ± 1.1		61.5	9.5	39.1	58.9		32.3	22.8	74.3	0.74	3536	33767
DeKalb	DKC67-23 (RR2/YGCB)	9.3 ± 1.1		60.7	8.7	43.0	58.5		28.4	25.6	72.9	0.72	3403	31475
Augusta	A-06-04HXLL	9.3 ± 1.1		60.7	8.4	40.0	63.4		32.7	24.1	74.8	0.76	3667	33917
Mycogen	TMF2N804 (RR/LL/HX)	9.1 ± 1.1		62.8	9.2	43.0	59.1		27.8	25.8	72.7	0.72	3412	31049
Wyffels	W9121 (VT3)	9.1 ± 1.1		64.2	9.6	42.3	57.0		29.6	25.0	73.1	0.73	3483	31525
Croplan	8221VT3	9.0 ± 1.1		69.2	9.6	46.8	53.9		24.3	28.1	70.8	0.70	3238	28984
NK Brand	N78N (GT/CB/LL)	7.8 ± 0.8		63.2	9.8	43.0	60.2		30.6	24.9	72.5	0.73	3455	27055
Mycogen	F2F725 (LL/HX/RW)	7.6 ± 1.1		65.5	9.2	44.4	69.8		28.2	25.8	73.3	0.76	3732	28179

† yields reported are dry weight basis unless otherwise indicated, feed analysis reported on an "dry weight" basis

Bt, YG, YGCB, CB, HX = contains a *Bacillus thuringiensis* gene for insect resistance

YGRW, RW = contains a gene for rootworm resistance

VT3, TS = contains genes for corn borer, rootworm, and glyphosate resistance

RR, RR2 = contains a gene for tolerance to glyphosate

LL = contains a gene for tolerance to glufosinate

CL = contains a gene for tolerance to Imidazolinone class herbicides

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

SWEET SORGHUM HYBRIDS

Ten **sweet sorghum** varieties were evaluated for silage yield and quality at the East Tennessee REC. Yields presented were adjusted to both dry weight and 65% moisture. Plots were harvested with a commercial silage harvester. A sub-sample from each plot was taken for determination of moisture at harvest. The samples were ground and analyzed for nutrient content by Cumberland Valley Analytical Services, Inc., Hagerstown, MD. Milk per ton and milk per acre calculations were performed using the University of Wisconsin Milk2006 program.

Table 14. Mean yields and agronomic characteristics of 10 sweet sorghum varieties evaluated for silage at Knoxville, Tennessee during 2009.

Brand	Hybrid	Dry Weight			65% Moisture			Moisture		
		Avg. Yield	± Std Err.	tons/a	Avg. Yield	± Std Err.	tons/a	Plant Height	Harvest	at
								inches	%	
Walter Moss KN	Mega Green	11.4 ± 0.6		32.6 ± 1.8	1.2		161		76.5	
Walter Moss MS	Morris	11.0 ± 0.6		31.4 ± 1.8	2.2		145		71.5	
Top	4 Ever Green	10.1 ± 0.6		29.0 ± 1.8	1.7		159		79.5	
Walter Moss VA	Dale	9.6 ± 0.6		27.6 ± 1.8	3.5		144		74.8	
MS	76-6	9.5 ± 0.6		27.2 ± 1.8	1.5		127		75.0	
Walter Moss MS	4 Ever Green	9.4 ± 0.6		26.8 ± 1.8	3.2		152		78.6	
MS	Della	9.2 ± 0.6		26.1 ± 1.8	2.7		145		71.8	
MS	Theis	8.9 ± 0.6		25.5 ± 1.8	1.5		117		68.9	
MS	M81E	8.9 ± 0.6		25.5 ± 1.8	2.3		139		74.4	
MS	Keller	8.5 ± 0.6		24.3 ± 1.8	3.2		135		72.9	
Avg. (tons/a)		9.7		27.6	2.3		142		74.4	
L.S.D._{.05} (tons/a)		1.9		5.4						
C.V. (%)		11.6		11.5						

Planted 5/14/09, seeding rate 87,600 / acre, Stasser Silt Loam, two row plots 30 ft in length, three replications of each entry, Harvested 9/4/09
Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Table 15. Mean yields and feed quality characteristics of 10 sweet sorghum varieties evaluated for silage at Knoxville, Tennessee during 2009.

Dry Weight															
Brand	Hybrid	Avg. Yield		Crude Protein	NDF		NDF 30h		Sugar	ADF	TDN	NEL	Milk/ton [†]		Milk/acre [†]
		± Std Err.	tons/a		% dm	% dm	% of NDF	% dm					lbs/ton	lbs/acre	
Walter Moss	Mega Green		11.4 ± 0.6	6.5	59.6	41.4	8.4	3.5	40.1	62.3	0.51	1956	22235		
KN	Morris		11.0 ± 0.6	7.4	40.5	58.7	20.9	5.2	28.1	71.1	0.60	2657	29142		
Walter Moss	4 Ever Green		10.1 ± 0.6	6.0	59.9	44.9	7.6	4.2	40.2	63.4	0.51	1994	20200		
MS	Dale		9.6 ± 0.6	6.6	48.5	62.6	13.0	5.8	33.7	69.0	0.56	2459	23683		
Top	76-6		9.5 ± 0.6	7.2	43.6	58.9	17.5	5.5	29.7	70.2	0.58	2517	23991		
Walter Moss	4 Ever Green	BMR	9.4 ± 0.6	7.0	52.6	65.2	11.6	4.8	34.6	67.8	0.60	2685	25163		
VA	Della		9.2 ± 0.6	6.2	43.4	55.1	18.1	6.0	31.1	70.1	0.56	2361	21654		
MS	Theis		8.9 ± 0.6	7.2	42.1	57.4	20.9	4.6	28.6	70.9	0.61	2739	24461		
MS	M81E		8.9 ± 0.6	6.2	46.7	52.5	15.9	5.4	33.0	68.3	0.55	2274	20242		
MS	Keller		8.5 ± 0.6	6.2	40.0	53.1	21.0	5.0	29.1	69.4	0.56	2386	20278		

NDF = Neutral Detergent Fiber ADF = Acid Detergent Fiber TDN = Total Digestible Nutrients NEL = Net Energy for Lactation

[†] † based on University of Wisconsin Milk2006 software program.

Table 16. Mean yields of seven sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for two years (2008-2009).

Brand	Hybrid	Dry Weight			65% Moisture			Moisture		
		Avg. Yield ± Std Err. (n=2)	Avg. Yield ± Std Err. (n=2)	Avg. Yield ± Std Err. (n=2)	Lodging (n=2)	Plant Height (n=2)	Harvest (n=2)	at Harvest (n=2)		
		tons/a	tons/a	tons/a	Score	inches	%			
Walter Moss	Mega Green	13.0 ± 0.8	37.1 ± 2.2	1.4	157	75.1				
Walter Moss	4 Ever Green	11.6 ± 0.8	33.1 ± 2.2	2.4	157	77.9				
MS	Dale	11.2 ± 0.8	32.0 ± 2.2	2.8	143	72.0				
MS	M81E	10.1 ± 0.8	29.0 ± 2.2	2.4	142	71.9				
MS	Keller	9.6 ± 0.8	27.4 ± 2.2	3.4	136	70.2				
MS	Theis	8.6 ± 0.8	24.4 ± 2.2	2.2	116	68.8				
VA	Della	8.5 ± 0.8	24.3 ± 2.2	3.3	143	71.3				
Avg. (tons/a)		10.4	29.6	2.6	142	72.5				
L.S.D._{.05} (tons/a)		2.6	7.4							
C.V. (%)		18.0	18.0							

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Table 17. Mean yields and feed quality characteristics of seven sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for two years (2008-2009).

Brand	Hybrid	Dry Weight			Crude			NDF 30h			NEL			Milk/acre [‡]		
		Avg. Yield ± Std Err. (n=2)	Avg. Yield ± Std Err. (n=2)	Avg. Yield ± Std Err. (n=2)	Protein (n=2)	Protein (n=2)	Protein (n=2)	NDF (n=2)	IV Digest (n=2)	IV Digest (n=2)	ADF (n=2)	ADF (n=2)	ADF (n=2)	Milk/ton [‡]	Milk/ton [‡]	Milk/acre [‡]
		tons/a	tons/a	tons/a	% dm	% dm	% dm	% dm	% of NDF	% of NDF	% dm	% dm	% dm	lbs/ton	lbs/ton	lbs/acre
Walter Moss	Mega Green	13.0 ± 0.8	37.1 ± 2.2	1.4	6.6	62.4	41.6	6.8	41.6	41.6	41.0	55.8	0.50	1894	1894	21143
Walter Moss	4 Ever Green	11.6 ± 0.8	33.1 ± 2.2	2.4	6.7	61.2	45.9	6.7	45.9	45.9	39.5	57.8	0.52	2044	2044	20647
MS	Dale	11.2 ± 0.8	32.0 ± 2.2	2.8	6.1	45.5	54.4	15.3	54.4	54.4	30.7	60.0	0.54	2236	2236	21400
MS	M81E	10.1 ± 0.8	29.0 ± 2.2	2.4	6.5	47.3	49.7	16.1	49.7	49.7	31.6	60.9	0.55	2232	2232	20686
MS	Keller	9.6 ± 0.8	27.4 ± 2.2	3.4	7.1	42.0	51.6	17.0	51.6	51.6	28.9	60.4	0.54	2209	2209	19536
MS	Theis	8.6 ± 0.8	24.4 ± 2.2	2.2	7.5	43.5	53.8	18.7	53.8	53.8	28.4	63.3	0.59	2544	2544	20707
VA	Della	8.5 ± 0.8	24.3 ± 2.2	3.3	6.7	46.3	51.9	16.0	51.9	51.9	30.5	61.4	0.55	2242	2242	18863

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

[‡] based on University of Wisconsin Milk2006 software program.

Table 18. Mean yields of five sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for three years (2007-2009).

Brand	Hybrid	Dry Weight			65% Moisture			Moisture	
		Avg. Yield ± Std Err. (n=3)	tons/a	Avg. Yield ± Std Err. (n=3)	tons/a	Lodging Score (n=3)	Plant Height inches (n=3)	at Harvest (n=3)	%
MS	Keller	13.3 ± 0.7	37.9 ± 1.9	37.9 ± 1.9	37.9 ± 1.9	3.2	137	69.2	69.2
MS	M81E	12.9 ± 0.7	36.8 ± 1.9	36.8 ± 1.9	36.8 ± 1.9	2.3	142	71.4	71.4
MS	Dale	12.2 ± 0.7	35.0 ± 1.9	35.0 ± 1.9	35.0 ± 1.9	2.8	144	72.3	72.3
VA	Della	9.6 ± 0.7	27.5 ± 1.9	27.5 ± 1.9	27.5 ± 1.9	3.4	141	72.2	72.2
MS	Theis	9.4 ± 0.7	26.9 ± 1.9	26.9 ± 1.9	26.9 ± 1.9	2.0	113	68.7	68.7
Avg. (tons/a)		11.5	32.8	32.8	32.8	2.7	135	70.8	70.8
L.S.D._{.05} (tons/a)		2.6	7.5	7.5	7.5				
C.V. (%)		17.6	17.6	17.6	17.6				

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Table 19. Mean yields and feed quality characteristics of five sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for three years (2007-2009).

Brand	Hybrid	Dry Weight		Crude		NDF	NDF 30h		Starch	Sugar	ADF	TDN	NEL	Milk/acre [‡]	
		Avg. Yield ± Std Err.	tons/a	Protein % dm	% dm	% dm	IV Digest % of NDF	% dm	% dm	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre
MS	Keller	13.3 ± 0.7	7.1	44.1	48.5	17.2	9.1	29.2	58.6	0.55	2207	28179			
MS	M81E	12.9 ± 0.7	6.7	48.1	46.7	15.9	9.2	31.2	58.1	0.54	2160	26114			
MS	Dale	12.2 ± 0.7	6.8	46.6	51.5	16.0	9.5	30.3	59.5	0.56	2321	26171			
VA	Della	9.6 ± 0.7	7.0	48.3	49.4	14.4	9.5	31.3	58.2	0.54	2161	20485			
MS	Theis	9.4 ± 0.7	7.6	44.1	49.5	20.1	8.0	28.2	62.1	0.60	2541	23216			

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

[‡] based on University of Wisconsin Milk2006 software program.

Table 20. Characteristics, as described by the seed company, of corn silage hybrids evaluated in yield tests in Tennessee during 2009.†

Brand	Hybrid	Grain		Herbicide		Released or		Comments from Companies
		Color	Maturity	Tolerance	BT Gene	Experimental		
Augusta	A008VT3	Y	117	RR	CB/RW	R		Highly digestible
Augusta	A-06-04HXLL	Y	109	LL	HX	R		Highly digestible, stress tolerance
Augusta	A-06-06CBLL	Y	111	LL	CB	R		Health & digestibility
Augusta	A08-13HXLL	Y	117	LL	HX	E		---
Augusta	A08-01GTCBLL	Y	114	GT/LL	CB	R		---
Augusta	A5175 CB	Y	109	---	CB	R		Health & digestibility
Augusta	A5337 CB	Y	113	---	CB	R		Great digestibility
Augusta	A61-66CBLL	Y	116	LL	CB	E		---
Augusta	A62-65GTCBLL	Y	115	GT/LL	CB	E		---
Augusta	A73-64GTCBLL	Y	114	GT/LL	CB	R		---
Augusta	A08-20LL	Y	117	LL	---	R		---
Croplan	6831 TS	Y	112	RR	YGCB/RW	R		Flex ear, no poorly drained soils
Croplan	8221VT3	Y	118	RR	YGCB/RW	R		Dual purpose, excellent digestibility, 32K/Ac
Croplan	8505VT3	Y	118	RR	YGCB/RW	E		---
Croplan	851VT3	Y	118	RR	YGCB/RW	R		Avoid poor drained soils, silage > 30K/Ac, dual purpose
Croplan	8756VT3	Y	118	RR	YGCB/RW	R		---
Croplan	8950 RB	Y	117	RR	YGCB	R		Tall, heat/drought tolerant, excellent roots/stalks, avg staygreen
Croplan	9009 RH	Y	124	RR/LL	YGCB/RW	R		Disease tolerant, high poplins, good drought tolerance
DeKalb	DKC67-23 (RR2/YGCB)	Y	117	RR2	YGCB	R		---
DeKalb	DKC67-87 (RR2/YGCB)	Y	117	RR2	YGCB	R		---
Dyna Gro	58K40 (RR)	Y	117	RR2	---	R		High tonnage, excellent stress tolerance
Dyna-Gro	57V44 (RR/CB)	Y	112	RR	CB	R		---
Dyna-Gro	58V69 (RR/CB)	Y	119	RR	CB	R		---
Dyna-Gro	V5373VT3	Y	113	RR	CB/RW	R		---
Dyna-Gro	V5783VT3	Y	117	RR	CB/RW	R		---
Mycogen	F2F725 (LL/HX/RW)	Y	113	LL	HX/RW	R		Brown mid rib, low to med poplins, sound agronomics
Mycogen	TMF2H918 (RR/LL/HX)	Y	123	RR/LL	HX	R		Med to med high poplins, staygreen, good drought tolerance
Mycogen	TMF2N804 (RR/LL/HX)	Y	116	RR/LL	HX	R		Med to med high poplins, good drought tolerance
Wyffels	W8681 (VT3)	Y	115	RR2	CB/RW	R		Excellent stay green
Wyffels	W9121 (VT3)	Y	117	RR	YGCB/RW	R		Excellent standability

Codes:

Bt, YG, YGCB, CB, HX = contains a *Bacillus thuringiensis* gene for insect resistance

CBRW, RW, CRW = contains a gene for rootworm resistance

CL = contains a gene for tolerance to Imidazolinone class herbicides

† Information on this table provided by the respective seed companies.

LL = contains a gene for tolerance to glufosinate

W = white grain

RR, R, RR2, RR2, GT = contains a gene for tolerance to glyphosate

Table 21. Contact information for corn hybrid and sweet sorghum seed companies evaluated in yield tests in Tennessee during 2009.¹

Company	Contact	Phone	Email	Web site	Address
Corn					
Augusta Seed Corporation	Matt Rawley	540-886-6055	Matt.Rawley@augustaseed.com augustaseed@aol.com		473 Tisdale Farm Ln. Stuanton, VA 24401
Croplan Genetics	Jesse Witt Kieth Savin Jim Payne Ashley Plymale Darrin Holder	256-221-5932 731-610-7006 901-225-2032 270-719-1570 270-207-0190	ipayne@ourcoop.com	www.croplangenetics.com	Agrilinnace and Tennessee Farmers Co-op Locations
Monsanto (Dekalb)		800-768-6387		www.monsanto.com www.dekalb.com	800 N. Lindbergh Blvd. St. Louis, MO 63167
Crop Production Services (Dyna-Gro)	Steve Johnson	731-885-1212	sjohnson@agriumretail.com	www.dynagroseed.com	
Mycogen Seed	Ron Prinz	270-217-3383 270-744-0150	rhprinz@dow.com	www.dowagro.com/mycogen	8315 Danube Dr. West Paducah, KY 42086
Wyffels Hybrids Inc.	Scott Janes	888-786-4537	scojan@milesnmore.com	www.wyffels.com	Miles Farm Supply, P.O. Box 22879 Owensboro, KY 42304
Sweet Sorghum					
Kentucky Sweet Sorghum Association	Morris Bitzer	859-806-3358	mbitzer@uky.edu	www.ca.uky.edu/nssppa	2049 Rebel Road, Lexington, KY 40503
Walter Moss Seed (Mega Green, 4 Ever Green)		888-667-7872	info@mossseed.com	www.mossseed.com	P.O. Box 21114 Waco, TX 76702-1114



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