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Texas Cool-Season Annual Forage Results

2016

Texas A&M AgriLife Extension

Texas A&M AgriLife Research

varietytesting.tamu.edu

2016
Forage Variety Results
Texas Cool-Season Annual Variety Trials

varietytesting.tamu.edu/wheat

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Introduction

The statewide Cool-Season Annual Forage Variety Trial data presented in the following pages are the results from eight trials coordinated and implemented by numerous Texas A&M AgriLife Extension and Research faculty and staff. We also appreciate the cooperation from Texas County Extension Agents, producers, and private industry partners that contributed locations, property, seed, time and other assets to conduct these field trials. The purpose of this publication is to provide unbiased yield and quality data for forage producers across the state. With this information, Texas forage producers can make educated decisions regarding the most appropriate varieties for their geographic region.

Variety Selection:

Selection of an appropriate cool season forage variety is one of the most important decisions a producer will make. This decision can impact the potential forage yield, forage nutritive value, disease and insect management, and maturity of the crop. It is important that producers have diversity in the varieties planted on their farms to minimize production risks. The choice of varieties depends on the intended use of the crop (forage or dual-purpose) and when forage is most needed. Even though total forage production may be similar, certain species/varieties tend to produce more forage during the fall, winter, and/or spring. Variety diversification spreads the risk associated with potentially devastating pests (leaf and stripe rust, Hessian fly, wheat curl mite, greenbugs, etc.) and yield loss from adverse environmental factors (freeze, drought, etc.).

Producers should select no fewer than two varieties to plant on their farms and preferably more, depending upon size, location, and purpose of fields. Variety selection should be based upon multiple years of sound data produced from university trials and other reliable sources. High yields over multiple years and multiple locations demonstrate a variety's ability to perform well over diverse environmental factors. Stable yield performance of forage is the best variety selection tool. It is important to consider decreasing yields over a two or three year time frame, which may reflect a change in disease and/or insect resistance.

When selecting a variety for the 2017 season, producers should consider the variables that limited yield in the previous growing season; which may have had a negative impact on the results presented in the following pages. We strongly encourage producers to look at multiple year averages and to look at numerous relevant variety trial locations.

Interpreting the Data:

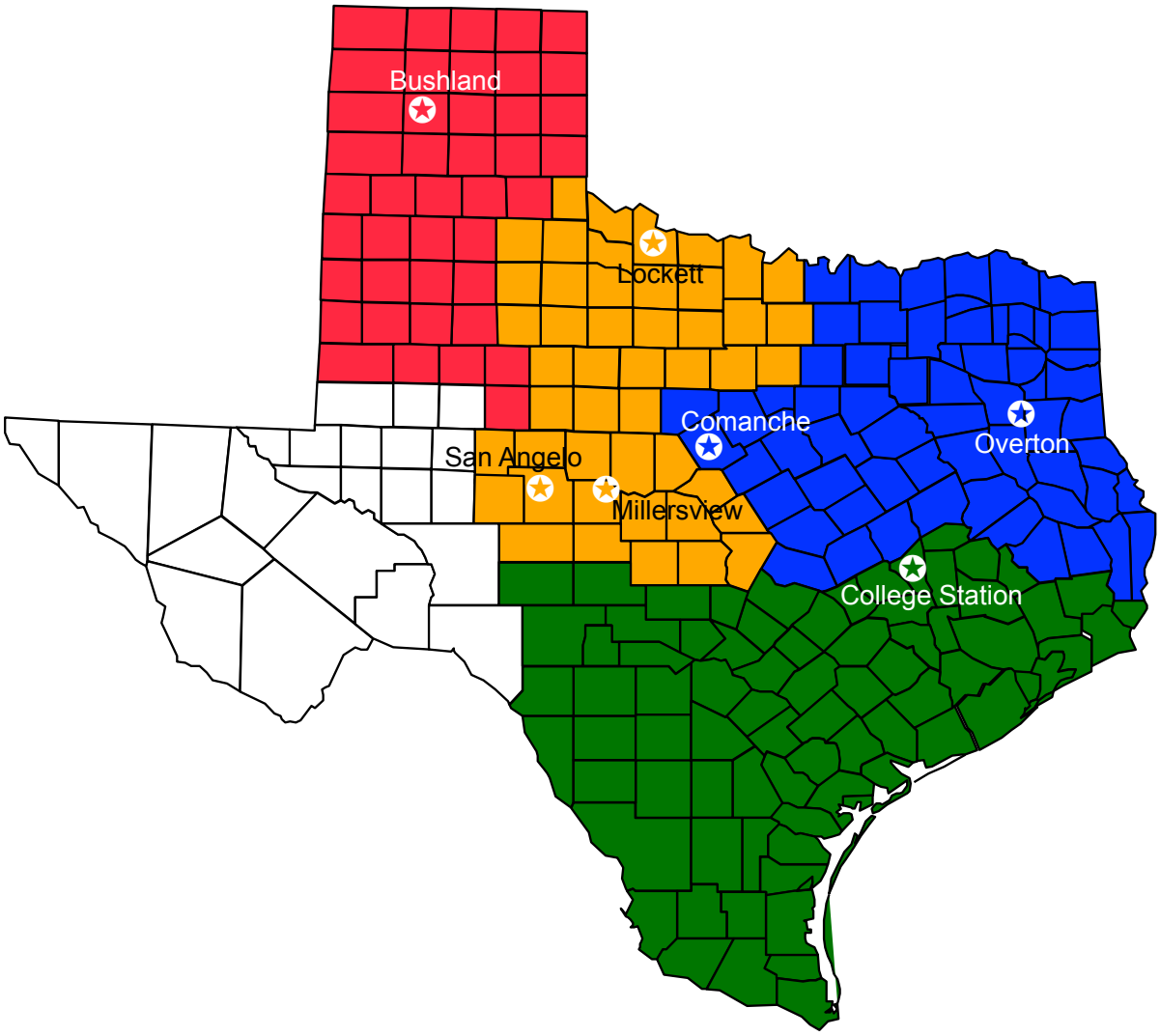
Forage yield at each location has been analyzed using appropriate statistical procedures. The statistical analysis provides the mean, CV, and LSD values. It is important to note these statistical values to prevent misinterpretation of any replicated data.

The mean is another term for the average. Therefore, a mean yield is the average of all the plots within a trial. Individual variety yields can be compared to the mean yield to determine how these varieties performed within the trial (i.e. were they above or below average?). This average can also be used as an indication of the environment for that location. A low mean yield can indicate poor growing conditions during the season; likewise, a high yield average can indicate favorable growing conditions.

The CV (Coefficient of Variation) value, expressed as a percentage, indicates the level of unexplained variability present within the trial. A high CV value indicates considerable variability existed within the trial not related to normal variations that might be expected between the varieties in the test. This variability may be the result from non-uniform stands, non-uniform insect or disease pressure, variability in harvesting, or other issues. Generally, CV values in excess of 25% signify that there were problems in the trial, leading the reader to question the validity of the data as a true representation of varietal performance.

The LSD (Least Significant Difference) value is a numeric range to help the reader determine if the varieties performed differently from one another within the trial. If the LSD value is 2 ton/ac in a trial in which Variety A yielded 6 ton/ac and Variety B yielded 3 ton/ac, then Variety A is said to be significantly better. In that same trial with an LSD value of 2 ton/ac at a 0.05 (5%) significance level, the statistical inference one could say is that Variety A would yield better than Variety B in 19 out of 20 trials conducted in which there was at least a 2 ton/ac difference in yield. In this hypothetical comparison, you might have a 20^{th} trial with a 2 ton/ac difference that there is not truly a difference between Variety A and B, but random chance caused the 2 ton difference.

Texas Regional Map



Legend:

- Texas High Plains
- Texas Rolling Plains
- Texas Blacklands and East Texas
- South Texas

2016 Texas Region Overview

Texas Blacklands:
The Texas Blacklands forage season started off dry in the months of September and much of October for producers planting for fall forage production. Heavy rains arrived at the end of October and wet conditions continued through January. As the season progressed, excessive rainfall set in once again during late winter following a brief dry period in mid-winter and continued throughout the spring. This moisture allowed for the establishment of rust infestations on wheat and oats that, along with flooded or waterlogged fields, contributed to overall yield reductions. The water-logged soils made harvest (both grazing and mechanical) difficult throughout much of the area.

Texas High Plains:
Fall planting conditions were above average on the Texas High Plains as the result of summer and early fall precipitation that resulted in full soil moisture profiles and very good to excellent stand establishment. Regionally, late winter and early spring temperatures were above average and precipitation remained below average resulting in severe water stress on much of the small grain acres. Weather patterns shifted in late April when much of the crop was beginning to enter reproductive stages of development. Subsequent precipitation and cool temperatures persisted through May resulting in optimal conditions that were ideal for stripe rust. Regionally, growing season conditions resulted in average or above average forage yields on both dryland and irrigated acreage.

Texas Rolling Plains:
Small grain planting was delayed across the Rolling Plains especially in southern portions due to the concentrated rain in October 2015. There were some reports of seedling emergence issues in the Rolling Plains especially from seeds that were saved from the previous year, as this area experienced a very wet April and May, where saved seed quality may have been lower than average. Above average precipitation continued during the fall to early winter. Some freeze-damaged small grain fields were observed in the spring although no severe yield loss was reported. Stripe rust started earlier than expected in late-January to early-February in the Rollng Plains region due to the ideal temperatures (50-64 °F) for stripe rust infestations during early spring.

South Texas:
In the southern part of the state, fall planting was slightly delayed due to lack of moisture early. Good rains during late October and through November allowed for good emergence and establishment. Excessive rainfall from late winter through the spring left many small grain fields standing in water. Foliar diseases were plentiful in this area due to the moisture. Mild temperatures throughout the winter led to widespread vernalization issues in winter small grains planted in the region that extended the grazing time. The warm conditions also contributed to some insect problems such as Hessian fly and southern corn-rootworm.

Forage Trial Agronomic Data

Location[1]	Cooperator(s)	Yield Limiting Issues	Planting Date	Fertilizer Total (lb N/A)	Pesticide Applied (Date)
Bushland[2]	Texas A&M AgriLife Research and Extension Center	None	9/30/15	75	None
College Station[2]	Texas A&M Research and Extension Agronomy Farm	Excessive Moisture	10/1/15	90	Govern + MCPA Ester (1/29/16)
Comanche[2]	Indian Creek Farm; Rodney Stephens	None	9/30/15	118	None
Lockett[2]	Texas A&M AgriLife Research and Extension Center	DATA NOT SHOWN	9/25/15	50	None
Millersview	Mickey Dillard	DATA NOT SHOWN Dry planted; Wild Oat Infestation	9/29/15	50	None
Overton	Texas A&M Research and Extension Center	Excessive Moisture	12/9/15	180	None
San Angelo	Texas A&M AgriLife Research and Extension Center	ABANDONED Dry planted; Drought	9/29/15	50	None

[1]These locations were planted with a seeding rate of 90 lb/a. All seed was treated with Cruiser Maxx Vibrance for Cereals

[2]Bushland, College Station, Comanche and Lockett were the only locations that irrigation was available.

TEXAS A&M AGRILIFE RESEARCH | EXTENSION

2016 Small Grains Forage Trial - Total Season Forage Yield State Wide

Class[1]	Variety[2]	Company	Dry Matter Yield (lbs/a)			
			Bushland (Irrigated)	College Station (Irrigated)	Comanche (Irrigated)	Overton (Dryland)
Blend	Bob/TAM 204	--	8776	3987	6965	--
	Haybet/TAM 204	--	7302	5176	9078	--
	SY Goliad/TAM 204	--	7802	3582	8872	--
HRWW	Duster	OSU	9765	3665	5767	--
	Endurance	OSU	9420	--	--	--
	Fannin	Syngenta	9399	3990	7423	--
	Iba	OSU	10373	3555	5792	--
	SY Razor**	Syngenta	8216	3610	8796	--
	TAM 114	TAMU	10188	4111	7845	--
	TAM 204**	TAMU	9373	3531	7832	--
	TAM 204** (Untreated)	TAMU	--	3388	6186	--
	TAM 401**	TAMU	8941	3968	7514	--
	WB 4458	Monsanto	9440	4063	8769	--
	WB Cedar	Monsanto	9373	4000	6549	--
	Weathermaster 135**	Unknown	9410	--	--	--
Oat	Bob	UA	--	4087	5670	--
	Heavy Grazer 76-30	East Texas Seed	--	4348	5906	--
	Heavy Grazer II	East Texas Seed	--	4518	8104	--
	Horizon 201	Plantation Seed	--	4492	7096	--
	Horizon 306	Plantation Seed	--	5205	4705	--
	Okay	Noble Foundation	--	3511	6190	--
	TAMO 411	TAMU	--	5005	6639	--
	TAMO 606	TAMU	--	4418	6195	--
	TX07CS1948*	TAMU	--	4302	5148	--
	TX07CS2257*	TAMU	--	4909	6092	--
	TX09CS031*	TAMU	--	3855	5268	--
	TX09CS049*	TAMU	--	3827	5421	--
Rye	Elbon	Noble Foundation	--	3243	--	--
	Maton	Noble Foundation	8600	2983	7360	--
	Maton II	Noble Foundation	7987	2934	8180	--
	Oklon	Noble Foundation	9147	3191	6512	--
Ryegrass	Gulf	TAMU	--	4511	5533	9438
	Marshal	Wax Company	--	--	--	8391
	Nelson	TAMU	--	6032	4790	7312
	Prine	UF	--	--	5447	8788
	SunGrazer	Orego Seeds, Inc	--	4995	4261	--
	TAM 90	TAMU	--	4738	4314	7376
	TAMTBO	TAMU	--	5062	6084	7153
TRIT	Fridge**	Elliot Plant Breeding	9817	3662	6041	--
	NF 201	Noble Foundation	8116	4371	8679	--
	SlickTrit	Watley Seed	--	3667	6336	--
	SlickTrit II	Watley Seed	10414	--	--	--
	TAMcale 5019	TAMU	8678	3335	5945	--
	TX12VT8220*	TAMU	9178	--	--	--
	TX12VT8222*	TAMU	8080	--	--	--
	TX12VT8229*	TAMU	8544	--	--	--
	WS1	Watley Seed	9100	--	--	--
WB	P-919**	Paramount Seeds	9894	5416	8370	--
	TAMbar 501	TAMU	10785	4177	7561	--
		Mean	**9116**	**4137**	**6704**	**8076**
		LSD (5%)	**1344**	**1159**	**1583**	**1876**
		CV (%)	**11**	**19**	**13**	**20**

*Experimental Lines

**Awnless/Beardless

[1]Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW); Triticale (TRIT); Winter Barley (WB)

[2]All Ryegrass Varieties are Tetraploids EXCEPT Gulf, Marshal, and TAM 90.

TEXAS A&M AGRILIFE RESEARCH | EXTENSION

2016 Small Grains Forage Trial - Total Yield (lb/a) by Class

2016 State Wide

Class[1]	Bushland (Irrigated)	Comanche (Irrigated)	College Station (Irrigated)	Overton (Dryland)
HRWW	9445	7321	3754	--
Oat	--	6204	4388	--
Rye	8578	7469	3088	--
Ryegrass	--	5049	4834	8076
TRIT	8991	6823	3790	--
WB	10340	7965	4885	--
Mean	**9260**	**6704**	**4126**	**--**
LSD (5%)	**773**	**1446**	**571**	**--**
CV (%)	**12**	**17**	**20**	**--**

2015 Bushland

Class[1]	Cut 1	Cut 2	Cut 3	Cut 4	Total
WB	1237	1770	2046	5287	10340
HRWW	1147	2245	2032	4020	9445
TRIT	1127	2137	2112	3616	8991
Rye	1101	2204	2202	3071	8578
Mean	**1142**	**2164**	**2081**	**3873**	**9260**
LSD (5%)	**NS**	**228**	**NS**	**670**	**773**
CV (%)	**21**	**15**	**17**	**24**	**12**

2016 Comanche

Class[1]	Cut 1	Cut 2	Cut 3	Cut 4	Total
WB	583	7382	--	--	7965
Rye	334	7135	--	--	7469
HRWW	237	7084	--	--	7321
TRIT	152	6671	--	--	6823
Oat	498	5705	--	--	6204
Ryegrass	96	4953	--	--	5049
Mean	**353**	**6351**	**--**	**--**	**6704**
LSD (5%)	**328**	**1319**	**--**	**--**	**1446**
CV (%)	**73[a]**	**16**	**--**	**--**	**17**

2016 College Station

Class[1]	Cut 1	Cut 2	Cut 3	Cut 4	Total
WB	2259	1435	996	195	4885
Ryegrass	1486	819	1218	1311	4834
Oat	2751	737	465	435	4388
TRIT	2052	830	450	457	3790
HRWW	1862	899	684	309	3754
Rye	1173	797	676	441	3088
Mean	**2028**	**844**	**705**	**549**	**4126**
LSD (5%)	**511**	**223**	**274**	**147**	**571**
CV (%)	**36[a]**	**37[a]**	**55[a]**	**38[a]**	**20**

[1]Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW); Spring Barley (SB); Winter Barley (WB)

[a]Trials with a coefficient of variation (CV) ≥ 25% contain excessive experimental error. Readers should consider trials in a similar environment to confirm varietal yield.

2016 Small Grains Forage Trial - Bushland (Irrigated)

				Dry Matter Yield (lb/a)				
				Clip 1	Clip 2	Clip 3	Clip 4	Total
Rank[a]	Variety	Class[1]	Company	11/24/15	2/15/16	3/11/16	4/22/16	4 Clips
1	TAMbar 501	WB	TAMU	1433	1659	2041	5653	10785
2	SlickTrit II	TRIT	Watley Seed	912	2242	2015	5246	10414
3	Iba	HRWW	OSU	1293	2417	2175	4488	10373
4	TAM 114	HRWW	TAMU	1041	2561	2216	4370	10188
5	P-919**	WB	Paramount Seeds	1041	1881	2051	4921	9894
6	Fridge**	TRIT	Elliot Plant Breeding	1299	2041	1932	4545	9817
7	Duster	HRWW	OSU	1134	2345	1963	4323	9765
8	WB 4458	HRWW	Monsanto	1371	2257	1695	4117	9440
9	Endurance	HRWW	OSU	706	2046	1989	4679	9420
10	Weathermaster 135	HRWW	Unknown	1190	2458	2149	3612	9410
11	Fannin	HRWW	Syngenta	1268	2247	2087	3798	9399
12	TAM 204**	HRWW	TAMU	1232	2216	2133	3793	9373
13	WB Cedar	HRWW	Monsanto	1118	2139	1989	4128	9373
14	TX12VT8220*	TRIT	TAMU	1402	2288	2216	3272	9178
15	Oklon	Rye	Noble Foundation	933	2303	2118	3793	9147
16	WS1	TRIT	Watley Seed	1046	1865	1969	4220	9100
17	TAM 401**	HRWW	TAMU	1226	1819	1994	3901	8941
18	Bob/TAM 204**	Oat/HRWW Blend	--	1170	2010	2036	3561	8776
19	TAMcale 5019	TRIT	TAMU	840	2108	2659	3071	8678
20	Maton	Rye	Noble Foundation	1154	2092	2236	3118	8600
21	TX12VT8229*	TRIT	TAMU	1252	2092	2102	3097	8544
22	SY Razor**	HRWW	Syngenta	1041	2195	1965	3015	8216
23	NF 201(NF96210)	TRIT	Noble Foundation	1123	2133	2077	2783	8116
24	TX12VT8222*	TRIT	TAMU	1139	2324	1922	2695	8080
25	Maton II	Rye	Noble Foundation	1216	2216	2252	2303	7987
26	SY Goliad/TAM 204**	HRSW/HRWW Blend	--	1010	1886	1474	3432	7802
27	Haybet/TAM 204**	SB/HRWW Blend	--	1201	1206	1417	3478	7302
			Mean	**1140**	**2113**	**2032**	**3830**	**9116**
			LSD (5%)	**257**	**415**	**484**	**1011**	**1344**
			CV (%)	**16**	**14**	**17**	**19**	**11**

*Experimental Lines

**Awnless/Beardless

[1]Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW); Spring Barley (SB); Winter Barley (WB); Triticale (TRIT)

[a]Rank is based on Total Forage Weight

TEXAS A&M AGRILIFE RESEARCH | EXTENSION

Multi-Year Small Grains Forage Trial - Bushland (Irrigated)

Rank[a]	Variety	Class[1]	Company	Dry Matter Yield (lb/a) 3-Year[‡] Total	2-Year Total	2016 Total
1	Maton	Rye	Noble Foundation	10696	9510	8600
2	TAM 114	HRWW	TAMU	10134	10005	10188
3	TAMbar 501	WB	TAMU	9610	10114	10785
4	Weathermaster 135	HRWW	Unknown	9345	9225	9410
5	P-919**	WB	Paramount Seeds	9269	9498	9894
6	Fridge**	TRIT	Elliot Plant Breeding	9135	8868	9817
7	Fannin	HRWW	Syngenta	9112	8824	9399
8	TAMcale 5019	TRIT	TAMU	8990	9163	8678
9	TAM 204**	HRWW	TAMU	8752	8925	9373
10	TAM 401**	HRWW	TAMU	8087	8796	8941
11	TX12VT8220*	TRIT	TAMU		9660	9178
12	Duster	HRWW	OSU		9583	9765
13	Maton II	Rye	Noble Foundation		9353	7987
14	TX12VT8229*	TRIT	TAMU		9225	8544
15	TX12VT8222*	TRIT	TAMU		8828	8080
16	SY Razor**	HRWW	Syngenta		8474	8216
17	SlickTrit II	TRIT	Watley Seed			10414
18	Iba	HRWW	OSU			10373
19	WB 4458	HRWW	Monsanto			9440
20	Endurance	HRWW	OSU			9420
21	WB Cedar	HRWW	Monsanto			9373
22	Oklon	Rye	Noble Foundation			9147
23	WS1	TRIT	Watley Seed			9100
24	Bob/TAM 204**	Oat/HRWW Blend	--			8776
25	NF 201(NF96210)	TRIT	Noble Foundation			8116
26	SY Goliad/TAM 204**	HRSW/HRWW Blend	--			7802
27	Haybet/TAM 204**	SB/HRWW Blend	--			7302
			Mean	**9313**	**9291**	**9116**
			LSD (5%)	**1115**	**NS**	**1344**
			CV (%)	**15**	**12**	**11**

*Experimental Lines

**Awnless/Beardless

[†]Varieties ranked according to 2-year, then 2016 yield averages.

[‡]3-year average based on 2014, 2015 and 2016 yields.

[1]Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW); Spring Barley (SB); Winter Barley (WB); Triticale (TRIT)

[a]Rank is based on 3-Year, 2-Year, then 2016 Totals

TEXAS A&M AGRILIFE RESEARCH | EXTENSION

2016 Small Grains Forage Trial - College Station (Irrigated)

				Dry Matter Yield (lb/a)				
				Clip 1	Clip 2	Clip 3	Clip 4	Total
Rank[a]	Variety[1]	Class[2]	Company	1/19/16	3/2/16	3/28/16	4/26/16	4 Clips
1	Nelson	Ryegrass	TAMU	1775	877	1928	1453	6032
2	P-919**	WB	Paramount Seeds	2859	1921	469	167	5416
3	Horizon 306	Oat	Plantation Seed	3530	705	484	485	5205
4	Haybet/TAM 204	SB/HRWW Blend	--	3921	596	300	359	5176
5	TAMTBO	Ryegrass	TAMU	1405	753	1316	1588	5062
6	TAMO 411	Oat	TAMU	3451	814	332	408	5005
7	SunGrazer Plus	Ryegrass	Oregro Seeds, Inc	1777	970	926	1323	4995
8	TX07CS2257*	Oat	TAMU	3127	798	396	587	4909
9	TAM 90	Ryegrass	TAMU	1177	769	1398	1394	4738
10	Heavy Grazer II	Oat	East Texas Seed	2690	821	555	452	4518
11	Gulf	Ryegrass	TAMU	1027	734	1199	1552	4511
12	Horizon 201	Oat	Plantation Seed	2902	786	399	406	4492
13	TAMO 606	Oat	TAMU	2881	673	419	445	4418
14	NF 201(NF96210)	TRIT	Noble Foundation	2782	965	353	272	4371
15	Heavy Grazer 76-30	Oat	East Texas Seed	2764	792	399	392	4348
16	TX07CS1948*	Oat	TAMU	2034	901	990	377	4302
17	TAMbar 501	WB	TAMU	1458	787	1699	233	4177
18	TAM 114	HRWW	TAMU	1945	545	1154	468	4111
19	Bob	Oat	UA	2738	674	328	348	4087
20	WB 4458	HRWW	Monsanto	1965	879	663	557	4063
21	WB Cedar	HRWW	Monsanto	1841	876	1064	219	4000
22	Fannin	HRWW	Syngenta	2039	1035	705	212	3990
23	Bob/TAM 204	Oat/HRWW Blend	--	2390	840	405	352	3987
24	TAM 401**	HRWW	TAMU	2402	987	354	225	3968
25	TX09CS031*	Oat	TAMU	2273	756	365	461	3855
26	TX09CS049*	Oat	TAMU	2075	638	605	509	3827
27	SlickTrit	TRIT	Watley Seed	1754	815	542	557	3667
28	Duster	HRWW	OSU	1882	822	769	192	3665
29	Fridge**	TRIT	Elliot Plant Breeding	1650	750	558	704	3662
30	SY Razor**	HRWW	Syngenta	1813	866	688	243	3610
31	SY Goliad/TAM 204	HRSW/HRWW Blend	--	2081	799	348	354	3582
32	Iba	HRWW	OSU	1552	799	844	360	3555
33	TAM 204**	HRWW	TAMU	1795	1062	363	312	3531
34	Okay	Oat	Noble Foundation	2343	496	364	307	3511
35	TAM 204** (Untreated)	HRWW	TAMU	1505	1028	466	388	3388
36	TAMcale 5019	TRIT	TAMU	1725	776	440	394	3335
37	Elbon	Rye	Noble Foundation	1181	826	730	505	3243
38	Oklon	Rye	Noble Foundation	1070	762	776	584	3191
39	Maton	Rye	Noble Foundation	1112	813	702	357	2983
40	Maton II	Rye	Noble Foundation	1329	787	497	320	2934
			Mean	**2089**	**836**	**678**	**535**	**4137**
			LSD (5%)	**1098**	**438**	**432**	**175**	**1159**
			CV (%)	**35[b]**	**35[b]**	**43[b]**	**22**	**19**

*Experimental Lines

**Awnless/Beardless

[1]All Ryegrass Varieties are Tetraploids EXCEPT Gulf, Marshal, and TAM 90.

[2]Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW); Spring Barley (SB); Winter Barley (WB); Triticale (TRIT)

[a]Rank is based on Total Forage Weight

[b]Trials with a coefficient of variation (CV) ≥ 25% contain excessive experimental error.
Readers should consider trials in a similar environment to confirm varietal yield.

TEXAS A&M AGRILIFE RESEARCH | EXTENSION

Multi-Year Small Grains Forage Trial - College Station (Irrigated)

Rank[a]	Variety[1]	Class[2]	Company	Dry Matter Yield (lb/a) 4-Year‡ Total	3-Year Total	2-Year Total	2016 Total
1	Nelson	Ryegrass	TAMU	7089	6469	5799	6032
2	P-919**	WB	Paramount Seeds	6543	5644	5345	5416
3	TAM 114	HRWW	TAMU	6173	5370	4589	4111
4	TAMO 411	Oat	TAMU	6140	5295	4900	5005
5	TAMbar 501	WB	TAMU	6108	4938	3931	4177
6	TAMO 606	Oat	TAMU	6059	5416	4819	4418
7	Heavy Grazer 76-30	Oat	East Texas Seed	6047	5121	4605	4348
8	Bob	Oat	UA	5754	5046	4488	4087
9	TAM 401**	HRWW	TAMU	5143	3999	3585	3968
10	Fannin	HRWW	Syngenta	5134	4464	4020	3990
11	TAM 204**	HRWW	TAMU	4838	4226	3552	3531
12	Maton	Rye	Noble Foundation	4815	4213	3208	2983
13	TAMcale 5019	TRIT	TAMU	4785	4132	3427	3335
14	Elbon	Rye	Noble Foundation	4629	3857	3015	3243
15	TAMTBO	Ryegrass	TAMU		5876	4965	5062
16	Fridge**	TRIT	Elliot Plant Breeding		4428	3620	3662
17	TX09CS031*	Oat	TAMU		4331	3525	3855
18	Maton II	Rye	Noble Foundation		4041	3385	2934
19	Horizon 306	Oat	Plantation Seed			5158	5205
20	SunGrazer Plus	Ryegrass	Oregro Seeds, Inc			4932	4995
21	Gulf	Ryegrass	TAMU			4880	4511
22	TAM 90	Ryegrass	TAMU			4837	4738
23	Horizon 201	Oat	Plantation Seed			4714	4492
24	TX07CS2257*	Oat	TAMU			4465	4909
25	Okay	Oat	Noble Foundation			4316	3511
26	TX07CS1948*	Oat	TAMU			4230	4302
27	Duster	HRWW	OSU			4104	3665
28	SlickTrit	TRIT	Watley Seed			3759	3667
29	SY Razor**	HRWW	Syngenta			3592	3610
30	Oklon	Rye	Noble Foundation			3274	3191
31	Haybet/TAM 204	SB/HRWW Blend	--				5176
32	Heavy Grazer II	Oat	East Texas Seed				4518
33	NF 201(NF96210)	TRIT	Noble Foundation				4371
34	WB 4458	HRWW	Monsanto				4063
35	WB Cedar	HRWW	Monsanto				4000
36	Bob/TAM 204	Oat/HRWW Blend	--				3987
37	TX09CS049*	Oat	TAMU				3827
38	SY Goliad/TAM 204	HRSW/HRWW Blend	--				3582
39	Iba	HRWW	OSU				3555
40	TAM 204** (Untreated)	HRWW	TAMU				3388
			Mean	**5638**	**4811**	**4211**	**4137**
			LSD (5%)	**618**	**602**	**715**	**1159**
			CV (%)	**15**	**15**	**16**	**19**

*Experimental Lines

**Awnless/Beardless

[1]All Ryegrass Varieties are Tetraploids EXCEPT Gulf, Marshal, and TAM 90.

[2]Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW); Spring Barley (SB); Winter Barley (WB); Triticale (TRIT)

‡4-year average based on 2013, 2014, 2015 and 2016 yields.

[a]Rank is based on 4-Year, 3-Year, 2-Year, then 2016 Totals

TEXAS A&M AGRILIFE RESEARCH | EXTENSION

2016 Small Grains Forage Trial - Comanche (Irrigated)

Rank[a]	Variety[1]	Class[2]	Company	Dry Matter Yield (lb/a) Clip 1 12/17/15	Clip 2 4/5/16	Total 2 Clips
1	Haybet/TAM 204	SB/HRWW Blend	--	1637	7441	9078
2	SY Goliad/TAM 204	HRSW/HRWW Blend	--	665	8207	8872
3	SY Razor**	HRWW	Syngenta	193	8603	8796
4	WB 4458	HRWW	Monsanto	843	7925	8769
5	NF 201(NF96210)	TRIT	Noble Foundation	165	8514	8679
6	P-919**	WB	Paramount Seeds	667	7703	8370
7	Maton II	Rye	Noble Foundation	643	7537	8180
8	Heavy Grazer II	Oat	East Texas Seed	777	7327	8104
9	TAM 114	HRWW	TAMU	220	7625	7845
10	TAM 204**	HRWW	TAMU	133	7699	7832
11	TAMbar 501	WB	TAMU	499	7062	7561
12	TAM 401**	HRWW	TAMU	339	7176	7514
13	Fannin	HRWW	Syngenta	233	7190	7423
14	Maton	Rye	Noble Foundation	106	7254	7360
15	Horizon 201	Oat	Plantation Seed	732	6364	7096
16	Bob/TAM 204	Oat/HRWW Blend	--	255	6710	6965
17	TAMO 411	Oat	TAMU	398	6241	6639
18	WB Cedar	HRWW	Monsanto	55	6494	6549
19	Oklon	Rye	Noble Foundation	99	6413	6512
20	SlickTrit	TRIT	Watley Seeds	130	6206	6336
21	TAMO 606	Oat	TAMU	361	5835	6195
22	Okay	Oat	Noble Foundation	719	5471	6190
23	TAM 204** (Untreated)	HRWW	TAMU	35	6151	6186
24	TX07CS2257*	Oat	TAMU	260	5832	6092
25	TAMTBO	Ryegrass	TAMU	45	6039	6084
26	Fridge**	TRIT	Elliot Plant Breeding	214	5827	6041
27	TAMcale 5019	TRIT	TAMU	73	5872	5945
28	Heavy Grazer 76-30	Oat	East Texas Seed	276	5630	5906
29	Iba	HRWW	OSU	67	5724	5792
30	Duster	HRWW	OSU	47	5721	5767
31	Bob	Oat	UA	707	4963	5670
32	Gulf	Ryegrass	TAMU	59	5474	5533
33	Prine	Ryegrass	East Texas Seed	146	5301	5447
34	TX09CS049*	Oat	TAMU	437	4984	5421
35	TX09CS031*	Oat	TAMU	124	5144	5268
36	TX07CS1948*	Oat	TAMU	87	5061	5148
37	Nelson	Ryegrass	TAMU	92	4697	4790
38	Horizon 306	Oat	Plantation Seed	774	3931	4705
39	TAM 90	Ryegrass	TAMU	80	4234	4314
40	SunGrazer Plus	Ryegrass	Oregro Seeds, Inc	171	4091	4261
			Mean	**353**	**6352**	**6631**
			LSD (5%)	**392**	**1450**	**1583**
			CV (%)	**60[b]**	**12**	**13**

*Experimental Lines

**Awnless/Beardless

[1]All Ryegrass Varieties are Tetraploids EXCEPT Gulf, Marshal, and TAM 90.

[2]Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW); Spring Barley (SB); Winter Barley (WB); Triticale (TRIT)

[a]Rank is based on Total Forage Weight

[b]Trials with a coefficient of variation (CV) ≥ 25% contain excessive experimental error. Readers should consider trials in a similar environment to confirm varietal yield.

Multi-Year Small Grains Forage Trial - Comanche (Irrigated)

Rank[a]	Variety[1]	Class[2]	Company	Dry Matter Yield (lb/a) 2-Year‡ Total	Dry Matter Yield (lb/a) 2016 Total
1	Horizon 201	Oat	Plantation Seed	8134	7096
2	TAM 114	HRWW	TAMU	7887	7845
3	Maton II	Rye	Noble Foundation	7875	8180
4	Okay	Oat	Noble Foundation	7799	6190
5	TAMbar 501	WB	TAMU	7730	7561
6	P-919**	WB	Paramount Seeds	7562	8370
7	TAMTBO	Ryegrass	TAMU	7416	6084
8	Oklon	Rye	Noble Foundation	7343	6512
9	Heavy Grazer 76-30	Oat	East Texas Seed	7288	5906
10	TX07CS2257*	Oat	TAMU	7214	6092
11	Maton	Rye	Noble Foundation	7145	7360
12	SY Razor**	HRWW	Syngenta	7023	8796
13	Horizon 306	Oat	Plantation Seed	6935	4705
14	TAMO 606	Oat	TAMU	6908	6195
15	TAMO 411	Oat	TAMU	6838	6639
16	Fridge**	TRIT	Elliot Plant Breeding	6789	6041
17	Prine	Ryegrass	East Texas Seed	6728	5447
18	Gulf	Ryegrass	TAMU	6691	5533
19	TAM 90	Ryegrass	TAMU	6568	4314
20	Bob	Oat	UA	6566	5670
21	SunGrazer Plus	Ryegrass	Oregro Seeds, Inc	6497	4261
22	TAM 204**	HRWW	TAMU	6485	7832
23	Nelson	Ryegrass	TAMU	6430	4790
24	Duster	HRWW	OSU	6404	5767
25	Fannin	HRWW	Syngenta	6268	7423
26	TX07CS1948*	Oat	TAMU	6267	5148
27	TAM 401**	HRWW	TAMU	6129	7514
28	SlickTrit	TRIT	Watley Seeds	5993	6336
29	TAMcale 5019	TRIT	TAMU	5536	5945
30	TX09CS031*	Oat	TAMU	5448	5268
31	Haybet/TAM 204	SB/HRWW Blend	--		9078
32	SY Goliad/TAM 204	HRSW/HRWW Blend	--		8872
33	WB 4458	HRWW	Monsanto		8769
34	NF 201(NF96210)	TRIT	Noble Foundation		8679
35	Heavy Grazer II	Oat	East Texas Seed		8104
36	Bob/TAM 204	Oat/HRWW Blend	--		6965
37	WB Cedar	HRWW	Monsanto		6549
38	TAM 204** (Untreated)	HRWW	TAMU		6186
39	Iba	HRWW	OSU		5792
40	TX09CS049*	Oat	TAMU		5421
			Mean	**6871**	**6704**
			LSD (5%)	**1103**	**1583**
			CV (%)	**15**	**13**

*Experimental Lines

**Awnless/Beardless

[1]All Ryegrass Varieties are Tetraploids EXCEPT Gulf, Marshal, and TAM 90.

[2]Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW); Spring Barley (SB); Winter Barley (WB); Triticale (TRIT)

‡2-year average based on 2015 and 2016 yields.

[a]Rank is based on 2-Year then 2016 Totals

TEXAS A&M AGRILIFE RESEARCH | EXTENSION

2016 Ryegrass Forage Trial - Overton (Dryland)

2016 Rank[a]	Variety	Dry Matter Yield (lb/a) Clip 1 3/3/16	Clip 2 3/22/16	Clip 3 4/14/16	Clip 4 5/16/16	2016 Total 4 Clips	2013-2016 Average 3 Years[b]
1	Jackson	802	1727	4071	4292	10892	9264
2	Winterhawk	754	1656	3118	4201	9729	8279
3	Gulf	877	1387	3321	3853	9438	8007
4	Flying A	870	1526	3360	3675	9431	9108
5	07-WWa	1453	1032	2916	3739	9140	7187
6	Passerel Plus	870	1400	3758	2895	8923	7609
7	TARX10-1*	822	1289	3515	3281	8907	8365
8	Prine	809	1342	3118	3519	8788	8115
9	B-14.0047*	921	1550	3079	3166	8716	-
10	M2CVS*	631	1350	3166	3494	8641	8104
11	Big Boss	579	1140	2777	4103	8599	8147
12	Tetrastar	654	1279	3370	3233	8536	7683
13	Marshall	811	978	3040	3562	8391	8279
14	PS 12*	930	1252	2783	3421	8386	-
15	Herdsman	609	1296	2788	3626	8319	-
16	BARLM09129*	535	1227	3127	3287	8176	-
17	BARLM010202*	608	1419	2665	3323	8015	-
18	Attain	547	1231	2998	2959	7735	8030
19	Lonestar	791	1198	2908	2823	7720	7945
20	Ration	717	1035	2881	3079	7712	-
21	GA101M*	657	1295	2641	3072	7665	-
22	TARX10-6*	760	1181	3101	2576	7618	7417
23	Meroa	719	1185	2466	3212	7582	-
24	BARLM14167-4*	665	1105	2902	2898	7570	-
25	GALM1401*	779	1358	2763	2653	7553	-
26	IS-LWD8*	782	1463	2851	2431	7527	-
27	Diamond T	1060	1291	2354	2818	7523	8072
28	Credence	451	1095	2731	3239	7517	-
29	BARLM14167-1*	680	998	2979	2849	7506	-
30	BARLM15426*	624	965	2646	3267	7502	-
31	PS 15*	719	1202	2686	2886	7493	-
32	ME 4*	716	1299	2802	2666	7483	7493
33	KoWinearly	1534	1964	2012	1945	7455	-
34	ME 94*	719	1109	2938	2616	7382	7119
35	TAM90	665	1137	2552	3022	7376	7718
36	Jumbo	744	1092	2556	2971	7363	8146
37	Nelson	495	1175	2484	3158	7312	8018
38	B-13.0414*	702	1045	2855	2704	7306	-
39	BARLM15476*	566	1237	2961	2536	7300	-
40	Andes	760	1265	2776	2486	7287	-
41	BARLM14167-2*	619	938	2886	2737	7180	-
42	BARLM010200*	853	888	2379	3059	7179	-
43	BARLM15427*	545	1068	2653	2905	7171	-
44	TAMTBO	752	1157	2476	2768	7153	8670
45	BARLM09124*	638	1246	2539	2657	7080	-
46	Maximus	717	1109	2704	2438	6968	7052
47	BARLM14167*	531	1096	2735	2605	6967	-
48	BARLM09137*	549	1107	2642	2574	6872	-
49	IS-LWT12*	458	1164	2658	2539	6819	-
50	BARLM15425*	366	1040	2298	3108	6812	-
51	PPG-LMT 102*	414	1030	2218	2757	6419	-
	Mean	**699**	**1209**	**2843**	**3053**	**7825**	**---**
	LSD (5%)	**329**	**379**	**628**	**999**	**1876**	**---**
	CV (%)	**40[c]**	**27[c]**	**19**	**28[c]**	**20**	**---**

*Experimental Line - Not commercially available

[a]Rank is based on Total Forage Yield

[b] "-" Entry not tested over last 3 years.

[c]Trials with a coefficient of variation (CV) ≥ 25% contain excessive experimental error. Readers should consider trials in a similar environment to confirm varietal yield.

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