

Corn Hybrid and Sweet Sorghum Silage Tests in Tennessee

2009

PRELIMINARY REPORT

Fred L. Allen, Coordinator, Agronomic Crop Variety Testing & Demonstrations

Richard Johnson, Research Associate, Agronomic Crop Variety Testing & Demonstrations

**Agronomic Crop Variety Testing and Demonstrations
Department of Plant Sciences
Institute of Agriculture
University of Tennessee
Knoxville**

•Telephone: (865)974-8821 • FAX: (865)974-1947 •email: allenf@utk.edu

Variety test results are posted on UT's website at:

<http://varietytrials.tennessee.edu/>
and
www.utcrops.com

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Department of Plant Sciences

Dr. Dennis West, Professor and Grains Breeder

Mr. David Kincer, Research Associate

Kara Warwick, Graduate Research Assistant

Jennifer Lane, Graduate Research Assistant

Research and Education Centers:

East Tennessee, Knoxville

Dr. John Hodges, Superintendent

Mr. Bobby McKee, Sr. Farm Crew Leader

Mr. Lee Ellis, Research Assistant

Plateau

Mr. Walt Hitch, Superintendent

Mr. Greg Blaylock, Light Farm Equipment Operator

Mr. Sam Simmons, Light Farm Equipment Operator

Highland Rim, Springfield

Dr. Barry Sims, Superintendent

Mr. Brad S. Fisher, Research Associate

Dairy, Lewisburg

Dr. Dennis Onks, Superintendent

Mr. Hugh Moorehead, Research Assistant

Mr. Phillip Lunn, Research Assistant

Middle Tennessee, Spring Hill

Dr. Dennis Onks, Superintendent

Mr. Frank Musgrave, Research Associate

County Standard Corn Silage Tests

County

Blount

Washington

Producer

Mac Pate

David Saylor

Agent

John Wilson

John Hamrick

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). Ten **sweet sorghum** varieties were evaluated for silage yield and quality at the East Tennessee 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 will be provided by the Cumberland Valley Analytical Services, Inc., Hagerstown, MD and will be added to the final publication of this report when received. Milk per ton and milk per acre calculations will be performed using the University of Wisconsin Milk2000 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.

Brand	Hybrid	Dry Weight	65% Moisture	Dry Weight				
		Avg. Yield ± Std Err. (n=5)	Avg. Yield ± Std Err. (n=5)	Knoxville	Crossville	Spring Hill	Springfield	Lewisburg
		-----tons/a-----						
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.

Brand	Hybrid	Dry Weight	65% Moisture	Moisture at harvest	Lodging	Plant Height	Ear Height
		Avg. Yield ± Std Err. (n=5)	Avg. Yield ± Std Err. (n=5)				
		tons/a	tons/a	%	%	inches	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 (RR2/YGCB)	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 (RR2/YGCB)	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.

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

YG, YGCB, CB, Bt, HX = contains a *Bacillus thuringiensis* gene for insect 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 4. 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, 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

Table 5. Mean yields † and agronomic characteristics of 15 corn hybrids evaluated for silage in four environments for two years (2008-2009) in Tennessee.

Brand	Variety	Dry Weight	65% Moisture	Moisture at harvest	Lodging	Plant Height	Ear Height
		Avg. Yield ± Std Err. (n=8)	Avg. Yield ± Std Err. (n=8)				
		tons/a	tons/a	%	%	inches	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, 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

Table 6. Mean yields † of 11 corn hybrids evaluated for silage in three environments for three years (2007-2009) in Tennessee.

Brand	Hybrid	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, 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

Table 7. Mean yields † and agronomic characteristics of 11 corn hybrids evaluated for silage in three environments for three years (2007-2009) in Tennessee.

Brand	Variety	Dry Weight	65% Moisture	Moisture at harvest	Lodging	Plant Height	Ear Height
		Avg. Yield ± Std Err. (n=9)	Avg. Yield ± Std Err. (n=9)				
		tons/a	tons/a	%	%	inches	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, 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

Table 8. Mean yields † of 15 corn hybrids evaluated for silage in two County Standard Tests in Tennessee during 2009.

Brand	Hybrid	Dry Weight	65% Moisture	----- Dry Weight -----		Moisture at harvest (n=2)	Plant Height * (n=1)	Ear Height * (n=1)
		Avg. Yield ± Std Err. (n=2)	Avg. Yield ± Std Err. (n=2)	Blount (n=1)	Washington (n=1)			
		-----tons/a-----				%	inches	inches
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

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

* Plant and ear height data from Blount County location.

Table 9. Mean yields and agronomic characteristics of 10 sweet sorghum varieties evaluated for silage at Knoxville, Tennessee during 2009.

Brand	Hybrid	Dry Weight	65% Moisture	Lodging	Plant Height	Moisture at Harvest
		Avg. Yield ± Std Err.	Avg. Yield ± Std Err.			
		tons/a	tons/a	Score	inches	%
Walter Moss	Mega Green	11.4 ± 0.6	32.6 ± 1.8	1.2	161	76.5
KN	Morris	11.0 ± 0.6	31.4 ± 1.8	2.2	145	71.5
Walter Moss	4 Ever Green	10.1 ± 0.6	29.0 ± 1.8	1.7	159	79.5
MS	Dale	9.6 ± 0.6	27.6 ± 1.8	3.5	144	74.8
Top	76-6	9.5 ± 0.6	27.2 ± 1.8	1.5	127	75.0
Walter Moss	4 Ever Green BMR	9.4 ± 0.6	26.8 ± 1.8	3.2	152	78.6
VA	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, Harvested 9/4/09, seeding rate 87,600 / acre, Stasser Silt Loam

Table 10. Mean yields of seven sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for two years (2008-2009).

Brand	Hybrid	Dry Weight	65% Moisture	Lodging	Plant Height	Moisture at Harvest
		Avg. Yield ± Std Err. (n=2)	Avg. Yield ± Std Err. (n=2)			
		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			

Table 11. Mean yields of five sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for three years (2007-2009).

Brand	Hybrid	Dry Weight	65% Moisture	Lodging	Plant Height	Moisture at Harvest
		Avg. Yield ± Std Err. (n=3)	Avg. Yield ± Std Err. (n=3)			
		tons/a	tons/a	Score	inches	%
MS	Keller	13.3 ± 0.7	37.9 ± 1.9	3.2	137	69.2
MS	M81E	12.9 ± 0.7	36.8 ± 1.9	2.3	142	71.4
MS	Dale	12.2 ± 0.7	35.0 ± 1.9	2.8	144	72.3
VA	Della	9.6 ± 0.7	27.5 ± 1.9	3.4	141	72.2
MS	Theis	9.4 ± 0.7	26.9 ± 1.9	2.0	113	68.7
Avg. (tons/a)		11.5	32.8	2.7	135	70.8
L.S.D._{.05} (tons/a)		2.6	7.5			
C.V. (%)		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 12. 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 poplns, 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 poplns, sound agronomics	
Mycogen	TMF2H918 (RR/LL/HX)	Y	123	RR/LL	HX	R	Med to med high poplns, staygreen, good drought tolerance	
Mycogen	TMF2N804 (RR/LL/HX)	Y	116	RR/LL	HX	R	Med to med high poplns, 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, R2, RR2, GT = contains a gene for tolerance to glyphosate

Table 13. Contact information for corn hybrid and sweet sorghum seed companies evaluated in yield tests in Tennessee during 2009.

Company	Contact	Phone	Email	Web site	Address
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	jpayne@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 270-217-3383	sjohnson@agriumretail.com	www.dynagroseed.com	8315 Danube Dr. West Paducah, KY 42086
Mycogen Seed	Ron Prinz	270-744-0150	rhprinz@dow.com	www.dowagro.com/mycogen	Miles Farm Supply, P.O. Box 22879 Owensboro, KY 42304
Wyffels Hybrids Inc.	Scott Janes	888-786-4537	scojan@milesnmore.com	www.wyffels.com	
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