

2020 Texas Cool-Season Annual Forage Results



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Forage Variety Results

Texas Cool-Season Annual Variety Trials

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Texas A&M AgriLife Extension Service

Fernando Guillen-Portal, Russ Garetson, Clark Neely,
Brandon Gerrish, Reagan Noland
Emi Kimura, Jourdan Bell, Jonathan Ramirez, Mike Berry,
Justin Klinksiek, and Travis Bell

Texas A&M AgriLife Research

Amir Ibrahim, Jackie Rudd, Gerald Smith,
Jason Baker, Bryan Simoneaux

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Introduction

The statewide Cool-Season Annual Forage Variety Trial data presented in the following pages are the results from five trials coordinated and implemented by Texas A&M AgriLife Extension and Research faculty and staff. We also appreciate the cooperation from County Extension Agents, producers, and private industry partners that contributed land property, seed, time, and other assets for the effective implementation of these trials. The purpose of this publication is to provide unbiased yield data for forage producers across the state. We hope that this information can assist Texas forage producers in identifying the most appropriate forage varieties for the growing conditions in their geographic regions.

Variety Selection:

The selection of an appropriate cool-season forage variety is one of the most important decisions a producer will make relative to their livestock operation. This decision can impact the potential forage yield, forage nutritive value, disease and insect management, and maturity of the crop, and thus, overall livestock performance. Producers need 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 only 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 choose 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 potential to perform well over diverse environments. Stable yield performance of forage is the best variety selection tool. It is important to consider decreasing yields over a two or three-year period, which may reflect a change in disease and/or insect resistance if weather conditions have remained similar.

When selecting a variety for the 2020-21 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:

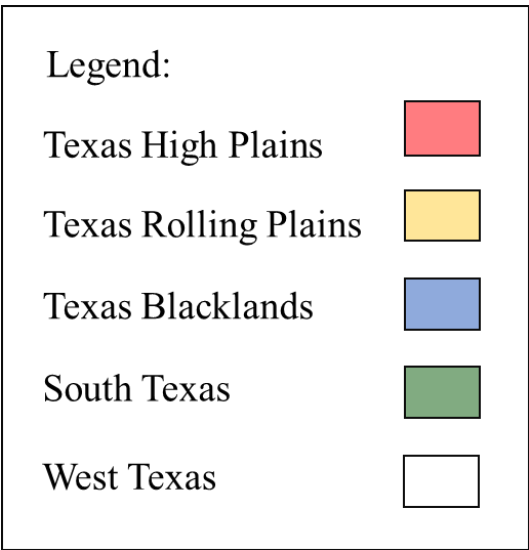
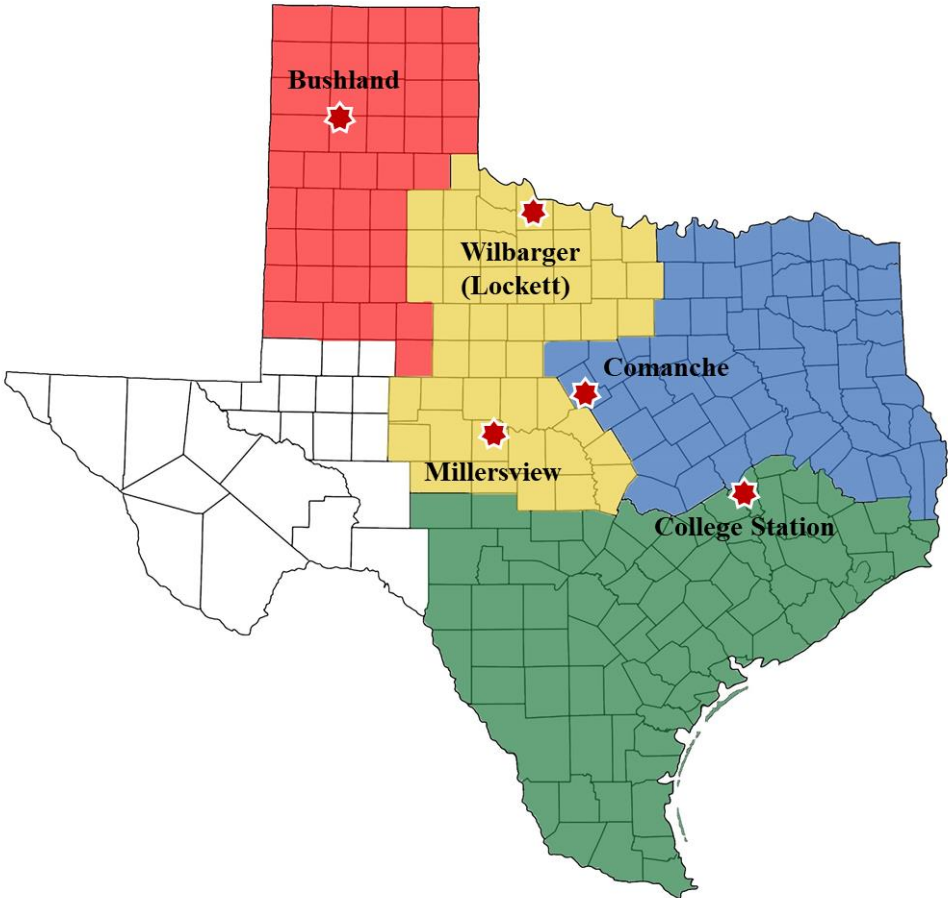
Forage yield at each location has been analyzed using appropriate statistical procedures. The statistical analysis provides the mean, CV, and LSD values. It is important to note these statistical values to prevent misinterpretation of any replicated data.

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 among the varieties in the test. This variability may be the result of non-uniform stands, non-uniform insect or disease pressure, variability in harvesting, or other issues. Generally, CV values above 25% for forage trials 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 500 lb/ac in a trial in which Variety A yielded 6000 lb/ac and Variety B yielded 5000 lb/ac, then Variety A is said to be significantly better. In that same trial with an LSD value of 500 lb/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 500 lb/ac difference in yield. In this hypothetical comparison, you might have a 20th trial with a 500 lb/ac difference that there is not truly a difference between Variety A and B, but random chance caused the 500 lb difference.

Texas Regional Map: 2020 Forage Trials



2020 Texas Region Overview

Texas High Plains: Variable rainfall in August and September 2020 resulted in varying planting conditions across the Texas High Plains. Some fields were planted with replenished soil moisture while other fields were sown under dry conditions. October 2019 rains delivered valuable moisture for the region's crops. There was minimal winter precipitation in 2019 through the central and northern Panhandle resulting in another dry winter. Dryland fields benefited from March 2020 rain. April 2020 freezes resulted in varying degrees of injury to the crops. Conditions rapidly changed in late April 2020. Above-average temperatures through May 2020 drove the forage-crop water demand, resulting in water stress. Because of warm, dry conditions, disease pressure was minimal during late spring of 2020.

Texas Rolling Plains: The season started with hot and dry conditions in the fall of 2019. Soil temperature was not optimum for planting forages until the first week of October 2019. Dry months continued to the end of December 2019, which reduced winter forage productivity throughout the Texas Rolling Plains. The performance of forage crops improved with the precipitations observed during the January – March 2020 period.

Texas Blacklands: The 2019/2020 growing season was characterized by prolonged rains from the start, and, in many instances, the excessive rain delayed planting. The occurrence of a cold front in March 2020 brought below-freezing temperatures that caused some freeze damage to cold-sensitive varieties in some fields. Wet conditions continued in May and June 2020 delaying harvest in some fields.

South Texas. Very hot and dry conditions characterized the beginning of the 2019/2020 growing season, followed by cold weather and rain in late October 2019, which allowed timely plantings for most of the locations. Intense and prolonged rains observed during much of the early growing season affected the performance of forage crops. Disease pressure was not as high as what was observed in previous seasons, although the occurrence of leaf rust, and to a minor extent of stripe rust, caused yield damage in some fields.

Forage Trial Agronomic Data

Location¹	Cooperator(s)	Yield Limiting Issues	Planting Date	Fertilizer Total (lb N/A)	Pesticide Applied (Date)
Bushland²	Texas A&M AgriLife Research and Extension Center	Heavy rain after planting, severe drought thereafter	09/23/19	40	Quelex (3/11/20)
College Station	Texas A&M Research and Extension Agronomy Farm	Wet season	10/07/19	50	Ally/Amber (12/13/19)
Comanche²	Indian Creek Farm; Rodney Stephens	None	11/5/19	111	None
Wilbarger (Lockett)	Texas A&M AgriLife Research and Extension Center	None	10/01/18	138	None
Millersview	Mickey Dillard	None	10/28/19	35	None

¹These locations were planted with a seeding rate of 1.2 million seed/ac except for ryegrass which was 25 lb/ac. All seed was treated with Cruiser Maxx Vibrance for Cereals.

²Bushland and Comanche were the only locations where irrigation was available.

2020 Cool Season Forage Variety Trial - Total Season Forage Yield Statewide.

Species ¹	Variety	Source	Dry matter yield (lb/ac)				
			Bushland (Irrigated)	College Station	Comanche (Irrigated)	Millersview	Wilbarger
Barley	2011-F5-135-4	TAMU	--	2355	7508	2967	--
	2011-F5-126-2	TAMU	4878	--	--	2774	11283
	2011-F5-64-1	TAMU	--	3051	11414	--	--
	2011-F5-9-2	TAMU	4156	3343	8593	--	12016
	DH140760	Oregro Seeds	4487	3554	9543	--	11223
	DH140789	Oregro Seeds	3602	2586	11100	--	9992
	DH140797	Oregro Seeds	4468	2402	11636	--	10949
	MW76_2	Oregon State University	--	6633	7899	--	--
	P 919	Paramount Seed	--	--	--	2943	--
	Valor	Trical Superior Forage	5295	5466	8928	--	--
HRWW	CP7826	Croplan	3981	3924	8751	--	10727
	Gallagher	Oregon State University	--	--	--	2858	--
	KGAL	Unknown	3830	4387	10670	--	8534
	NF00108	Noble Research Institute	--	4683	7770	--	--
	NF101	Noble Research Institute	--	4500	8920	--	--
	NF97117	Noble Research Institute	--	4744	8273	--	--
	ON11D25005	Noble Research Institute	--	4411	10709	--	--
	ON1366277	Noble Research Institute	--	3892	8991	--	--
	ON13P016	Noble Research Institute	--	4618	8672	--	--
	SY Razor	Syngenta	--	--	--	2339	--
	TAM 114	TAMU	--	--	--	3186	--
	TAM 115	TAMU	4565	4149	11526	2519	11135
	TAM 204**	TAMU	--	--	--	1774	--
	TAM 205	TAMU	4908	4354	8030	2507	12117
	TAMbar 500	TAMU	--	--	--	3023	--
	TAMbar 501	TAMU	--	--	--	2957	--
	TX14A001035*	TAMU	4923	3978	5908	--	9704
	TX14M7061*	TAMU	5133	5236	7157	--	10080
	TX14V70214*	TAMU	4933	4074	9106	--	11854
	TX15M8024*	TAMU	5063	4453	11436	--	11346
	WB 4303	Westbred	5231	--	10485	--	13095
	WB 4515	Westbred	--	--	--	--	11994
	WB 4595	Westbred	4427	--	10047	--	10206
WB 4792	Westbred	4141	--	9966	--	11897	
Weathermaster 135**	Unknown	--	--	--	2389	--	
HRWW & HRSW	TAM801 & TAM114	TAMU	--	4118	10182	--	--
Oat	FL 0720	University of Florida	--	6228	--	--	--
	Heavy Grazer 76 30	East Texas Seed	--	--	--	2905	--
	LA10001SSBS-20-1	Louisiana State University	--	3645	8371	--	--
	LA10044SSBS-1	Louisiana State University	--	4161	7550	--	--
	LA11074SBSBSBSB-109	Louisiana State University	--	5658	8724	--	--
	TAMO 412	TAMU	--	4591	8466	--	--
	TAMO 606	TAMU	--	5897	8633	2575	--
	Trical 19001	Trical Superior Forage	--	4221	11259	--	--
	TX14OCS5061*	TAMU	--	5191	9153	--	--
	TX14OCS5212*	TAMU	--	4925	9899	--	--
	TX15OCS6039*	TAMU	--	4576	9501	--	--
	TX15OCS6142*	TAMU	--	4299	9068	--	--
	TX15OCS6163*	TAMU	--	5231	8805	--	--
	TX16OCS7009*	TAMU	--	4187	--	3075	--
	TX16OCS7100*	TAMU	--	4462	--	2969	--
Rye	Bates	Noble Research Institute	--	6832	8587	--	--
	Elbon	Noble Research Institute	--	4337	7197	2727	--
	Maton	Noble Research Institute	--	--	--	2564	--
	NF95319B	Noble Research Institute	--	5160	10453	--	--
	NF97325	Noble Research Institute	--	4712	10168	--	--
	NF99362	Noble Research Institute	--	4909	10778	--	--
Triticale	NF201	Noble Research Institute	--	4189	7699	--	--
	NF97226	Noble Research Institute	--	6535	7702	--	--
	Slicktrit II	Watley Seed	3660	--	--	2619	--
	Trical 0114	Trical Superior Forage	5030	--	--	--	--
	Trical 20T03	Trical Superior Forage	--	4789	6693	--	--
	Trical 20T04	Trical Superior Forage	--	4740	9708	--	--
	Trical 6023	Trical Superior Forage	4322	--	--	--	--
	Trical 131	Trical Superior Forage	4950	4503	10954	--	--
	Trical 718	Trical Superior Forage	4980	--	--	--	--
	Trical 813	Trical Superior Forage	5007	4656	11747	--	--
Trical Flex 719	Trical Superior Forage	6075	--	--	--	--	

2020 Cool Season Forage Variety Trial- Total Season Forage Yield Statewide Continued.

Species	Variety	Source	Dry matter yield (lb/ac)				
			Bushland (Irrigated)	College Station	Comanche (Irrigated)	Millersview	Wilbarger
	Trical Surge	Trical Superior Forage	5096	5545	10927	2512	--
	Trical Thor	Trical Superior Forage	4937	5604	8570	--	--
	TX12VT8222-3*	TAMU	4569	--	10758	--	10053
	TX14VT70526*	TAMU	5626	--	8073	--	12520
	TX16VT68295*	TAMU	5700	--	6993	--	12416
	TX17AT03*	TAMU	5760	--	7335	--	12328
	TX17AT10*	TAMU	4651	--	10282	--	11574
	LSD (0.05)		1168	2084	NS	NS	NS
	CV (%)		17	28	26	21	13
	Mean		4787	4574	9223	2709	11229

*Experimental Lines.

**Awnless/Beardless.

¹Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW).

2020 Cool-season Forage Variety Trial- Total Yield (lb/ac) by Species. Statewide.

Species ¹	Dry matter yield (lb/ac)				
	Bushland	College Station	Comanche	Millersview	Wilbarger
Barley	4481	3732	9578	2870	11093
HRWW	4649	4386	9175	2650	11057
HRWW & HRSW	--	4118	10182	--	--
Oat	--	4805	9039	2881	--
Rye	--	5190	9437	2645	--
Triticale	5026	5070	9016	2565	11778
LSD (0.05)	426	1128	NS	NS	NS
CV (%)	19	30	27	21	15
Mean	4719	4550	9404	2722	11309

¹Hard Red Winter Wheat (HRWW); Hard Red Spring Wheat (HRSW)

2020 Cool-season Forage Variety Trial - Total Yield (lb/ac) by Species. Bushland.

		Dry matter yield [‡] (lb/ac)
		<u>Clip3</u>
Rank [†]	Species ¹	3/6/20
1	Triticale	5026
2	HRWW	4649
3	Barley	4481
4	Rye	--
5	Oat	--
6	HRWW & HRSW	--
LSD (0.05)		426
CV (%)		19
Mean		4719

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Hard Red Spring Wheat (HRSW).

[‡]Only Clip1 was collected on 3/6/20 due to very dry conditions thereafter.

2020 Cool-season Forage Variety Trial- Total Yield (lb/ac) by Species. College Station.

Rank [†]	Species ¹	Dry Matter Yield (lb/ac) [‡]		
		Clip1 1/20/20	Clip3 4/27/20	Total 2020
1	Rye	236	4979	5190
2	Triticale	289	4792	5070
3	Oat	474	4331	4805
4	HRWW	182	4241	4386
5	HRWW & HRSW	511	3607	4118
6	Barley	268	3486	3732
LSD (0.05)		150	1133	1128
CV (%)		56	32	30
Mean		327	4239	4550

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Hard Red Spring Wheat (HRSW).

[‡]Clip2 was not collected due to wet conditions.

2020 Cool-season Forage Variety Trial - Total Yield (lb/ac) by Species. Comanche.

Rank [†]	Species ¹	Dry matter yield (lb/ac) [‡]		
		Clip1 2/18/20	Clip3 ^{‡‡} 5/6/20	Total 2020
1	HRWW & HRSW	1022	9159	10182
2	Barley	614	8855	9578
3	Rye	1506	7834	9437
4	HRWW	789	8387	9175
5	Oat	955	8108	9039
6	Triticale	974	8058	9016
LSD (0.05)		397	NS	NS
CV (%)		53	26	27
Mean		977	8400	9404

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Hard Red Spring Wheat (HRSW).

[‡]Clip2 was not collected due to logistical reasons.

^{‡‡}Dry matter yield for Clip 3 was calculated using an overall average dry matter sample of 64%.

2020 Cool-season Forage Variety Trial - Comanche County Uniform Forage Trial.

Rank [†]	Species ¹	Dry matter yield (lb/ac) [‡]		
		Clip1 2/18/20	Clip3 ^{‡‡} 5/6/20	Total 2020
1	Blend	1368	8125	9493
2	HRWW	439	8230	8669
3	SRWW	106	8403	8509
4	Oat	530	7861	8390
5	Triticale	391	6730	7121
6	Rye	293	6463	6756
7	Ryegrass	302	5641	5943
LSD (0.05)		355	1781	1770
CV (%)		67	22	21
Mean		490	7350	7840

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Soft Red Winter Wheat (SRWW).

[‡]Clip2 was not collected due to logistical reasons.

^{‡‡}Dry matter yield for Clip 3 was calculated using an overall average dry matter sample of 64%.

2020 Cool-season Forage Variety Trial - Comanche Silage Trial

Rank [†]	Species ¹	Dry matter yield (lb/ac)
		Clip3 [‡] 5/6/20
1	SRWW	12811
2	Ryegrass	9648
3	Oat	8043
4	WB	7949
5	HRWW	6754
6	Triticale	6476
7	Rye	5601
LSD (0.05)		3888
CV (%)		29
Mean		8183

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Soft Red Winter Wheat (SRWW).

[‡]Dry matter yield for Clip 3 was calculated using an overall average dry matter sample of 64%.

2020 Cool-season Forage Variety Trial - Comanche Cover Crop Trial.

Rank [†]	Species ¹	Dry matter yield (lb/ac)
		Clip3 [‡] 5/6/20
1	Rye	6429
2	Triticale	6135
LSD (0.05)		NS
CV (%)		20
Mean		6282

[†]Varieties were ranked according to 2020 total yield.

[‡]Dry matter yield for Clip 3 was calculated using an overall average dry matter sample of 64%.

2020 Cool-season Forage Variety Trial - Wilbarger.

Rank [†]	Species ¹	Dry matter yield (lb/ac)			
		Clip1 1/27/20	Clip2 3/6/20	Clip3 4/28/20	Total 2020
1	Triticale	1838	2997	6943	11778
2	Barley	1864	2775	6454	11093
3	HRWW	1725	2992	6341	11057
	HRWW & HRSW	--	--	--	--
	Oat	--	--	--	--
	Rye	--	--	--	--
LSD (0.05)		NS	NS	NS	NS
CV (%)		36	27	19	15
Mean		1809	2921	6579	11309

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Hard Red Spring Wheat (HRSW).

2020 Cool-season Forage Variety Trial - Millersview.

Rank [†]	Species ¹	Dry matter yield (lb/ac) [‡]		
		Clip1 2/24/20	Clip2 4/21/20	Total 2020
1	Oat	155	2726	2881
2	Barley	121	2750	2870
3	HRWW	135	2515	2650
4	Rye	151	2495	2645
5	Triticale	156	2409	2565
LSD (0.05)		NS	NS	NS
CV (%)		31	22	21
Mean		143	2579	2722

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW).

[‡]Clip3 was not collected due to due to limited rainfall and growth.

2020 Cool-season Forage Variety Trial - Bushland (Irrigated).

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac) [‡]
				Clip 3 3/6/20
1	Trical Flex 719	Triticale	Trical Superior Forage	6075
2	TX17AT03*	Triticale	TAMU	5760
3	TX16VT68295*	Triticale	TAMU	5700
4	TX14VT70526*	Triticale	TAMU	5626
5	Valor	Barley	Trical Superior Forage	5295
6	WB 4303	HRWW	Westbred	5231
7	TX14M7061*	HRWW	TAMU	5133
8	Trical Surge	Triticale	Trical Superior Forage	5096
9	TX15M8024*	HRWW	TAMU	5063
10	Trical 0114	Triticale	Trical Superior Forage	5030
11	Trical 813	Triticale	Trical Superior Forage	5007
12	Trical 718	Triticale	Trical Superior Forage	4980
13	Trical_131	Triticale	Trical Superior Forage	4950
14	Trical Thor	Triticale	Trical Superior Forage	4937
15	TX14V70214*	HRWW	TAMU	4933
16	TX14A001035*	HRWW	TAMU	4923
17	TAM 205	HRWW	TAMU	4908
18	2011-F5-126-2	Barley	TAMU	4878
19	TX17AT10*	Triticale	TAMU	4651
20	TX12VT8222-3*	Triticale	TAMU	4569
21	TAM 115	HRWW	TAMU	4565
22	DH140760	Barley	Oregro Seeds	4487
23	DH140797	Barley	Oregro Seeds	4468
24	WB 4595	HRWW	Westbred	4427
25	Trical 6023	Triticale	Trical Superior Forage	4322
26	2011-F5-9-2	Barley	TAMU	4156
27	WB 4792	HRWW	Westbred	4141
28	CP7826	HRWW	Croplan	3981
29	KGAL	HRWW	Unknown	3830
30	Slicktrit II**	Triticale	Watley Seed	3660
31	DH140789	Barley	Oregro Seeds	3602
LSD (0.05)				1168
CV (%)				17
Mean				4787

[†]Varieties were ranked according to 2020 total yield.

*Experimental Lines.

**Awnless/Beardless.

¹Hard Red Winter Wheat (HRWW)

[‡]Only Clip3 was collected on 3/6/20 due to very dry conditions thereafter.

2020 Cool-season Forage Variety Trial - Bushland (Irrigated).

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac)			
				4-year [‡]	3-year	2-year	2020
1	TAM 115	HRWW	TAMU	15659	12590	6315	4565
2	Slicktrit II**	Triticale	Watley Seed	14916	11529	7173	3660
3	TAM 205	HRWW	TAMU		12863	7102	4908
4	WB 4303	HRWW	Westbred		12744	7398	5231
5	DH140760	Barley	Oregro Seeds		10516	6215	4487
6	DH140789	Barley	Oregro Seeds		10439	6140	3602
7	Trical 718	Triticale	Trical Superior Forage			7674	4980
8	TX16VT68295*	Triticale	TAMU			7591	5700
9	TX14A001035*	HRWW	TAMU			7305	4923
10	TX14VT70526*	Triticale	TAMU			7302	5626
11	WB 4792	HRWW	Westbred			6757	4141
12	TX14V70214*	HRWW	TAMU			6677	4933
13	TX14M7061*	HRWW	TAMU			6599	5133
14	Trical Flex 719	Triticale	Trical Superior Forage				6075
15	TX17AT03*	Triticale	TAMU				5760
16	Valor	Barley	Trical Superior Forage				5295
17	Trical Surge	Triticale	Trical Superior Forage				5096
18	TX15M8024*	HRWW	TAMU				5063
19	Trical 0114	Triticale	Trical Superior Forage				5030
20	Trical 813	Triticale	Trical Superior Forage				5007
21	Trical 131	Triticale	Trical Superior Forage				4950
22	Trical Thor	Triticale	Trical Superior Forage				4937
23	2011-F5-126-2	Barley	TAMU				4878
24	TX17AT10*	Triticale	TAMU				4651
25	TX12VT8222-3*	Triticale	TAMU				4569
26	DH140797	Barley	Oregro Seeds				4468
27	WB 4595	HRWW	Westbred				4427
28	Trical 6023	Triticale	Trical Superior Forage				4322
29	2011-F5-9-2	Barley	TAMU				4156
30	CP7826	HRWW	Croplan				3981
31	KGAL	HRWW	Unknown				3830
LSD (0.05)				NS	1520	NS	1168
CV (%)				19	16	18	17
Mean				15287	11780	6942	4787

*Experimental Lines.

**Awnless/Beardless.

[†]Varieties were ranked according to 4-year, 3-year, 2-year, then 2020 total yield.

¹Hard Red Winter Wheat (HRWW)

[‡]4-year average was based on 2017, 2018, 2019, and 2020 yields.

2020 Statewide Cool-season Forage Variety Trial - College Station (Limited Irrigation).

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac) [‡]		
				Clip 1 1/20/20	Clip 3 4/27/20	Total 2020
1	Bates	Rye	Noble Research Institute	343	6489	6832
2	MW76_2	Barley	Oregon State University	64	6578	6633
3	NF97226	Triticale	Noble Research Institute	350	6185	6535
4	FL 0720	Oat	University of Florida	765	5463	6228
5	TAMO 606	Oat	TAMU	323	5574	5897
6	LA11074SBSBSBSB-109	Oat	Louisiana State University	699	4959	5658
7	Trical Thor	Triticale	Trical Superior Forage	166	5438	5604
8	Trical Surge	Triticale	Trical Superior Forage	515	5030	5545
9	Valor	Barley	Trical Superior Forage	153	5361	5466
10	TX14M7061*	HRWW	TAMU	106	5130	5236
11	TX15OCS6163*	Oat	TAMU	505	4726	5231
12	TX14OCS5061*	Oat	TAMU	196	4995	5191
13	NF95319B	Rye	Noble Research Institute	281	4879	5160
14	TX14OCS5212*	Oat	TAMU	444	4482	4925
15	NF99362	Rye	Noble Research Institute	223	4685	4909
16	Trical 20T03	Triticale	Trical Superior Forage	66	4736	4789
17	NF97117	HRWW	Noble Research Institute	426	4318	4744
18	Trical 20T04	Triticale	Trical Superior Forage	439	4301	4740
19	NF97325	Rye	Noble Research Institute	161	4551	4712
20	NF00108	HRWW	Noble Research Institute	266	4417	4683
21	Trical 813	Triticale	Trical Superior Forage	94	4562	4656
22	ON13P016	HRWW	Noble Research Institute	64	4568	4618
23	TAMO 412	Oat	TAMU	255	4336	4591
24	TX15OCS6039	Oat	TAMU	353	4223	4576
25	Trical 31	Triticale	Trical Superior Forage	330	4173	4503
26	NF101	HRWW	Noble Research Institute	227	4272	4500
27	TX16OCS7100*	Oat	TAMU	442	4020	4462
28	TX15M8024*	HRWW	TAMU	248	4205	4453
29	ON11D25005	HRWW	Noble Research Institute	67	4378	4411
30	KGAL	HRWW	Unknown	283	4104	4387
31	TAM 205	HRWW	TAMU	92	4317	4354
32	Elbon	Rye	Noble Research Institute	42	4289	4337
33	TX15OCS6142*	Oat	TAMU	717	3582	4299
34	Trical 19O01	Oat	Trical Superior Forage	772	3448	4221
35	NF201	Triticale	Noble Research Institute	277	3912	4189
36	TX16OCS7009*	Oat	TAMU	273	3914	4187
37	LA10044SSBS-1	Oat	Louisiana State University	638	3524	4161
38	TAM115	HRWW	TAMU	77	4073	4149
39	TAM 801 & TAM 114	HRWW_HRSW	TAMU	511	3607	4118
40	TX14V70214*	HRWW	TAMU	104	3970	4074
41	TX14A001035*	HRWW	TAMU	59	3922	3978
42	CP7826	HRWW	Croplan	67	3884	3924
43	ON1366277	HRWW	Noble Research Institute	88	3823	3892
44	LA10001SSBS-20-1	Oat	Louisiana State University	250	3395	3645
45	DH140760	Barley	Oregro Seeds	314	3240	3554
46	2011-F5-9-2	Barley	TAMU	404	2939	3343
47	2011-F5-64-1	Barley	TAMU	553	2499	3051
48	DH140789	Barley	Oregro Seeds	102	2484	2586
49	DH140797	Barley	Oregro Seeds	195	2207	2402
50	2011-F5-135-4	Barley	TAMU	248	2124	2355
LSD (0.05)				171	2089	2084
CV (%)				30	30	28
Mean				293	4286	4574

*Experimental Lines.

[†]Varieties were ranked according to 2020 total yield.

¹ Hard Red Winter Wheat (HRWW), Hard Red Spring Wheat (HRSW).

[‡]Clip2 was not collected due to wet conditions.

2020 Statewide Cool-season Forage Variety Trial - College Station (Limited Irrigation).

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac)			
				4-year [‡]	3-year	2-year	2020
1	FL 0720	Oat	University of Florida	4152	4989	5731	6228
2	TAM 115	HRWW	TAMU	3304	3930	4611	4149
3	NF97226	Triticale	Noble Research Institute		4660	5472	6535
4	ON13P016	HRWW	Noble Research Institute		4462	5037	4618
5	NF97117	HRWW	Noble Research Institute		4294	4806	4744
6	NF95319B	Rye	Noble Research Institute		4292	4731	5160
7	TAM 205	HRWW	TAMU		4139	4773	4354
8	NF97325	Rye	Noble Research Institute		4013	4602	4712
9	DH140760	Barley	Oregro Seeds		3907	4227	3554
10	DH140789	Barley	Oregro Seeds		3506	3926	2586
11	Bates	Rye	Noble Research Institute			5732	6832
12	TAMO 606	Oat	TAMU			5329	5897
13	LA11074SBSBSBSB-109	Oat	Louisiana State University			5088	5658
14	NF99362	Rye	Noble Research Institute			5031	4909
15	TAMO 412	Oat	TAMU			4961	4591
16	NF101	HRWW	Noble Research Institute			4567	4500
17	Elbon	Rye	Noble Research Institute			4424	4337
18	NF201	Triticale	Noble Research Institute			4387	4189
19	ON11D25005	HRWW	Noble Research Institute			4384	4411
20	LA10044SSBS-1	Oat	Louisiana State University			4311	4161
21	LA10001SSBS-20-1	Oat	Louisiana State University			4305	3645
22	MW76-2	Barley	Oregon State University				6633
23	Trical Thor	Triticale	Trical Superior Forage				5604
24	Trical Surge	Triticale	Trical Superior Forage				5545
25	Valor	Barley	Trical Superior Forage				5466
26	TX14M7061*	HRWW	TAMU				5236
27	TX15OCS6163*	Oat	TAMU				5231
28	TX14OCS5061*	Oat	TAMU				5191
29	TX14OCS5212*	Oat	TAMU				4925
30	Trical 20T03	Triticale	Trical Superior Forage				4789
31	Trical 20T04	Triticale	Trical Superior Forage				4740
32	NF00108	HRWW	Noble Research Institute				4683
33	Trical 813	Triticale	Trical Superior Forage				4656
34	TX15OCS6039*	Oat	TAMU				4576
35	Trical 31	Triticale	Trical Superior Forage				4503
36	TX16OCS7100*	Oat	TAMU				4462
37	TX15M8024*	HRWW	TAMU				4453
38	KGAL	HRWW	Unknown				4387
39	TX15OCS6142*	Oat	TAMU				4299
40	Trical 19O01	Oat	Trical Superior Forage				4221
41	TX16OCS7009*	Oat	TAMU				4187
42	TAM 801 & TAM 114	HRWW_HRSW	TAMU				4118
43	TX14V70214*	HRWW	TAMU				4074
44	TX14A001035*	HRWW	TAMU				3978
45	CP7826	HRWW	Croplan				3924
46	ON1366277	HRWW	Noble Research Institute				3892
47	2011-F5-9-2	Barley	TAMU				3343
48	2011-F5-64-1	Barley	TAMU				3051
49	DH140797	Barley	Oregro Seeds				2402
50	2011-F5-135-4	Barley	TAMU				2355
	LSD (0.05)			327	780	1191	2084
	CV (%)			12	20	21	28
	Mean			3728	4219	4783	4574

*Experimental Lines.

[†]Varieties were ranked according to 4-year, 3-year, 2-year, then 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Hard Red Spring Wheat (HRSW).

[‡]4-year average was based on 2017, 2018, 2019, and 2020 yields.

2020 Statewide Cool-season Forage Variety Trial - Comanche.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac) [‡]		
				Clip 1 2/18/20	Clip 3 ^{‡‡} 5/6/20	Total 2020
1	Trical 813	Triticale	Trical Superior Forage	959	10788	11747
2	DH140797	Barley	Oregro Seeds	425	11211	11636
3	TAM 115	HRWW	TAMU	857	10669	11526
4	TX15M8024*	HRWW	TAMU	712	10724	11436
5	2011-F5-64-1	Barley	TAMU	556	7069	11414
6	Trical 19001	Oat	Trical Superior Forage	1109	10150	11259
7	DH140789	Barley	Oregro Seeds	401	10699	11100
8	Trical 31	Triticale	Trical Superior Forage	1647	9307	10954
9	Trical Surge	Triticale	Trical Superior Forage	1764	9163	10927
10	NF99362	Rye	Noble Research Institute	2144	8364	10778
11	TX12VT8222-3*	Triticale	TAMU	1219	9539	10758
12	ON11D25005	HRWW	Noble Research Institute	517	10192	10709
13	KGAL	HRWW	Unknown	833	9836	10670
14	WB 4303	HRWW	Westbred	720	9838	10485
15	NF95319B	Rye	Noble Research Institute	1979	8474	10453
16	TX17AT10*	Triticale	TAMU	489	9794	10282
17	TAM801 & TAM114	HRWW_HRSW	TAMU	1022	9159	10182
18	NF97325	Rye	Noble Research Institute	1507	8661	10168
19	WB4595	HRWW	Westbred	745	9303	10047
20	WB4792	HRWW	Westbred	1054	8912	9966
21	TX14OCS5212*	Oat	TAMU	740	9159	9899
22	Trical 20T04	Triticale	Trical Superior Forage	956	8617	9708
23	DH140760	Barley	Oregro Seeds	835	8708	9543
24	TX15OCS6039*	Oat	TAMU	1033	8468	9501
25	TX14OCS5061*	Oat	TAMU	703	8450	9153
26	TX14V70214*	HRWW	TAMU	962	8144	9106
27	TX15OCS6142*	Oat	TAMU	1620	7448	9068
28	ON1366277	HRWW	Noble Research Institute	764	8227	8991
29	Valor	Barley	Trical Superior Forage	387	8541	8928
30	NF101	HRWW	Noble Research Institute	691	8228	8920
31	TX15OCS6163*	Oat	TAMU	634	8171	8805
32	CP7826	HRWW	Croplan	345	8406	8751
33	LA11074SBSBSBSB-109	Oat	Louisiana State University	1676	7048	8724
34	ON13P016	HRWW	Noble Research Institute	726	7946	8672
35	TAMO 606	Oat	TAMU	834	7799	8633
36	2011-F5-9-2	Barley	TAMU	810	7251	8593
37	Bates	Rye	Noble Research Institute	1851	6736	8587
38	Trical Thor	Triticale	Trical Superior Forage	567	8003	8570
39	TAMO 412	Oat	TAMU	424	8141	8466
40	LA10001SSBS-20-1	Oat	Louisiana State University	716	7654	8371
41	NF97117	HRWW	Noble Research Institute	998	7275	8273
42	TX14VT70526*	Triticale	TAMU	700	7373	8073
43	TAM 205	HRWW	TAMU	398	7633	8030
44	MW76_2	Barley	Oregon State University	498	7401	7899
45	NF00108	HRWW	Noble Research Institute	1776	5993	7770
46	NF97226	Triticale	Noble Research Institute	1330	6372	7702
47	NF201	Triticale	Noble Research Institute	994	6705	7699
48	LA10044SSBS-1	Oat	Louisiana State University	845	6705	7550
49	2011-F5-135-4	Barley	TAMU	1064	9617	7508
50	TX17AT03*	Triticale	TAMU	646	6689	7335
51	Elbon	Rye	Noble Research Institute	261	6935	7197
52	TX14M7061*	HRWW	TAMU	865	6292	7157
53	TX16VT68295*	Triticale	TAMU	778	6215	6993
54	Trical 20T03	Triticale	Trical Superior Forage	427	6371	6693
55	TX14A001035*	HRWW	TAMU	450	5458	5908
LSD (0.05)				554	NS	NS
CV (%)				37	25	26
Mean				908	8291	9223

*Experimental Lines.

[†] Varieties were ranked according to 2020 total yield.

¹ Hard Red Winter Wheat (HRWW), Hard Red Spring Wheat (HRSW).

[‡] Clip2 was not collected due to logistical reasons.

^{‡‡} Dry matter yield for Clip 3 was calculated using an overall average dry matter sample of 64%.

2020 Statewide Cool-season Forage Variety Trial - Comanche.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac) [‡]		
				3-year	2-year	2020
1	TAM 115	HRWW	TAMU	9670	9549	11526
2	DH140789	Barley	Oregro Seeds	9524	9778	11100
3	DH140760	Barley	Oregro Seeds	9185	8791	9543
4	NF97325	Rye	Noble Research Institute	8895	8796	10168
5	NF95319B	Rye	Noble Research Institute	8805	8934	10453
6	WB 4303	HRWW	Westbred	8508	8812	10485
7	ON13P016	HRWW	Noble Research Institute	8424	7780	8672
8	TAM 205	HRWW	TAMU	8313	7457	8030
9	NF97226	Triticale	Noble Research Institute	7984	7540	7702
10	NF97117	HRWW	Noble Research Institute	7812	7699	8273
11	NF99362	Rye	Noble Research Institute		9016	10778
12	ON11D25005	HRWW	Noble Research Institute		8824	10709
13	WB 4792	HRWW	Westbred		8763	9966
14	LA11074SBSBSB-109	Oat	Louisiana State University		8265	8724
15	NF101	HRWW	Noble Research Institute		8243	8920
16	TX14VT70526*	Triticale	TAMU		7985	8073
17	LA10001SSBS-20-1	Oat	Louisiana State University		7798	8371
18	TAMO 606	Oat	TAMU		7697	8633
19	NF201	Triticale	Noble Research Institute		7630	7699
20	TAMO 412	Oat	TAMU		7507	8466
21	Elbon	Rye	Noble Research Institute		7031	7197
22	TX16VT68295*	Triticale	TAMU		7000	6993
23	LA10044SSBS-1	Oat	Louisiana State University		6902	7550
24	Trical 813	Triticale	Trical Superior Forage			11747
25	DH140797	Barley	Oregro Seeds			11636
26	TX15M8024	HRWW	TAMU			11436
27	2011-F5-64-1	Barley	TAMU			11414
28	Trical 19O01	Oat	Trical Superior Forage			11259
29	Trical 31	Triticale	Trical Superior Forage			10954
30	Trical Surge	Triticale	Trical Superior Forage			10927
31	TX12VT8222-3*	Triticale	TAMU			10758
32	KGAL	HRWW	Unknown			10670
33	TX17AT10*	Triticale	TAMU			10282
34	TAM801 & TAM114	HRWW_HRSW	TAMU			10182
35	WB 4595	HRWW	Westbred			10047
36	TX14OCS5212*	Oat	TAMU			9899
37	Trical 20T04	Triticale	Trical Superior Forage			9708
38	TX15OCS6039*	Oat	TAMU			9501
39	TX14OCS5061*	Oat	TAMU			9153
40	TX14V70214*	HRWW	TAMU			9106
41	TX15OCS6142*	Oat	TAMU			9068
42	ON1366277	HRWW	Noble Research Institute			8991
43	Valor	Barley	Trical Superior Forage			8928
44	TX15OCS6163*	Oat	TAMU			8805
45	CP7826	HRWW	Croplan			8751
46	2011-F5-9-2	Barley	TAMU			8593
47	Bates	Rye	Noble Research Institute			8587
48	Trical Thor	Triticale	Trical Superior Forage			8570
49	MW76-2	Barley	Oregon State University			7899
50	NF00108	HRWW	Noble Research Institute			7770
51	2011-F5-135-4	Barley	TAMU			7508
52	TX17AT03*	Triticale	TAMU			7335
53	TX14M7061*	HRWW	TAMU			7157
54	Trical 20T03	Triticale	Trical Superior Forage			6693
55	TX14A001035*	HRWW	TAMU			5908
	LSD (0.05)			1245	1766	NS
	CV (%)			15	19	26
	Mean			8712	8165	9223

*Experimental Lines.

[†]Varieties were ranked according to 3-year, 2-year, then 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Hard Red Spring Wheat (HRSW).

[‡]3-year average was based on 2018, 2019 and 2020 yields.

2020 Statewide Cool-season Forage Variety Trial - Wilbarger.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac)			
				Clip 1 1/27/20	Clip 2 3/6/20	Clip 3 4/28/20	Total 2020
1	WB 4303	HRWW	Westbred	2379	4260	6456	13095
2	TX14VT70526*	Triticale	TAMU	2152	3268	7100	12520
3	TX16VT68295*	Triticale	TAMU	2223	3843	6349	12416
4	TX17AT03*	Triticale	TAMU	2012	3092	7223	12328
5	TAM 205	HRWW	TAMU	1892	2977	7248	12117
6	2011-F5-9-2	Barley	TAMU	2399	2939	6678	12016
7	WB 4515	HRWW	Westbred	1363	2766	7865	11994
8	WB 4792	HRWW	Westbred	1744	3509	6645	11897
9	TX14V70214*	HRWW	TAMU	2108	2818	6927	11854
10	TX17AT10*	Triticale	TAMU	1406	2073	8095	11574
11	TX15M8024*	HRWW	TAMU	1719	3106	6522	11346
12	2011-F5-126-2	Barley	TAMU	1662	2056	7566	11283
13	DH140760	Barley	Oregro Seeds	2136	3503	5584	11223
14	TAM 115	HRWW	TAMU	1784	2780	6571	11135
15	DH140797	Barley	Oregro Seeds	1560	2393	6996	10949
16	CP7826	HRWW	Croplan	1705	2656	6366	10727
17	WB 4595	HRWW	Westbred	1368	2898	5940	10206
18	TX14M7061*	HRWW	TAMU	1396	2857	5828	10080
19	TX12VT8222-3*	Triticale	TAMU	1395	2709	5949	10053
20	DH140789	Barley	Oregro Seeds	1563	2983	5447	9992
21	TX14A001035*	HRWW	TAMU	1842	2919	4943	9704
22	KGAL	HRWW	Unknown	1398	2358	4778	8534
	LSD (0.05)			NS	NS	1802	NS
	CV (%)			36	24	17	13
	Mean			1782	2944	6504	11229

*Experimental Lines

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW).

2020 Statewide Cool-season Forage Variety Trial - Wilbarger.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac)		
				3-year [‡]	2-year	2020 [#]
1	TAM 205	HRWW	TAMU	11133	13488	12117
2	TAM 115	HRWW	TAMU	10621	11092	11135
3	DH140760	Barley	Oregro Seeds	9864	11545	11223
4	DH140789	Barley	Oregro Seeds	7723	9996	9992
5	TX14VT70526*	Triticale	TAMU		15401	12520
6	TX16VT68295*	Triticale	TAMU		14043	12416
7	TX14V70214*	HRWW	TAMU		12621	11854
8	WB 4515	HRWW	Westbred		12509	11994
9	WB 4303	HRWW	Westbred		12071	13095
10	TX14A001035*	HRWW	TAMU		12003	9704
11	WB 4792	HRWW	Westbred		11660	11897
12	TX14M7061*	HRWW	TAMU		10710	10080
13	TX17AT03*	Triticale	TAMU			12328
14	2011-F5-9-2	Barley	TAMU			12016
15	TX17AT10*	Triticale	TAMU			11574
16	TX15M8024*	HRWW	TAMU			11346
17	2011-F5-126-2	Barley	TAMU			11283
18	DH140797	Barley	Oregro Seeds			10949
19	CP7826	HRWW	Croplan			10727
20	WB 4595	HRWW	Westbred			10206
21	TX12VT8222-3*	Triticale	TAMU			10053
22	KGAL	HRWW	Unknown			8534
	LSD (0.05)			1904	2234	NS
	CV (%)			20	16	13
	Mean			9835	12262	11229

*Experimental Lines

[†]Varieties were ranked according to 3-year, 2-year then 2020 total yield.

¹Hard Red Winter Wheat (HRWW).

[‡]3-year average was based on 2018, 2019 and 2020 yields.

[#]Only clip3 was taken in 2019.

2020 Statewide Cool-season Forage Variety Trial - Millersview.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac) [‡]		
				Clip 1 2/24/20	Clip 2 4/21/20	Total 2020
1	TAM 114	HRWW	TAMU	176	3010	3186
2	TX16OCS7009*	Oat	TAMU	151	2923	3075
3	TAMbar 500	HRWW	TAMU	138	2885	3023
4	TX16OCS7100*	Oat	TAMU	126	2843	2969
5	2011-F5-126-2	Barley	TAMU	132	2835	2967
6	TAMbar 501	HRWW	TAMU	135	2822	2957
7	P 919	Barley	Paramount Seed	132	2812	2943
8	Heavy Grazer 76-30	Oat	East Texas Seed	156	2749	2905
9	Gallagher	HRWW	Oklahoma State Univ.	160	2698	2858
10	2011-F5-9-2	Barley	TAMU	109	2665	2774
11	Elbon	Rye	Noble Research Institute	134	2593	2727
12	Slicktrit II**	Triticale	Watley Seed	160	2458	2619
13	TAMO 606	Oat	TAMU	184	2391	2575
14	Maton	Rye	Noble Research Institute	167	2397	2564
15	TAM 115	HRWW	TAMU	136	2383	2519
16	Trical Surge	Triticale	Trical Superior Forage	152	2360	2512
17	TAM 205	HRWW	TAMU	100	2407	2507
18	Weathermaster 135**	HRWW	Unknown	143	2246	2389
19	SY Razor**	HRWW	Syngenta	140	2200	2339
20	TAM 204	HRWW	TAMU	88	1686	1774
LSD (0.05)				NS	NS	NS
CV (%)				32	22	21
Mean				141	2568	2709

*Experimental line.

**Awnless/Beardless.

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW).

[‡]Clip3 was not collected due to limited rainfall and growth.

2020 Statewide Cool-season Forage Variety Trial - Millersview.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac)		
				3-year [‡]	2-year	2020
1	Elbon	Rye	Noble Research Institute	3463	4058	2727
2	Slicktrit II**	Triticale	Watley Seed	3212	4061	2619
3	TAM 114	HRWW	TAMU	3195	4072	3186
4	Maton	Rye	Noble Research Institute	3048	3812	2564
5	TAMO 606	Oat	TAMU	2826	3430	2575
6	TAM 204**	HRWW	TAMU	2307	2563	1774
7	Heavy Grazer-76-30	Oat	East Texas Seed		3928	2905
8	SY Razor	HRWW	Syngenta		3256	2339
9	Weathermaster 135**	HRWW	Unknown		2992	2389
10	TX16OCS7009*	Oat	TAMU			3075
11	TAMbar 500	HRWW	TAMU			3023
12	TX16OCS7100*	Oat	TAMU			2969
13	2011-F5-126-2	Barley	TAMU			2967
14	TAMbar 501	HRWW	TAMU			2957
15	P 919	Barley	Paramount Seed			2943
16	Gallagher	HRWW	Oklahoma State Univ.			2858
17	2011-F5-9-2	Barley	TAMU			2774
18	TAM 115	HRWW	TAMU			2519
19	Trical Surge	Triticale	Trical Superior Forage			2512
20	TAM 205	HRWW	TAMU			2507
LSD (0.05)				373	536	NS
CV (%)				13	13	21
Mean				3009	3575	2709

*Experimental Lines.

**Awnless/Beardless.

[†]Varieties were ranked according to 3-year, 2-year then 2020 total yield.

¹Hard Red Winter Wheat (HRWW).

[‡]3-year average was based on 2018, 2019 and 2020 yields.

2020 Statewide Cool-season Forage Variety Trial - Comanche County.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac) [‡]		
				Clip 1 2/18/20	Clip 3 ^{‡‡} 5/6/20	Total 2020
1	TAM 114	HRWW	TAMU	209	10909	11118
2	Haybet & TAM114	Barley/HRWW	--	1727	8130	9857
3	Bob	Oat	Producers Coop	663	8618	9281
4	BigMac/Razor	Oat/HRWW	--	1009	8120	9129
5	LCS Chrome	HRWW	Limagrain	270	8676	8945
6	TAM 204**	HRWW	TAMU	513	8291	8804
7	Oakes	SRWW	Syngenta	106	8403	8509
8	Heavy Grazer II	Oat	East Texas Seed	885	7612	8497
9	SY Flint	HRWW	Syngenta	390	7848	8239
10	TAMO 606	Oat	TAMU	397	7771	8168
11	Wintergrazer	Rye	--	281	7882	8164
12	Harrison	Oat	Louisiana State University	263	7520	7784
13	Slicktrit	Triticale	Watley Seed	108	7168	7276
14	SY Razor	HRWW	Syngenta	736	6354	7090
15	NF 201	Triticale	Noble Research Institute	674	6292	6965
16	Elbon	Rye	Noble Research Institute	420	6193	6613
17	Marshall	Ryegrass	--	352	6141	6494
18	Nelson	Ryegrass	TAMU	229	5828	6057
19	Maton II	Rye	Noble Foundation	178	5314	5492
20	Prine	Ryegrass	East Texas Seed	325	4953	5278
LSD (0.05)				50	2613	2640
CV (%)				55	21	20
Mean				487	7401	7888

*Experimental Lines.

**Awnless/Beardless.

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Soft Red Winter Wheat (SRWW).

[‡]Clip2 was not collected due to logistical reasons.

^{‡‡}Dry matter yield for Clip 3 was calculated using an overall average dry matter sample of 64%.

2020 Statewide Cool-season Forage Variety Trial - Comanche County.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac)		
				3-year [‡]	2-year	2020
1	TAM 114	HRWW	TAMU	7933	6929	11118
2	Oakes	SRWW	Syngenta	7038	5489	8509
3	TAM 204**	HRWW	TAMU	6858	5569	8804
4	SY Flint	HRWW	Syngenta	6691	5044	8239
5	Elbon	Rye	Noble Research Institute	6309	4806	6613
6	Slicktrit	Triticale	Watley Seed	6240	4478	7276
7	NF201	Triticale	Noble Research Institute	6094	4854	6965
8	SY Razor**	HRWW	Syngenta	6014	4464	7090
9	Bob	Oat	Producers Coop	5879	5520	9281
10	Maton II	Rye	Noble Foundation	5777	4320	5492
11	Harrison	Oat	Louisiana State University	5753	4663	7784
12	Prine	Ryegrass	East Texas Seed	5361	3562	5278
13	Nelson	Ryegrass	TAMU	5159	4067	6057
14	Haybet & TAM114	Barley/HRWW	--		6059	9857
15	Wintergrazer	Rye	--		5390	8164
16	TAMO 606	Oat	TAMU		4930	8168
17	Marshall	Ryegrass	--		4469	6494
18	BigMac/Razor	Oat/HRWW	--			9129
19	Heavy Grazer II	Oat	East Texas Seed			8497
20	LCS Chrome	HRWW	Limagrain			8945
LSD (0.05)				769	1218	2640
CV (%)				13	21	20
Mean				6239	4977	7888

**Awnless/Beardless.

[†]Varieties were ranked according to 3-year, 2-year, then 2020 total yield.

¹Hard Red Winter Wheat (HRWW).

[‡]3-year average was based on 2018, 2019 and 2020 yields.

2020 Statewide Cool-season Forage Variety Trial - Comanche Silage.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield(lb/ac)
				<u>Clip 3</u> 5/6/20
1	Oakes	SRWW	Syngenta	12811
2	Nelson	Ryegrass	TAMU	9648
3	Okay	Oat	Oklahoma State Univ.	8043
4	P919	Barley	Paramount Seed	7949
5	SY Razor**	HRWW	Syngenta	7317
6	NF 201	Triticale	Noble Research Institute	6476
7	TAM 114	HRWW	TAMU	6191
8	Maton II	Rye	Noble Research Institute	5601
LSD (0.05)				NS
CV (%)				29
Mean				8004

**Awnless/Beardless.

[†]Varieties were ranked according to 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Soft Red Winter Wheat (SRWW).

2020 Statewide Cool-season Forage Variety Trial - Comanche Silage.

Rank [†]	Variety	Species ¹	Source	Dry Matter Yield (lb/ac)		
				3-year [‡]	2-year	2020
1	Oakes	SRWW	Syngenta	9537	9357	12811
2	Nelson	Ryegrass	TAMU	7131	7356	9648
3	Okay	Oat	Oklahoma State Univ.	7267	6674	8043
4	P 919	Barley	Paramount Seed	5844	7031	7949
5	SY Razor**	HRWW	Syngenta	7520	6176	7317
6	N201	Triticale	Noble Research Institute	6963	6686	6476
7	TAM 114	HRWW	TAMU	7164	6054	6191
8	Maton II	Rye	Noble Research Institute	6482	5780	5601
LSD (0.05)				1314	1931	NS
CV (%)				19	24	29
Mean				7239	6889	8004

**Awnless/Beardless.

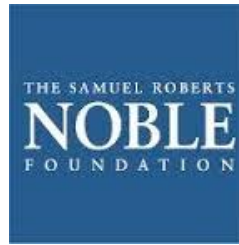
[†]Varieties were ranked according to 3-year, 2-year, then 2020 total yield.

¹Hard Red Winter Wheat (HRWW), Soft Red Winter Wheat (SRWW).

[‡]3-year average was based on 2018, 2019 and 2020 yields.

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