

CORN SILAGE TESTS IN TENNESSEE 2017

VIRGINIA SYKES

Assistant Professor, Variety Testing Coordinator and
Agroecology Specialist

ALISON WILLETTE

Research Associate, Variety Testing and Agroecology

GARY BATES

Professor and UT Beef and Forage Center Director

DAVID MCINTOSH

Coordinator, UT Beef and Forage Center



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Virginia Sykes, Assistant Professor, Variety Testing Coordinator and Agroecology Specialist
Alison Willette, Research Associate, Variety Testing and Agroecology
Gary Bates, Professor and UT Beef and Forage Center Director
David McIntosh, Coordinator, UT Beef and Forage Center

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

•Telephone: (865) 974-7285 • FAX: (865) 974-1947 •email: vsykes@utk.edu

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Charles Summey, Senior Field Worker

Nicholas Tissot, Light Farm Equipment Operator

Plateau AgResearch and Education Center (Crossville, TN)

John Walter (Walt) Hitch, Director

Greg Blaylock, Light Farm Equipment Operator

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Robert Ellis, Director

Brad S. Fisher, Research Associate

Middle Tennessee AgResearch and Education Center (Spring Hill, TN)

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Joe David Plunk, Research Associate

County Standard Corn Silage Tests

County

Producer

Agent

Blount

Scott, Randy, Steve, and Gary Blair
(Pate Acres Dairy Farm)

John Wilson

Jefferson

John Neal Scarlett
(Scarlett Farms)

Steven Huff

Washington

David and Mike Saylor
(Savland Dairy Farm)

John Hamrick

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CORN SILAGE YIELD TESTS

2017

Experimental Procedures

AgResearch and Education Center (REC) Tests: Eleven corn hybrids were evaluated for silage yield and quality in 2017. The tests were conducted at the East Tennessee (Knoxville), Highland Rim (Springfield), Middle Tennessee (Spring Hill), and Plateau (Crossville) RECs. The plots at all locations consisted of two rows, planted 30 inches apart, 30 feet 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 of approximately 3 lbs was taken from each plot 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 the UT Beef and Forage Center. 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, Jefferson, and Washington County in Tennessee and included five of the eleven hybrids evaluated in the REC tests. Each hybrid was evaluated in a large strip-plot. Plots were planted, sprayed, fertilized, and harvested with the equipment used in the cooperating producer's farming operation. The harvested length was measured for each variety and appropriate harvested area adjustments were made to determine the yield per acre.

Growing Season: Most REC locations were planted at the beginning of May; however, rain delayed planting at Plateau REC and in county trial locations. These were planted in late May/early June. Statewide corn planting remained on par with the 5 year average, with 89% of corn in Tennessee planted by mid-May. Adequate rainfall

throughout the season facilitated earlier than average emergence and anticipation for good yields. By mid-August, 86% of the crop rated good to excellent. Higher than normal incidence of corn rust was observed at trial locations immediately prior to harvest as well as some incidence of corn smut. Although numbers are not yet available for the 2017 season, in 2016, corn silage accounted for 4.5% of all corn harvested in Tennessee with average yields of 19 tons/ac.

Interpretation of Data:

The tables on the following pages have been prepared with the entries listed in order of yield performance, the highest-yielding entry being listed first. Mean separation was performed using the **LSD (Least Significant Difference) test**. The mean trait value of any two entries being compared must differ by at least the LSD amount shown to be considered different 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). Tests with an LSD value of N.S. indicate there were no significant differences in entry performance within that test.

To simplify interpretation, **Mean Separation Letters** have been listed next to each entry for the test of average yield across all locations. Hybrids that have any letter in common are not significantly different in yield at the 5% level of probability based on the LSD test. Hybrids with performance not significantly different from the top performing hybrid will have an "A" included in the list of mean separation letters next to that entry.

Table 1. Location information from AgResearch and Education Centers (REC) where corn silage variety tests were conducted in 2017.

AgResearch and Education Center	Location	Planting Date	Harvest Date	Plant Population	Soil Type
East Tennessee	Knoxville	05/03/17	08/16/17	32419	Shady Loam
Plateau	Crossville	05/23/17	08/30/17	33940	Lily Loam
Middle Tennessee	Spring Hill	05/03/17	08/10/17	35015	Maury Silt Loam
Highland Rim	Springfield	05/02/17	08/10/17	30114	Dickson Silt Loam

Table 2. Location information from county locations where corn silage variety tests were conducted in 2017.

Cooperator	County	Agent	Planting Date	Harvest Date	Plant Population	Soil Type	Plot Size
Scott, Randy, Steve, and Gairy Blair (Pate Acres Dairy Farm)	Blount	John Wilson	06/02/17	08/29/17	30000	Decatur, Dewey Silty Clay Loam, Hermitage Silt Loam	10 ft x 950 ft
John Neal Scarlett (Scarlett Farms)	Jefferson	Steven Huff	05/19/17	08/28/17	27878	Dewey Silt Loam (39%), Dunmore Silt Loam (36.9%), Allen Sandy Loam (24%)	7.5 ft x 1342 ft
David and Mike Saylor (Sayland Dairy Farm)	Washington	John Hamrick	06/01/17	09/11/17	26484	Dunmore Silty Clay Loam	15 ft x 720 ft

Table 3. Mean yields and agronomic traits of 11 corn hybrids evaluated for silage across four REC locations in Tennessee during 2017.

MS [†] Avg. Yield	Hybrid [‡]	Dry Weight	65% Moisture	Moisture at harvest (n=4)	Plant Height (n=4)	Ear Height (n=3)	Lodging (n=4)
		Avg. Yield ± Std Err. (n=4)	Avg. Yield ± Std Err. (n=4)				
		-----tons/a-----		%	inches	inches	%
A	Croplan 5900 (RR,VT2P)	9.01 ± 0.47	25.75 ± 1.35	69	119	49	0
AB	NK N83D-3111 (RR,LL,VIP3111)	8.93 ± 0.47	25.52 ± 1.35	66	121	46	0
AB	Terral REV 28BHR18 (RR2,LL,YGCB,HX1)	8.73 ± 0.47	24.95 ± 1.35	65	122	47	0
ABC	Augusta 7768 (GT,LL,VIP3110)	8.71 ± 0.48	24.89 ± 1.37	67	124	44	1
ABCD	Masters Choice MCT6653 (RR,LL,3000GT)	8.55 ± 0.47	24.42 ± 1.35	67	127	51	1
ABCD	Croplan 5678 (RR,VT2P)	8.34 ± 0.47	23.83 ± 1.35	67	111	40	0
BCD	Terral REV 25BHR26 (RR2,LL,YGCB,HX1)	8.31 ± 0.47	23.75 ± 1.35	68	118	47	0
BCD	Masters Choice MCT6733 (RR,LL,3000GT)	8.28 ± 0.47	23.65 ± 1.35	65	120	40	0
CDE	NK NK1573-3111A (RR,LL,VIP3111)	8.02 ± 0.47	22.91 ± 1.35	66	116	40	0
DE	Terral REV 23BHR55 (RR2,LL,YGCB,HX1)	7.96 ± 0.47	22.75 ± 1.35	69	122	43	0
E	Masters Choice MCT6363 (RR,LL,3000GT)	7.34 ± 0.48	20.97 ± 1.37	69	116	44	0
Average		8.38	23.94	67	120	45	0
L.S.D._{.05}		0.69	1.98	3	5	4	N.S.

Table 4. Mean dry weight yields across and by location of 11 corn hybrids evaluated for silage at four REC locations in Tennessee during 2017.

MS [†] Avg. Yield	Hybrid [‡]	Avg. Yield				
		± Std Err. (n=4)	Knoxville	Crossville	Spring Hill	Springfield
		-----tons/a-----				
A	Croplan 5900 (RR,VT2P)	9.01 ± 0.47	8.79	9.39	10.61	7.26
AB	NK N83D-3111 (RR,LL,VIP3111)	8.93 ± 0.47	9.28	8.90	11.13	6.42
AB	Terral REV 28BHR18 (RR2,LL,YGCB,HX1)	8.73 ± 0.47	8.86	9.15	11.01	5.91
ABC	Augusta 7768 (GT,LL,VIP3110)	8.71 ± 0.48	8.48	9.20	10.82	6.49
ABCD	Masters Choice MCT6653 (RR,LL,3000GT)	8.55 ± 0.47	8.37	8.64	10.07	7.11
ABCD	Croplan 5678 (RR,VT2P)	8.34 ± 0.47	8.20	8.12	10.43	6.61
BCD	Terral REV 25BHR26 (RR2,LL,YGCB,HX1)	8.31 ± 0.47	7.80	8.69	10.71	6.05
BCD	Masters Choice MCT6733 (RR,LL,3000GT)	8.28 ± 0.47	8.77	8.20	8.99	7.15
CDE	NK NK1573-3111A (RR,LL,VIP3111)	8.02 ± 0.47	7.69	7.99	9.70	6.69
DE	Terral REV 23BHR55 (RR2,LL,YGCB,HX1)	7.96 ± 0.47	8.24	8.41	9.49	5.71
E	Masters Choice MCT6363 (RR,LL,3000GT)	7.34 ± 0.48	7.34	7.78	9.00	5.27
Average		8.38	8.35	8.59	10.18	6.42
L.S.D._{.05}		0.69	N.S.	N.S.	1.48	N.S.

† Hybrids that have any MS letter in common are not significantly different at the 5% level of probability.

‡ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name. For a full description of abbreviated biotech traits, see table 13.

Table 5. Mean yields and feed quality characteristics of 11 corn hybrids evaluated for silage at four REC locations in Tennessee during 2017.

MS [†] Avg. Yield	Hybrid [‡]	Dry Weight		Moisture at Harvest (n=4)	Crude Protein (n=4)	30h IV		ADF (n=4)	TDN (n=4)	NEL (n=4)	Milk/ton [§] (n=4)	Milk/acre [§] (n=4)
		Avg. Yield ± Std Err. (n=4)	%			NDF (n=4)	NDFD (n=4)					
		tons/a	% dm	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre
A	Croplan 5900 (RR,VT2P)	9.01 ± 0.47	69	7.55	54.40	58.00	18.00	32.40	69.40	0.65	3026	27307
AB	NK N83D-3111 (RR,LL,VIP3111)	8.93 ± 0.47	66	7.38	51.10	58.60	23.50	29.60	71.00	0.67	3161	28469
AB	Terral REV 28BHR18 (RR2,LL,YGCB,HX1)	8.73 ± 0.47	65	7.02	49.40	58.40	25.70	28.40	71.00	0.67	3167	27962
ABC	Augusta 7768 (GT,LL,VIP3110)	8.71 ± 0.48	67	7.26	52.10	57.70	21.60	30.10	70.50	0.67	3128	27461
ABCD	Masters Choice MCT6653 (RR,LL,3000GT)	8.55 ± 0.47	67	7.28	55.20	59.00	19.90	32.30	70.40	0.66	3094	26574
ABCD	Croplan 5678 (RR,VT2P)	8.34 ± 0.47	67	7.29	52.00	55.60	23.60	30.40	69.30	0.66	3063	25646
BCD	Terral REV 25BHR26 (RR2,LL,YGCB,HX1)	8.31 ± 0.47	68	7.90	49.00	59.90	25.20	28.00	72.70	0.69	3278	27541
BCD	Masters Choice MCT6733 (RR,LL,3000GT)	8.28 ± 0.47	65	7.18	51.70	58.70	23.50	30.10	70.60	0.67	3127	25953
CDE	NK NK1573-3111A (RR,LL,VIP3111)	8.02 ± 0.47	66	7.50	50.10	57.40	25.80	29.10	71.10	0.68	3183	25694
DE	Terral REV 23BHR55 (RR2,LL,YGCB,HX1)	7.96 ± 0.47	69	7.57	50.20	58.90	24.30	29.40	72.30	0.69	3261	26156
E	Masters Choice MCT6363 (RR,LL,3000GT)	7.34 ± 0.48	69	7.03	49.10	58.60	26.50	28.60	72.50	0.69	3284	24046
	Average	8.38	67	7.36	51.30	58.25	23.42	29.85	70.98	0.67	3161	26619
	L.S.D. _{.05}	0.69	3	N.S.	3.20	N.S.	3.68	2.31	2.22	0.02	159	N.S.

Table 6. Mean separation of dry weight yields, milk/ton, and milk/acre of 11 corn hybrids evaluated for silage at four REC locations in Tennessee during 2017.

Hybrid [‡]	Dry Weight Avg. Yield		MS [†] Yield	Milk/ton		Milk/acre	
	± Std Err. (n=4) tons/a			± Std Err. (n=4) tons/a	MS [†] Milk/ton	± Std Err. (n=4) tons/a	MS [†] Milk/acre
Croplan 5900 (RR,VT2P)	9.01 ± 0.47	A	3026 ± 70	B	27307 ± 0	A	
NK N83D-3111 (RR,LL,VIP3111)	8.93 ± 0.47	AB	3161 ± 70	AB	28469 ± 0	A	
Terral REV 28BHR18 (RR2,LL,YGCB,HX1)	8.73 ± 0.47	AB	3167 ± 70	AB	27962 ± 0	A	
Augusta 7768 (GT,LL,VIP3110)	8.71 ± 0.48	ABC	3128 ± 70	AB	27575 ± 0	A	
Masters Choice MCT6653 (RR,LL,3000GT)	8.55 ± 0.47	ABCD	3094 ± 70	B	26574 ± 0	A	
Croplan 5678 (RR,VT2P)	8.34 ± 0.47	ABCD	3063 ± 70	B	25646 ± 0	A	
Terral REV 25BHR26 (RR2,LL,YGCB,HX1)	8.31 ± 0.47	BCD	3278 ± 70	A	27541 ± 0	A	
Masters Choice MCT6733 (RR,LL,3000GT)	8.28 ± 0.47	BCD	3127 ± 70	AB	25953 ± 0	A	
NK NK1573-3111A (RR,LL,VIP3111)	8.02 ± 0.47	CDE	3183 ± 70	AB	25694 ± 0	A	
Terral REV 23BHR55 (RR2,LL,YGCB,HX1)	7.96 ± 0.47	DE	3261 ± 70	A	26156 ± 0	A	
Masters Choice MCT6363 (RR,LL,3000GT)	7.34 ± 0.48	E	3284 ± 70	A	24010 ± 0	A	
Average	8.38		3161		26626		

‡ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name. For a full description of abbreviated biotech traits, see table 13.

† Hybrids that have any MS letter in common are not significantly different at the 5% level of probability.

NDF = Neutral Detergent Fiber

30h IV NDFD = Neutral Detergent Fiber Digestibility

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

§ based on University of Wisconsin Milk2006 software program. .

Table 7. Mean yields and agronomic traits of four corn hybrids evaluated for silage across four REC locations in Tennessee across two years (2016-2017).

MS [†] Avg. Yield	Hybrid [‡]	Dry Weight	65% Moisture	Moisture at harvest	Plant Height	Ear Height
		Avg. Yield ± Std Err. (n=8) <i>tons/a</i>	Avg. Yield ± Std Err. (n=8) <i>tons/a</i>			
A	Croplan 5900 (RR,VT2P)	8.92 ± 0.58	25.49 ± 1.66	66	115	49
A	Augusta 7768 (GT,LL,VIP3110)	8.57 ± 0.58	24.49 ± 1.67	65	116	43
A	Terral REV 25BHR26 (RR2,LL,YGCB,HX1)	8.50 ± 0.58	24.30 ± 1.67	65	114	46
A	Terral REV 23BHR55 (RR2,LL,YGCB,HX1)	8.15 ± 0.58	23.29 ± 1.66	67	114	43
	Average	8.54	24.39	66	115	45
	L.S.D._{.05}	N.S.	N.S.	N.S.	N.S.	N.S.

Table 8. Mean dry weight yields across and by location of four corn hybrids evaluated for silage at four REC locations in Tennessee across two years (2016-2017).

MS [†] Avg. Yield	Hybrid [‡]	Avg. Yield				
		± Std Err. (n=8)	Knoxville	Crossville	Spring Hill	Springfield
----- <i>tons/a</i> -----						
A	Croplan 5900 (RR,VT2P)	8.92 ± 0.58	8.52	10.14	8.55	8.49
A	Augusta 7768 (GT,LL,VIP3110)	8.57 ± 0.58	7.95	9.12	9.21	7.82
A	Terral REV 25BHR26 (RR2,LL,YGCB,HX1)	8.50 ± 0.58	7.49	9.67	8.59	8.33
A	Terral REV 23BHR55 (RR2,LL,YGCB,HX1)	8.15 ± 0.58	7.83	9.30	7.75	7.62
	Average	8.54	7.95	9.56	8.53	8.07
	L.S.D._{.05}	N.S.	N.S.	N.S.	N.S.	N.S.

† Hybrids that have any MS letter in common are not significantly different at the 5% level of probability.

‡ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name. For a full description of abbreviated biotech traits, see table

Table 9. Mean yields † and feed quality characteristics of four corn hybrids evaluated for silage at four REC locations in Tennessee across two years (2016-2017).

MS [†]	Avg. Yield	Dry Weight		Moisture at Harvest	Crude Protein	30h IV		Starch	ADF	TDN	NEL	Milk/ton [§]	Milk/acre [§]
		± Std Err.	(n=4)			(n=8)	NDF						
Yield	Hybrid [‡]	(n=4)	(n=4)	(n=8)	(n=8)	(n=8)	(n=8)	(n=8)	(n=8)	(n=8)	(n=8)	(n=8)	(n=8)
		tons/a		%	% dm	% dm	% of NDF	% dm	% dm	% dm	Mcal/lb	lbs/ton	lbs/acre
A	Croplan 5900 (RR,VT2P)	8.92 ± 0.58		66	7.57	53.80	56.20	19.40	31.40	69.10	0.66	2993	27456
A	Augusta 7768 (GT,LL,VIP3110)	8.57 ± 0.58		65	7.19	51.50	56.30	22.40	29.50	70.00	0.68	3089	26394
A	Terral REV 25BHR26 (RR2,LL,YGCB,HX1)	8.50 ± 0.58		65	7.83	48.00	57.60	26.50	26.90	72.30	0.70	3223	25894
A	Terral REV 23BHR55 (RR2,LL,YGCB,HX1)	8.15 ± 0.58		67	7.63	50.90	56.80	23.80	29.50	71.00	0.68	3163	25910
	Average	8.5		66	7.56	51.05	56.73	23.03	29.33	70.60	0.68	3117	26414
	L.S.D._{.05}	N.S.		N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

† Hybrids that have any MS letter in common are not significantly different at the 5% level of probability.

‡ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name. For a full description of abbreviated biotech traits, see table 13.

NDF = Neutral Detergent Fiber

30h IV NDFD = Neutral Detergent Fiber Digestibility

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

Table 10. Mean yields and agronomic characteristics of five corn hybrids evaluated for silage in three County Standard Tests in Tennessee during 2017.

MS [†] Avg. Yield	Hybrid [‡]	Dry Weight	65% Moisture	Moisture at harvest	Plant Height	Ear Height
		Avg. Yield ± Std Err. (n=2) <i>tons/a</i>	Avg. Yield ± Std Err. (n=2) <i>tons/a</i>			
A	NK N83D-3111 (RR,LL,VIP3111)	8.61 ± 0.63	24.60 ± 1.81	49	124	51
A	NK NK1573-3111A (RR,LL,VIP3111)	8.36 ± 0.63	23.88 ± 1.81	52	113	45
A	Augusta 7768 (GT,LL,VIP3110)	8.14 ± 0.63	23.26 ± 1.81	54	118	46
A	Croplan 5678 (RR,VT2P)	7.97 ± 0.63	22.76 ± 1.81	52	105	44
A	Croplan 5900 (RR,VT2P)	7.90 ± 0.63	22.56 ± 1.81	56	119	54
Average		8.20	23.4	53	116	48
L.S.D. _{.05}		N.S.	N.S.	N.S.	N.S.	N.S.

Table 11. Mean yields and feed quality characteristics of five corn hybrids evaluated for silage in three County Standard Tests in Tennessee during 2017.

MS [†] Avg. Yield	Hybrid [‡]	Dry Weight	Crude		30h IV		Starch	ADF	TDN	NEL	Milk/ton [§]	Milk/acre [§]
		Avg. Yield ± Std Err. (n=4) <i>tons/a</i>	Protein (n=3) <i>% dm</i>	NDF (n=3) <i>% dm</i>	NDFD (n=3) <i>% of NDF</i>							
A	NK N83D-3111 (RR,LL,VIP3111)	8.61 ± 0.63	8.69	47.40	63.40	21.20	27.50	70.20	0.65	3037	25986	
A	NK NK1573-3111A (RR,LL,VIP3111)	8.36 ± 0.63	8.94	47.00	66.80	22.50	27.00	73.30	0.68	3244	26143	
A	Augusta 7768 (GT,LL,VIP3110)	8.14 ± 0.63	9.04	48.80	68.20	19.00	28.00	73.00	0.67	3183	25763	
A	Croplan 5678 (RR,VT2P)	7.97 ± 0.63	8.54	48.10	64.70	23.10	27.70	72.00	0.67	3160	24443	
A	Croplan 5900 (RR,VT2P)	7.90 ± 0.63	8.63	50.30	64.70	18.50	28.70	70.00	0.64	2984	23708	
Average		8.20	8.77	48.32	65.56	20.86	27.78	71.70	0.66	3122	25209	
L.S.D. _{.05}		N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	

† Hybrids that have any MS letter in common are not significantly different at the 5% level of probability.

‡ If a trait appears inside parenthesis i.e. (RR/CB), then it is not part of the hybrid name. For a full description of abbreviated biotech traits, see table 13.

NDF = Neutral Detergent Fiber

30h IV NDFD = Neutral Detergent Fiber Digestibility

ADF = Acid Detergent Fiber

TDN = Total Digestible Nutrients

NEL = Net Energy for Lactation

§ based on University of Wisconsin Milk2006 software program.

Table 12. Characteristics, as described by the seed company, of corn silage hybrids evaluated in yield tests in Tennessee during 2017[†].

Hybrid [‡]	Grain Color	Maturity	Herbicide Tolerance	Insect Tolerance	Refuge in a Bag	Released or Experimental	Seed Treatment
Augusta 7768 (GT,LL,VIP3110)	Y	118	GT, LL	VIP3110	N	R	Cruiser Maxx 250
Croplan 5678 (RR,VT2P)		116	RR	VT2P	Y	R	Acceleron
Croplan 5900 (RR,VT2P)		119	RR	VT2P	Y	R	Acceleron
Masters Choice MCT6733 (RR,LL,3000GT)	Y	117	RR,LL	3000GT	N	R	C250
Masters Choice MCT6363 (RR,LL,3000GT)		113	RR,LL	3000GT	N	R	C250
Masters Choice MCT6653 (RR,LL,3000GT)		116	RR,LL	3000GT	N	R	C250
NK N83D-3111 (RR,LL,VIP3111)		118	RR,LL	VIP3111	N	R	Avicta Complete, Vibrance
NK NK1573-3111A (RR,LL,VIP3111)		115	RR,LL	VIP3111	N	R	Avicta Complete, Vibrance
Terral REV 23BHR55 (RR2,LL,YGCB,HX1)	Y	113	RR2, LL	YGCB, HX1	N	R	Maxim-Quattro + Poncho1250 + Votivo
Terral REV 25BHR26 (RR2,LL,YGCB,HX1)	Y	115	RR2, LL	YGCB, HX1	N	R	Maxim-Quattro + Poncho1250 + Votivo
Terral REV 28BHR18 (RR2,LL,YGCB,HX1)		118	RR2,LL	YGCB, HX1	N	R	Maxim-Quattro + Poncho1250 + Votivo

[†] Information 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. For a full description of abbreviated biotech traits, see table 13.

Table 13. Abbreviations used to identify biotech seed traits contained in corn silage hybrids evaluated in Tennessee in 2017.*Herbicide Tolerance*

Abbreviation	Name	Characteristic
LL	Bayer CropScience LibertyLink®	Glufosinate herbicide tolerance. Event: T25
RR	Monsanto Roundup Ready® Corn	Glyphosate herbicide tolerance.
RR2	Monsanto Roundup Ready® Corn 2	Glyphosate herbicide tolerance. Event: NK603
GT	Syngenta Agrisure® GT	Glyphosate herbicide tolerance. Event: SYTGA21

Insect Tolerance

Abbreviation	Name	Characteristic
3000GT	Syngenta Agrisure® 3000GT	Cry1Ab, Corn Borer protection. Modified Cry3A, Protection of Western, Northern and Mexican Corn Rootworm. Glufosinate herbicide tolerance. Glyphosate tolerance. Event: SYTGA21+Bt11+MIR604
HX1	DowAgrosciences Pioneer Hi-Bred Herculex® I	Cry1F, Western Bean Cutworm, Corn Borer, Black Cutworm and Fall Armyworm resistance. Glufosinate herbicide tolerance. Event: TC1507
SSX	Monsanto Genuity™ SmartStax™ DowAgrosciences SmartStax™	Cry1A.105, Cry2Ab2, Cry1F, Cry3Bb1, Cry34/35Ab1 Western, Northern, and Mexican Corn Rootworms, European and Southwestern Corn Borers, Sugarcane Borer, Southern Cornstalk Borer, Western Bean and Black Cutworms, Corn Earworm, Fall Armyworm protection. Glyphosate herbicide tolerance. Glyphosate herbicide tolerance. Event: Mon88017+Mon89034+TC1507+DAS59122-7
VIP3110	Agrisure Viptera™ 3110	Vip3A, Cry1Ab, European and Southwestern Corn Borers, Southern Cornstalk Borer, Fall and Beet Armyworm, Black and Western Bean Cutworm, Sugarcane Borer, Common Stalk borer and Dingy Cutworm protection Glyphosate tolerance. Event: MIR162+Bt11+GA21
VIP3111	Agrisure Viptera™ 3111A	Vip3A, Cry1Ab. Protection from European and Southwestern Corn Borers, Corn earworm, Southern cornstalk borer, Fall and Beet armyworm, Black and Western Bean Cutworm, Sugarcane borer, Western, Northern and Mexican corn rootworm, Common stalk borer and Dingy cutworm. Glyphosate tolerance. Contains Agrisure Artesian technology with multiple genes for season long drought protection. Event: MIR162+Bt11+GA21+MIR604
VT2P	Monsanto Genuity™ VT Double PRO™	Cry1A.105, Cry2Ab2, European and Southwestern Corn Borers, Sugarcane Borer, Southern Cornstalk Borer, Corn Earworm, and Fall Armyworm protection. Glyphosate herbicide tolerance. Event: Mon89034+NK603

Table 13. (continued)

Insect Tolerance

Abbreviation	Name	Characteristic
YGCB	Monsanto YieldGard® Corn Borer	Cry1Ab, European and Southwestern Corn Borers, Sugarcane Borer and Southern Cornstalk Borer protection. Event: Mon810

Refuge

Abbreviation	Name	Characteristic
RIB	Refuge in Bag	

Table 14. Contact information for corn hybrid seed companies evaluated in silage tests in Tennessee during 2017.

Company	Contact	Phone	Email	Web site
Augusta Seed Corporation	Matt Rawley	540-886-6055	matt.rawley@augustaseed.com	www.augustaseed.com
Croplan by Winfield	Caleb Robertson	731-614-5234	clrobertson@landolakes.com	www.croplan.com
Master's Choice	Kyle Vosburgh	866-444-1044	kyle@seedcorn.com	seedcorn.com
NK (Syngenta)	Chuck Leonard	270-519-9600	chuck.leonard@syngenta.com	www.syngenta-us.com
Terral Seed, Inc.	Marty Hale	318-341-8814	mhale@terralseed.com	www.terralseed.com



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