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Corn and Wheat Silage Tests in Tennessee 2012

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County Standard Corn Silage Tests

County	**Producer**	**Agent**
Blount	Scott Blair (Mac Pate Dairy Farm)	John Wilson
Washington	David Saylor (Savland Dairy Farm)	John Hamrick

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CORN SILAGE YIELD TESTS

2012

Experimental Procedures

AgResearch and Education Center Tests: Fourteen corn hybrids were evaluated for silage yield and quality in 2012. The tests were conducted at the East Tennessee (Knoxville and Maryville), Plateau (Crossville), Highland Rim (Springfield), and Middle Tennessee (Spring Hill), AgResearch and Education Centers. The plots at all locations consisted of two rows, planted 30 inches apart, 30 feet in length and were replicated three times. Yields presented were adjusted to both dry weight and 65 percent 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 pounds was taken for analysis. Fresh weight and dried weight were recorded on each sample for determination of moisture at harvest. The samples were then ground and analyzed for nutritional content. Silage quality analyses were provided by Cumberland Valley Analytical Services Inc., Hagerstown, Md. Predictions for milk production per ton and milk production per acre were calculated 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 with the same 14 hybrids included in the AgResearch and Education Center tests. 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 2012 growing season was characterized by a warmer than usual spring followed by hot, dry drought conditions which persisted through most of the critical growth stages for corn. This was particularly true during the months of June and July when daily temperatures above 100 were common. The early, warm spring allowed record setting early planting progress nearly three weeks ahead of the normal pace. Field conditions were predominately hotter and drier than normal with few fields receiving limited to moderate rainfall through July. Widespread precipitation received in mid-July was too late to be of much benefit to most of the state's corn crop. The crop was rated at 61 percent poor to very poor in mid-July when harvesting began as the crop matured earlier than usual due to the heat and drought.

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 AgResearch and Education Centers where the corn silage variety tests were conducted in 2012.

Research and Education Center	Location	Planting Date	Harvest Date	Plant Population	Soil Type
East Tennessee	Knoxville	4/17/12	8/16/12	34,558	Sequatchie Silt Loam
East Tennessee	Maryville	4/18/12	8/24/12	29,621	Staser Loam
Plateau	Crossville	4/30/12	8/30/12	29,621	Lilly Silt Loam
Middle Tennessee	Spring Hill	4/20/12	7/20/12	31,944	Maury Silt Loam
Highland Rim	Springfield	4/18/12	8/8/12	33,106	Mountview Silt Loam

Table 2. Mean yields † of 14 corn hybrids evaluated for silage at five locations in Tennessee during 2012.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=5)	65% Moisture Avg. Yield ± Std Err. (n=5)	Dry Weight Yield				
				Knoxville	Maryville	Crossville	Spring Hill	Springfield
		tons/a						
Croplan	9009 RH	7.6 ± 0.3	21.6 ± 0.7	9.4	11.5	6.1	4.4	6.4
Steyer	X21192TM (RR)	6.8 ± 0.3	19.4 ± 0.7	9.2	9.6	6.4	4.3	4.4
Croplan	8505VT3P	6.7 ± 0.3	19.1 ± 0.7	8.5	10.6	6.1	3.8	4.4
Augusta	A6969RR	6.6 ± 0.3	18.9 ± 0.7	8.8	10.6	5.6	4.4	3.8
Augusta	A6867GT3000 (LL/CB/RW)	6.4 ± 0.3	18.4 ± 0.8	8.0	10.2	6.4	3.0	4.5
Croplan	8756VT3	6.4 ± 0.3	18.3 ± 0.7	8.7	10.3	6.3	3.5	3.2
Croplan	8221VT3	6.3 ± 0.3	18.1 ± 0.7	8.4	10.6	5.5	3.6	3.6
Croplan	8410VT3P	6.3 ± 0.3	18.0 ± 0.7	7.9	10.2	6.2	3.4	3.7
Augusta	A7664VT3	6.2 ± 0.3	17.7 ± 0.7	8.1	9.8	5.0	4.1	3.8
Augusta	A6767GT3000 (LL/CB/RW)	6.1 ± 0.3	17.5 ± 0.7	7.1	9.1	5.6	4.3	4.5
Augusta	A5462GT3000 (LL/CB/RW)	6.1 ± 0.3	17.4 ± 0.7	7.5	9.5	6.8	3.6	3.1
Croplan	8621VT3P	6.0 ± 0.3	17.2 ± 0.7	8.5	9.9	5.4	3.1	3.1
Steyer	X21181CM (RR)	5.8 ± 0.3	16.7 ± 0.7	7.9	9.2	5.1	3.4	3.5
Augusta	A5464GT	5.4 ± 0.3	15.5 ± 0.7	6.3	9.1	5.5	3.3	2.9
Avg. (tons/a)		**6.3**	**18.1**	**8.2**	**10.0**	**5.9**	**3.7**	**3.9**
L.S.D.$_{.05}$ (tons/a)		**0.7**	**2.0**	**0.9**	**1.8**	**2.0**	**0.9**	**2.2**
C.V. (%)		**15.4**	**15.4**	**6.3**	**10.7**	**20.4**	**14.4**	**33.1**

† 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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

YGRW, RW, CRW = contians 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 14 corn hybrids evaluated for silage at five locations in Tennessee during 2012.

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=5)	Plant Height (n=5)	Ear Height (n=4)
		tons/a	tons/a	%	%	inches	inches
Croplan	9009 RH	7.6 ± 0.3	21.6 ± 0.7	61.9	0	88	40
Steyer	X21192TM (RR)	6.8 ± 0.3	19.4 ± 0.7	63.4	0	87	37
Croplan	8505VT3P	6.7 ± 0.3	19.1 ± 0.7	60.1	0	88	39
Augusta	A6969RR	6.6 ± 0.3	18.9 ± 0.7	61.6	0	84	36
Augusta	A6867GT3000 (LL/CB/RW)	6.4 ± 0.3	18.4 ± 0.8	59.4	0	91	38
Croplan	8756VT3	6.4 ± 0.3	18.3 ± 0.7	62.3	0	80	35
Croplan	8221VT3	6.3 ± 0.3	18.1 ± 0.7	60.4	0	81	40
Croplan	8410VT3P	6.3 ± 0.3	18.0 ± 0.7	59.3	0	76	30
Augusta	A7664VT3	6.2 ± 0.3	17.7 ± 0.7	59.4	0	83	31
Augusta	A6767GT3000 (LL/CB/RW)	6.1 ± 0.3	17.5 ± 0.7	61.5	0	93	35
Augusta	A5462GT3000 (LL/CB/RW)	6.1 ± 0.3	17.4 ± 0.7	58.9	0	89	37
Croplan	8621VT3P	6.0 ± 0.3	17.2 ± 0.7	59.7	0	83	35
Steyer	X21181CM (RR)	5.8 ± 0.3	16.7 ± 0.7	62.3	0	84	37
Augusta	A5464GT	5.4 ± 0.3	15.5 ± 0.7	57.7	0	89	36
	Average	**6.3**	**18.1**	**60.6**	**0**	**85**	**36**

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

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

LL = contains a gene for tolerance to glufosinate

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

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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

YGRW, RW = contians a gene for rootworm resistance

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

CL = contains a gene for tolerance to Imidazolinone class herbicides

Table 4. Mean yields † and feed quality characteristics of 14 corn hybrids evaluated for silage at five locations in Tennessee during 2012.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=5)	Moisture at Harvest (n=5)	Crude Protein (n=5)	NDF (n=5)	30h IV NDFD (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
Croplan	9009 RH	7.6 ± 0.3	61.9	9.1	45.5	61.9	26.9	26.4	71.3	0.74	3188	24103
Steyer	X21192TM (RR)	6.8 ± 0.3	63.4	9.7	44.0	60.8	28.4	24.9	71.8	0.75	3255	22069
Croplan	8505VT3P	6.7 ± 0.3	60.1	9.9	45.6	59.5	27.7	25.6	70.9	0.74	3007	20084
Augusta	A6969RR	6.6 ± 0.3	61.6	9.7	43.1	62.1	29.7	24.4	72.0	0.75	3199	21179
Augusta	A6867GT3000 (LL/CB/RW)	6.4 ± 0.3	59.4	9.3	43.2	60.1	29.7	24.6	71.7	0.75	3050	19608
Croplan	8756VT3	6.4 ± 0.3	62.3	9.3	46.8	60.3	27.5	26.6	70.5	0.74	3095	19841
Croplan	8221VT3	6.3 ± 0.3	60.4	9.1	42.8	60.6	29.2	24.8	72.2	0.76	3159	20027
Croplan	8410VT3P	6.3 ± 0.3	59.3	9.5	43.0	58.4	31.4	24.0	72.4	0.76	3034	19082
Augusta	A7664VT3	6.2 ± 0.3	59.4	10.0	42.1	60.4	30.0	24.2	72.1	0.75	3099	19153
Augusta	A6767GT3000 (LL/CB/RW)	6.1 ± 0.3	61.5	9.2	44.3	62.3	27.1	25.5	71.3	0.74	3160	19306
Augusta	A5462GT3000 (LL/CB/RW)	6.1 ± 0.3	58.9	9.2	46.0	58.5	28.1	26.0	70.6	0.74	2924	17836
Croplan	8621VT3P	6.0 ± 0.3	59.7	9.3	41.3	60.0	30.9	23.7	73.1	0.76	3186	19116
Steyer	X21181CM (RR)	5.8 ± 0.3	62.3	9.9	44.5	63.8	27.1	25.3	71.9	0.75	3299	19234
Augusta	A5464GT	5.4 ± 0.3	57.7	9.1	44.2	59.0	29.1	25.4	71.1	0.74	2924	15880

† 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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

NDF = Neutral Detergent Fiber

30h IV NDFD = Neutral Detergent Filber Digestibility

ADF = Acid Detergent Fiber

TDN = Total Digestable Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

Table 5. Mean yields † and feed quality characteristics of 14 corn hybrids evaluated for silage at five locations in Tennessee during 2012, 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)	30h IV NDFD (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
Augusta	A6969RR	6.6 ± 0.3	61.6	9.7	43.1	62.1	29.7	24.4	72.0	0.75	3199	21179
Augusta	A6867GT3000 (LL/CB/RW)	6.4 ± 0.3	59.4	9.3	43.2	60.1	29.7	24.6	71.7	0.75	3050	19608
Augusta	A7664VT3	6.2 ± 0.3	59.4	10.0	42.1	60.4	30.0	24.2	72.1	0.75	3099	19153
Augusta	A6767GT3000 (LL/CB/RW)	6.1 ± 0.3	61.5	9.2	44.3	62.3	27.1	25.5	71.3	0.74	3160	19306
Augusta	A5462GT3000 (LL/CB/RW)	6.1 ± 0.3	58.9	9.2	46.0	58.5	28.1	26.0	70.6	0.74	2924	17836
Augusta	A5464GT	5.4 ± 0.3	57.7	9.1	44.2	59.0	29.1	25.4	71.1	0.74	2924	15880
Croplan	9009 RH	7.6 ± 0.3	61.9	9.1	45.5	61.9	26.9	26.4	71.3	0.74	3188	24103
Croplan	8505VT3P	6.7 ± 0.3	60.1	9.9	45.6	59.5	27.7	25.6	70.9	0.74	3007	20084
Croplan	8756VT3	6.4 ± 0.3	62.3	9.3	46.8	60.3	27.5	26.6	70.5	0.74	3095	19841
Croplan	8221VT3	6.3 ± 0.3	60.4	9.1	42.8	60.6	29.2	24.8	72.2	0.76	3159	20027
Croplan	8410VT3P	6.3 ± 0.3	59.3	9.5	43.0	58.4	31.4	24.0	72.4	0.76	3034	19082
Croplan	8621VT3P	6.0 ± 0.3	59.7	9.3	41.3	60.0	30.9	23.7	73.1	0.76	3186	19116
Steyer	X21192TM (RR)	6.8 ± 0.3	63.4	9.7	44.0	60.8	28.4	24.9	71.8	0.75	3255	22069
Steyer	X21181CM (RR)	5.8 ± 0.3	62.3	9.9	44.5	63.8	27.1	25.3	71.9	0.75	3299	19234

† 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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

NDF = Neutral Detergent Fiber

30h IV NDFD = Neutral Detergent Filber Digestibility

ADF = Acid Detergent Fiber

TDN = Total Digestable Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

Table 6. Mean yields † of six corn hybrids evaluated for silage in four environments for two years (2011-2012) in Tennessee.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=8)	65% Moisture Avg. Yield ± Std Err. (n=8)	Dry Weight Yield			
				Knoxville	Crossville	Spring Hill	Springfield
		tons/a					
Croplan	9009 RH	7.0 ± 0.3	20.0 ± 0.8	10.5	5.6	4.6	7.3
Augusta	A5462GT3000 (LL/CB/RW)	6.6 ± 0.3	19.0 ± 0.8	8.1	7.6	4.7	6.1
Croplan	8505VT3P	6.6 ± 0.3	18.9 ± 0.8	9.6	5.7	4.8	6.3
Augusta	A7664VT3	6.5 ± 0.3	18.6 ± 0.8	9.2	6.1	4.7	6.1
Croplan	8756VT3	6.5 ± 0.3	18.6 ± 0.8	9.7	6.2	4.2	6.0
Croplan	8221VT3	6.4 ± 0.3	18.2 ± 0.8	9.6	5.5	4.6	5.7
Avg. (tons/a)		**6.6**	**18.9**	**9.4**	**6.1**	**4.6**	**6.2**
L.S.D.$_{.05}$ (tons/a)		**1.0**	**2.8**	**1.3**	**2.6**	**1.0**	**2.5**
C.V. (%)		**18.9**	**18.9**	**9.0**	**27.0**	**13.8**	**23.1**

Table 7. Mean yields † and agronomic characteristics of six corn hybrids evaluated for silage in four environments for two years (2011-2012) in Tennessee.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=8)	65% Moisture Avg. Yield ± Std Err. (n=8)	Moisture at harvest (n=8)	Lodging (n=8)	Plant Height (n=8)	Ear Height (n=6)
		tons/a	tons/a	%	%	inches	inches
Croplan	9009 RH	7.0 ± 0.3	20.0 ± 0.8	60.7	0	97	41
Augusta	A5462GT3000 (LL/CB/RW)	6.6 ± 0.3	19.0 ± 0.8	59.1	0	96	37
Croplan	8505VT3P	6.6 ± 0.3	18.9 ± 0.8	60.0	0	97	40
Augusta	A7664VT3	6.5 ± 0.3	18.6 ± 0.8	59.6	0	89	31
Croplan	8756VT3	6.5 ± 0.3	18.6 ± 0.8	61.6	0	92	37
Croplan	8221VT3	6.4 ± 0.3	18.2 ± 0.8	59.8	0	93	41

† 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

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

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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

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

LL = contains a gene for tolerance to glufosinate

YGRW, RW = contians a gene for rootworm resistance

CL = contains a gene for tolerance to Imidazolinone class herbicides

Table 8. Mean yields † and feed quality characteristics of six corn hybrids evaluated for silage at four locations for 2 years (2011-2012) in Tennessee.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=8)	Moisture at Harvest (n=8)	Crude Protein (n=8)	NDF (n=8)	30h IV NDFD (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
Croplan	9009 RH	7.0 ± 0.3	60.7	8.5	47.2	58.9	26.3	27.9	70.4	0.73	3062	22916
Augusta	A5462GT3000 (LL/CB/RW)	6.6 ± 0.3	59.1	8.4	45.9	57.1	29.5	26.5	70.7	0.74	2937	20766
Croplan	8505VT3P	6.6 ± 0.3	60.0	8.9	45.8	57.5	28.3	26.3	71.0	0.74	3011	21346
Augusta	A7664VT3	6.5 ± 0.3	59.6	9.0	44.5	58.2	28.8	26.1	71.2	0.74	3030	21063
Croplan	8756VT3	6.5 ± 0.3	61.6	8.6	48.7	58.5	25.8	28.3	69.7	0.73	3054	21327
Croplan	8221VT3	6.4 ± 0.3	59.8	8.5	44.6	57.7	29.3	26.3	71.4	0.75	3007	20649

† 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

30h IV NDFD = Neutral Detergent Filber Digestibility

ADF = Acid Detergent Fiber

TDN = Total Digestable Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

Table 9. Mean yields † of five corn hybrids evaluated for silage in four environments for three years (2010-2012) in Tennessee.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=12)	65% Moisture Avg. Yield ± Std Err. (n=12)	Dry Weight Yield			
				Knoxville	Crossville	Spring Hill	Springfield
		tons/a					
Croplan	9009 RH	7.2 ± 0.2	20.6 ± 0.6	11.0	5.7	4.9	7.3
Croplan	8505VT3P	7.0 ± 0.2	20.1 ± 0.6	10.1	5.8	5.3	6.9
Augusta	A5462GT3000 (LL/CB/RW)	6.7 ± 0.2	19.2 ± 0.6	8.8	6.8	5.1	6.3
Croplan	8756VT3	6.7 ± 0.2	19.2 ± 0.6	10.0	5.6	4.7	6.4
Croplan	8221VT3	6.6 ± 0.2	18.8 ± 0.6	10.3	5.4	4.9	5.9
Avg. (tons/a)		**6.9**	**19.6**	**10.0**	**5.9**	**5.0**	**6.6**
L.S.D.$_{.05}$ (tons/a)		**0.9**	**2.6**	**1.3**	**2.2**	**1.1**	**2.6**
C.V. (%)		**18.0**	**18.0**	**8.9**	**25.2**	**14.8**	**24.1**

Table 10. Mean yields † and agronomic characteristics of five corn hybrids evaluated for silage in four environments for three years (2010-2012) in Tennessee.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=12)	65% Moisture Avg. Yield ± Std Err. (n=12)	Moisture at harvest (n=12)	Lodging (n=12)	Plant Height (n=12)	Ear Height (n=9)
		tons/a	tons/a	%	%	inches	inches
Croplan	9009 RH	7.2 ± 0.2	20.6 ± 0.6	58.5	0	101	44
Croplan	8505VT3P	7.0 ± 0.2	20.1 ± 0.6	58.4	0	99	42
Augusta	A5462GT3000 (LL/CB/RW)	6.7 ± 0.2	19.2 ± 0.6	56.9	0	102	40
Croplan	8756VT3	6.7 ± 0.2	19.2 ± 0.6	59.2	0	95	40
Croplan	8221VT3	6.6 ± 0.2	18.8 ± 0.6	57.3	0	97	44

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 = contians 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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

Table 11. Mean yields † and feed quality characteristics of five corn hybrids evaluated for silage at four locations for three years (2010-2012) in Tennessee.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=12)	Moisture at Harvest (n=12)	Crude Protein (n=12)	NDF (n=12)	30h IV NDFD (n=12)	Starch (n=12)	ADF (n=12)	TDN (n=12)	NEL (n=12)	Milk/ton‡ (n=12)	Milk/acre‡ (n=12)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Croplan	9009 RH	7.2 ± 0.2	58.5	8.1	47.7	56.4	26.2	28.6	70.0	0.73	2937	22129
Croplan	8505VT3P	7.0 ± 0.2	58.4	8.4	46.4	54.8	28.4	27.3	70.5	0.73	2882	21113
Augusta	A5462GT3000 (LL/CB/RW)	6.7 ± 0.2	56.9	8.2	44.8	56.7	30.3	26.2	71.1	0.74	2925	20535
Croplan	8756VT3	6.7 ± 0.2	59.2	8.3	49.2	58.5	25.4	28.7	69.5	0.72	2985	20976
Croplan	8221VT3	6.6 ± 0.2	57.3	8.2	44.9	56.3	29.3	26.9	70.9	0.74	2923	20234

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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

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

30h IV NDFD = Neutral Detergent Filber Digestibility

ADF = Acid Detergent Fiber

TDN = Total Digestable Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

COUNTY STANDARD TESTS

Table 12. Mean yields † of 14 corn hybrids evaluated for silage in two County Standard Tests in Tennessee during 2012.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=2)	65% Moisture Avg. Yield ± Std Err. (n=2)	--- Dry Weight Yield --- Blount (n=1)	Washington (n=1)	Moisture at harvest (n=2)	Lodging (n=1)	Plant Height (n=1)	Ear Height (n=1)
		----------tons/a----------				%	%	inches	inches
Steyer	X21181CM (RR)	7.4 ± 0.7	21.0 ± 1.9	7.9	6.8	55.8	0	96	49
Augusta	A6867GT3000 (LL/CB/RW)	6.1 ± 0.7	17.4 ± 1.9	5.0	7.2	57.8	0	87	41
Augusta	A5462GT3000 (LL/CB/RW)	5.9 ± 0.7	16.7 ± 1.9	3.8	7.9	60.0	0	88	38
Croplan	8410VT3P	5.8 ± 0.7	16.5 ± 1.9	4.0	7.6	64.6	0	75	34
Augusta	A5464GT	5.7 ± 0.7	16.3 ± 1.9	4.0	7.4	58.9	0	87	33
Croplan	8756VT3	5.5 ± 0.7	15.7 ± 1.9	3.8	7.2	64.6	0	71	41
Augusta	A6969RR	5.4 ± 0.7	15.4 ± 1.9	4.6	6.2	66.9	0	70	42
Croplan	8621VT3P	5.4 ± 0.7	15.3 ± 1.9	4.4	6.4	61.2	0	72	36
Croplan	9009 RH	5.4 ± 0.7	15.3 ± 1.9	4.7	6.1	65.7	0	83	41
Steyer	X21192TM (RR)	5.3 ± 0.7	15.2 ± 1.9	5.0	5.7	63.7	0	79	38
Croplan	8221VT3	5.3 ± 0.7	15.2 ± 1.9	4.1	6.6	64.3	0	77	41
Augusta	A7664VT3	5.2 ± 0.7	14.8 ± 1.9	4.3	6.1	65.3	0	96	42
Croplan	8505VT3P	5.1 ± 0.7	14.6 ± 1.9	3.7	6.5	60.9	0	79	41
Augusta	A6767GT3000 (LL/CB/RW)	4.8 ± 0.7	13.8 ± 1.9	4.2	5.5	65.5	0	79	30
Avg. (tons/a)		**5.6**	**15.9**	**4.5**	**6.7**	**62.5**	**0**	**81**	**39**
L.S.D.$_{.05}$ (tons/a)		**2.2**	**5.9**						
C.V. (%)		**17.3**	**17.3**						

† 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 = contians 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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

Blount County: Mac Pate Dairy Farm (Scott Blair)
Planted: 4-13-12
Harvested: 8-22-12
Population: 26,294
30 inch row spacing

Washington County: Savland Dairy Farm (David Saylor)
Planted: 5-18-12
Harvested: 9-17-12
Population: 28,000
30 inch row spacing

Table 13. Mean yields † and feed quality characteristics of 14 corn hybrids evaluated for silage in two County Standard Tests in Tennessee during 2012.

Brand	Hybrid §	Dry Weight Avg. Yield ± Std Err. (n=2)	Moisture at Harvest (n=2)	Crude Protein (n=2)	NDF (n=2)	30h IV NDFD (n=2)	Starch (n=2)	ADF (n=2)	TDN (n=2)	NEL (n=2)	Milk/ton‡ (n=2)	Milk/acre‡ (n=2)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Steyer	X21181CM (RR)	7.4 ± 0.7	55.8	10.3	47.6	55.5	23.6	28.2	68.9	0.72	2689	19792
Augusta	A6867GT3000 (LL/CB/RW)	6.1 ± 0.7	57.8	9.7	46.9	54.7	28.2	25.7	69.3	0.72	2696	16447
Augusta	A5462GT3000 (LL/CB/RW)	5.9 ± 0.7	60.0	10.4	47.6	54.3	23.0	27.4	68.8	0.72	2801	16413
Croplan	8410VT3P	5.8 ± 0.7	64.6	10.6	56.9	47.7	15.9	31.8	64.7	0.67	2450	14187
Augusta	A5464GT	5.7 ± 0.7	58.9	10.5	50.7	54.3	22.5	28.9	67.1	0.70	2604	14872
Croplan	8756VT3	5.5 ± 0.7	64.6	10.4	60.1	52.1	13.5	33.4	63.3	0.66	2431	13346
Augusta	A6969RR	5.4 ± 0.7	66.9	11.1	57.3	49.3	14.8	31.2	63.9	0.66	2474	13359
Croplan	8621VT3P	5.4 ± 0.7	61.2	10.4	50.7	49.1	24.2	27.5	67.1	0.70	2565	13750
Croplan	9009 RH	5.4 ± 0.7	65.7	11.1	54.0	50.6	19.6	29.0	65.8	0.69	2634	14117
Steyer	X21192TM (RR)	5.3 ± 0.7	63.7	10.9	52.7	50.2	20.4	28.6	66.3	0.69	2618	13928
Croplan	8221VT3	5.3 ± 0.7	64.3	9.9	49.2	53.1	25.2	27.3	67.8	0.71	2810	14920
Augusta	A7664VT3	5.2 ± 0.7	65.3	11.5	50.9	52.2	22.2	27.4	67.0	0.70	2765	14322
Croplan	8505VT3P	5.1 ± 0.7	60.9	9.7	47.7	56.0	25.2	26.8	69.4	0.72	2894	14816
Augusta	A6767GT3000 (LL/CB/RW)	4.8 ± 0.7	65.5	10.9	56.0	50.4	17.7	30.3	64.6	0.67	2534	12237

† 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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

NDF = Neutral Detergent Fiber

30h IV NDFD = Neutral Detergent Filber Digestibility

ADF = Acid Detergent Fiber

TDN = Total Digestable Nutrients

NEL = Net Energy for Lactation

‡ based on University of Wisconsin Milk2006 software program.

Small Grains Silage Test

Sixty-seven wheat varieties were evaluated for silage yield and quality at the Middle Tennessee AgResearch and Education Center (Spring Hill, Tenn.). Varieties were seeded at 26 seed per square foot. Plots were planted on 10/26/11 with a drill and consisted of seven rows on 7-inch spacings, 30 feet in length. Each entry was replicated three times. The plots were harvested on 4/19/12 by a commercial silage harvester. Yields presented were adjusted to both dry weight and 65 percent moisture. A sub-sample from each plot of approximately 3 lbs was taken for analysis. Fresh weight and dried weight were recorded on each sample for determination of moisture at harvest. The samples were then ground and analyzed for nutritional content. Silage quality analyses were provided by Cumberland Valley Analytical Services Inc., Hagerstown, Md. Estimates of milk production per ton and milk production per acre were calculated using the University of Wisconsin Milk2006 program.

Table 14. Mean yields and agronomic characteristics of 67 soft red winter wheat varieties evaluated for silage at the Middle Tennessee AgResearch and Education Center during 2012.

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=1)	65% Moisture Avg. Yield ± Std Err. (n=1)	Moisture at harvest (n=1)	Lodging (n=1)	Height (n=1)
		tons/a	tons/a	%	(score)	inches
GA Exp.	GA-001138-8E36	2.7 ± 0.1	7.6 ± 0.3	56.7	1.0	34
Pioneer	26R10	2.4 ± 0.1	6.8 ± 0.3	48.4	1.0	32
Dyna-Gro	9053	2.4 ± 0.1	6.8 ± 0.3	58.3	1.0	31
Pioneer	26R41	2.3 ± 0.1	6.7 ± 0.3	48.7	1.0	28
GA Exp.	GA-021245-9E16	2.3 ± 0.1	6.6 ± 0.3	51.8	1.0	33
USG	3120	2.3 ± 0.1	6.5 ± 0.3	47.7	1.0	33
Progeny	PGX11-14	2.3 ± 0.1	6.5 ± 0.3	55.5	1.0	31
MO	Milton	2.2 ± 0.1	6.3 ± 0.3	55.8	1.0	31
Pioneer	26R53	2.2 ± 0.1	6.3 ± 0.3	52.0	1.0	28
Delta Grow	7300	2.1 ± 0.1	6.1 ± 0.3	59.6	1.0	29
Pioneer	26R20	2.1 ± 0.1	6.0 ± 0.3	56.0	1.0	30
Croplan Genetics	8868	2.1 ± 0.1	6.0 ± 0.3	53.3	1.0	31
USG	3555	2.1 ± 0.1	5.9 ± 0.3	53.4	1.0	26
VA Exp.	VA07W-415	2.1 ± 0.1	5.9 ± 0.3	54.6	1.0	32
Armor	ARX 1107	2.1 ± 0.1	5.9 ± 0.3	53.3	1.0	31
Agripro/Coker	SY 1526	2.0 ± 0.1	5.8 ± 0.3	52.8	1.0	33
Terral	TV8848	2.0 ± 0.1	5.8 ± 0.3	58.6	1.0	30
TN Exp.	TN 1202	2.0 ± 0.1	5.8 ± 0.3	56.3	1.0	29
Dyna-Gro	9223	2.0 ± 0.1	5.7 ± 0.3	58.9	1.0	33
Terral	TV8626	2.0 ± 0.1	5.6 ± 0.3	58.7	1.0	29
Terral	TV8535	2.0 ± 0.1	5.6 ± 0.3	55.5	1.0	29
Agripro/Coker	SY 9978	2.0 ± 0.1	5.6 ± 0.3	58.3	1.0	34
Pioneer	26R22	2.0 ± 0.1	5.6 ± 0.3	55.7	1.0	28
MO	Bess	1.9 ± 0.1	5.5 ± 0.3	57.6	1.0	32
Progeny	357	1.9 ± 0.1	5.5 ± 0.3	58.9	1.0	29
FFR	2239	1.9 ± 0.1	5.5 ± 0.3	57.3	1.0	29
TN Exp.	TN 1101	1.9 ± 0.1	5.4 ± 0.3	50.7	1.0	31
Progeny	870	1.9 ± 0.1	5.4 ± 0.3	53.7	1.0	29
Warren Seed	McKenna 200	1.9 ± 0.1	5.4 ± 0.3	59.9	1.0	28
TN Exp.	TN 1102	1.9 ± 0.1	5.4 ± 0.3	53.4	1.0	32
Croplan Genetics	8925	1.9 ± 0.1	5.3 ± 0.3	57.1	1.0	30
Michigan Crop Improvement	Red Ruby	1.9 ± 0.1	5.3 ± 0.3	53.9	1.0	31
Croplan Genetics	8302	1.9 ± 0.1	5.3 ± 0.3	58.3	1.0	31
Agripro/Coker	W1104	1.8 ± 0.1	5.3 ± 0.3	61.7	1.0	30
Cache River Valley Seed	Dixie McAlister	1.8 ± 0.1	5.3 ± 0.3	51.6	1.0	28
Dyna-Gro	9922	1.8 ± 0.1	5.2 ± 0.3	59.4	1.0	31
Armor	ARX 1133	1.8 ± 0.1	5.2 ± 0.3	55.1	1.0	28
Dyna-Gro	9012	1.8 ± 0.1	5.1 ± 0.3	56.1	1.0	32
Dyna-Gro	9171	1.8 ± 0.1	5.1 ± 0.3	55.1	1.0	29
Armor	ARX 1109	1.8 ± 0.1	5.1 ± 0.3	57.1	1.0	28
USG	3251	1.8 ± 0.1	5.1 ± 0.3	61.1	1.0	31
Croplan Genetics	9004	1.8 ± 0.1	5.1 ± 0.3	58.4	1.0	33
Progeny	308	1.8 ± 0.1	5.1 ± 0.3	57.7	1.0	29
Progeny	185	1.8 ± 0.1	5.0 ± 0.3	54.5	1.0	32
Dyna-Gro	Yorktown	1.8 ± 0.1	5.0 ± 0.3	59.5	1.0	29
USG	3244	1.8 ± 0.1	5.0 ± 0.3	53.7	1.0	30
Progeny	117	1.7 ± 0.1	5.0 ± 0.3	52.5	1.0	33
Armor	Rampage	1.7 ± 0.1	5.0 ± 0.3	55.9	1.0	31
Agripro/Coker	SY Harrison	1.7 ± 0.1	4.9 ± 0.3	54.9	1.0	29
Cache River Valley Seed	Dixie Kelsey	1.7 ± 0.1	4.9 ± 0.3	56.5	1.0	28
USG	3562	1.7 ± 0.1	4.9 ± 0.3	53.7	1.0	29

Table 14. (continued)

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=1)	65% Moisture Avg. Yield ± Std Err. (n=1)	Moisture at harvest (n=1)	Lodging (n=1)	Height (n=1)
		tons/a	tons/a	%	(score)	inches
Warren Seed	McKay 110	1.7 ± 0.1	4.9 ± 0.3	58.7	1.0	31
Pioneer	25R32	1.7 ± 0.1	4.8 ± 0.3	57.8	1.0	32
Terral	TV8861	1.7 ± 0.1	4.8 ± 0.3	61.2	1.0	28
Croplan Genetics	554W	1.7 ± 0.1	4.8 ± 0.3	58.8	1.0	29
TN Exp.	TN 1201	1.7 ± 0.1	4.8 ± 0.3	57.5	1.0	31
Progeny	125	1.7 ± 0.1	4.8 ± 0.3	47.7	1.0	29
Delta Grow	7500	1.7 ± 0.1	4.7 ± 0.3	54.9	1.0	29
Pioneer	26R15	1.7 ± 0.1	4.7 ± 0.3	60.4	1.0	31
Delta Grow	7900	1.6 ± 0.1	4.6 ± 0.3	56.6	1.0	30
VA	Jamestown	1.6 ± 0.1	4.6 ± 0.3	50.5	1.0	29
TFC	NS 1102	1.6 ± 0.1	4.5 ± 0.3	63.4	1.0	26
Armor	Ricochet	1.6 ± 0.1	4.5 ± 0.3	59.1	1.0	28
USG	3201	1.6 ± 0.1	4.4 ± 0.3	59.6	1.0	29
MO	Truman	1.5 ± 0.1	4.2 ± 0.3	56.9	1.0	25
Terral	TV8525	1.4 ± 0.1	4.1 ± 0.3	57.9	1.0	29
USG	3438	1.4 ± 0.1	4.1 ± 0.3	54.1	1.0	29
	Average (bu/a)	**1.9**	**5.4**	**56.0**	**1.0**	**30**
	L.S.D.$_{.05}$ (bu/a)	**0.3**	**0.8**			
	C.V. (%)	**9.6**	**9.6**			

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 67 wheat varieties evaluated for silage at the Middle Tennessee AgResearch and Education Center during 2012.

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=1)	Moisture at Harvest (n=1)	Crude Protein (n=1)	NDF (n=1)	30h IV NDFD (n=1)	Starch (n=1)	ADF (n=1)	TDN (n=1)	NEL (n=1)	Milk/ton‡ (n=1)	Milk/acre‡ (n=1)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
GA Exp.	GA-001138-8E36	2.7 ± 0.1	56.7	11.0	62.2	62.7	3.1	38.8	62.1	0.64	2464	6529
Pioneer	26R10	2.4 ± 0.1	48.4	.	.	.	.	.	.	.	.	.
Dyna-Gro	9053	2.4 ± 0.1	58.3	10.6	55.2	60.5	3.8	34.2	64.7	0.67	2076	4899
Pioneer	26R41	2.3 ± 0.1	48.7	10.1	53.9	62.9	4.2	33.4	65.2	0.67	2001	4683
GA Exp.	GA-021245-9E16	2.3 ± 0.1	51.8	.	.	.	.	.	.	.	.	.
USG	3120	2.3 ± 0.1	47.7	14.3	51.4	63.6	3.0	29.9	66.2	0.69	2272	5181
Progeny	PGX11-14	2.3 ± 0.1	55.5	11.7	55.5	61.7	3.1	34.3	64.0	0.66	2157	4896
MO	Milton	2.2 ± 0.1	55.8	10.0	55.1	64.5	3.4	33.8	65.0	0.67	2061	4534
Pioneer	26R53	2.2 ± 0.1	52.0	10.1	57.7	59.5	2.6	36.6	62.0	0.64	2002	4385
Delta Grow	7300	2.1 ± 0.1	59.6	10.4	55.7	62.1	3.2	34.1	64.3	0.66	2094	4481
Pioneer	26R20	2.1 ± 0.1	56.0	10.2	58.3	63.2	3.1	35.9	64.2	0.66	2214	4628
Croplan Genetics	8868	2.1 ± 0.1	53.3	9.6	53.9	64.4	3.4	33.1	64.7	0.67	1971	4119
USG	3555	2.1 ± 0.1	53.4	11.3	55.5	64.9	3.8	34.0	65.2	0.67	2228	4613
VA Exp.	VA07W-415	2.1 ± 0.1	54.6	10.0	56.0	61.5	2.7	35.5	63.3	0.65	2025	4172
Armor	ARX 1107	2.1 ± 0.1	53.3	9.6	55.1	54.8	7.6	35.4	62.7	0.65	1939	3976
Agripro/Coker	SY 1526	2.0 ± 0.1	52.8	10.7	51.6	64.3	3.6	31.7	65.1	0.67	1889	3835
Terral	TV8848	2.0 ± 0.1	58.6	11.0	54.7	63.6	3.8	33.4	65.4	0.68	2189	4422
TN Exp.	TN 1202	2.0 ± 0.1	56.3	10.0	58.7	57.6	4.0	37.2	62.0	0.64	2063	4147
Dyna-Gro	9223	2.0 ± 0.1	58.9	10.8	58.5	61.9	3.5	36.2	63.9	0.66	2271	4565
Terral	TV8626	2.0 ± 0.1	58.7	9.7	58.0	65.9	3.3	35.7	64.1	0.66	2239	4411
Terral	TV8535	2.0 ± 0.1	55.5	9.4	57.7	63.2	3.7	35.6	63.7	0.66	2098	4112
Agripro/Coker	SY 9978	2.0 ± 0.1	58.3	10.3	52.9	63.6	3.9	32.2	66.4	0.69	2027	3973
Pioneer	26R22	2.0 ± 0.1	55.7	.	.	.	.	.	.	.	.	.
MO	Bess	1.9 ± 0.1	57.6	10.5	53.5	63.1	3.7	32.9	65.1	0.67	2025	3928
Progeny	357	1.9 ± 0.1	58.9	10.3	55.3	53.9	4.9	35.0	63.0	0.65	1903	3654
FFR	2239	1.9 ± 0.1	57.3	.	.	.	.	.	.	.	.	.
TN Exp.	TN 1101	1.9 ± 0.1	50.7	11.1	57.5	62.8	3.3	35.6	64.3	0.66	2229	4236
Progeny	870	1.9 ± 0.1	53.7	11.3	57.9	56.9	3.0	36.6	62.1	0.64	2067	3907
Warren Seed	McKenna 200	1.9 ± 0.1	59.9	.	.	.	.	.	.	.	.	.
TN Exp.	TN 1102	1.9 ± 0.1	53.4	11.0	53.2	64.2	3.6	32.2	66.2	0.69	2092	3912
Croplan Genetics	8925	1.9 ± 0.1	57.1	10.0	56.0	64.3	3.1	34.5	64.7	0.67	2117	3958
Michigan Crop Improvement	Red Ruby	1.9 ± 0.1	53.9	11.6	56.2	65.8	3.5	34.2	65.2	0.67	2303	4283
Croplan Genetics	8302	1.9 ± 0.1	58.3	9.3	55.9	64.4	3.3	34.5	64.6	0.67	2038	3770
Agripro/Coker	W1104	1.8 ± 0.1	61.7	10.1	58.3	61.3	3.5	36.1	63.6	0.66	2229	4101
Cache River Valley Seed	Dixie McAlister	1.8 ± 0.1	51.6	9.9	59.8	59.3	4.4	37.0	63.1	0.65	2166	3985
Dyna-Gro	9922	1.8 ± 0.1	59.4	10.1	55.0	62.2	3.7	34.1	64.4	0.67	2035	3723

Table 15. (continued)

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=1)	Moisture at Harvest (n=1)	Crude Protein (n=1)	NDF (n=1)	30h IV NDFD (n=1)	Starch (n=1)	ADF (n=1)	TDN (n=1)	NEL (n=1)	Milk/ton‡ (n=1)	Milk/acre‡ (n=1)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Armor	ARX 1133	1.8 ± 0.1	55.1	10.7	54.6	62.5	3.3	33.7	64.1	0.66	2021	3658
Dyna-Gro	9012	1.8 ± 0.1	56.1	11.1	55.4	65.1	3.5	33.9	64.7	0.67	2179	3923
Dyna-Gro	9171	1.8 ± 0.1	55.1	11.7	58.2	59.0	4.0	36.1	64.0	0.66	2280	4081
Armor	ARX 1109	1.8 ± 0.1	57.1	10.2	55.3	55.7	5.3	33.9	63.3	0.65	1943	3478
USG	3251	1.8 ± 0.1	61.1	11.1	59.1	60.5	2.8	37.0	62.8	0.65	2258	4042
Croplan Genetics	9004	1.8 ± 0.1	58.4	10.3	55.8	59.4	2.8	35.4	63.1	0.65	1966	3499
Progeny	308	1.8 ± 0.1	57.7	10.2	55.9	65.8	2.7	34.3	64.9	0.67	2140	3788
Progeny	185	1.8 ± 0.1	54.5	11.8	52.8	65.0	3.5	32.2	66.4	0.69	2155	3792
Dyna-Gro	Yorktown	1.8 ± 0.1	59.5	11.4	56.1	59.1	2.7	35.0	63.3	0.65	2096	3690
USG	3244	1.8 ± 0.1	53.7	10.0	61.3	58.9	3.1	38.3	61.6	0.63	2187	3827
Progeny	117	1.7 ± 0.1	52.5	10.0	57.1	58.5	4.8	35.7	63.1	0.65	2073	3608
Armor	Rampage	1.7 ± 0.1	55.9	12.0	62.1	53.8	5.0	39.5	61.2	0.63	2293	3990
Agripro/Coker	SY Harrison	1.7 ± 0.1	54.9	9.9	55.2	61.6	3.5	33.9	64.6	0.67	1980	3426
Cache River Valley Seed	Dixie Kelsey	1.7 ± 0.1	56.5	10.7	57.9	60.5	3.1	36.2	63.1	0.65	2146	3713
USG	3562	1.7 ± 0.1	53.7	10.8	51.2	63.4	3.6	31.0	66.6	0.69	1944	3344
Warren Seed	McKay 110	1.7 ± 0.1	58.7	11.3	59.7	63.0	3.7	37.1	63.5	0.66	2404	4111
Pioneer	25R32	1.7 ± 0.1	57.8	9.5	56.9	58.1	1.8	35.6	61.4	0.63	1847	3122
Terral	TV8861	1.7 ± 0.1	61.2	10.5	56.7	61.0	3.8	34.6	63.8	0.66	2133	3604
Croplan Genetics	554W	1.7 ± 0.1	58.8	11.0	53.8	63.1	3.1	33.1	64.7	0.67	2044	3454
TN Exp.	TN 1201	1.7 ± 0.1	57.5	10.8	54.7	62.1	3.2	33.2	65.1	0.67	2095	3519
Progeny	125	1.7 ± 0.1	47.7	.	.	.	.	.	.	.	.	.
Delta Grow	7500	1.7 ± 0.1	54.9	9.8	53.9	64.4	4.8	33.0	65.3	0.68	2037	3361
Pioneer	26R15	1.7 ± 0.1	60.4	10.4	59.7	62.7	3.5	37.1	62.9	0.65	2254	3719
Delta Grow	7900	1.6 ± 0.1	56.6	10.0	56.3	62.2	3.9	34.7	64.6	0.67	2083	3375
VA	Jamestown	1.6 ± 0.1	50.5	10.1	51.6	66.5	4.2	31.1	67.1	0.70	2007	3212
TFC	NS 1102	1.6 ± 0.1	63.4	10.9	56.1	64.9	3.6	34.2	65.3	0.68	2273	3569
Armor	Ricochet	1.6 ± 0.1	59.1	10.9	56.2	53.4	5.2	35.7	62.5	0.64	1955	3069
USG	3201	1.6 ± 0.1	59.6	10.8	56.6	57.0	3.9	35.4	63.0	0.65	2038	3158
MO	Truman	1.5 ± 0.1	56.9	10.3	56.9	60.6	3.8	34.0	63.6	0.66	2139	3166
Terral	TV8525	1.4 ± 0.1	57.9	8.8	53.3	63.4	3.2	33.3	64.3	0.66	1802	2577
USG	3438	1.4 ± 0.1	54.1	9.6	54.4	64.1	3.4	33.4	64.9	0.67	1973	2802

† yields reported are dry weight basised, feed analysis reported on an "dry weight" basis NDF = Neutral Detergent Fiber ADF = Acid Detergent Fiber
TDN = Total Digestable Nutrients NEL = Net Energy for Lactation ‡ based on University of Wisconsin Milk2006 software program.
30h IV NDFD = Neutral Detergent Filber Digestibility

Table 16. Mean yields and agronomic characteristics of 42 soft red winter wheat varieties evaluated for silage at the Middle Tennessee AgResearch and Education Center for two years (2011-2012).

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=2)	65% Moisture Avg. Yield ± Std Err. (n=2)	Moisture at harvest (n=2)	Lodging (n=2)	Height (n=2)
		tons/a	tons/a	%	(score)	inches
Pioneer	XW09H	3.4 ± 0.2	9.7 ± 0.5	58.6	1.0	32
Dyna-Gro	9922	3.3 ± 0.2	9.5 ± 0.5	64.3	1.0	32
Agripro/Coker	SY 9978	3.1 ± 0.2	8.9 ± 0.5	63.9	1.0	35
USG	3251	3.1 ± 0.2	8.9 ± 0.5	66.0	1.0	32
Warren Seed	McKenna 200	3.1 ± 0.2	8.9 ± 0.5	64.4	1.0	30
Progeny	PGX10-7	3.1 ± 0.2	8.8 ± 0.5	64.5	1.0	31
Pioneer	26R20	3.1 ± 0.2	8.7 ± 0.5	63.8	1.0	31
USG	3120	3.1 ± 0.2	8.7 ± 0.5	58.8	1.0	34
MO	Milton	3.1 ± 0.2	8.7 ± 0.5	63.9	1.0	32
Progeny	PGX10-5	3.1 ± 0.2	8.7 ± 0.5	61.2	1.0	31
Terral	TVX8535	3.0 ± 0.2	8.6 ± 0.5	63.7	1.0	31
Pioneer	26R22	3.0 ± 0.2	8.5 ± 0.5	63.6	1.0	30
Pioneer	26R15	3.0 ± 0.2	8.5 ± 0.5	64.7	1.0	32
Terral	TV8861	2.9 ± 0.2	8.4 ± 0.5	65.4	1.0	29
USG	3555	2.9 ± 0.2	8.4 ± 0.5	62.2	1.0	29
Progeny	125	2.9 ± 0.2	8.3 ± 0.5	58.4	1.0	32
Croplan Genetics	8302	2.9 ± 0.2	8.3 ± 0.5	64.7	1.0	33
USG	3244	2.9 ± 0.2	8.3 ± 0.5	61.2	1.0	33
MO	Truman	2.9 ± 0.2	8.2 ± 0.5	65.0	1.0	28
Cache River Valley Seed	Dixie McAlister	2.8 ± 0.2	8.1 ± 0.5	60.1	1.0	31
Terral	TVX8626	2.8 ± 0.2	8.0 ± 0.5	65.3	1.0	30
USG	3438	2.8 ± 0.2	8.0 ± 0.5	62.0	1.0	31
Armor	Ricochet	2.8 ± 0.2	7.9 ± 0.5	65.6	1.0	30
Delta Grow	7900	2.7 ± 0.2	7.8 ± 0.5	63.0	1.0	32
VA Exp.	VA05W-139	2.7 ± 0.2	7.8 ± 0.5	64.1	1.0	30
Dyna-Gro	9171	2.7 ± 0.2	7.8 ± 0.5	62.1	1.0	31
Delta Grow	7500	2.7 ± 0.2	7.7 ± 0.5	62.3	1.0	32
Agripro/Coker	W1104	2.7 ± 0.2	7.7 ± 0.5	66.0	1.0	30
MO	Bess	2.7 ± 0.2	7.7 ± 0.5	64.2	1.0	32
Progeny	185	2.7 ± 0.2	7.7 ± 0.5	62.8	1.0	32
Terral	TVX8525	2.7 ± 0.2	7.6 ± 0.5	64.3	1.0	31
Dyna-Gro	9012	2.6 ± 0.2	7.6 ± 0.5	63.8	1.0	31
Terral	TVX8848	2.6 ± 0.2	7.5 ± 0.5	65.2	1.0	31
Cache River Valley Seed	Dixie Kelsey	2.6 ± 0.2	7.5 ± 0.5	63.2	1.0	30
USG	3201	2.6 ± 0.2	7.4 ± 0.5	65.2	1.0	30
TN Exp.	TN 1101	2.6 ± 0.2	7.4 ± 0.5	61.0	1.0	34
Croplan Genetics	8925	2.5 ± 0.2	7.2 ± 0.5	64.2	1.0	32
Pioneer	25R32	2.5 ± 0.2	7.2 ± 0.5	64.1	1.0	31
VA	Jamestown	2.5 ± 0.2	7.2 ± 0.5	60.8	1.0	32
TN Exp.	TN 1102	2.5 ± 0.2	7.2 ± 0.5	63.4	1.0	34
Dyna-Gro	9053	2.5 ± 0.2	7.1 ± 0.5	67.2	1.0	31
Progeny	117	2.5 ± 0.2	7.1 ± 0.5	64.0	1.0	34
	Average (bu/a)	**2.8**	**8.1**	**63.4**	**1.0**	**31**
	L.S.D.$_{.05}$ (bu/a)	**0.5**	**1.5**			
	C.V. (%)	**13.2**	**13.2**			

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 42 wheat varieties evaluated for silage at the Middle Tennessee AgResearch and Education Center for two years (2011-2012).

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=2)	Moisture at Harvest (n=2)	Crude Protein (n=2)	NDF (n=2)	30h IV NDFD (n=2)	Starch (n=2)	ADF (n=2)	TDN (n=2)	NEL (n=2)	Milk/ton‡ (n=2)	Milk/acre‡ (n=2)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Pioneer	XW09H	3.4 ± 0.2	58.6	8.8	62.2	56.8	2.9	39.7	59.5	0.61	2255	10035
Dyna-Gro	9922	3.3 ± 0.2	64.3	9.6	58.6	61.2	3.4	36.9	62.0	0.64	2237	7728
Agripro/Coker	SY 9978	3.1 ± 0.2	63.9	9.0	57.9	60.3	3.0	36.6	62.0	0.64	2072	6518
USG	3251	3.1 ± 0.2	66.0	10.2	62.4	60.5	2.2	39.3	60.6	0.63	2383	7578
Warren Seed	McKenna 200	3.1 ± 0.2	64.4	9.2	65.5	56.9	1.1	42.4	56.0	0.57	2281	9831
Progeny	PGX10-7	3.1 ± 0.2	64.5	10.1	62.0	54.7	3.7	39.6	59.8	0.62	2090	6630
Pioneer	26R20	3.1 ± 0.2	63.8	9.2	60.1	62.3	3.0	37.7	61.7	0.64	2289	7054
USG	3120	3.1 ± 0.2	58.8	12.1	55.6	62.2	2.4	34.0	62.7	0.65	2276	6956
MO	Milton	3.1 ± 0.2	63.9	9.0	61.0	60.1	3.1	38.4	61.3	0.63	2207	6855
Progeny	PGX10-5	3.1 ± 0.2	61.2	10.0	59.9	56.7	2.7	38.2	60.1	0.62	2124	6544
Terral	TVX8535	3.0 ± 0.2	63.7	9.4	63.3	58.2	3.0	40.1	59.4	0.61	2111	6388
Pioneer	26R22	3.0 ± 0.2	63.6	9.2	61.4	62.6	2.5	39.2	61.0	0.63	2441	9836
Pioneer	26R15	3.0 ± 0.2	64.7	9.6	60.5	60.5	3.3	38.1	61.3	0.63	2279	6803
Terral	TV8861	2.9 ± 0.2	65.4	9.4	58.8	60.8	3.1	36.6	61.9	0.64	2180	6458
USG	3555	2.9 ± 0.2	62.2	9.7	60.6	63.4	3.1	37.3	62.2	0.64	2354	6991
Progeny	125	2.9 ± 0.2	58.4									
Croplan Genetics	8302	2.9 ± 0.2	64.7	8.8	58.5	61.4	3.2	36.7	62.1	0.64	2139	6307
USG	3244	2.9 ± 0.2	61.2	9.6	60.5	59.2	2.9	38.2	60.6	0.62	2223	6489
MO	Truman	2.9 ± 0.2	65.0	11.1	60.4	61.7	3.4	36.7	62.1	0.64	2418	7302
Cache River Valley Seed	Dixie McAlister	2.8 ± 0.2	60.1	9.3	62.3	58.9	3.7	39.1	60.8	0.63	2306	6688
Terral	TVX8626	2.8 ± 0.2	65.3	9.4	61.1	63.0	2.7	38.1	61.6	0.64	2332	6630
USG	3438	2.8 ± 0.2	62.0	8.7	56.7	61.6	3.3	35.5	62.4	0.64	2039	5800
Armor	Ricochet	2.8 ± 0.2	65.6	9.8	63.7	51.0	4.6	41.2	58.1	0.59	1893	5161
Delta Grow	7900	2.7 ± 0.2	63.0	9.5	64.1	55.2	3.9	40.9	59.2	0.61	1961	5237
VA Exp.	VA05W-139	2.7 ± 0.2	64.1	8.7	63.6	60.8	2.2	40.0	59.6	0.61	2398	8513
Dyna-Gro	9171	2.7 ± 0.2	62.1	10.5	62.7	56.9	3.7	39.2	60.6	0.63	2292	6232
Delta Grow	7500	2.7 ± 0.2	62.3	9.3	55.7	61.9	4.1	34.7	63.4	0.66	2098	5730
Agripro/Coker	W1104	2.7 ± 0.2	66.0	9.4	66.2	56.5	2.5	42.0	58.3	0.60	2087	5512
MO	Bess	2.7 ± 0.2	64.2	10.0	58.3	61.1	3.6	36.5	62.3	0.64	2270	6289
Progeny	185	2.7 ± 0.2	62.8	11.0	59.0	62.6	2.5	37.0	62.3	0.64	2343	6438
Terral	TVX8525	2.7 ± 0.2	64.3	8.8	56.3	62.9	2.9	35.3	62.6	0.64	2037	5686
Dyna-Gro	9012	2.6 ± 0.2	63.8	10.0	57.5	62.7	3.6	35.8	62.8	0.65	2235	5960
Terral	TVX8848	2.6 ± 0.2	65.2	9.7	59.0	61.6	2.9	36.8	62.0	0.64	2247	5943
Cache River Valley Seed	Dixie Kelsey	2.6 ± 0.2	63.2	9.8	60.3	60.2	3.1	37.8	61.5	0.63	2267	6048
USG	3201	2.6 ± 0.2	65.2	10.1	60.5	58.9	3.0	38.0	60.6	0.62	2239	6033
TN Exp.	TN 1101	2.6 ± 0.2	61.0	10.1	64.5	58.7	2.4	40.9	58.6	0.60	2124	5409

Table 17. (continued)

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=2)	Moisture at Harvest (n=2)	Crude Protein (n=2)	NDF (n=2)	30h IV NDFD (n=2)	Starch (n=2)	ADF (n=2)	TDN (n=2)	NEL (n=2)	Milk/ton‡ (n=2)	Milk/acre‡ (n=2)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
Croplan Genetics	8925	2.5 ± 0.2	64.2	9.5	59.3	63.0	3.2	36.9	62.9	0.65	2297	5932
Pioneer	25R32	2.5 ± 0.2	64.1	9.3	63.0	58.5	2.2	39.7	59.2	0.61	2128	5595
VA	Jamestown	2.5 ± 0.2	60.8	9.8	57.0	61.7	3.4	35.3	63.0	0.65	2145	5522
TN Exp.	TN 1102	2.5 ± 0.2	63.4	10.2	60.1	61.5	2.7	37.4	61.5	0.64	2250	5750
Dyna-Gro	9053	2.5 ± 0.2	67.2	9.8	60.7	57.1	3.6	38.4	60.9	0.63	2165	5392
Progeny	117	2.5 ± 0.2	64.0	9.0	60.4	58.1	3.3	38.5	60.0	0.62	2130	5313

† 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 Digestable Nutrients NEL = Net Energy for Lactation ‡ based on University of Wisconsin Milk2006 software program.

30h IV NDFD = Neutral Detergent Filber Digestibility

Table 18. Mean yields and agronomic characteristics of 25 soft red winter wheat varieties evaluated for silage at the Middle Tennessee AgResearch and Education Center for three years (2010-2012).

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=3)	65% Moisture Avg. Yield ± Std Err. (n=3)	Moisture at harvest (n=3)	Lodging (n=3)	Height (n=3)
		tons/a	tons/a	%	(score)	inches
USG	3251	3.3 ± 0.1	9.3 ± 0.4	63.9	1.0	32
Agripro/Coker	SY 9978	3.2 ± 0.1	9.3 ± 0.4	63.1	1.0	35
Croplan Genetics	8302	3.2 ± 0.1	9.3 ± 0.4	61.4	1.0	33
Pioneer	26R22	3.2 ± 0.1	9.0 ± 0.4	61.5	1.0	31
USG	3244	3.1 ± 0.1	8.9 ± 0.4	60.0	1.0	33
Dyna-Gro	9922	3.1 ± 0.1	8.9 ± 0.4	61.8	1.0	32
Progeny	125	3.0 ± 0.1	8.7 ± 0.4	57.0	1.0	30
MO	Milton	3.0 ± 0.1	8.6 ± 0.4	61.9	1.0	32
Pioneer	26R15	3.0 ± 0.1	8.6 ± 0.4	63.8	1.0	32
USG	3120	3.0 ± 0.1	8.6 ± 0.4	58.5	1.0	33
Armor	Ricochet	3.0 ± 0.1	8.6 ± 0.4	62.4	1.0	30
Pioneer	26R20	3.0 ± 0.1	8.6 ± 0.4	64.2	1.0	32
Agripro/Coker	W1104	3.0 ± 0.1	8.5 ± 0.4	64.1	1.0	30
USG	3555	2.9 ± 0.1	8.3 ± 0.4	61.7	1.0	27
USG	3438	2.9 ± 0.1	8.3 ± 0.4	61.5	1.0	30
Dyna-Gro	9012	2.9 ± 0.1	8.2 ± 0.4	62.4	1.0	31
MO	Truman	2.8 ± 0.1	8.1 ± 0.4	63.8	1.0	30
MO	Bess	2.8 ± 0.1	8.1 ± 0.4	61.6	1.0	32
USG	3201	2.8 ± 0.1	8.1 ± 0.4	62.2	1.0	29
Terral	TV8861	2.7 ± 0.1	7.8 ± 0.4	63.3	1.0	29
Progeny	185	2.7 ± 0.1	7.8 ± 0.4	61.2	1.0	31
Croplan Genetics	8925	2.7 ± 0.1	7.7 ± 0.4	61.5	1.0	32
Progeny	117	2.7 ± 0.1	7.6 ± 0.4	62.2	1.0	34
VA	Jamestown	2.6 ± 0.1	7.3 ± 0.4	59.7	1.0	30
Pioneer	25R32	2.6 ± 0.1	7.3 ± 0.4	63.3	1.0	31
	Average (bu/a	**2.9**	**8.4**	**61.9**	**1.0**	**31**
	L.S.D.$_{.05}$ (bu/a)	**0.5**	**1.4**			
	C.V. (%)	**12.9**	**12.9**			

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 25 wheat varieties evaluated for silage at the Middle Tennessee AgResearch and Education Center for three years (2010-2012).

Brand	Variety	Dry Weight Avg. Yield ± Std Err. (n=3)	Moisture at Harvest (n=3)	Crude Protein (n=3)	NDF (n=3)	30h IV NDFD (n=3)	Starch (n=3)	ADF (n=3)	TDN (n=3)	NEL (n=3)	Milk/ton‡ (n=3)	Milk/acre‡ (n=3)
		tons/a	%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcals/lb	lbs/ton	lbs/acre
USG	3251	3.3 ± 0.1	63.9	9.6	59.3	58.1	4.6	37.2	59.2	0.59	2301	7609
Agripro/Coker	SY 9978	3.2 ± 0.1	63.1	9.3	57.3	57.5	4.6	36.3	60.7	0.61	2140	6969
Croplan Genetics	8302	3.2 ± 0.1	61.4	8.7	57.7	58.8	4.2	36.1	59.7	0.59	2092	6825
Pioneer	26R22	3.2 ± 0.1	61.5	9.4	58.9	58.7	5.5	37.5	60.0	0.59	2374	8955
USG	3244	3.1 ± 0.1	60.0	8.7	58.9	57.9	4.3	37.1	58.9	0.58	2160	6759
Dyna-Gro	9922	3.1 ± 0.1	61.8	9.1	56.5	58.4	6.1	35.5	60.2	0.60	2210	7093
Progeny	125	3.0 ± 0.1	57.0	9.0	56.6	52.2	7.2	35.3	55.6	0.52	2079	6818
MO	Milton	3.0 ± 0.1	61.9	8.8	59.0	58.9	4.2	37.0	59.7	0.59	2171	6629
Pioneer	26R15	3.0 ± 0.1	63.8	9.7	59.7	57.9	5.0	37.6	60.7	0.61	2314	6982
USG	3120	3.0 ± 0.1	58.5	10.5	55.3	59.9	4.5	34.1	60.6	0.61	2215	6682
Armor	Ricochet	3.0 ± 0.1	62.4	9.7	60.6	52.3	5.5	38.8	57.5	0.57	1965	5902
Pioneer	26R20	3.0 ± 0.1	64.2	9.2	59.2	61.1	4.6	36.9	61.9	0.62	2365	7151
Agripro/Coker	W1104	3.0 ± 0.1	64.1	9.6	63.1	55.8	3.7	40.0	58.4	0.58	2153	6325
USG	3555	2.9 ± 0.1	61.7	9.2	58.2	61.0	4.4	36.1	60.3	0.60	2265	6652
USG	3438	2.9 ± 0.1	61.5	9.1	55.7	59.5	5.3	34.7	61.5	0.61	2144	6260
Dyna-Gro	9012	2.9 ± 0.1	62.4	9.5	56.5	60.4	5.1	35.2	61.0	0.61	2218	6381
MO	Truman	2.8 ± 0.1	63.8	10.8	59.8	59.9	3.4	36.6	60.8	0.61	2355	6949
MO	Bess	2.8 ± 0.1	61.6	9.6	57.4	59.1	4.5	35.8	60.3	0.60	2215	6367
USG	3201	2.8 ± 0.1	62.2	9.2	58.0	58.0	4.5	36.3	58.6	0.58	2137	6142
Terral	TV8861	2.7 ± 0.1	63.3	9.0	57.6	59.0	4.3	35.9	60.1	0.60	2157	5951
Progeny	185	2.7 ± 0.1	61.2	10.1	58.8	58.8	3.9	37.1	60.0	0.60	2258	6262
Croplan Genetics	8925	2.7 ± 0.1	61.5	8.7	58.1	59.3	5.1	36.2	60.2	0.60	2204	6005
Progeny	117	2.7 ± 0.1	62.2	9.0	58.8	57.1	4.8	37.3	59.3	0.59	2158	5807
VA	Jamestown	2.6 ± 0.1	59.7	9.4	55.5	58.7	6.4	34.3	61.4	0.62	2189	5721
Pioneer	25R32	2.6 ± 0.1	63.3	9.7	60.9	57.4	3.6	38.3	59.3	0.59	2200	5762

† 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 Digestable Nutrients NEL = Net Energy for Lactation ‡ based on University of Wisconsin Milk2006 software program.

30h IV NDFD = Neutral Detergent Filber Digestibility

Table 20. Characteristics, as described by the seed company, of corn silage hybrids evaluated in yield tests in Tennessee during 2012.†

Brand	Hybrid §	Grain Color	Maturity	Herbicide Tolerance	BT Gene	Released or Experimental	Seed Treatment
Augusta	A5462GT3000 (LL/CB/RW)	Y	112	GT/LL	CB/RW	R	Cruiser Extreme
Augusta	A5464GT	Y	114	GT		R	Cruiser Extreme
Augusta	A6867GT3000 (LL/CB/RW)	Y	117	GT/LL	CB/RW	R	Cruiser Extreme
Augusta	A6767GT3000 (LL/CB/RW)	Y	117	GT/LL	CB/RW	R	Cruiser Extreme
Augusta	A6969RR	Y	119	RR		R	Cruiser Extreme
Augusta	A7664VT3	Y	114	RR	YGCB/RW	R	Cruiser Extreme
Croplan	8221VT3	Y	118	RR	YGCB/RW	R	Cruiser 250
Croplan	8410VT3P	Y	117	RR	YG,CB,C,RW	R	Cruiser 250
Croplan	8505VT3P	Y	118	RR	YG,CB,C,RW	R	Cruiser 250
Croplan	8621VT3P	Y	118	RR	YG,CB,C,RW	R	Cruiser 250
Croplan	8756VT3	Y	118	RR	YGCB/RW	R	Cruiser 250
Croplan	9009 RH	Y	124	RR/LL	YGCB	R	Cruiser 250
Steyer	X21181CM (RR)	Y	118	RR		E	Maxim, Apron, Dynasty, Quattro, Cruiser
Steyer	X21192TM (RR)	Y	119	RR		E	Maxim, Apron, Dynasty, Quattro, Cruiser
Steyer	11701 (GT/CB/LL)	Y	117	RR/LL	CB	R	Maxim, Apron, Dynasty, Quattro, Cruiser
NK Brand	N78B-3000 GT	Y	115	RR/LL	YGCB/RW	R	Cruiser Extreme 250

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

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

§ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name.

LL = contains a gene for tolerance to glufosinate

W = white grain

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

Table 21. Contact information for corn hybrid seed companies evaluated in yield tests in Tennessee during 2012.

Company	Contact	Phone	Email	Website	Address
Augusta Seed Corporation	Dennis Rawley Matt Rawley	540-886-6055 540-255-5902	augustaseed@aol.com		473 Tisdale Farm Ln, Stuanton, VA 24401
Croplan Genetics	Jesse Witt Keith Saum Jim Payne Eric Kennedy	256-221-5932 731-610-7006 901-652-0903 812-350-9025	JBWitt@landolakes.com kdsaum@landolakes.com jpayne@ourcoop.com	www.croplangenetics.com www.ourcoop.com	Consolidated Ag Products (Agriliance) and Tennessee Farmers Co-op Locations
NK Brand (Syngenta)	Mike Saxton	800-445-0956	mike.saxton@syngenta.com	www.nk-us.com	P.O. Box 959, Minneapolis, MN 55440
Steyer Seeds	Mike Phillips	859-516-3935	mikeandsteyer@gmail.com	www.steyerseeds.com	6154 N. Co. Rd. 33, Tiffin, OH 44883

Table 22. Contact information for wheat seed companies evaluated in yield tests in Tennessee during 2011-12.

Company	Contact	Phone	Email	Website	Address
AgriPro/Coker (Syngenta)	David Hill	870-930-0010	david-1.hill@syngenta.com	www.agriprowheat.com	778 CR 680, Bay, AR 72411
Armor Seed	Lane Dill	901-233-0274	lanedill@armorseed.com	www.armorseed.com	P.O. Box 178, Fisher, AR 72429
Dixie (Cache River Valley Seed)	Josh Rupard	870-897-9112	joshr@crvseed.com	www.crvseed.com	P.O. Box 10, Cash, AR 72421
Croplan Genetics	Jesse Witt Keith Saum	256-221-5932 731-610-7006	JBWitt@landolakes.com kdsaum@landolakes.com	www.croplangenetics.com	DSM Middle & East TN DSM West TN
(available at TN Farmers Co-Op and Agreliance locations)	Ashley Plymale Jim Payne Matt Sowder	270-719-1570 901-652-0903 901-355-7267	 jpayne@ourcoop.com	 www.ourcoop.com	Agronomist West TN East & Middle TN
Delta Grow Seed	Lee Hughes	800-530-7933	leehughes19@hotmail.com	www.deltagrow.com	P O Box 219, England, AR 72046
Dyna-Gro (Crop Production Services)	Todd Theobald	731-885-1212 765-623-1382	todd.theobald@cpsagu.com	www.dynagroseed.com	710 South First Street, Union City, TN 38621
University of Georgia	Jerry Johnson	770-228-7345	jjohnson@griffin.uga.edu		UGA, Griffin Campus 1109 Experiment St. Griffin, GA 30223
Michigan Crop Improvement Association	C.J. Palmer	517-332-3546	palmerj@michcrop.com		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	quadem@missouri.edu mckendrya@missouri.edu		University of MO Foundation Seed 3600 New Haven Rd Columbia, MO 65201
Pioneer Hi-Bred Int.	Dan Poston	800-331-2475	dan.poston@pioneer.com	www.pioneer.com	700 Boulevard South, Suite 302, Huntsville, AL 35802
Progeny	Corey Dildine	870-208-6032	corey@progenyag.com	www.progenyag.com	1529 Hwy 193, Wynne, AR 72396
Terral Seed Inc	Larry Mullen	318-231-8811	lmullen@terralseed.com	www.terralseed.com	P O Box 826, Lake Providence, LA 71254
Tennessee Farmers Co-Op	Matt Henderson	731-836-7739	mhenderson@ourcoop.com		
University of Tennessee	Dennis West	865-974-8826	dwest3@utk.edu		3421 Joe Johnson Dr, Knoxville, TN 37996-4561

(continued)

Table 22. Contact information for wheat seed companies evaluated in yield tests in Tennessee during 2011-12.

Company	Contact	Phone	Email	Website	Address
Unisouth Genetics (USG)	Stacy Burwick	800-505-3133	sburwick@bellsouth.net	www.usgseed.com	2640-C Nolensville Rd., Nashville, TN 37211
	David Fandrich	931-967-3377	fandrichsupply@aol.com		Fandrich Supply Co, Belvidere, TN
	Mark Huffstetler	731-235-2167	huffy1@crunet.com		Huffstetler & Sons Seed Inc, Greenfield, TN
	Trey Hurt	731-836-7574	hurtco@bellsouth.net		Hurt Seed Co. Inc, Halls, TN
	Wes Miller	731-536-6251	wes@obiongrain.com		Obion Grain Co. Inc, Obion, TN
	Billy Sellers	731-538-2990			Sellers Seed, Obion, TN
Virginia Crop Improvement	Bruce Beahm	804-746-4884	bbeahm@rivnet.net	www.virginiacrop.org	Virginia Crop Improvement Assoc. 9225 Atlee Branch Lane Mechanicsville, VA 23116
Warren Seed	Lanny Warren	731-234-2921	lanny.warren@charter.net		P.O. Box 10, Woodland Mills, TN 38721

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