Corn Hybrid and Sweet Sorghum Silage Tests in Tennessee

2008

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)974-8850 •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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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

Greeneville
Mr. Robert Ellis, Superintendent
Mr. Charles Click, Research Associate

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CORN & SWEET SORGHUM SILAGE YIELD TESTS

2008

Experimental Procedures

Research and Education Center Tests: Thirty-seven corn hybrids were evaluated for silage yield and quality in 2008. The tests were conducted at the East Tennessee (Knoxville), Plateau (Crossville), Dairy (Lewisburg), Highland Rim (Springfield), Middle Tennessee (Spring Hill), and Greeneville Research and Education Centers (REC). Due to planting problems, cattle damage and very dry conditions of the crop at harvest, the data from the Middle Tennessee REC were not used. Eight **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 4 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 Milk2000 program.

Growing Season: Hot and dry conditions prevailed throughout most of the growing season in Middle and East Tennessee where the tests were conducted. This resulted in lower than average silage yields across the region.

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 2008.

Research and Education Center	Location	Planting Date	Harvest Date	Plant Population	Soil Type
East Tennessee	Knoxville	5/5/08	9/4/08	33,977	Sequatchie Silt Loam
Greenville	Greeneville	6/2/08	9/5/08	25,265	Nolichucky Silt Loam
Plateau	Crossville	5/10/08	8/25/08	26,717	Hendon Silt Loam
Middle Tennessee (Data not used)	Spring Hill	4/23/08	8/19/08	23,813	Maury Silt Loam
Highland Rim	Springfield	4/21/08	8/18/08	30,492	Dickson Silt Loam
Dairy	Lewisburg	4/24/08	8/4/08	22,942	Nesbitt Silt Loam

Table 2. Mean yields † of 37 corn hybrids evaluated for silage at five locations in Tennessee during 2008.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=5)	65% Moisture Avg. Yield ± Std Err. (n=5)	Dry Weight				
				Knoxville	Greeneville	Crossville	Springfield	Lewisburg
				tons/a				
Pioneer	31P42 (HX1/LL/RR2)	6.2 ± 0.3	17.8 ± 0.8	9.4	5.6	4.7	6.4	5.0
Augusta	A08-07HX (LL)	6.0 ± 0.3	17.0 ± 0.8	8.6	5.2	6.0	4.2	5.8
Augusta	A-06-04 HX	5.9 ± 0.3	16.9 ± 0.8	8.1	5.0	6.2	6.0	4.3
AgVenture	R9487YB (RR/CB)	5.9 ± 0.3	16.9 ± 0.8	9.5	6.5	4.2	6.2	3.2
DeKalb	DKC67-87 (RR2/YGCB)	5.9 ± 0.3	16.8 ± 0.8	9.6	5.1	3.9	6.1	4.7
Croplan	8221VT3	5.8 ± 0.3	16.6 ± 0.8	8.6	4.9	6.1	5.6	3.9
Croplan	6831 TS	5.8 ± 0.3	16.5 ± 0.8	7.4	4.9	6.0	6.0	4.7
Croplan	7131VT3	5.8 ± 0.3	16.5 ± 0.8	8.1	5.4	5.2	5.9	4.4
Pioneer	31R87 (RR2)	5.7 ± 0.3	16.4 ± 0.8	7.6	5.3	5.0	5.5	5.2
Dyna-Gro	58P27 (RR/Bt)	5.7 ± 0.3	16.3 ± 0.8	8.0	5.0	4.2	6.7	4.7
Wyffels	W9127 (RR/Bt)	5.6 ± 0.3	16.1 ± 0.8	8.2	4.7	5.3	4.7	5.4
Augusta	A5337 CB	5.6 ± 0.3	16.1 ± 0.8	8.7	5.4	4.1	6.5	3.6
Augusta	A-06-06CBLL	5.6 ± 0.3	15.9 ± 0.8	8.8	5.1	4.7	5.4	3.8
Croplan	9009 RR	5.5 ± 0.3	15.7 ± 0.8	7.2	5.1	5.3	5.6	4.2
Augusta	A5175 CB	5.4 ± 0.3	15.5 ± 0.8	7.7	5.1	4.3	6.4	3.7
FFR	746 RR/Bt	5.4 ± 0.3	15.4 ± 0.8	7.9	5.6	3.6	5.5	4.3
Croplan	8950 RB	5.4 ± 0.3	15.4 ± 0.8	7.5	4.1	4.4	7.4	3.6
Dyna Gro	58K40 (RR)	5.3 ± 0.3	15.2 ± 0.8	8.1	4.8	5.4	4.1	4.3
Dyna-Gro	58V24 (VT3)	5.3 ± 0.3	15.2 ± 0.8	8.3	4.9	5.7	3.5	4.1
Pioneer	31G70 (HXX/LL/RR2)	5.3 ± 0.3	15.1 ± 0.8	8.6	5.3	3.8	4.5	4.3
Croplan	851VT3	5.3 ± 0.3	15.0 ± 0.8	8.1	5.0	3.4	5.3	4.4
Augusta	A007Q	5.2 ± 0.3	15.0 ± 0.8	8.6	4.0	4.5	4.7	4.3
Croplan	6531VT3	5.2 ± 0.3	14.9 ± 0.8	7.8	4.2	4.0	5.4	4.7
Augusta	A5338 CB	5.2 ± 0.3	14.9 ± 0.8	7.8	5.5	3.7	5.1	4.0
Augusta	A008VT3	5.1 ± 0.3	14.8 ± 0.8	7.4	4.7	4.7	5.3	3.7
Wyffels	W8681 (VT3)	5.1 ± 0.3	14.7 ± 0.8	7.6	5.1	3.9	4.8	4.2
Augusta	A08-13HX (LL)	5.1 ± 0.3	14.6 ± 0.8	8.1	5.7	4.2	3.3	4.3
Augusta	A06-07CB (LL)	5.1 ± 0.3	14.5 ± 0.8	7.0	4.4	5.1	4.8	4.1
Augusta	A76-64CB	5.1 ± 0.3	14.4 ± 0.8	7.7	4.8	4.9	3.8	4.1
Dyna-Gro	58K81 (RR)	5.0 ± 0.3	14.4 ± 0.8	7.8	4.2	4.1	5.0	3.9
Mycogen	TMF 2Q759 (RR/LL/Bt)	5.0 ± 0.3	14.3 ± 0.8	8.1	5.0	3.6	4.1	4.3
DeKalb	DKC67-23 (RR2/YGCB)	5.0 ± 0.3	14.3 ± 0.8	7.8	4.2	4.8	4.2	3.9

Table 2 (continued)

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=5)	65% Moisture Avg. Yield ± Std Err. (n=5)	Dry Weight Knoxville	Dry Weight Greeneville	Dry Weight Crossville	Dry Weight Springfield	Dry Weight Lewisburg
				tons/a				
FFR	842 RR2	5.0 ± 0.3	14.2 ± 0.8	7.6	4.1	3.7	5.1	4.4
Augusta	A08-71VT3	4.9 ± 0.3	14.0 ± 0.8	8.1	4.9	3.5	4.2	3.9
Augusta	A-06-02 HX	4.9 ± 0.3	13.9 ± 0.8	8.6	4.7	4.4	3.9	2.8
Mycogen	F2F723 (LL/Bt)	4.8 ± 0.3	13.8 ± 0.8	7.1	4.7	3.9	5.4	3.1
Wyffels	W7648 (RR2/LL/Bt) *	5.4 ± 0.3	15.4 ± 0.8	7.6	5.3	---	---	---
Avg. (tons/a)		**5.4**	**15.5**	**8.1**	**4.9**	**4.6**	**5.2**	**4.2**
L.S.D.$_{.05}$ (tons/a)		**0.7**	**2.0**	**1.9**	**0.8**	**1.9**	**2.3**	**1.6**
C.V. (%)		**17.7**	**17.7**	**10.2**	**10.6**	**18.9**	**26.9**	**23.8**

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

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

YGRW = contians 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

* - Wyffels W7648 was received late and planted in the field area bordering the regular test at two locations (Knoxville and Greenville, TN) - overall average yield was estimated from the two locations.

Table 3. Mean yields † and agronomic characteristics of 37 corn hybrids evaluated for silage at five locations in Tennessee during 2008.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=5)	65% Moisture Avg. Yield ± Std Err. (n=5)	Moisture at harvest (n=5)	Lodging (n=4)	Plant Height (n=5)	Ear Height (n=2)
		tons/a	tons/a	%	%	inches	inches
Pioneer	31P42 (HX1/LL/RR2)	6.2 ± 0.3	17.8 ± 0.8	64.2	0	96	35
Augusta	A08-07HX (LL)	6.0 ± 0.3	17.0 ± 0.8	56.4	0	87	32
Augusta	A-06-04 HX	5.9 ± 0.3	16.9 ± 0.8	57.7	0	91	34
AgVenture	R9487YB (RR/CB)	5.9 ± 0.3	16.9 ± 0.8	63.1	0	88	36
DeKalb	DKC67-87 (RR2/YGCB)	5.9 ± 0.3	16.8 ± 0.8	60.4	0	91	37
Croplan	8221VT3	5.8 ± 0.3	16.6 ± 0.8	65.8	0	91	41
Croplan	6831 TS	5.8 ± 0.3	16.5 ± 0.8	56.2	0	88	32
Croplan	7131VT3	5.8 ± 0.3	16.5 ± 0.8	61.4	0	87	29
Pioneer	31R87 (RR2)	5.7 ± 0.3	16.4 ± 0.8	62.8	0	98	38
Dyna-Gro	58P27 (RR/Bt)	5.7 ± 0.3	16.3 ± 0.8	66.2	0	88	36
Wyffels	W9127 (RR/Bt)	5.6 ± 0.3	16.1 ± 0.8	59.9	0	88	35
Augusta	A5337 CB	5.6 ± 0.3	16.1 ± 0.8	60.7	0	89	30
Augusta	A-06-06CBLL	5.6 ± 0.3	15.9 ± 0.8	59.3	0	91	34
Croplan	9009 RR	5.5 ± 0.3	15.7 ± 0.8	68.1	0	97	42
Augusta	A5175 CB	5.4 ± 0.3	15.5 ± 0.8	57.4	0	88	28
FFR	746 RR/Bt	5.4 ± 0.3	15.4 ± 0.8	66.4	0	94	44
Croplan	8950 RB	5.4 ± 0.3	15.4 ± 0.8	65.5	0	96	42
Dyna Gro	58K40 (RR)	5.3 ± 0.3	15.2 ± 0.8	66.7	0	94	42
Dyna-Gro	58V24 (VT3)	5.3 ± 0.3	15.2 ± 0.8	62.2	0	92	36
Pioneer	31G70 (HXX/LL/RR2)	5.3 ± 0.3	15.1 ± 0.8	59.2	0	95	39
Croplan	851VT3	5.3 ± 0.3	15.0 ± 0.8	63.4	0	86	33
Augusta	A007Q	5.2 ± 0.3	15.0 ± 0.8	61.4	0	96	36
Croplan	6531VT3	5.2 ± 0.3	14.9 ± 0.8	56.0	0	88	35
Augusta	A5338 CB	5.2 ± 0.3	14.9 ± 0.8	62.7	0	86	31
Augusta	A008VT3	5.1 ± 0.3	14.8 ± 0.8	64.4	0	89	36
Wyffels	W8681 (VT3)	5.1 ± 0.3	14.7 ± 0.8	61.2	0	89	31
Augusta	A08-13HX (LL)	5.1 ± 0.3	14.6 ± 0.8	65.6	0	92	38
Augusta	A06-07CB (LL)	5.1 ± 0.3	14.5 ± 0.8	60.3	0	85	28
Augusta	A76-64CB	5.1 ± 0.3	14.4 ± 0.8	60.1	0	83	28
Dyna-Gro	58K81 (RR)	5.0 ± 0.3	14.4 ± 0.8	64.1	0	89	35
Mycogen	TMF 2Q759 (RR/LL/Bt)	5.0 ± 0.3	14.3 ± 0.8	60.6	0	88	31
DeKalb	DKC67-23 (RR2/YGCB)	5.0 ± 0.3	14.3 ± 0.8	62.6	0	88	37

Table 3 (continued)

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=5)	65% Moisture Avg. Yield ± Std Err. (n=5)	Moisture at harvest (n=5)	Lodging (n=4)	Plant Height (n=5)	Ear Height (n=2)
		tons/a	tons/a	%	%	inches	inches
FFR	842 RR2	5.0 ± 0.3	14.2 ± 0.8	63.6	0	91	38
Augusta	A08-71VT3	4.9 ± 0.3	14.0 ± 0.8	66.9	0	87	38
Augusta	A-06-02 HX	4.9 ± 0.3	13.9 ± 0.8	64.1	0	95	37
Mycogen	F2F723 (LL/Bt)	4.8 ± 0.3	13.8 ± 0.8	65.6	0	91	37
Wyffels	W7648 (RR2/LL/Bt) *	5.4 ± 0.3	15.4 ± 0.8	65.8	0	87	34
	Average	**5.4**	**15.5**	**62.3**	**0**	**90**	**35**

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

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

YGRW = contians 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 gen‹ yield was estimated

CL = contains a gene for tolerance to Imidazolinone class herbicides

* - Wyffels W7648 was received late and planted in the field area bordering the regular test at two locations (Knoxville and Greenville, TN) - overall average yield was estimated from the two locations.

Table 4. Mean yields † and feed quality characteristics of 37 corn hybrids evaluated for silage at five locations in Tennessee during 2008.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=5)	Moisture at Harvest (n=5)	Crude Protein (n=5)	NDF (n=5)	NDF 48h 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	Mcals/lb	lbs/ton	lbs/acre
Pioneer	31P42 (HX1/LL/RR2)	6.2 ± 0.3	64.2	8.5	45.0	58.3	27.5	26.9	72.4	0.75	3620	22555
Augusta	A08-07HX (LL)	6.0 ± 0.3	56.4	8.5	43.7	59.0	30.4	25.8	71.2	0.74	3542	21110
Augusta	A-06-04 HX	5.9 ± 0.3	57.7	8.4	42.6	59.1	31.8	25.3	72.3	0.75	3620	21506
AgVenture	R9487YB (RR/CB)	5.9 ± 0.3	63.1	9.2	44.5	60.9	29.0	25.4	73.6	0.77	3731	22126
DeKalb	DKC67-87 (RR2/YGCB)	5.9 ± 0.3	60.4	8.7	42.0	56.2	31.2	25.0	72.0	0.75	3577	21033
Croplan	8221VT3	5.8 ± 0.3	65.8	9.0	46.1	55.9	25.9	27.9	70.3	0.73	3449	20039
Croplan	6831 TS	5.8 ± 0.3	56.2	8.7	41.3	60.1	32.5	24.4	72.5	0.75	3645	21104
Croplan	7131VT3	5.8 ± 0.3	61.4	9.9	40.1	58.9	33.7	23.1	74.4	0.77	3771	21832
Pioneer	31R87 (RR2)	5.7 ± 0.3	62.8	8.4	46.8	55.7	25.3	28.4	69.9	0.72	3421	19570
Dyna-Gro	58P27 (RR/Bt)	5.7 ± 0.3	66.2	9.0	39.9	60.6	32.4	23.8	75.8	0.79	3884	22216
Wyffels	W9127 (RR/Bt)	5.6 ± 0.3	59.9	8.8	43.2	56.0	31.4	25.5	71.1	0.74	3512	19806
Augusta	A5337 CB	5.6 ± 0.3	60.7	9.1	42.2	59.8	30.3	25.0	73.3	0.76	3703	20921
Augusta	A-06-06CBLL	5.6 ± 0.3	59.3	8.3	42.3	56.2	31.6	25.2	71.6	0.74	3543	19737
Croplan	9009 RR	5.5 ± 0.3	68.1	8.8	52.7	54.8	18.6	32.1	66.3	0.68	3151	17300
Augusta	A5175 CB	5.4 ± 0.3	57.4	9.1	41.2	57.0	32.7	24.4	71.7	0.74	3561	19374
FFR	746 RR/Bt	5.4 ± 0.3	66.4	8.8	48.5	54.6	24.2	29.4	68.6	0.71	3315	17870
Croplan	8950 RB	5.4 ± 0.3	65.5	9.0	44.9	57.5	26.1	26.7	71.1	0.74	3522	18984
Dyna Gro	58K40 (RR)	5.3 ± 0.3	66.7	8.8	48.2	56.4	24.4	29.3	69.5	0.72	3400	18055
Dyna-Gro	58V24 (VT3)	5.3 ± 0.3	62.2	9.1	41.9	58.3	30.8	25.2	73.1	0.76	3674	19510
Pioneer	31G70 (HXX/LL/RR2)	5.3 ± 0.3	59.2	8.4	44.6	58.4	30.0	26.1	71.6	0.74	3565	18858
Croplan	851VT3	5.3 ± 0.3	63.4	9.1	44.3	58.1	28.3	26.8	72.4	0.75	3624	19060
Augusta	A007Q	5.2 ± 0.3	61.4	8.8	44.9	57.9	27.7	26.6	71.5	0.74	3554	18621
Croplan	6531VT3	5.2 ± 0.3	56.0	8.7	41.9	59.7	32.5	24.3	71.9	0.75	3602	18802
Augusta	A5338 CB	5.2 ± 0.3	62.7	9.0	42.6	59.5	31.1	25.2	73.6	0.77	3720	19380
Augusta	A008VT3	5.1 ± 0.3	64.4	8.7	44.5	60.3	28.5	26.6	73.3	0.76	3708	19096
Wyffels	W8681 (VT3)	5.1 ± 0.3	61.2	9.3	41.0	58.0	32.6	24.1	73.3	0.76	3684	18862
Augusta	A08-13HX (LL)	5.1 ± 0.3	65.6	8.4	46.9	54.3	25.7	28.4	69.5	0.72	3381	17278
Augusta	A06-07CB (LL)	5.1 ± 0.3	60.3	9.0	41.0	56.7	32.8	23.8	72.7	0.75	3627	18424
Augusta	A76-64CB	5.1 ± 0.3	60.1	9.4	40.8	58.7	32.5	23.8	73.3	0.76	3694	18653
Dyna-Gro	58K81 (RR)	5.0 ± 0.3	64.1	8.5	50.9	55.3	22.6	30.2	68.1	0.70	3288	16508
Mycogen	TMF 2Q759 (RR/LL/Bt)	5.0 ± 0.3	60.6	8.6	41.7	59.9	31.6	24.9	73.4	0.76	3712	18597
DeKalb	DKC67-23 (RR2/YGCB)	5.0 ± 0.3	62.6	9.0	44.1	55.7	29.3	26.1	71.2	0.74	3512	17562

Table 4 (continued)

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=5)	Moisture at Harvest (n=5)	Crude Protein (n=5)	NDF (n=5)	NDF 48h 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	Mcals/lb	lbs/ton	lbs/acre
FFR	842 RR2	5.0 ± 0.3	63.6	8.6	49.1	58.5	23.3	28.7	70.3	0.73	3471	17286
Augusta	A08-71VT3	4.9 ± 0.3	66.9	8.3	52.3	57.3	18.7	31.4	67.0	0.69	3227	15877
Augusta	A-06-02 HX	4.9 ± 0.3	64.1	8.3	46.9	55.4	24.6	28.6	69.4	0.72	3379	16489
Mycogen	F2F723 (LL/Bt)	4.8 ± 0.3	65.6	9.2	46.0	69.2	25.5	26.8	76.5	0.80	4005	19303
Wyffels	W7648 (RR2/LL/Bt) *	5.4 ± 0.3	65.8	9.5	44.4	54.3	29.3	26.4	70.6	0.73	3458	18502

† 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 Digestable Nutrients

NEL = Net Energy for Lactation

* - Wyffels W7648 was received late and planted in the field area bordering the regular test at two locations (Knoxville and Greenville, TN) - overall average yield was estimated from the two locations.

Table 5. Mean yields † and feed quality characteristics of 37 corn hybrids evaluated for silage at five locations in Tennessee during 2008, sorted by brand.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=5)	Moisture at Harvest (n=5)	Crude Protein (n=5)	NDF (n=5)	NDF 48h 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	Mcals/lb	lbs/ton	lbs/acre
AgVenture	R9487YB (RR/CB)	5.9 ± 0.3	63.1	9.2	44.5	60.9	29.0	25.4	73.6	0.77	3731	22126
Augusta	A08-07HX (LL)	6.0 ± 0.3	56.4	8.5	43.7	59.0	30.4	25.8	71.2	0.74	3542	21110
Augusta	A-06-04 HX	5.9 ± 0.3	57.7	8.4	42.6	59.1	31.8	25.3	72.3	0.75	3620	21506
Augusta	A5337 CB	5.6 ± 0.3	60.7	9.1	42.2	59.8	30.3	25.0	73.3	0.76	3703	20921
Augusta	A-06-06CBLL	5.6 ± 0.3	59.3	8.3	42.3	56.2	31.6	25.2	71.6	0.74	3543	19737
Augusta	A5175 CB	5.4 ± 0.3	57.4	9.1	41.2	57.0	32.7	24.4	71.7	0.74	3561	19374
Augusta	A007Q	5.2 ± 0.3	61.4	8.8	44.9	57.9	27.7	26.6	71.5	0.74	3554	18621
Augusta	A5338 CB	5.2 ± 0.3	62.7	9.0	42.6	59.5	31.1	25.2	73.6	0.77	3720	19380
Augusta	A008VT3	5.1 ± 0.3	64.4	8.7	44.5	60.3	28.5	26.6	73.3	0.76	3708	19096
Augusta	A08-13HX (LL)	5.1 ± 0.3	65.6	8.4	46.9	54.3	25.7	28.4	69.5	0.72	3381	17278
Augusta	A06-07CB (LL)	5.1 ± 0.3	60.3	9.0	41.0	56.7	32.8	23.8	72.7	0.75	3627	18424
Augusta	A76-64CB	5.1 ± 0.3	60.1	9.4	40.8	58.7	32.5	23.8	73.3	0.76	3694	18653
Augusta	A08-71VT3	4.9 ± 0.3	66.9	8.3	52.3	57.3	18.7	31.4	67.0	0.69	3227	15877
Augusta	A-06-02 HX	4.9 ± 0.3	64.1	8.3	46.9	55.4	24.6	28.6	69.4	0.72	3379	16489
Croplan	8221VT3	5.8 ± 0.3	65.8	9.0	46.1	55.9	25.9	27.9	70.3	0.73	3449	20039
Croplan	6831 TS	5.8 ± 0.3	56.2	8.7	41.3	60.1	32.5	24.4	72.5	0.75	3645	21104
Croplan	7131VT3	5.8 ± 0.3	61.4	9.9	40.1	58.9	33.7	23.1	74.4	0.77	3771	21832
Croplan	9009 RR	5.5 ± 0.3	68.1	8.8	52.7	54.8	18.6	32.1	66.3	0.68	3151	17300
Croplan	8950 RB	5.4 ± 0.3	65.5	9.0	44.9	57.5	26.1	26.7	71.1	0.74	3522	18984
Croplan	851VT3	5.3 ± 0.3	63.4	9.1	44.3	58.1	28.3	26.8	72.4	0.75	3624	19060
Croplan	6531VT3	5.2 ± 0.3	56.0	8.7	41.9	59.7	32.5	24.3	71.9	0.75	3602	18802
DeKalb	DKC67-87 (RR2/YGCB)	5.9 ± 0.3	60.4	8.7	42.0	56.2	31.2	25.0	72.0	0.75	3577	21033
DeKalb	DKC67-23 (RR2/YGCB)	5.0 ± 0.3	62.6	9.0	44.1	55.7	29.3	26.1	71.2	0.74	3512	17562
Dyna Gro	58K40 (RR)	5.3 ± 0.3	66.7	8.8	48.2	56.4	24.4	29.3	69.5	0.72	3400	18055
Dyna-Gro	58P27 (RR/Bt)	5.7 ± 0.3	66.2	9.0	39.9	60.6	32.4	23.8	75.8	0.79	3884	22216
Dyna-Gro	58V24 (VT3)	5.3 ± 0.3	62.2	9.1	41.9	58.3	30.8	25.2	73.1	0.76	3674	19510
Dyna-Gro	58K81 (RR)	5.0 ± 0.3	64.1	8.5	50.9	55.3	22.6	30.2	68.1	0.70	3288	16508
FFR	746 RR/Bt	5.4 ± 0.3	66.4	8.8	48.5	54.6	24.2	29.4	68.6	0.71	3315	17870
FFR	842 RR2	5.0 ± 0.3	63.6	8.6	49.1	58.5	23.3	28.7	70.3	0.73	3471	17286
Mycogen	TMF 2Q759 (RR/LL/Bt)	5.0 ± 0.3	60.6	8.6	41.7	59.9	31.6	24.9	73.4	0.76	3712	18597
Mycogen	F2F723 (LL/Bt)	4.8 ± 0.3	65.6	9.2	46.0	69.2	25.5	26.8	76.5	0.80	4005	19303
Pioneer	31P42 (HX1/LL/RR2)	6.2 ± 0.3	64.2	8.5	45.0	58.3	27.5	26.9	72.4	0.75	3620	22555
Pioneer	31R87 (RR2)	5.7 ± 0.3	62.8	8.4	46.8	55.7	25.3	28.4	69.9	0.72	3421	19570

Table 5 (continued)

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=5)	Moisture at Harvest (n=5)	Crude Protein (n=5)	NDF (n=5)	NDF 48h 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	Mcals/lb	lbs/ton	lbs/acre
Pioneer	31G70 (HXX/LL/RR2)	5.3 ± 0.3	59.2	8.4	44.6	58.4	30.0	26.1	71.6	0.74	3565	18858
Wyffels	W9127 (RR/Bt)	5.6 ± 0.3	59.9	8.8	43.2	56.0	31.4	25.5	71.1	0.74	3512	19806
Wyffels	W7648 (RR2/LL/Bt) *	5.4 ± 0.3	65.8	9.5	44.4	54.3	29.3	26.4	70.6	0.73	3458	18502
Wyffels	W8681 (VT3)	5.1 ± 0.3	61.2	9.3	41.0	58.0	32.6	24.1	73.3	0.76	3684	18862

† 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 Digestable Nutrients

NEL = Net Energy for Lactation

* - Wyffels W7648 was received late and planted in the field area bordering the regular test at two locations (Knoxville and Greenville, TN) - overall average yield was estimated from the two locations.

Table 6. Mean yields † of 16 corn hybrids evaluated in four environments for two years (2007 - 2008) in Tennessee.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=8)	65% Moisture Avg. Yield ± Std Err. (n=8)	Dry Weight			
				Knoxville	Greeneville	Crossville	Springfield
		tons/a					
Augusta	A-06-04 HX	6.8 ± 0.2	19.3 ± 0.7	9.0	5.8	5.6	6.7
Augusta	A5337 CB	6.6 ± 0.2	18.7 ± 0.7	9.1	6.2	4.0	7.0
DeKalb	DKC67-87 (RR2/YGCB)	6.4 ± 0.2	18.3 ± 0.6	9.1	6.2	4.3	6.1
Dyna Gro	58K40 (RR)	6.4 ± 0.2	18.3 ± 0.6	8.9	6.4	5.3	5.0
Augusta	A-06-06CBLL	6.4 ± 0.2	18.2 ± 0.7	8.5	6.1	4.4	6.5
FFR	746 RR/Bt	6.3 ± 0.2	18.1 ± 0.7	8.2	6.7	4.4	6.0
Augusta	A-06-02 HX	6.1 ± 0.2	17.6 ± 0.6	8.3	6.1	4.7	5.5
Croplan	9009 RR	6.1 ± 0.2	17.5 ± 0.6	8.1	6.0	4.5	6.0
Pioneer	31R87 (RR2)	6.1 ± 0.2	17.4 ± 0.6	7.9	6.0	4.9	5.4
Croplan	8950 RB	6.1 ± 0.2	17.3 ± 0.7	8.1	5.5	4.3	6.3
Croplan	8221VT3	6.0 ± 0.2	17.2 ± 0.7	8.3	5.7	5.0	5.1
Augusta	A5338 CB	6.0 ± 0.2	17.2 ± 0.7	7.9	6.0	4.3	5.7
Augusta	A5175 CB	6.0 ± 0.2	17.1 ± 0.6	8.6	5.7	4.2	5.4
Croplan	851VT3	5.8 ± 0.2	16.7 ± 0.7	8.2	6.1	3.9	5.1
DeKalb	DKC67-23 (RR2/YGCB)	5.7 ± 0.2	16.3 ± 0.7	8.0	5.4	4.5	5.0
FFR	842 RR2	5.3 ± 0.2	15.2 ± 0.6	8.0	5.6	3.5	4.2
Avg. (tons/a)		**6.1**	**17.5**	**8.4**	**6.0**	**4.5**	**5.7**
L.S.D.$_{.05}$ (tons/a)		**0.8**	**2.2**	**1.3**	**1.0**	**1.4**	**2.2**
C.V. (%)		**17.0**	**17.0**	**10.3**	**11.0**	**20.9**	**26.5**

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

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

YGRW = contians a gene for rootworm 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

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

Table 7. Mean yields † and agronomic characteristics of 16 corn hybrids evaluated for silage in four environments for two years (2007-2008) 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=6)	Plant Height (n=8)	Ear Height (n=4)
		tons/a	tons/a	%	%	inches	inches
Augusta	A-06-04 HX	6.8 ± 0.2	19.3 ± 0.7	53.9	0	91	37
Augusta	A5337 CB	6.6 ± 0.2	18.7 ± 0.7	55.7	0	92	34
DeKalb	DKC67-87 (RR2/YGCB)	6.4 ± 0.2	18.3 ± 0.6	56.1	0	93	40
Dyna Gro	58K40 (RR)	6.4 ± 0.2	18.3 ± 0.6	60.8	0	96	44
Augusta	A-06-06CBLL	6.4 ± 0.2	18.2 ± 0.7	55.1	0	92	36
FFR	746 RR/Bt	6.3 ± 0.2	18.1 ± 0.7	60.6	0	93	45
Augusta	A-06-02 HX	6.1 ± 0.2	17.6 ± 0.6	59.6	0	97	40
Croplan	9009 RR	6.1 ± 0.2	17.5 ± 0.6	63.2	0	98	44
Pioneer	31R87 (RR2)	6.1 ± 0.2	17.4 ± 0.6	57.8	0	95	40
Croplan	8950 RB	6.1 ± 0.2	17.3 ± 0.7	59.5	0	97	42
Croplan	8221VT3	6.0 ± 0.2	17.2 ± 0.7	61.0	0	93	45
Augusta	A5338 CB	6.0 ± 0.2	17.2 ± 0.7	58.3	0	89	35
Augusta	A5175 CB	6.0 ± 0.2	17.1 ± 0.6	53.3	0	88	33
Croplan	851VT3	5.8 ± 0.2	16.7 ± 0.7	57.3	0	87	34
DeKalb	DKC67-23 (RR2/YGCB)	5.7 ± 0.2	16.3 ± 0.7	56.3	0	89	39
FFR	842 RR2	5.3 ± 0.2	15.2 ± 0.6	59.1	0	90	39

Codes:

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

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

YGRW = contians a gene for rootworm 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

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

Table 8. Mean yields † and feed quality characteristics of 16 corn hybrids evaluated for silage at four locations for 2 years (2007-2008) in Tennessee.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=8)	Moisture at Harvest (n=8)	Crude Protein (n=8)	NDF (n=8)	NDF 48h 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	Mcals/lb	lbs/ton	lbs/acre
Augusta	A-06-04 HX	6.8 ± 0.2	53.9	8.0	42.4	63.6	32.9	25.0	73.4	0.76	3738	23747
Augusta	A5337 CB	6.6 ± 0.2	55.7	8.2	39.3	63.3	35.4	23.3	73.9	0.77	3776	23470
DeKalb	DKC67-87 (RR2/YGCB)	6.4 ± 0.2	56.1	8.3	40.0	61.4	34.8	23.4	73.4	0.77	3724	22571
Dyna Gro	58K40 (RR)	6.4 ± 0.2	60.8	8.2	45.7	60.7	28.7	27.5	71.8	0.75	3608	21927
Augusta	A-06-06CBLL	6.4 ± 0.2	55.1	7.9	41.0	60.5	34.5	24.2	72.9	0.76	3680	22309
FFR	746 RR/Bt	6.3 ± 0.2	60.6	8.3	45.5	58.7	28.8	27.3	70.6	0.73	3502	21201
Augusta	A-06-02 HX	6.1 ± 0.2	59.6	7.9	45.2	59.7	28.3	27.4	71.5	0.74	3577	20568
Croplan	9009 RR	6.1 ± 0.2	63.2	8.5	49.8	61.3	23.3	29.8	70.5	0.73	3514	20627
Pioneer	31R87 (RR2)	6.1 ± 0.2	57.8	7.8	45.3	60.4	29.3	27.3	71.7	0.74	3597	20990
Croplan	8950 RB	6.1 ± 0.2	59.5	8.2	43.1	62.8	30.3	25.3	72.9	0.76	3697	21221
Croplan	8221VT3	6.0 ± 0.2	61.0	8.4	44.5	59.6	29.6	26.6	71.9	0.75	3605	20473
Augusta	A5338 CB	6.0 ± 0.2	58.3	8.3	40.8	62.8	34.4	24.1	73.9	0.77	3778	21654
Augusta	A5175 CB	6.0 ± 0.2	53.3	8.5	40.0	61.3	35.5	23.4	72.9	0.76	3690	21237
Croplan	851VT3	5.8 ± 0.2	57.3	8.6	41.1	63.2	33.2	24.6	73.9	0.77	3775	21171
DeKalb	DKC67-23 (RR2/YGCB)	5.7 ± 0.2	56.3	8.3	41.2	60.5	33.9	24.1	72.7	0.76	3660	20013
FFR	842 RR2	5.3 ± 0.2	59.1	8.6	46.6	62.5	27.7	26.9	72.0	0.75	3640	18887

† 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 Digestable Nutrients

NEL = Net Energy for Lactation

Table 9. Mean yields † of five corn hybrids evaluated in four environments for three years (2006-2008) in Tennessee.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=12)	65% Moisture Avg. Yield ± Std Err. (n=12)	Dry Weight Knoxville	Dry Weight Greeneville	Dry Weight Crossville	Dry Weight Springfield
		tons/a	tons/a	tons/a	tons/a	tons/a	tons/a
FFR	746 RR/Bt	6.7 ± 0.2	19.3 ± 0.6	8.6	7.0	6.2	5.2
Dyna Gro	58K40 (RR)	6.7 ± 0.2	19.2 ± 0.5	9.1	7.0	6.1	4.7
Pioneer	31R87 (RR2)	6.4 ± 0.2	18.4 ± 0.5	8.2	6.9	5.7	4.9
DeKalb	DKC67-23 (RR2/YGCB)	6.0 ± 0.2	17.3 ± 0.6	8.3	6.3	5.1	4.5
FFR	842 RR2	5.9 ± 0.2	16.9 ± 0.5	8.6	6.7	4.6	3.8
Avg. (tons/a)		**6.4**	**18.2**	**8.5**	**6.8**	**5.5**	**4.6**
L.S.D.$_{.05}$ (tons/a)		**0.8**	**2.3**	**1.2**	**1.2**	**1.8**	**2.0**
C.V. (%)		**17.0**	**17.0**	**9.5**	**11.7**	**22.8**	**27.5**

† all silage yields are adjusted to Dry Weight basis.

Table 10. Mean yields † and agronomic characteristics of five corn hybrids evaluated for silage in four environments for three years (2006-2008) in Tennessee.

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=12)	65% Moisture Avg. Yield ± Std Err. (n=12)	Moisture at harvest (n=12)	Lodging (n=9)	Plant Height (n=12)	Ear Height (n=6)
		tons/a	tons/a	%	%	inches	inches
FFR	746 RR/Bt	6.7 ± 0.2	19.3 ± 0.6	63.0	0	95	45
Dyna Gro	58K40 (RR)	6.7 ± 0.2	19.2 ± 0.5	63.2	0	98	46
Pioneer	31R87 (RR2)	6.4 ± 0.2	18.4 ± 0.5	60.7	0	97	41
DeKalb	DKC67-23 (RR2/YGCB)	6.0 ± 0.2	17.3 ± 0.6	59.3	0	93	42
FFR	842 RR2	5.9 ± 0.2	16.9 ± 0.5	61.8	0	92	41

Codes:

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

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

YGRW = contians a gene for rootworm resistance

RR, RR2 = contains a gene for tolerance to glyphosate

Table 11. Mean yields † and feed quality characteristics of five corn hybrids evaluated for silage at four locations for three years (2006-2008) in Tennessee.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=12)	Moisture at Harvest (n=12)	Crude Protein (n=11)	NDF (n=11)	NDF 48h IV Digest (n=11)	Starch (n=11)	ADF (n=11)	TDN (n=11)	NEL (n=11)	Milk/ton (n=11)	Milk/acre (n=11)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
FFR	746 RR/Bt	6.7 ± 0.2	63.0	8.2	46.3	59.3	27.1	27.5	70.4	0.73	3505	22335
Dyna Gro	58K40 (RR)	6.7 ± 0.2	63.2	8.1	47.4	60.7	26.2	28.3	71.2	0.74	3572	22764
Pioneer	31R87 (RR2)	6.4 ± 0.2	60.7	7.6	47.2	60.5	27.1	28.1	71.5	0.74	3589	21958
DeKalb	DKC67-23 (RR2/YGCB)	6.0 ± 0.2	59.3	8.2	42.4	61.0	31.8	24.6	72.8	0.76	3681	21436
FFR	842 RR2	5.9 ± 0.2	61.8	8.5	46.6	63.0	26.9	26.7	72.1	0.75	3655	20685

† 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

RR, RR2 = contains a gene for tolerance to glyphosate

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestable Nutrients

NEL = Net Energy for Lactation

Table 12. Mean yields and agronomic characteristics of eight sweet sorghum varieties evaluated for silage at Knoxville, Tennessee during 2008.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err. (n=2)	65% Moisture Avg. Yield ± Std Err. (n=2)	-------- Dry Weight ------- Early Planted Knoxville	Late Planted Knoxville	Lodging (n=2)	Plant Height (n=2)	Moisture at Harvest (n=2)
		tons/a	tons/a	tons/a	tons/a	Score	inches	%
Mega Green	W1800	11.0 ± 0.8	31.3 ± 2.4	14.6	7.3	1.3	144	74.1
Mega Green	W6027	10.8 ± 0.8	30.7 ± 2.4	13.6	7.9	1.3	141	74.3
Walter Moss	4 Ever Green	10.1 ± 0.8	28.8 ± 2.4	13.1	7.1	2.1	139	76.3
MS	M81E	9.7 ± 0.8	27.6 ± 2.4	11.4	7.9	2.0	143	72.3
MS	Dale	9.5 ± 0.9	27.1 ± 2.7	12.8	6.2	1.6	143	71.9
MS	Keller	9.3 ± 0.8	26.4 ± 2.4	10.7	7.8	2.5	140	70.4
VA	Della	7.6 ± 0.8	21.6 ± 2.4	7.9	7.2	2.9	143	71.5
MS	Theis	7.2 ± 0.8	20.6 ± 2.4	8.2	6.3	1.9	112	68.9
Avg. (tons/a)		**9.4**	**26.9**	**11.5**	**7.2**	**2.0**	**138**	**72.5**
L.S.D.$_{.05}$ (tons/a)		**2.4**	**7.0**	**2.1**	**2.3**			
C.V. (%)		**21.7**	**21.7**	**22.1**	**17.8**			

Knoxville Early Planted 5/21/08, Harvested 9/15/08, seeding rate 87,600 / acre, Sequatchie Silt Loam

Knoxville Late Planted 6/17/08, Harvested 10/1/08, seeding rate 87,600 / acre, Stasser Silt Loam

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 13. Mean yields and feed quality characteristics of eight sweet sorghum varieties evaluated for silage at Knoxville, Tennessee during 2008.

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err.	Crude Protein	NDF	NDF 48h IV Digest	Starch	Sugar	ADF	TDN	NEL	Milk/ton	Milk/acre
		tons/a	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Mega Green	W1800	11.0 ± 0.8	6.6	63.7	45.3	5.1	8.6	40.3	49.2	0.49	1831	20051
Mega Green	W6027	10.8 ± 0.8	5.3	60.8	45.8	7.1	9.7	38.7	48.9	0.49	1815	19507
Walter Moss	4 Ever Green	10.1 ± 0.8	6.8	61.1	49.5	6.3	9.5	37.6	52.3	0.53	2093	21093
MS	M81E	9.7 ± 0.8	6.4	51.9	49.6	12.9	11.7	31.9	53.6	0.54	2190	21129
MS	Dale	9.5 ± 0.9	5.9	44.0	50.2	15.3	15.0	27.8	51.0	0.51	2012	19116
MS	Keller	9.3 ± 0.8	6.7	43.6	49.8	14.6	13.2	27.9	51.4	0.52	2032	18794
VA	Della	7.6 ± 0.8	6.8	47.8	49.2	14.2	13.5	29.0	52.7	0.53	2123	16072
MS	Theis	7.2 ± 0.8	6.8	44.3	50.6	17.1	12.2	27.6	55.7	0.57	2348	16953

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestable Nutrients

NEL = Net Energy for Lactation

Table 14. Mean yields of five sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for two years (2007-2008).

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err.	65% Moisture Avg. Yield ± Std Err.	Lodging	Plant Height	Moisture at Harvest
		tons/a	tons/a	Score	inches	%
MS	Keller	15.7 ± 1.0	44.7 ± 3.0	3.3	138	67.4
MS	M81E	14.9 ± 1.0	42.5 ± 3.0	2.3	143	69.9
MS	Dale	13.6 ± 1.0	38.7 ± 3.0	2.4	143	71.0
VA	Della	9.9 ± 1.0	28.2 ± 3.0	3.8	140	72.4
MS	Theis	9.7 ± 1.0	27.6 ± 3.0	2.3	111	68.6
Avg. (tons/a)		**12.7**	**36.3**	**2.8**	**135**	**69.9**
L.S.D.$_{.05}$ (tons/a)		**3.6**	**10.2**			
C.V. (%)		**19.6**	**19.6**			

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 15. Mean yields and feed quality characteristics of five sweet sorghum varieties evaluated for silage at Knoxville, Tennessee for two years (2007-2008).

Brand	Hybrid	Dry Weight Avg. Yield ± Std Err.	Crude Protein	NDF	NDF 48h IV Digest	Starch	Sugar	ADF	TDN	NEL	Milk/ton	Milk/acre
		tons/a	% dm	% dm	% of NDF	% dm	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
MS	Keller	15.7 ± 1.0	7.6	46.2	46.2	15.2	11.2	29.2	53.1	0.54	2118	32130
MS	M81E	14.9 ± 1.0	7.0	48.8	43.8	15.9	11.1	30.3	53.0	0.54	2104	29051
MS	Dale	13.6 ± 1.0	6.9	45.6	46.0	17.5	11.4	28.6	54.7	0.56	2252	27415
VA	Della	9.9 ± 1.0	7.3	50.8	46.5	12.6	11.3	31.4	52.2	0.53	2061	19900
MS	Theis	9.7 ± 1.0	7.8	45.0	45.5	19.6	9.8	28.0	57.7	0.59	2443	22593

NDF = Neutral Detergent Fiber

ADF = Acid Detergent Fiber

TDN = Total Digestable Nutrients

NEL = Net Energy for Lactation

Table 16. Characteristics, as described by the seed company, of corn silage hybrids evaluated in yield tests in Tennessee during 2008.†

Brand	Hybrid	Grain Color	Maturity	Herbicide Tolerance	BT Gene	Released or Experimental	Comments from Companies
AgVenture	R9487YB (RR/CB)	Y	115	RR	CB	R	---
Augusta	A007Q	Y	115	---	---	R	Conventional, yield
Augusta	A008VT3	Y	117	RR	CB/RW	R	Highly digestible
Augusta	A-06-02 HX	Y	119	LL	Bt	R	Digestible & tonnage
Augusta	A-06-04 HX	Y	109	LL	Bt	R	Highly digestible
Augusta	A-06-06CBLL	Y	111	LL	Bt	R	Health & digestibility
Augusta	A06-07CB (LL)	Y	107	LL	Bt	R	Health & digestibility
Augusta	A76-64CB	Y	115	---	CB	E	---
Augusta	A08-07HX (LL)	Y	113	LL	HX	E	---
Augusta	A08-13HX (LL)	Y	117	LL	HX	E	---
Augusta	A08-71VT3	Y	119	RR	CB/RW	R	Highly digestible
Augusta	A5175 CB	Y	107	---	Bt	R	Health & digestibility
Augusta	A5337 CB	Y	113	---	YG	R	Great digestibility
Augusta	A5338 CB	Y	116	---	CB	R	Digestible & tonnage
Croplan	6531VT3	Y	112	RR	CB/RW	R	Flex ear, digestibility
Croplan	6831 TS	Y	111	RR	CB/RW	R	Flex ear, no poorly drained soils
Croplan	7131VT3	Y	115	RR	CB/RW	R	Dual purpose, no poorly drained soils
Croplan	8221VT3	Y	118	RR	CRW/Bt	R	Dual purpose, excellent digestability, 32K/Ac
Croplan	851VT3	Y	118	RR	CRW/Bt	R	Avoid poor drained soils, silage > 30K/Ac, dual purpose
Croplan	8950 RB	Y	120	RR	Bt	R	Tall, heat/drought tolerant, excellent roots/stalks, avg staygreen
Croplan	9009 RR	Y	124	RR	---	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	58K81 (RR)	Y	117	RR2	---	R	Disease resistant, all soils, agronomics
Dyna-Gro	58P27 (RR/Bt)	Y	119	RR2	YGCB	R	Sandy silt soils, good dryland, defensive
Dyna-Gro	58V24 (VT3)	Y	116	RR2	CB/RW	R	Very good quality, drought
FFR	746 RR/Bt	Y	114	RR	Bt	R	Good in bottoms, heavy soils, irrigation, high populations
FFR	842 RR2	Y	117	RR2	---	R	Grey lf spot, virus tolerant, heavy soils, early planted
Mycogen	F2F723 (LL/Bt)	Y	113	LL	HX1	R	Grey lf spot tolerant, med popln, productive soils
Mycogen	TMF 2Q759 (RR/LL/Bt)	Y	113	RR/LL	HX Xtra	R	Grey lf spot tolerant, med popln, productive soils
Pioneer	31G70 (HXX/LL/RR2)	Y	119	RR/LL	HX1/RW	R	---
Pioneer	31P42 (HX1/LL/RR2)	Y	119	RR/LL	HX1	R	---
Pioneer	31R87 (RR2)	Y	120	RR2	---	R	---
Wyffels	W7648 (RR/LL/Bt)	Y	112	RR2/LL	HXT	R	Stress tolerance
Wyffels	W8681 (VT3)	Y	115	RR2	CB/RW	R	Excellent stay green
Wyffels	W9127 (RR/Bt)	Y	117	RR2	YGCB	R	Excellent stay green

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

LL = contains a gene for tolerance to glufosinate

W = white grain

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

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

Table 17. Contact information for corn hybrid and sweet sorghum seed companies evaluated in yield tests in Tennessee during 2008.[1]

Company	Contact	Phone	Email	Web site	Address
Corn Hybrids					
AgVenture D&M	Gary Allerkamp	270-756-8783	ageaav@aol.com	www.agventure.com	P.O. Box 794, Elizabethtown, KY 42702
	Kenny Kingins	270-293-5467	kwkingins@yahoo.com		6331 St. Rd. 121 S., Murray, KY 42071
	Henry Co Coop	888-767-0048			4075 US 641 S., Murray, KY 42071
Augusta Seed Corporation		540-886-6055	augustaseed@aol.com		473 Tisdale Farm Ln, Stuanton, VA 24401
Croplan Genetics/Land o Lakes	Jesse Witt	256-221-5932		www.croplangenetics.com	
	Kieth Savin	731-610-7006			
	Darrin Holder	270-207-0190			
Monsanto (Dekalb)		800-335-2676		www.dekalb.com	
United Agri Products (Dyna-Gro)	Brandon Sheridar	901-277-3638	brandon.sheridan@uap.com	www.dynagroseed.com	57 Germantown Ct Suite 200, Cordova, TN 38018
Tennessee Farmers Coop	Jim Payne	901-652-0903	jpayne@ourcoop.com	www.ourcoop.com	West TN
	Chris Morris	615-218-7963			East & Middle TN
Mycogen Seed	Ron Prinz	270-744-0150		www.dowagro.com/mycogen	
Pioneer Hi-Bred Int.	Michael Hughes	800-331-2475	michael.hughes@pioneer.com	www.pioneer.com	700 Boulevard South, Suite 302, Huntsville, AL 35802
Wyffels Hybrids Inc.	Scott Janes	270-926-2420	scojan@milesnmore.com	www.wyffels.com	Miles Farm Supply, P.O. Box 22879, Owensboro, KY 42304
Sweet Sorghums					
Kentucky Sweet Sorghum Assoc.	Morris Bitzer	859-806-3358	mbitzer@uky.edu	www.ca.uky.edu/nssppa	2049 Rebel Road, Lexington, KY 40503
Walter Moss Seed (Mega Green)		888-667-7872	info@mossseed.com	www.mossseed.com	P.O. Box 21114 Waco, TX 76702-1114