

# **Corn, Sweet Sorghum, and Small Grain Silage Tests in Tennessee**

**2010**

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

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

**Kara Warwick**, Graduate Research Assistant

**Jennifer Lane**, Graduate Research Assistant

**Virginia Sykes**, Graduate Research Assistant

**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](mailto:allenf@utk.edu)

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

<http://varietytrials.tennessee.edu/>  
and  
[www.utcrops.com](http://www.utcrops.com)

## Acknowledgments

This research was funded by the Tennessee Agricultural Experiment Station and UT Extension with partial funding from participating companies.

We gratefully acknowledge the assistance of the following individuals in conducting these experiments:

Department of Plant Sciences

**Dr. Dennis West**, Professor and Grains Breeder

**Mr. David Kincer**, Research Associate

Research and Education Centers:

East Tennessee, Knoxville

**Dr. Robert Simpson**, 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

Middle Tennessee, Spring Hill

**Dr. Kevin Thompson**, Superintendent

**Mr. Frank Musgrave**, Research Associate

### County Standard Corn Silage Tests

**County**

Blount

Washington

**Producer**

Mac Pate

David Saylor

**Agent**

John Wilson

John Hamrick

## Table of Contents

Experimental Procedures _____	3
Interpretation of Data _____	4
Research and Education Center Information _____	4
2010 Corn Hybrid Yield _____	5
2010 Corn Hybrid Agronomic Data _____	6
2010 Corn Hybrid Quality Data _____	7
2 Year Corn Hybrid Data _____	9
3 Year Corn Hybrid Data _____	11
County Standard Tests _____	13
2010 Sweet Sorghum Silage Data _____	15
2 Year Sweet Sorghum Silage Data _____	17
3 Year Sweet Sorghum Silage Data _____	18
2010 Wheat Silage Yield & Agronomic Data _____	19
2010 Wheat Silage Quality Data _____	22
2010 Oat Silage Yield & Agronomic Data _____	24
2010 Oat Silage Quality Data _____	25
Corn Hybrid Characteristics _____	26
Seed Company Contact Information _____	27

## CORN SILAGE YIELD TESTS

### 2010

#### Experimental Procedures

**Research and Education Center Tests:** Nineteen corn hybrids were evaluated for silage yield and quality in 2010. The tests were conducted at the East Tennessee (Knoxville), Plateau (Crossville), 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 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:** The 2010 growing season was characterized by a wet spring resulting in some flooded fields followed by hotter and dryer than normal conditions. Hot dry conditions in July and August advanced harvest slightly ahead of the normal pace.

**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 2010.**

<b>Research and Education Center</b>	<b>Location</b>	<b>Planting Date</b>	<b>Harvest Date</b>	<b>Plant Population</b>	<b>Soil Type</b>
East Tennessee	Knoxville	4/19/10	8/12/10	31,944	Sequatchie Silt Loam
Plateau	Crossville	5/10/10	8/24/10	29,621	Lilly Silt Loam
Middle Tennessee	Spring Hill	4/26/10	8/16/10	32,815	Maury Silt Loam
Highland Rim	Springfield	4/15/10	8/10/10	25,555	Dickson Silt Loam

**Table 2. Mean yields † of 19 corn hybrids evaluated for silage at four locations in Tennessee during 2010.**

Brand	Hybrid	Dry Weight	65% Moisture	----- Dry Weight -----			
		Avg. Yield ± Std Err. (n=4)	Avg. Yield ± Std Err. (n=4)	Knoxville	Crossville	Spring Hill	Springfield
-----tons/a-----							
Croplan	8505VT3P	7.9 ± 0.4	22.5 ± 1.1	11.1	6.1	6.2	8.1
Croplan	9009 RH (RR/LL/HX)	7.7 ± 0.4	21.9 ± 1.1	12.1	6.0	5.4	7.2
Augusta	A5337EVT3	7.6 ± 0.4	21.8 ± 1.1	11.8	5.0	5.7	8.0
Mycogen	TMF2H918 (RR/LL/HX)	7.4 ± 0.4	21.1 ± 1.0	11.7	5.2	5.8	6.9
Merschman	M-816-10 (RR/CB/RW)	7.3 ± 0.4	20.9 ± 1.0	10.9	4.7	5.7	7.9
Augusta	A6867CBLL	7.3 ± 0.4	20.8 ± 1.1	11.1	5.8	5.5	6.8
Augusta	A5461GTCBLL	7.2 ± 0.4	20.7 ± 1.1	11.2	4.8	6.6	6.4
Croplan	8756VT3	7.1 ± 0.4	20.3 ± 1.0	10.7	4.5	5.9	7.4
Croplan	8221VT3	7.0 ± 0.4	20.1 ± 1.1	11.5	5.0	5.3	6.3
Wyffels	W8681 (VT3)	7.0 ± 0.4	19.9 ± 1.0	10.6	5.4	5.4	6.4
Augusta	A0604HXLL	6.9 ± 0.4	19.9 ± 1.1	10.4	5.9	5.5	6.0
Augusta	A5462GT3	6.9 ± 0.4	19.8 ± 1.0	10.3	5.2	5.8	6.5
Wyffels	W9121 (VT3)	6.8 ± 0.4	19.5 ± 1.0	9.7	4.6	5.4	7.7
Mycogen	TMF2W727 (RR/LL/HX)	6.8 ± 0.3	19.5 ± 1.0	10.3	5.4	5.6	6.1
Augusta	A008VT3	6.7 ± 0.4	19.3 ± 1.1	11.2	4.3	5.0	6.4
Croplan	851VT3P	6.7 ± 0.4	19.0 ± 1.1	10.6	4.6	5.6	5.9
Augusta	A7664CB	6.6 ± 0.4	18.7 ± 1.1	9.8	5.2	5.6	5.6
Merschman	M-1015B-15 (RR/CB/RW)	5.9 ± 0.3	16.9 ± 1.0	10.3	4.9	5.0	3.5
Mycogen	F2F665 (RR/LL/HX)	5.9 ± 0.3	16.9 ± 1.0	9.4	4.4	4.5	5.4
<b>Avg. (tons/a)</b>		<b>7.1</b>	<b>19.9</b>	<b>10.7</b>	<b>5.1</b>	<b>5.5</b>	<b>6.8</b>
<b>L.S.D.<sub>.05</sub> (tons/a)</b>		<b>1.0</b>	<b>2.8</b>	<b>1.5</b>	<b>1.7</b>	<b>1.4</b>	<b>3.4</b>
<b>C.V. (%)</b>		<b>16.4</b>	<b>16.9</b>	<b>8.6</b>	<b>19.9</b>	<b>15.6</b>	<b>26.4</b>

† 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm 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 19 corn hybrids evaluated for silage at four locations in Tennessee during 2010.**

Brand	Hybrid	Dry Weight	65% Moisture	Moisture at harvest	Lodging	Plant Height	Ear Height
		Avg. Yield ± Std Err. (n=4)	Avg. Yield ± Std Err. (n=4)				
		tons/a	tons/a	%	%	inches	inches
Croplan	8505VT3P	7.9 ± 0.4	22.5 ± 1.1	54.8	0	105	46
Croplan	9009 RH (RR/LL/HX)	7.7 ± 0.4	21.9 ± 1.1	54.1	1	108	49
Augusta	A5337EVT3	7.6 ± 0.4	21.8 ± 1.1	54.7	0	107	43
Mycogen	TMF2H918 (RR/LL/HX)	7.4 ± 0.4	21.1 ± 1.0	53.5	0	110	50
Merschman	M-816-10 (RR/CB/RW)	7.3 ± 0.4	20.9 ± 1.0	52.9	0	102	47
Augusta	A6867CBLL	7.3 ± 0.4	20.8 ± 1.1	51.5	1	105	44
Augusta	A5461GTCBLL	7.2 ± 0.4	20.7 ± 1.1	52.2	0	112	45
Croplan	8756VT3	7.1 ± 0.4	20.3 ± 1.0	54.2	0	102	46
Croplan	8221VT3	7.0 ± 0.4	20.1 ± 1.1	52.5	0	104	50
Wyffels	W8681 (VT3)	7.0 ± 0.4	19.9 ± 1.0	53.4	0	102	40
Augusta	A0604HXLL	6.9 ± 0.4	19.9 ± 1.1	51.4	1	104	42
Augusta	A5462GT3	6.9 ± 0.4	19.8 ± 1.0	52.5	1	113	47
Wyffels	W9121 (VT3)	6.8 ± 0.4	19.5 ± 1.0	51.9	0	101	42
Mycogen	TMF2W727 (RR/LL/HX)	6.8 ± 0.3	19.5 ± 1.0	52.8	0	102	44
Augusta	A008VT3	6.7 ± 0.4	19.3 ± 1.1	55.5	0	105	45
Croplan	851VT3P	6.7 ± 0.4	19.0 ± 1.1	53.3	0	97	41
Augusta	A7664CB	6.6 ± 0.4	18.7 ± 1.1	53.8	0	95	38
Merschman	M-1015B-15 (RR/CB/RW)	5.9 ± 0.3	16.9 ± 1.0	50.2	0	99	40
Mycogen	F2F665 (RR/LL/HX)	5.9 ± 0.3	16.9 ± 1.0	50.0	0	104	48
<b>Average</b>		<b>7.1</b>	<b>19.9</b>	<b>52.9</b>	<b>0</b>	<b>104</b>	<b>45</b>

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

YGRW, 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm and glyphosate resistance

**Table 4. Mean yields † and feed quality characteristics of 19 corn hybrids evaluated for silage at four locations in Tennessee during 2010.**

Brand	Hybrid	Dry Weight										
		Avg. Yield ± Std Err. (n=4) tons/a	Moisture at Harvest (n=4) %	Crude Protein (n=4) % dm	NDF 30h			ADF	TDN	NEL	Milk/ton <sup>‡</sup>	Milk/acre <sup>‡</sup>
					NDF	IV Digest	Starch					
					(n=4) % dm	(n=4) % of NDF	(n=4) % dm	(n=4) % dm	(n=4) % dm	(n=4) Mcal/lb	(n=4) lbs/ton	(n=4) lbs/acre
Croplan	8505VT3P	7.9 ± 0.4	54.8	7.5	47.5	49.6	28.6	29.4	69.3	0.72	2624	20648
Croplan	9009 RH (RR/LL/HX)	7.7 ± 0.4	54.1	7.2	48.5	51.4	26.1	29.8	69.1	0.72	2687	20553
Augusta	A5337EVT3	7.6 ± 0.4	54.7	7.8	42.6	55.4	30.8	26.1	71.7	0.75	2914	22177
Mycogen	TMF2H918 (RR/LL/HX)	7.4 ± 0.4	53.5	7.8	48.9	60.3	25.4	29.4	69.7	0.73	2930	21683
Merschman	M-816-10 (RR/CB/RW)	7.3 ± 0.4	52.9	7.1	48.3	54.9	27.1	28.9	69.7	0.73	2772	20290
Augusta	A6867CBLL	7.3 ± 0.4	51.5	7.9	43.0	56.0	31.8	26.0	71.6	0.75	2885	21029
Augusta	A5461GTCBLL	7.2 ± 0.4	52.2	7.6	44.5	55.5	30.7	27.0	71.0	0.74	2843	20610
Croplan	8756VT3	7.1 ± 0.4	54.2	7.6	50.1	58.3	24.8	29.6	69.0	0.72	2847	20273
Croplan	8221VT3	7.0 ± 0.4	52.5	7.6	45.5	53.6	29.3	28.0	70.1	0.73	2756	19403
Wyffels	W8681 (VT3)	7.0 ± 0.4	53.4	8.3	44.8	56.3	30.2	26.8	71.0	0.74	2870	19973
Augusta	A0604HXLL	6.9 ± 0.4	51.4	7.6	44.2	57.1	30.5	26.9	71.2	0.74	2908	20212
Augusta	A5462GT3	6.9 ± 0.4	52.5	7.8	42.5	55.9	31.9	25.5	71.8	0.75	2901	20072
Wyffels	W9121 (VT3)	6.8 ± 0.4	51.9	7.9	45.3	53.3	29.6	27.4	70.5	0.74	2779	19007
Mycogen	TMF2W727 (RR/LL/HX)	6.8 ± 0.3	52.8	7.4	46.9	54.9	27.3	28.8	70.1	0.73	2813	19213
Augusta	A008VT3	6.7 ± 0.4	55.5	7.7	46.5	54.6	28.3	28.4	69.9	0.73	2776	18708
Croplan	851VT3P	6.7 ± 0.4	53.3	7.8	44.2	56.5	30.0	27.3	70.9	0.74	2880	19179
Augusta	A7664CB	6.6 ± 0.4	53.8	8.1	41.8	57.0	33.5	24.7	72.2	0.76	2931	19224
Merschman	M-1015B-15 (RR/CB/RW)	5.9 ± 0.3	50.2	7.2	44.7	53.4	31.3	27.1	70.9	0.74	2782	16499
Mycogen	F2F665 (RR/LL/HX)	5.9 ± 0.3	50.0	8.1	46.1	61.8	27.4	28.0	70.6	0.74	3013	17807

† 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm 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 19 corn hybrids evaluated for silage at four locations in Tennessee during 2010, sorted by brand.**

Brand	Hybrid	Dry Weight		Crude Protein (n=4)	NDF 30h			ADF (n=4)	TDN (n=4)	NEL (n=4)	Milk/ton‡ (n=4)	Milk/acre‡ (n=4)
		Avg. Yield ± Std Err. (n=4)	Moisture at Harvest (n=4)		NDF	IV Digest	Starch					
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre
Augusta	A5337EVT3	7.6 ± 0.4	54.7	7.8	42.6	55.4	30.8	26.1	71.7	0.75	2914	22177
Augusta	A6867CBLL	7.3 ± 0.4	51.5	7.9	43.0	56.0	31.8	26.0	71.6	0.75	2885	21029
Augusta	A5461GTCBLL	7.2 ± 0.4	52.2	7.6	44.5	55.5	30.7	27.0	71.0	0.74	2843	20610
Augusta	A0604HXLL	6.9 ± 0.4	51.4	7.6	44.2	57.1	30.5	26.9	71.2	0.74	2908	20212
Augusta	A5462GT3	6.9 ± 0.4	52.5	7.8	42.5	55.9	31.9	25.5	71.8	0.75	2901	20072
Augusta	A008VT3	6.7 ± 0.4	55.5	7.7	46.5	54.6	28.3	28.4	69.9	0.73	2776	18708
Augusta	A7664CB	6.6 ± 0.4	53.8	8.1	41.8	57.0	33.5	24.7	72.2	0.76	2931	19224
Croplan	8505VT3P	7.9 ± 0.4	54.8	7.5	47.5	49.6	28.6	29.4	69.3	0.72	2624	20648
Croplan	9009 RH (RR/LL/HX)	7.7 ± 0.4	54.1	7.2	48.5	51.4	26.1	29.8	69.1	0.72	2687	20553
Croplan	8756VT3	7.1 ± 0.4	54.2	7.6	50.1	58.3	24.8	29.6	69.0	0.72	2847	20273
Croplan	8221VT3	7.0 ± 0.4	52.5	7.6	45.5	53.6	29.3	28.0	70.1	0.73	2756	19403
Croplan	851VT3P	6.7 ± 0.4	53.3	7.8	44.2	56.5	30.0	27.3	70.9	0.74	2880	19179
Merschman	M-816-10 (RR/CB/RW)	7.3 ± 0.4	52.9	7.1	48.3	54.9	27.1	28.9	69.7	0.73	2772	20290
Merschman	M-1015B-15 (RR/CB/RW)	5.9 ± 0.3	50.2	7.2	44.7	53.4	31.3	27.1	70.9	0.74	2782	16499
Mycogen	TMF2H918 (RR/LL/HX)	7.4 ± 0.4	53.5	7.8	48.9	60.3	25.4	29.4	69.7	0.73	2930	21683
Mycogen	TMF2W727 (RR/LL/HX)	6.8 ± 0.3	52.8	7.4	46.9	54.9	27.3	28.8	70.1	0.73	2813	19213
Mycogen	F2F665 (RR/LL/HX)	5.9 ± 0.3	50.0	8.1	46.1	61.8	27.4	28.0	70.6	0.74	3013	17807
Wyffels	W8681 (VT3)	7.0 ± 0.4	53.4	8.3	44.8	56.3	30.2	26.8	71.0	0.74	2870	19973
Wyffels	W9121 (VT3)	6.8 ± 0.4	51.9	7.9	45.3	53.3	29.6	27.4	70.5	0.74	2779	19007

† 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm 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 eight corn hybrids evaluated for silage in four environments for two years (2009-2010) in Tennessee.**

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=8)	65% Moisture Avg. Yield ± Std Err. (n=8)	----- Dry Weight -----			
				Knoxville	Crossville	Spring Hill	Springfield
-----tons/a-----							
Croplan	9009 RH (RR/LL/HX)	8.5 ± 0.2	24.1 ± 0.6	12.3	7.1	7.5	7.3
Mycogen	TMF2H918 (RR/LL/HX)	8.4 ± 0.2	23.7 ± 0.6	11.7	6.4	7.5	7.8
Croplan	8756VT3	8.2 ± 0.2	23.4 ± 0.6	11.9	5.5	7.5	8.0
Wyffels	W8681 (VT3)	8.1 ± 0.2	23.1 ± 0.6	11.1	6.1	7.2	8.0
Croplan	8221VT3	8.0 ± 0.2	22.6 ± 0.6	11.2	6.5	6.7	7.8
Augusta	A0604HXLL	8.0 ± 0.2	22.8 ± 0.7	11.1	6.2	7.2	7.3
Augusta	A008VT3	7.9 ± 0.2	22.5 ± 0.7	11.6	6.1	6.3	7.7
Wyffels	W9121 (VT3)	7.6 ± 0.2	21.7 ± 0.6	10.9	5.5	6.7	7.3
<b>Avg. (tons/a)</b>		<b>8.1</b>	<b>22.9</b>	<b>11.5</b>	<b>6.2</b>	<b>7.1</b>	<b>7.6</b>
<b>L.S.D.<sub>.05</sub> (tons/a)</b>		<b>0.8</b>	<b>2.3</b>	<b>1.6</b>	<b>1.5</b>	<b>1.2</b>	<b>2.1</b>
<b>C.V. (%)</b>		<b>12.6</b>	<b>12.9</b>	<b>9.1</b>	<b>15.7</b>	<b>10.8</b>	<b>16.7</b>

**Table 7. Mean yields † and agronomic characteristics of eight corn hybrids evaluated for silage in four environments for two years (2009-2010) in Tennessee.**

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=8)	65% Moisture Avg. Yield ± Std Err. (n=8)	Moisture at harvest (n=8)	Lodging (n=7)	Plant Height (n=8)	Ear Height (n=6)
Croplan	9009 RH (RR/LL/HX)	8.5 ± 0.2	24.1 ± 0.6	58.9	1	113	52
Mycogen	TMF2H918 (RR/LL/HX)	8.4 ± 0.2	23.7 ± 0.6	58.5	0	112	53
Croplan	8756VT3	8.2 ± 0.2	23.4 ± 0.6	57.0	0	105	49
Wyffels	W8681 (VT3)	8.1 ± 0.2	23.1 ± 0.6	57.3	0	104	44
Croplan	8221VT3	8.0 ± 0.2	22.6 ± 0.6	56.5	0	106	51
Augusta	A0604HXLL	8.0 ± 0.2	22.8 ± 0.7	54.8	0	107	46
Augusta	A008VT3	7.9 ± 0.2	22.5 ± 0.7	59.0	0	106	47
Wyffels	W9121 (VT3)	7.6 ± 0.2	21.7 ± 0.6	54.8	0	101	45

† 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm and glyphosate resistance

**Table 8. Mean yields † and feed quality characteristics of eight corn hybrids evaluated for silage at four locations for 2 years (2009-2010) in Tennessee.**

Brand	Hybrid	Dry Weight	Moisture at Harvest (n=8)	Crude Protein (n=8)	NDF (n=8)	NDF 30h		ADF (n=8)	TDN (n=8)	NEL (n=8)	Milk/ton <sup>‡</sup> (n=8)	Milk/acre <sup>‡</sup> (n=8)
		Avg. Yield ± Std Err. (n=8)				IV Digest (n=8)	Starch (n=8)					
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre
Croplan	9009 RH (RR/LL/HX)	8.5 ± 0.2	58.9	7.6	48.6	51.5	24.7	30.3	69.7	0.73	2865	25097
Mycogen	TMF2H918 (RR/LL/HX)	8.4 ± 0.2	58.5	7.8	47.9	57.1	24.8	29.7	70.5	0.74	2987	25909
Croplan	8756VT3	8.2 ± 0.2	57.0	7.6	47.5	57.8	27.4	28.4	70.6	0.74	2974	24945
Wyffels	W8681 (VT3)	8.1 ± 0.2	57.3	8.5	42.9	57.8	30.7	25.7	72.3	0.76	3078	25429
Croplan	8221VT3	8.0 ± 0.2	56.5	7.6	43.7	54.2	30.4	26.9	71.6	0.75	2926	24340
Augusta	A0604HXLL	8.0 ± 0.2	54.8	7.8	41.5	58.8	32.6	25.2	73.4	0.77	3064	24642
Augusta	A008VT3	7.9 ± 0.2	59.0	7.8	43.9	54.7	30.1	27.0	71.6	0.75	3012	24240
Wyffels	W9121 (VT3)	7.6 ± 0.2	54.8	8.1	43.9	55.4	30.4	26.5	72.0	0.75	2931	22407

† 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm 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 five corn hybrids evaluated for silage in three environments for three years (2008-2010) 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-----						
Croplan	9009 RH (RR/LL/HX)	7.9 ± 0.2	22.4 ± 0.6	10.6	6.5	6.7
Croplan	8221VT3	7.9 ± 0.2	22.3 ± 0.6	10.3	6.4	7.0
Augusta	A0604HXLL	7.7 ± 0.2	22.2 ± 0.7	10.1	6.2	6.9
Augusta	A008VT3	7.6 ± 0.2	21.5 ± 0.7	10.2	5.6	6.9
Wyffels	W8681 (VT3)	7.4 ± 0.2	21.1 ± 0.6	9.9	5.3	6.9
<b>Avg. (tons/a)</b>		<b>7.7</b>	<b>21.9</b>	<b>10.2</b>	<b>6.0</b>	<b>6.9</b>
<b>L.S.D.<sub>.05</sub> (tons/a)</b>		<b>0.9</b>	<b>2.7</b>	<b>1.4</b>	<b>1.4</b>	<b>2.0</b>
<b>C.V. (%)</b>		<b>14.6</b>	<b>14.8</b>	<b>9.5</b>	<b>16.9</b>	<b>20.1</b>

**Table 10. Mean yields † and agronomic characteristics of five corn hybrids evaluated for silage in three environments for three years (2008-2010) in Tennessee.**

Brand	Variety	Dry Weight	65% Moisture	Moisture at harvest (n=9)	Lodging (n=8)	Plant Height (n=9)	Ear Height (n=6)
		Avg. Yield ± Std Err. (n=9)	Avg. Yield ± Std Err. (n=9)				
		tons/a	tons/a	%	%	inches	inches
Croplan	9009 RH (RR/LL/HX)	7.9 ± 0.2	22.4 ± 0.6	61.8	0	110	51
Croplan	8221VT3	7.9 ± 0.2	22.3 ± 0.6	58.7	0	104	49
Augusta	A0604HXLL	7.7 ± 0.2	22.2 ± 0.7	55.3	0	103	42
Augusta	A008VT3	7.6 ± 0.2	21.5 ± 0.7	59.4	0	102	44
Wyffels	W8681 (VT3)	7.4 ± 0.2	21.1 ± 0.6	58.1	0	99	40

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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm and glyphosate resistance

**Table 11. Mean yields † and feed quality characteristics of five corn hybrids evaluated for silage at three locations for three years (2008-2010) in Tennessee.**

Brand	Hybrid	Dry Weight	Moisture at Harvest (n=9)	Crude Protein (n=9)	NDF (n=9)	NDF 30h IV Digest (n=9)	Starch (n=9)	ADF (n=9)	TDN (n=9)	NEL (n=9)	Milk/ton <sup>‡</sup> (n=9)	Milk/acre <sup>‡</sup> (n=9)
		Avg. Yield ± Std Err. (n=9) tons/a										
Croplan	9009 RH (RR/LL/HX)	7.9 ± 0.2	61.8	7.9	48.0	53.4	25.1	29.6	70.1	0.73	2960	22498
Croplan	8221VT3	7.9 ± 0.2	58.7	7.9	42.1	55.2	32.5	25.7	72.1	0.75	3100	22906
Augusta	A0604HXLL	7.7 ± 0.2	55.3	8.1	39.2	60.5	35.9	23.1	74.3	0.78	3249	23596
Augusta	A008VT3	7.6 ± 0.2	59.4	8.0	40.3	57.8	35.0	24.2	73.2	0.77	3244	22525
Wyffels	W8681 (VT3)	7.4 ± 0.2	58.1	8.9	39.4	58.6	35.3	23.0	73.2	0.77	3280	23240

† 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm 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 19 corn hybrids evaluated for silage in two County Standard Tests in Tennessee during 2010.

Brand	Hybrid	Dry Weight	65% Moisture	----- Dry Weight -----		Moisture at harvest (n=2)	Plant Height (n=1)
		Avg. Yield ± Std Err. (n=2)	Avg. Yield ± Std Err. (n=2)	Blount (n=1)	Washington (n=1)		
		-----tons/a-----				%	inches
Dyna-Gro	58V69 (RR/CB)	6.9 ± 0.7	19.7 ± 2.0	5.9	7.9	61.8	86
Augusta	A5462GT3	6.0 ± 0.7	17.0 ± 2.0	6.2	5.7	61.9	84
Croplan	8756VT3	5.4 ± 0.7	15.4 ± 2.0	4.4	6.4	66.5	91
Croplan	851VT3P	5.2 ± 0.7	14.9 ± 2.0	5.1	5.3	66.3	87
Croplan	8505VT3P	5.2 ± 0.7	14.8 ± 2.0	6.3	4.0	66.6	94
DeKalb	DKC67-87 (RR2/YGCB)	5.0 ± 0.7	14.2 ± 2.0	5.5	4.4	63.5	83
Merschman	M-816-10 (RR/CB/RW)	4.9 ± 0.7	14.1 ± 2.0	3.5	6.3	70.4	84
Mycogen	TMF2W727 (RR/LL/HX)	4.9 ± 0.7	13.9 ± 2.0	5.8	3.9	65.9	92
Croplan	8221VT3	4.8 ± 0.7	13.6 ± 2.0	4.5	5.1	69.1	88
Merschman	M-1015B-15 (RR/CB/RW)	4.7 ± 0.7	13.4 ± 2.0	4.4	5.0	63.0	81
Augusta	A008VT3	4.6 ± 0.7	13.0 ± 2.0	4.0	5.1	68.2	81
Augusta	A5337EVT3	4.6 ± 0.7	13.0 ± 2.0	4.6	4.5	68.0	84
Croplan	9009 RH	4.5 ± 0.7	12.7 ± 2.0	3.6	5.3	70.0	93
Mycogen	TMF2H918 (RR/LL/HX)	4.4 ± 0.7	12.6 ± 2.0	4.3	4.5	69.1	91
Wyffels	W9121 (VT3)	4.4 ± 0.7	12.4 ± 2.0	3.7	5.0	66.9	90
Augusta	A5461GTCBLL	4.1 ± 0.7	11.7 ± 2.0	3.7	4.5	67.9	85
Wyffels	W8681 (VT3)	3.7 ± 0.7	10.5 ± 2.0	2.6	4.7	71.6	78
Terral-REV Bra	28HR20 (RR2/LL/HX1)	3.6 ± 0.7	10.2 ± 2.0	2.8	4.3	72.6	95
Mycogen	F2F665 (RR/LL/HX)	3.3 ± 0.7	9.3 ± 2.0	2.8	3.7	70.2	86
<b>Avg. (tons/a)</b>		<b>4.7</b>	<b>13.5</b>	<b>4.4</b>	<b>5.0</b>	<b>67.3</b>	<b>87</b>
<b>L.S.D.<sub>.05</sub> (tons/a)</b>		<b>2.0</b>	<b>5.8</b>				
<b>C.V. (%)</b>		<b>20.4</b>	<b>20.4</b>				

† 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm and glyphosate resistance

Blount County: Mac Pate Dairy Farm

Planted: 4-16-10

Harvested: 7-23-10

Population: 26,263

30 inch row spacing

Washington County: Savland farm (David Saylor)

Planted: 5-14-10

Harvested: 9-13-10

Population: 27,333

30 inch row spacing

**Table 13. Mean yields † and feed quality characteristics of 19 corn hybrids evaluated for silage in two County Standard Tests in Tennessee during 2010.**

Brand	Hybrid	Dry Weight	Moisture	Crude	NDF 30h			ADF	TDN	NEL	Milk/ton <sup>‡</sup>	Milk/acre <sup>‡</sup>
		Avg. Yield ± Std Err. (n=2)	at Harvest (n=2)	Protein (n=2)	NDF (n=2)	IV Digest (n=2)	Starch (n=2)					
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre
Dyna-Gro	58V69 (RR/CB)	6.9 ± 0.7	61.8	11.8	45.0	62.1	21.5	24.8	70.2	0.73	3028	20896
Augusta	A5462GT3	6.0 ± 0.7	61.9	9.6	44.3	59.6	26.6	25.2	70.7	0.74	3061	18211
Croplan	8756VT3	5.4 ± 0.7	66.5	10.2	44.3	58.5	24.6	26.0	70.5	0.74	3179	17169
Croplan	851VT3P	5.2 ± 0.7	66.3	8.8	50.2	54.6	21.7	31.0	67.3	0.70	2881	14979
Croplan	8505VT3P	5.2 ± 0.7	66.6	11.2	49.2	58.2	23.7	26.2	68.4	0.71	2995	15425
DeKalb	DKC67-87 (RR2/YGCB)	5.0 ± 0.7	63.5	9.5	45.2	55.7	23.6	26.6	70.2	0.73	2893	14319
Merschman	M-816-10 (RR/CB/RW)	4.9 ± 0.7	70.4	10.6	46.8	63.5	21.7	26.3	70.4	0.74	3266	16002
Mycogen	TMF2W727 (RR/LL/HX)	4.9 ± 0.7	65.9	11.0	49.1	63.7	21.4	26.1	69.1	0.72	3161	15329
Croplan	8221VT3	4.8 ± 0.7	69.1	9.6	47.9	60.1	23.2	28.4	69.6	0.73	3209	15402
Merschman	M-1015B-15 (RR/CB/RW)	4.7 ± 0.7	63.0	9.9	47.4	58.4	23.5	27.8	69.1	0.72	2971	13964
Augusta	A008VT3	4.6 ± 0.7	68.2	11.7	46.0	61.1	23.1	26.0	69.3	0.73	3187	14500
Augusta	A5337EVT3	4.6 ± 0.7	68.0	12.1	46.4	61.6	21.4	25.5	69.9	0.73	3237	14729
Croplan	9009 RH	4.5 ± 0.7	70.0	11.0	50.5	64.4	15.7	28.6	68.3	0.71	3009	13391
Mycogen	TMF2H918 (RR/LL/HX)	4.4 ± 0.7	69.1	10.6	50.3	61.9	17.7	28.2	68.4	0.71	3063	13478
Wyffels	W9121 (VT3)	4.4 ± 0.7	66.9	11.6	54.7	60.2	15.5	29.9	66.0	0.69	2847	12384
Augusta	A5461GTCBLL	4.1 ± 0.7	67.9	11.1	48.8	57.8	19.8	27.3	68.0	0.71	2996	12282
Wyffels	W8681 (VT3)	3.7 ± 0.7	71.6	12.2	48.2	63.5	19.8	26.5	68.8	0.72	3209	11713
Terral-REV Brand	28HR20 (RR2/LL/HX1)	3.6 ± 0.7	72.6	11.4	49.8	62.7	16.8	28.5	67.6	0.70	3026	10741
Mycogen	F2F665 (RR/LL/HX)	3.3 ± 0.7	70.2	12.3	53.6	74.3	15.0	28.0	67.6	0.70	3276	10646

† 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

VT3P = contains genes for corn borer, rootworm, earworm, armyworm 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 Silage Test

Eleven **sweet sorghum** varieties were evaluated for silage yield and quality at the East Tennessee REC. Test varieties were planted on 5/7/10 at a rate of 87,600 seed per acre. Plots consisted of four rows on 30 inch spacings, 30 ft in length. Each entry was replicated three times. Plots were harvested with a commercial silage harvester on 9/29/10. Due to equipment difficulties and lodging, only one or two rows of each plot were harvested for yield evaluation. Yields presented were adjusted to both dry weight and 65% moisture. A sub-sample from each plot was taken for analysis and 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 11 sweet sorghum varieties evaluated for silage at Knoxville, Tennessee during 2010.**

Brand	Hybrid	Dry Weight	65% Moisture	Lodging	Plant Height	Moisture
		Avg. Yield ± Std Err.	Avg. Yield ± Std Err.			at Harvest
		tons/a	tons/a	Score	inches	%
Walter Moss	4 Ever Green	11.5 ± 1.1	32.9 ± 3.1	2.5	148	73.1
KN	Morris	10.9 ± 1.1	31.1 ± 3.1	4.0	149	65.7
Walter Moss	Mega Green	10.8 ± 1.1	30.8 ± 3.1	1.0	145	75.1
MS	M81E	10.7 ± 1.1	30.6 ± 3.1	2.0	143	70.8
Walter Moss	4 Ever Green BMR	10.6 ± 1.1	30.4 ± 3.1	3.8	141	72.2
Top	76-6	10.4 ± 1.1	29.6 ± 3.1	1.8	134	71.0
Winfield Solutions	BMR 108 Leafy	10.2 ± 1.1	29.0 ± 3.1	1.0	83	61.1
MS	Dale	10.0 ± 1.1	28.6 ± 3.1	4.3	146	69.9
VA	Della	8.3 ± 1.1	23.7 ± 3.1	3.8	156	69.5
MS	Keller	7.6 ± 1.1	21.7 ± 3.1	3.8	142	71.0
MS	Theis	7.3 ± 1.1	20.9 ± 3.1	3.2	120	68.3
<b>Avg. (tons/a)</b>		<b>9.9</b>	<b>28.2</b>	<b>2.8</b>	<b>137</b>	<b>69.8</b>
<b>L.S.D.<sub>.05</sub> (tons/a)</b>		<b>3.2</b>	<b>9.2</b>			
<b>C.V. (%)</b>		<b>19.2</b>	<b>19.2</b>			

Planted 5/7/09, seeding rate 87,600 / acre, Sequatchie Silt Loam, one and two row plots 30 ft in length, three replications of each entry, Harvested 9/29/10

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 11 sweet sorghum varieties evaluated for silage at Knoxville, Tennessee during 2010.**

Brand	Hybrid	Dry Weight	Crude Protein	NDF	NDF 30h		Sugar	ADF	TDN	NEL	Milk/ton <sup>‡</sup>	Milk/acre <sup>‡</sup>
		Avg. Yield ± Std Err.			IV Digest	Starch						
		tons/a	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Walter Moss	4 Ever Green	11.5 ± 1.1	7.5	60.0	51.6	5.9	9.7	36.6	61.6	0.63	2278	26267
KN	Morris	10.9 ± 1.1	7.3	48.3	53.7	13.2	12.3	29.1	67.1	0.70	2290	25029
Walter Moss	Mega Green	10.8 ± 1.1	6.3	67.1	45.6	4.3	6.8	43.4	55.8	0.57	2150	23223
MS	M81E	10.7 ± 1.1	7.1	47.8	53.1	13.3	11.6	29.6	67.7	0.70	2324	24864
Walter Moss	4 Ever Green BMR	10.6 ± 1.1	6.8	60.1	56.0	9.7	8.0	36.7	62.4	0.64	2699	28685
Top	76-6	10.4 ± 1.1	7.9	56.0	41.1	8.2	8.9	36.2	61.2	0.63	2024	20985
Winfield Solutions	BMR 108 Leafy	10.2 ± 1.1	9.9	43.2	54.1	23.1	7.6	26.1	69.9	0.73	2973	30235
MS	Dale	10.0 ± 1.1	6.1	44.7	51.4	15.6	13.8	28.0	67.1	0.69	2109	21093
VA	Della	8.3 ± 1.1	7.3	50.0	51.6	13.5	11.6	30.1	65.8	0.68	2331	19276
MS	Keller	7.6 ± 1.1	6.5	49.7	48.8	13.3	10.7	31.2	65.4	0.68	2215	16836
MS	Theis	7.3 ± 1.1	6.7	48.3	50.7	15.4	10.3	30.1	67.2	0.70	2442	17903

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 10 sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for two years (2009-2010).**

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	11.1 ± 0.7	31.7 ± 1.9	1.1	153	75.8
KN	Morris	11.0 ± 0.7	31.3 ± 1.9	3.1	147	68.6
Walter Moss	4 Ever Green	10.8 ± 0.7	30.9 ± 1.9	2.1	154	76.3
Walter Moss	4 Ever Green BMR	10.0 ± 0.7	28.6 ± 1.9	3.5	146	75.4
Top	76-6	10.0 ± 0.7	28.4 ± 1.9	1.7	131	73.0
MS	Dale	9.8 ± 0.7	28.1 ± 1.9	3.9	145	72.4
MS	M81E	9.8 ± 0.7	28.0 ± 1.9	2.2	141	72.6
VA	Della	8.7 ± 0.7	24.9 ± 1.9	3.3	151	70.7
MS	Theis	8.1 ± 0.7	23.2 ± 1.9	2.3	119	68.6
MS	Keller	8.1 ± 0.7	23.0 ± 1.9	3.5	138	72.0
<b>Avg. (tons/a)</b>		<b>9.7</b>	<b>27.8</b>	<b>2.7</b>	<b>143</b>	<b>72.5</b>
<b>L.S.D.<sub>.05</sub> (tons/a)</b>		<b>2.0</b>	<b>5.7</b>			
<b>C.V. (%)</b>		<b>16.3</b>	<b>16.3</b>			

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 10 sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for two years (2009-2010).**

Brand	Hybrid	Dry Weight	Crude Protein	NDF 30h			Sugar	ADF	TDN	NEL	Milk/ton <sup>‡</sup>	Milk/acre <sup>‡</sup>
		Avg. Yield ± Std Err.		NDF	IV Digest	Starch						
		tons/a	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Walter Moss	Mega Green	11.1 ± 0.7	6.4	63.4	43.5	6.3	5.2	41.7	59.1	0.61	2053	22729
KN	Morris	11.0 ± 0.7	7.3	44.4	56.2	17.0	8.8	28.6	69.1	0.72	2474	27086
Walter Moss	4 Ever Green	10.8 ± 0.7	6.7	60.0	48.2	6.8	7.0	38.4	62.5	0.64	2136	23234
Walter Moss	4 Ever Green BMR	10.0 ± 0.7	6.9	56.3	60.6	10.7	6.4	35.6	65.1	0.67	2692	26924
Top	76-6	10.0 ± 0.7	7.6	49.8	50.0	12.8	7.2	32.9	65.7	0.68	2271	22488
MS	Dale	9.8 ± 0.7	6.4	46.6	57.0	14.3	9.8	30.8	68.1	0.71	2284	22388
MS	M81E	9.8 ± 0.7	6.7	47.2	52.8	14.6	8.5	31.3	68.0	0.71	2299	22553
VA	Della	8.7 ± 0.7	6.8	46.7	53.4	15.8	8.8	30.6	67.9	0.71	2346	20465
MS	Theis	8.1 ± 0.7	7.0	45.2	54.0	18.1	7.5	29.3	69.0	0.72	2591	21182
MS	Keller	8.1 ± 0.7	6.3	44.9	51.0	17.1	7.9	30.2	67.4	0.70	2301	18557

NDF = Neutral Detergent Fiber

NEL = Net Energy for Lactation

TDN = Total Digestible Nutrients

ADF = Acid Detergent Fiber

‡ based on University of Wisconsin Milk2006 software program.

**Table 18. Mean yields of seven sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for three years (2008-2010).**

Brand	Hybrid	Dry Weight	65% Moisture	Lodging	Plant Height	Moisture
		Avg. Yield ± Std Err. (n=3)	Avg. Yield ± Std Err. (n=3)			at Harvest (n=3)
		tons/a	tons/a	Score	inches	%
Walter Moss	Mega Green	12.3 ± 0.6	35.0 ± 1.8	1.3	153	75.1
Walter Moss	4 Ever Green	11.6 ± 0.6	33.1 ± 1.8	2.4	154	76.3
MS	Dale	10.8 ± 0.6	30.9 ± 1.8	3.3	144	71.3
MS	M81E	10.3 ± 0.6	29.5 ± 1.8	2.3	142	71.5
MS	Keller	8.9 ± 0.6	25.5 ± 1.8	3.6	138	70.5
VA	Della	8.4 ± 0.6	24.1 ± 1.8	3.5	147	70.7
MS	Theis	8.1 ± 0.6	23.2 ± 1.8	2.5	117	68.6
<b>Avg. (tons/a)</b>		<b>10.1</b>	<b>28.8</b>	<b>2.7</b>	<b>142</b>	<b>72.0</b>
<b>L.S.D.<sub>.05</sub> (tons/a)</b>		<b>5.7</b>	<b>5.7</b>			
<b>C.V. (%)</b>		<b>18.4</b>	<b>18.5</b>			

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 seven sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for three years (2008-2010).**

Brand	Hybrid	Dry Weight	Crude Protein	NDF	NDF 30h	Starch	Sugar	ADF	TDN	NEL	Milk/ton <sup>‡</sup>	Milk/acre <sup>‡</sup>
		Avg. Yield ± Std Err.			IV Digest							
		tons/a	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Walter Moss	Mega Green	12.3 ± 0.6	6.5	64.0	42.9	5.9	6.0	41.8	55.8	0.60	1979	21836
Walter Moss	4 Ever Green	11.6 ± 0.6	6.9	60.8	47.8	6.4	7.6	38.5	59.1	0.63	2122	22520
MS	Dale	10.8 ± 0.6	6.1	45.3	53.4	15.4	11.1	29.8	62.4	0.71	2193	21297
MS	M81E	10.3 ± 0.6	6.7	47.5	50.8	15.1	9.4	30.9	63.2	0.70	2263	22078
MS	Keller	8.9 ± 0.6	6.9	44.5	50.7	15.8	9.4	29.7	62.1	0.72	2211	18636
VA	Della	8.4 ± 0.6	6.9	47.5	51.8	15.2	10.0	30.4	62.9	0.70	2272	19001
MS	Theis	8.1 ± 0.6	7.2	45.1	52.7	17.6	8.8	29.0	64.6	0.73	2510	19772

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.

## **Small Grains Silage Test**

Sixty-five wheat varieties and 23 fall seeded oat varieties were evaluated for silage yield and quality at the Middle Tennessee REC (Spring Hill, TN). Varieties were seeded at 26 seed per square foot. Plots were planted on 11/5/09 with a drill and consisted of 7 rows on 7 inch spacings, 30 ft in length. Each entry was replicated three times. The plots were harvested on 5/19/10 by a commercial silage harvester. Yields presented were adjusted to both dry weight and 65% moisture. 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 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 20. Mean yields and agronomic characteristics of 65 soft red winter wheat varieties evaluated for silage at the Middle Tennessee Research and Education Center during 2010.**

Brand	Hybrid	Dry Weight	65% Moisture	Moisture at harvest	Lodging	Height
		Avg. Yield ± Std Err. (n=1)	Avg. Yield ± Std Err. (n=1)			
		tons/a	tons/a	%	%	inches
Croplan Genetics	8302	3.9 ± 0.2	11.2 ± 0.7	55.0	1.0	33
VA Exp.	VA05W-258	3.8 ± 0.2	11.0 ± 0.7	56.5	1.0	32
TN Exp.	TN 902	3.6 ± 0.2	10.2 ± 0.7	57.7	1.0	33
USG	3251	3.6 ± 0.2	10.2 ± 0.7	59.6	1.0	31
AgriPro Coker	W1104	3.5 ± 0.2	10.0 ± 0.7	60.2	1.0	31
Pioneer	26R22	3.5 ± 0.2	10.0 ± 0.7	57.4	1.0	32
AgriPro Coker	B040798	3.5 ± 0.2	10.0 ± 0.7	61.4	1.0	36
Armor	ARX 9304	3.5 ± 0.2	10.0 ± 0.7	56.0	1.0	28
USG	3350	3.4 ± 0.2	9.8 ± 0.7	58.2	1.0	34
TN Exp.	TN 802	3.4 ± 0.2	9.7 ± 0.7	57.1	1.0	32
Delta Grow	5900	3.4 ± 0.2	9.6 ± 0.7	57.0	1.0	31
Michigan Crop Improvement	Red Ruby	3.4 ± 0.2	9.6 ± 0.7	60.4	1.0	30
TN Exp.	TN 1001	3.3 ± 0.2	9.6 ± 0.7	55.6	1.0	32
Dyna-Gro	9012	3.3 ± 0.2	9.5 ± 0.7	59.6	1.0	29
USG	3201	3.3 ± 0.2	9.4 ± 0.7	56.1	1.0	28
Warren Seed	McKay 100	3.3 ± 0.2	9.4 ± 0.7	54.0	1.0	33
Progeny	125	3.3 ± 0.2	9.4 ± 0.7	54.1	1.0	27
AgriPro Coker	W1566	3.3 ± 0.2	9.4 ± 0.7	63.0	1.0	33
USG	3770	3.3 ± 0.2	9.3 ± 0.7	56.6	1.0	31
Croplan Genetics	8868	3.3 ± 0.2	9.3 ± 0.7	53.4	1.0	31
USG	3209	3.2 ± 0.2	9.2 ± 0.7	57.6	1.0	28
GA Exp.	GA-001170-7E26	3.2 ± 0.2	9.2 ± 0.7	58.0	1.0	28
USG	3665	3.2 ± 0.2	9.2 ± 0.7	57.6	1.0	30
Terral	LA821	3.2 ± 0.2	9.2 ± 0.7	54.9	1.0	33
Terral	TVX8581	3.2 ± 0.2	9.1 ± 0.7	57.0	1.0	34
Terral	TV8558	3.2 ± 0.2	9.1 ± 0.7	53.8	1.0	30
Cache River Valley Seed	Dixie 427	3.1 ± 0.2	9.0 ± 0.7	59.0	1.0	31
Delta Grow	8300	3.1 ± 0.2	8.9 ± 0.7	57.8	1.0	30
Delta Grow	1600	3.1 ± 0.2	8.9 ± 0.7	57.4	1.0	31
MO	Bess	3.1 ± 0.2	8.9 ± 0.7	56.4	1.0	31
Dyna-Gro	V9710	3.1 ± 0.2	8.9 ± 0.7	55.6	1.0	27
Pioneer	26R15	3.1 ± 0.2	8.8 ± 0.7	62.2	1.0	32
Progeny	166	3.1 ± 0.2	8.8 ± 0.7	58.4	1.0	33
USG	3438	3.1 ± 0.2	8.8 ± 0.7	60.6	1.0	26
Progeny	117	3.1 ± 0.2	8.8 ± 0.7	58.8	1.0	33
GA Exp.	GA-991336-6E9	3.1 ± 0.2	8.7 ± 0.7	58.5	1.0	32
Terral	TV8589	3.0 ± 0.2	8.7 ± 0.7	58.1	1.0	32
Croplan Genetics	8925	3.0 ± 0.2	8.6 ± 0.7	56.0	1.0	32
Cache River Valley Seed	Dixie 907	3.0 ± 0.2	8.5 ± 0.7	61.4	1.0	33
Cache River Valley Seed	Dixie 940	3.0 ± 0.2	8.5 ± 0.7	52.6	1.0	35
Dyna-Gro	V9723	3.0 ± 0.2	8.5 ± 0.7	55.8	1.0	34
USG	3409	3.0 ± 0.2	8.5 ± 0.7	56.9	1.0	29
MO	Milton	3.0 ± 0.2	8.5 ± 0.7	57.9	1.0	30
VA	Merl	3.0 ± 0.2	8.4 ± 0.7	57.5	1.0	28
Dyna-Gro	Shirley	3.0 ± 0.2	8.4 ± 0.7	59.8	1.0	26
USG	3120	2.9 ± 0.2	8.3 ± 0.7	57.8	1.0	33
Delta Grow	5000	2.9 ± 0.2	8.3 ± 0.7	56.4	1.0	28
Pioneer	26R20	2.9 ± 0.2	8.3 ± 0.7	65.0	1.0	33
USG	3555	2.9 ± 0.2	8.2 ± 0.7	60.8	1.0	24
Armor	Renegade	2.9 ± 0.2	8.1 ± 0.7	57.1	1.0	32
Cache River Valley Seed	Dixie 454	2.8 ± 0.2	8.1 ± 0.7	61.6	1.0	31

(continued)

**Table 20. Mean yields and agronomic characteristics of 65 soft red winter wheat varieties evaluated for silage at the Middle Tennessee Research and Education Center during 2010.**

Brand	Hybrid	Dry Weight	65% Moisture	Moisture at harvest	Lodging	Height
		Avg. Yield ± Std Err. (n=1)	Avg. Yield ± Std Err. (n=1)			
		tons/a	tons/a	%	%	inches
OH	Malabar	2.8 ± 0.2	8.1 ± 0.7	63.5	1.0	32
AgriPro Coker	Oakes	2.8 ± 0.2	8.0 ± 0.7	60.2	1.0	30
Progeny	185	2.8 ± 0.2	8.0 ± 0.7	58.0	1.0	30
NC Exp.	NC05-19684	2.8 ± 0.2	8.0 ± 0.7	61.9	1.0	25
MO	Truman	2.8 ± 0.2	8.0 ± 0.7	61.5	1.0	32
Dyna-Gro	9922	2.7 ± 0.2	7.8 ± 0.7	56.8	1.0	30
VA	Jamestown	2.7 ± 0.2	7.6 ± 0.7	57.5	1.0	27
Pioneer	25R32	2.6 ± 0.2	7.4 ± 0.7	61.5	1.0	31
Croplan Genetics	554W	2.5 ± 0.2	7.2 ± 0.7	59.3	1.0	28
NC Exp.	NC04-20814	2.5 ± 0.2	7.1 ± 0.7	59.2	1.0	28
AgriPro Coker	Branson	2.5 ± 0.2	7.1 ± 0.7	61.1	1.0	29
AgriPro Coker	W1377	2.4 ± 0.2	6.9 ± 0.7	63.1	1.0	32
Terral	TVX8861	2.4 ± 0.2	6.8 ± 0.7	59.2	1.0	29
GA Exp.	GA-031238-7E34	2.4 ± 0.2	6.7 ± 0.7	59.0	1.0	26
	<b>Average (bu/a)</b>	<b>3.1</b>	<b>8.8</b>	<b>58.3</b>	<b>1.0</b>	<b>31</b>
	<b>L.S.D.<sub>.05</sub> (bu/a)</b>	<b>0.61</b>	<b>1.74</b>			
	<b>C.V. (%)</b>	<b>12.4</b>	<b>12.3</b>			

**Table 21. Mean yields † and feed quality characteristics of 65 wheat varieties evaluated for silage at the Middle Tennessee Research and Education Center during 2010.**

Brand	Hybrid	Dry Weight	Moisture at Harvest (n=1)	Crude Protein (n=1)	NDF 30h			ADF (n=1)	TDN (n=1)	NEL (n=1)	Milk/ton <sup>‡</sup> (n=1)	Milk/acre <sup>‡</sup> (n=1)
		Avg. Yield ± Std Err. (n=1)			NDF	IV Digest (n=1)	Starch (n=1)					
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Croplan Genetics	8302	3.9 ± 0.2	55.0	8.5	56.2	53.7	6.1	35.0	54.9	0.50	2000	7861
VA Exp.	VA05W-258	3.8 ± 0.2	56.5	7.8	52.5	54.7	10.3	32.2	56.7	0.52	2125	8119
TN Exp.	TN 902	3.6 ± 0.2	57.7	6.8	55.9	55.4	7.3	34.9	55.7	0.51	2033	7300
USG	3251	3.6 ± 0.2	59.6	8.3	53.2	53.4	9.5	33.0	56.6	0.52	2136	7669
AgriPro Coker	W1104	3.5 ± 0.2	60.2	10.2	56.9	54.5	6.2	36.0	58.6	0.55	2285	7952
Pioneer	26R22	3.5 ± 0.2	57.4	9.6	56.5	54.7	8.6	35.7	58.9	0.55	2307	8074
AgriPro Coker	B040798	3.5 ± 0.2	61.4	9.8	56.2	52.0	7.9	35.9	58.0	0.55	2275	7870
Armor	ARX 9304	3.5 ± 0.2	56.0	9.4	54.5	54.9	7.3	34.1	56.5	0.52	2110	7386
USG	3350	3.4 ± 0.2	58.2	7.9	56.7	54.7	7.3	35.5	56.6	0.52	2122	7344
TN Exp.	TN 802	3.4 ± 0.2	57.1	6.8	53.5	49.5	9.1	34.1	52.2	0.48	1838	6229
Delta Grow	5900	3.4 ± 0.2	57.0	8.0	56.7	53.2	7.1	36.3	55.7	0.51	2072	7004
Michigan Crop Improvement	Red Ruby	3.4 ± 0.2	60.4	8.1	54.6	56.1	7.8	34.1	57.4	0.53	2163	7160
TN Exp.	TN 1001	3.3 ± 0.2	55.6	6.4	56.3	54.1	9.2	35.0	55.6	0.51	2051	6913
Dyna-Gro	9012	3.3 ± 0.2	59.6	8.6	54.5	56.0	8.0	34.1	57.6	0.53	2182	7224
USG	3201	3.3 ± 0.2	56.1	7.5	53.1	56.2	7.4	33.1	54.6	0.49	1934	6361
Warren Seed	McKay 100	3.3 ± 0.2	54.0	8.7	56.0	55.7	8.0	34.8	57.8	0.53	2204	7206
Progeny	125	3.3 ± 0.2	54.1	9.0	56.6	52.2	7.2	35.3	55.6	0.52	2079	6818
AgriPro Coker	W1566	3.3 ± 0.2	63.0	9.1	55.5	52.2	8.8	35.3	57.6	0.54	2237	7315
USG	3770	3.3 ± 0.2	56.6	8.4	55.1	55.3	8.7	34.3	58.1	0.54	2233	7257
Croplan Genetics	8868	3.3 ± 0.2	53.4	7.8	58.1	51.0	8.1	36.1	54.9	0.51	2047	6611
USG	3209	3.2 ± 0.2	57.6	7.9	53.1	57.8	8.3	32.7	57.4	0.52	2140	6868
GA Exp.	GA-001170-7E26	3.2 ± 0.2	58.0	8.0	52.9	54.3	8.2	33.8	55.3	0.50	2015	6448
USG	3665	3.2 ± 0.2	57.6	8.4	56.8	52.2	5.2	36.0	54.4	0.50	1983	6366
Terral	LA821	3.2 ± 0.2	54.9	6.7	58.8	50.8	7.1	36.8	53.3	0.49	1915	6148
Terral	TVX8581	3.2 ± 0.2	57.0	8.0	54.7	55.2	8.8	33.9	57.2	0.53	2157	6860
Terral	TV8558	3.2 ± 0.2	53.8	6.8	58.6	51.8	7.2	36.7	54.0	0.50	1954	6293
Cache River Valley Seed	Dixie 427	3.1 ± 0.2	59.0	10.6	58.3	52.7	6.6	36.4	58.8	0.55	2333	7301
Delta Grow	8300	3.1 ± 0.2	57.8	8.7	53.7	54.9	10.2	33.6	58.6	0.54	2275	7122
Delta Grow	1600	3.1 ± 0.2	57.4	8.3	54.3	51.7	9.5	34.1	55.7	0.52	2093	6574
MO	Bess	3.1 ± 0.2	56.4	8.9	55.6	55.2	6.4	34.5	56.5	0.52	2104	6524
Dyna-Gro	V9710	3.1 ± 0.2	55.6	8.6	55.5	53.5	8.1	34.6	56.8	0.53	2150	6774
Pioneer	26R15	3.1 ± 0.2	62.2	9.9	58.0	52.8	8.4	36.5	59.5	0.56	2383	7340
Progeny	166	3.1 ± 0.2	58.4	9.3	55.9	54.7	8.7	34.8	58.7	0.55	2286	7086
USG	3438	3.1 ± 0.2	60.6	9.8	53.6	55.3	9.4	33.2	59.6	0.56	2354	7181
Progeny	117	3.1 ± 0.2	58.8	9.2	55.6	55.2	7.8	35.1	57.9	0.53	2214	6796
GA Exp.	GA-991336-6E9	3.1 ± 0.2	58.5	8.2	51.7	55.3	8.0	32.4	55.4	0.50	2015	6187

(continued)

**Table 21. Mean yields † and feed quality characteristics of 65 wheat varieties evaluated for silage at the Middle Tennessee Research and Education Center during 2010.**

Brand	Hybrid	Dry Weight		Crude Protein (n=1)	NDF 30h				NEL (n=1)	Milk/ton‡ (n=1)	Milk/acre‡ (n=1)	
		Avg. Yield ± Std Err. (n=1)	Moisture at Harvest (n=1)		NDF (n=1)	IV Digest (n=1)	Starch (n=1)	ADF (n=1)				TDN (n=1)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Terral	TV8589	3.0 ± 0.2	58.1	8.4	58.0	51.2	8.0	36.0	56.2	0.53	2149	6512
Croplan Genetics	8925	3.0 ± 0.2	56.0	7.3	55.7	51.9	9.1	35.0	54.8	0.51	2017	6153
Cache River Valley Seed	Dixie 907	3.0 ± 0.2	61.4	9.5	59.8	52.8	6.6	37.9	58.4	0.55	2295	6794
Cache River Valley Seed	Dixie 940	3.0 ± 0.2	52.6	8.8	54.7	56.4	8.7	33.7	57.7	0.53	2185	6556
Dyna-Gro	V9723	3.0 ± 0.2	55.8	7.8	53.6	56.7	7.1	33.9	55.2	0.50	1978	5855
USG	3409	3.0 ± 0.2	56.9	8.4	55.4	53.0	9.4	34.3	57.2	0.53	2193	6448
MO	Milton	3.0 ± 0.2	57.9	8.6	55.1	56.4	6.5	34.2	56.7	0.52	2101	6176
VA	Merl	3.0 ± 0.2	57.5	8.0	54.9	54.9	8.1	33.6	56.7	0.52	2126	6294
Dyna-Gro	Shirley	3.0 ± 0.2	59.8	8.9	52.9	57.6	5.6	33.3	56.2	0.50	2040	6038
USG	3120	2.9 ± 0.2	57.8	7.3	54.6	55.3	8.6	34.2	56.4	0.52	2093	6134
Delta Grow	5000	2.9 ± 0.2	56.4	8.7	53.1	52.1	10.3	33.1	56.4	0.53	2136	6236
Pioneer	26R20	2.9 ± 0.2	65.0	9.3	57.5	58.9	7.9	35.3	62.3	0.58	2515	7344
USG	3555	2.9 ± 0.2	60.8	8.3	53.5	56.2	7.1	33.6	56.5	0.51	2089	5974
Armor	Renegade	2.9 ± 0.2	57.1	9.5	56.6	52.8	9.2	35.8	58.5	0.55	2307	6529
Cache River Valley Seed	Dixie 454	2.8 ± 0.2	61.6	11.0	54.2	54.3	8.1	33.7	59.2	0.55	2339	6597
OH	Malabar	2.8 ± 0.2	63.5	10.6	61.5	57.6	3.5	38.9	61.2	0.57	2442	6861
AgriPro Coker	Oakes	2.8 ± 0.2	60.2	9.8	55.7	52.1	7.3	35.1	56.9	0.53	2186	6164
Progeny	185	2.8 ± 0.2	58.0	8.5	58.5	51.2	6.6	37.4	55.5	0.52	2088	5910
NC Exp.	NC05-19684	2.8 ± 0.2	61.9	9.6	55.0	55.4	6.1	35.1	57.3	0.53	2166	6021
MO	Truman	2.8 ± 0.2	61.5	10.1	58.7	56.3	3.6	36.5	58.3	0.54	2229	6242
Dyna-Gro	9922	2.7 ± 0.2	56.8	8.2	52.3	52.8	11.5	32.9	56.7	0.53	2157	5824
VA	Jamestown	2.7 ± 0.2	57.5	8.8	52.6	52.6	12.4	32.3	58.2	0.55	2275	6119
Pioneer	25R32	2.6 ± 0.2	61.5	10.7	56.9	55.3	6.6	35.6	59.5	0.55	2344	6095
Croplan Genetics	554W	2.5 ± 0.2	59.3	8.3	53.1	52.4	10.7	32.9	56.8	0.53	2168	5529
NC Exp.	NC04-20814	2.5 ± 0.2	59.2	9.5	56.1	52.4	6.8	35.9	56.3	0.52	2130	5346
AgriPro Coker	Branson	2.5 ± 0.2	61.1	11.2	53.3	53.1	9.2	33.3	59.7	0.56	2389	5925
AgriPro Coker	W1377	2.4 ± 0.2	63.1	9.1	57.0	54.4	7.0	35.9	57.9	0.54	2233	5338
Terral	TVX8861	2.4 ± 0.2	59.2	8.4	55.2	55.4	6.8	34.4	56.6	0.52	2110	4937
GA Exp.	GA-031238-7E34	2.4 ± 0.2	59.0	8.1	53.4	55.4	6.8	33.8	55.5	0.50	2020	4768

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

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 22. Mean yields and agronomic characteristics of 23 fall seeded oat lines evaluated for silage at the Middle Tennessee Research and Education Center during 2010.**

Brand	Hybrid	Dry Weight	65% Moisture	Moisture at harvest	Lodging	Height
		Avg. Yield ± Std Err. (n=1)	Avg. Yield ± Std Err. (n=1)			
		tons/a	tons/a	%	%	inches
NC	NC07-3972y	2.5 ± 0.1	7.0 ± 0.2	67.2	1.0	26
TX	TAMO 406	2.3 ± 0.1	6.6 ± 0.2	64.3	1.0	26
NC	NC05-5460y	2.3 ± 0.1	6.4 ± 0.2	62.6	1.0	26
FL	Horizon 201	2.2 ± 0.1	6.3 ± 0.2	64.4	1.0	28
TX	TX07CS3697	2.2 ± 0.1	6.3 ± 0.2	65.7	1.0	27
FL	FL04126-L4	2.1 ± 0.1	6.1 ± 0.2	65.3	1.0	27
NC	NC07-3843y	2.1 ± 0.1	5.9 ± 0.2	67.3	1.0	25
FL	FL03166-L7	2.1 ± 0.1	5.9 ± 0.2	64.8	1.0	25
TX	TX05CS542	2.1 ± 0.1	5.9 ± 0.2	64.0	1.0	27
FL	FL03211-L1	2.0 ± 0.1	5.8 ± 0.2	64.8	1.0	29
TX	TX07CS2783	2.0 ± 0.1	5.8 ± 0.2	65.9	1.0	28
TX	TX05CS347-1	2.0 ± 0.1	5.8 ± 0.2	67.5	1.0	25
LA	FL03053-S06-15-B-S1B	2.0 ± 0.1	5.8 ± 0.2	65.1	1.0	25
TX	TX05CS556	2.0 ± 0.1	5.7 ± 0.2	67.0	1.0	26
LA	LA02065SBSBSBSB-88	2.0 ± 0.1	5.7 ± 0.2	66.4	1.0	26
NC	Rodgers	2.0 ± 0.1	5.7 ± 0.2	66.7	1.0	27
TX	TX07CS2765	1.9 ± 0.1	5.5 ± 0.2	66.7	1.0	27
LA	LA03063SBSBSB-S4	1.9 ± 0.1	5.5 ± 0.2	63.8	1.0	25
LA	FL04155-S06-31-B-S1	1.9 ± 0.1	5.5 ± 0.2	66.7	1.0	28
FL	FL0115-J2	1.8 ± 0.1	5.2 ± 0.2	65.8	1.0	24
LA	LA03046SBS7-B-S1	1.8 ± 0.1	5.2 ± 0.2	67.3	1.0	25
FL	LA04003S-L3	1.8 ± 0.1	5.0 ± 0.2	67.4	1.0	27
LA	Horizon 270	1.6 ± 0.1	4.6 ± 0.2	66.0	1.0	24
<b>Average (bu/a)</b>		<b>2.0</b>	<b>5.8</b>	<b>65.8</b>	<b>1.0</b>	<b>26</b>
<b>L.S.D.<sub>.05</sub> (bu/a)</b>		<b>0.19</b>	<b>0.56</b>			
<b>C.V. (%)</b>		<b>5.9</b>	<b>5.8</b>			



**Table 23. Mean yields † and feed quality characteristics of 23 oat varieties evaluated for silage at the Middle Tennessee Research and Education Center during 2010.**

Brand	Hybrid	Dry Weight	Moisture at Harvest (n=1)	Crude Protein (n=1)	NDF (n=1)	NDF 30h IV Digest (n=1)	Starch (n=1)	ADF (n=1)	TDN (n=1)	NEL (n=1)	Milk/ton <sup>‡</sup> (n=1)	Milk/acre <sup>‡</sup> (n=1)
		Avg. Yield ± Std Err. (n=1)										
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre
NC	NC07-3972y	2.5 ± 0.1	67.2	8.5	58.2	48.3	7.1	37.5	55.3	0.54	2178	5424
TX	TAMO 406	2.3 ± 0.1	64.3	9.2	60.7	53.2	7.7	38.9	59.7	0.58	2471	5782
NC	NC05-5460y	2.3 ± 0.1	62.6	8.9	60.5	51.0	8.6	37.7	58.8	0.58	2437	5484
FL	Horizon 201	2.2 ± 0.1	64.4	8.0	58.1	53.1	9.4	36.5	59.1	0.57	2421	5351
TX	TX07CS3697	2.2 ± 0.1	65.7	8.7	60.9	51.4	6.7	38.9	57.3	0.56	2311	5085
FL	FL04126-L4	2.1 ± 0.1	65.3	9.4	58.9	52.4	6.9	37.2	58.2	0.56	2358	5046
NC	NC07-3843y	2.1 ± 0.1	67.3	10.1	61.5	52.5	6.1	38.9	59.5	0.58	2468	5158
FL	FL03166-L7	2.1 ± 0.1	64.8	8.0	61.7	53.0	6.6	39.6	57.2	0.55	2279	4672
TX	TX05CS542	2.1 ± 0.1	64.0	8.6	60.4	56.2	6.4	38.2	59.0	0.56	2370	4836
FL	FL03211-L1	2.0 ± 0.1	64.8	9.2	62.2	55.5	5.9	39.4	60.0	0.58	2465	4980
TX	TX07CS2783	2.0 ± 0.1	65.9	9.8	59.9	53.3	7.2	38.1	59.6	0.58	2464	5002
TX	TX05CS347-1	2.0 ± 0.1	67.5	9.6	57.8	52.4	6.5	37.0	57.8	0.56	2322	4691
LA	FL03053-S06-15-B-S1B	2.0 ± 0.1	65.1	10.1	58.2	53.1	6.7	36.9	58.9	0.57	2400	4825
TX	TX05CS556	2.0 ± 0.1	67.0	9.2	62.1	53.9	4.2	40.2	56.9	0.54	2238	4520
LA	LA02065SBSBSBSB-88	2.0 ± 0.1	66.4	8.7	62.3	56.2	5.7	38.6	59.9	0.57	2443	4886
NC	Rodgers	2.0 ± 0.1	66.7	9.5	60.8	50.4	6.9	39.2	57.1	0.56	2305	4540
TX	TX07CS2765	1.9 ± 0.1	66.7	9.4	58.3	52.4	8.5	36.8	59.8	0.58	2482	4816
LA	LA03063SBSBSB-S4	1.9 ± 0.1	63.8	9.1	57.6	55.3	7.5	36.6	58.9	0.56	2369	4548
LA	FL04155-S06-31-B-S1	1.9 ± 0.1	66.7	9.1	61.8	48.5	6.2	40.4	55.3	0.54	2197	4262
FL	FL0115-J2	1.8 ± 0.1	65.8	10.1	60.2	50.7	4.4	38.7	55.1	0.53	2136	3887
LA	LA03046SBS7-B-S1	1.8 ± 0.1	67.3	10.4	60.2	53.0	4.2	38.2	57.4	0.55	2286	4161
FL	LA04003S-L3	1.8 ± 0.1	67.4	10.2	62.1	56.4	4.5	39.1	60.3	0.58	2470	4297
LA	Horizon 270	1.6 ± 0.1	66.0	10.5	60.5	52.7	6.5	38.3	59.7	0.58	2476	4110

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

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 24. Characteristics, as described by the seed company, of corn silage hybrids evaluated in yield tests in Tennessee during 2010.†**

Brand	Hybrid	Grain		Herbicide		Released or		Comments from Companies
		Color	Maturity	Tolerance	BT Gene	Experimental	Seed Treatment	
Augusta	A008VT3	Y	117	RR	CB/RW	R	Cruiser 1250	Highly digestible
Augusta	A0604HXLL	Y	109	LL	HX	R	Poncho 250	Highly digestible, stress tolerance
Augusta	A7664CB	Y	115	LL	HX	R	Poncho 250	---
Augusta	A5337EVT3	Y	111	RR	CB/RW	R	Poncho 1250	---
Augusta	A5461GTCBLL	Y	111	GT/LL	CB	R	Cruiser 250	---
Augusta	A5462GT3	Y	115	GT		R	Poncho 250	---
Augusta	A6867CBLL	Y	117	LL	CB	R	Cruiser 1250	---
Croplan	8221VT3	Y	118	RR	YGCB/RW	R	Cruiser Extreme	Dual purpose, excellent digestability, 32K/Ac
Croplan	8505VT3P	Y	117	RR	YG, CB, C, RW	R	Cruiser Extreme	---
Croplan	851VT3P	Y	118	RR	YG, CB, C, RW	R	Cruiser Extreme	---
Croplan	8756VT3	Y	118	RR	YGCB/RW	R	Cruiser Extreme	---
Croplan	9009 RH (RR/LL/HX)	Y	124	RR/LL	YGCB/RW	R	Cruiser Extreme	Disease tolerant, high poplns, good drought tolerance
Merschman	M-1015B-15 (RR/CB/RW)	Y	116	RR	YGCB/RW	R	Accelaron, Poncho 500	---
Merschman	M-816-10 (RR/CB/RW)	Y	116	RR	YGCB/RW	R	Captan, Allegiance, Trilex, Poncho 250	---
Mycogen	F2F665 (RR/LL/HX)	Y	109	RR/LL	HX Xtra	R	Cruiser 250	---
Mycogen	TMF2H918 (RR/LL/HX)	Y	123	RR/LL	HX1	R	Cruiser 250	Med to med high poplns, staygreen, good drought tolerance
Mycogen	TMF2W727 (RR/LL/HX)	Y	113	RR/LL	HX Xtra	R	Cruiser 250	---
Wyffels	W8681 (VT3)	Y	115	RR2	YGCB/RW	R	Dynasty, Poncho 250	Excellent stay green
Wyffels	W9121 (VT3)	Y	117	RR2	YGCB/RW	R	Dynasty, Poncho 250	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 25. Contact information for corn hybrid and sweet sorghum seed companies evaluated in yield tests in Tennessee during 2010.†**

<b>Company</b>	<b>Contact</b>	<b>Phone</b>	<b>Email</b>	<b>Web site</b>	<b>Address</b>
<b>Corn</b>					
Augusta Seed Corporation	Matt Rawley	540-886-6055	<a href="mailto:Matt.Rawley@augustaseed.com">Matt.Rawley@augustaseed.com</a> <a href="mailto:augustaseed@aol.com">augustaseed@aol.com</a>		473 Tisdale Farm Ln. Stuanton, VA 24401
Croplan Genetics	Jesse Witt Kieth Saum Jim Payne Ashley Plymale Matt Sowder Darrin Holder	256-221-5932 731-610-7006 901-652-0903 270-719-1570 901-355-7367 270-207-0190	<a href="mailto:jbwitt@landolakes.com">jbwitt@landolakes.com</a> <a href="mailto:kdsaum@landolakes.com">kdsaum@landolakes.com</a> <a href="mailto:jpayne@ourcoop.com">jpayne@ourcoop.com</a>	<a href="http://www.croplangenetics.com">www.croplangenetics.com</a>	Agrilinnace and Tennessee Farmers Co-op Locations
Merschman Seeds	Skip Long	319-837-6111		<a href="http://www.merschmanseeds.com">www.merschmanseeds.com</a>	103 Avenue D, West Point, IA 52656
Mycogen Seed	Joe Emanuele	724-261-9115	<a href="mailto:jemanuele@dow.com">jemanuele@dow.com</a>	<a href="http://www.dowagro.com/mycogen">www.dowagro.com/mycogen</a>	3563 Hilty Road, Export, PA 15632 Miles Farm Supply, P.O. Box 22879 Owensboro, KY 42304
Wyffels Hybrids Inc.	Scott Janes	888-786-4537	<a href="mailto:scojan@milesmore.com">scojan@milesmore.com</a>	<a href="http://www.wyffels.com">www.wyffels.com</a>	
<b>Sweet / Forage Sorghum</b>					
Winfield Solutions	Jesse Witt	256-221-5932	<a href="mailto:jbwitt@landolakes.com">jbwitt@landolakes.com</a>	<a href="http://www.croplangenetics.com">www.croplangenetics.com</a>	
Kentucky Sweet Sorghum Association	Morris Bitzer	859-806-3358	<a href="mailto:mbitzer@uky.edu">mbitzer@uky.edu</a>	<a href="http://www.ca.uky.edu/nsspaa">www.ca.uky.edu/nsspaa</a>	2049 Rebel Road, Lexington, KY 40503
Walter Moss Seed (Mega Green, 4 Ever Green)		888-667-7872	<a href="mailto:info@mossseed.com">info@mossseed.com</a>	<a href="http://www.mossseed.com">www.mossseed.com</a>	P.O. Box 21114 Waco, TX 76702-1114

**Table 26. Contact information for wheat and oat seed companies evaluated in yield tests in Tennessee during 2009-10.**

Company	Contact	Phone	Email	Web site	Address
AgriPro COKER (Syngenta)	June Hancock	870-483-7691	<a href="mailto:june.hancock@syngenta.com">june.hancock@syngenta.com</a>	<a href="http://www.agriprowheat.com">www.agriprowheat.com</a>	778 CR 680, Bay, AR 72411
Armor, Delta King (Cullum Seeds)	Lane Dill	901-233-0274	<a href="mailto:lanedill@jwrayseeds.com">lanedill@jwrayseeds.com</a>	<a href="http://www.cullumseeds.com">www.cullumseeds.com</a>	P.O. Box 178, Fisher, AR 72429
Dixie (Cache River Valley Seed)	Andy Morris Jim Bigger James Crawford	901-674-0768 870-477-5427 870-974-2310	<a href="mailto:crvseed@crvseed.com">crvseed@crvseed.com</a> <a href="mailto:jimb@crvseed.com">jimb@crvseed.com</a> <a href="mailto:james@crvseed.com">james@crvseed.com</a>	<a href="http://www.crvseed.com">www.crvseed.com</a>	300 Lost Acne Way, Arlington, TN 38002 P.O. Box 10, Cash, AR 72421 Highway 226 East, Cash, AR 72421
Croplan Genetics  (available at TN Farmers Co-Op and Agreliance locations)	Jesse Witt Keith Saum Ashley Plymale  Jim Payne Matt Sowder	256-221-5932 731-610-7006 270-719-1570  901-652-0903 901-355-7267	<a href="mailto:JBWitt@landolakes.com">JBWitt@landolakes.com</a> <a href="mailto:kdsaum@landolakes.com">kdsaum@landolakes.com</a>  <a href="mailto:jpayne@ourcoop.com">jpayne@ourcoop.com</a>	<a href="http://www.croplangenetics.com">www.croplangenetics.com</a>  <a href="http://www.ourcoop.com">www.ourcoop.com</a>	DSM Middle & East TN DSM West TN Agronomist  West TN East & Middle TN
Delta Grow Seed	Lee Hughes	800-530-7933	<a href="mailto:leehughes19@hotmail.com">leehughes19@hotmail.com</a>	<a href="http://www.deltagrow.com">www.deltagrow.com</a>	P O Box 219, England, AR 72046
Dyna-Gro (Crop Production Services)	Steve Johnson Mick Schonauer	731-885-1212 937-644-9467	<a href="mailto:steve.johnson@cpsagu.com">steve.johnson@cpsagu.com</a> <a href="mailto:michael.schonauer@cpsagu.com">michael.schonauer@cpsagu.com</a>	<a href="http://www.dynagroseed.com">www.dynagroseed.com</a>	710 South First Street, Union City, TN 38621
University of Georgia	Jerry Johnson	770-228-7345	<a href="mailto:jjohnson@griffin.uga.edu">jjohnson@griffin.uga.edu</a>		University of Georgia CAES - Griffin Campus Griffin, GA 30223
Michigan Crop Improvement Association	C.J. Palmer	517-332-3546	<a href="mailto:palmerj@michcrop.com">palmerj@michcrop.com</a>		Michigan Crop Improvement Association P.O. Box 21008 Lansing, MI 48909
University of Missouri	Mary Ann Quade Anne McKendry	573-884-7333 573-882-7707	<a href="mailto:quadem@missouri.edu">quadem@missouri.edu</a> <a href="mailto:mckendrya@missouri.edu">mckendrya@missouri.edu</a>		University of MO Foundation Seed 3600 New Haven Rd Columbia, MO 65201
North Carolina State University	Paul Murphy	919-513-0000	<a href="mailto:paul_murphy@ncsu.edu">paul_murphy@ncsu.edu</a>		NC State University 840 Method Rd., Unit 3 Raleigh, NC 27695-7629
Ohio Seed Improvement Association	John Armstrong	614-889-1136			6150 Avery Road, Box 477 Dublin, OH 43017-0477
Pioneer Hi-Bred Int.	Michael Hughes	800-331-2475	<a href="mailto:michael.hughes@pioneer.com">michael.hughes@pioneer.com</a>	<a href="http://www.pioneer.com">www.pioneer.com</a>	700 Boulevard South, Suite 302, Huntsville, AL 35802
Progeny	Corey Dildine	870-208-6032	<a href="mailto:corey@progenyag.com">corey@progenyag.com</a>	<a href="http://www.progenyag.com">www.progenyag.com</a>	1529 Hwy 193, Wynne, AR 72396
Terral Seed Inc	Larry Mullen	318-559-2840	<a href="mailto:lmullen@terralseed.com">lmullen@terralseed.com</a>	<a href="http://www.terralseed.com">www.terralseed.com</a>	P O Box 826, Lake Providence, LA 71254

(continued)

**Table 26. Contact information for wheat and oat seed companies evaluated in yield tests in Tennessee during 2009-10.**

<b>Company</b>	<b>Contact</b>	<b>Phone</b>	<b>Email</b>	<b>Web site</b>	<b>Address</b>
University of Tennessee	Dennis West	865-974-8826	<a href="mailto:dwest3@utk.edu">dwest3@utk.edu</a>		3421 Joe Johnson Dr, Knoxville, TN 37996-4561
Unisouth Genetics (USG)	Stacy Burwick David Fandrich Mark Huffstetler Trey Hurt Wes Miller Billy Sellers	800-505-3133 931-967-3377 731-235-2167 731-836-7574 731-536-6251 731-538-2990	<a href="mailto:sburwick@bellsouth.net">sburwick@bellsouth.net</a> <a href="mailto:fandrichsupply@aol.com">fandrichsupply@aol.com</a> <a href="mailto:huffy1@crunet.com">huffy1@crunet.com</a> <a href="mailto:hurtco@bellsouth.net">hurtco@bellsouth.net</a> <a href="mailto:wes@obiongrain.com">wes@obiongrain.com</a>	<a href="http://www.usgseed.com">www.usgseed.com</a>	2640-C Nolensville Rd., Nashville, TN 37211 Fandrich Supply Co, Belvidere, TN Huffstetler & Sons Seed Inc, Greenfield, TN Hurt Seed Co. Inc, Halls, TN Obion Grain Co. Inc, Obion, TN Sellers Seed, Obion, TN
Virginia Tech	David Whitt	804-746-4884	<a href="mailto:dwhitt@vt.edu">dwhitt@vt.edu</a>	<a href="http://www.virginiacrop.org">www.virginiacrop.org</a>	Virginia Crop Improvement Assoc. 9142 Atlee Station Rd Mechanicsville, VA 23116
Warren Seed	Lanny Warren	731-234-2921	<a href="mailto:lanny_warren@charter.net">lanny_warren@charter.net</a>		P.O. Box 10, Woodland Mills, TN 38271-0010
USDA (Oats)	Myron Fountain	919-513-7739	<a href="mailto:Myron.Fountain@are.usda.gov">Myron.Fountain@are.usda.gov</a>		USDA-ARS Plant Science Research Unit 1416 Gardner Hall, Dept Plant Pathology North Carolina State University, Campus Box 7616 Raleigh, NC 27695-7616