

2013

Texas Cool-Season Annual Forage and Grain Results



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Forage and Grain Results

Texas Cool-Season Annual Variety Trials

varietytesting.tamu.edu/wheat

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Introduction

The Cool-Season Annual Forage Variety Trial data presented in the following pages are the results from five 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 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 yield (forage and/or grain), 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 (grain, forage, or dual-purpose). 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, hail, 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 quality grain or forage is the best variety selection tool. It is important to consider decreasing yield 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 2014 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, where available, and to look at numerous relevant variety trial locations. Most locations in this publication will have multiple years of data presented.

Interpreting the Data:

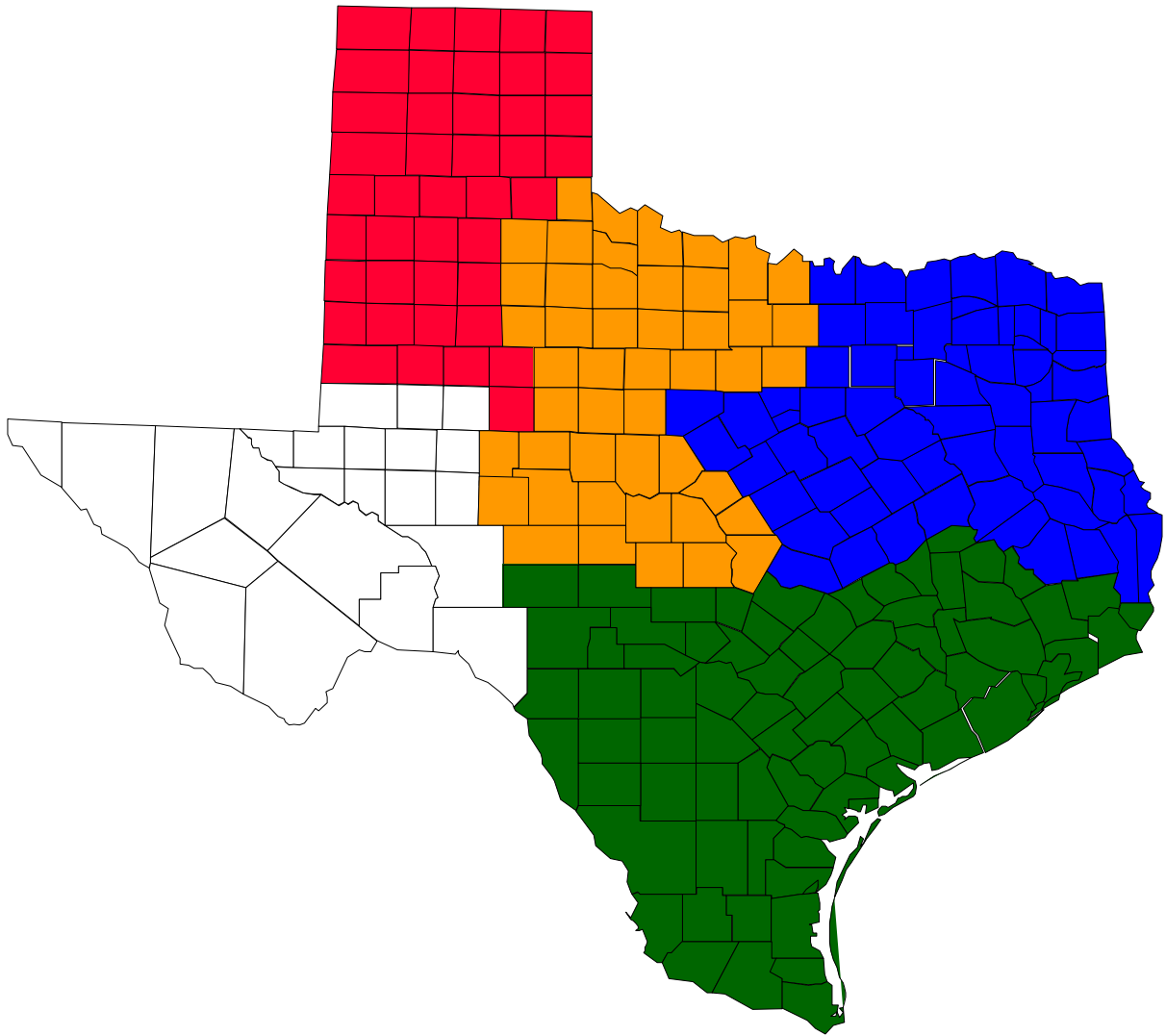
Forage yield, grain yield, and test weight at each location have been analyzed using appropriate statistical procedures. The statistical analysis provides the mean, CV, and LSD values. It is important to note these statistical values to prevent misinterpretation of any replicated data.

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 were experienced in that 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 a lot of 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 20th 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



2013 Texas Region Overview

Texas Blacklands:

The Texas Blacklands had an extremely good growing season for winter pasture compared to the rest of the state. Rainfall late in September allowed for many fields to be planted early for grazing. Unfortunately, if that rain was missed, the next significant rain event occurred late in December. Multiple freezing events in the spring may have hurt some producers in the area trying to harvest this crop for grain, but forage only producers didn't see any adverse effects. Insects had little affect in this year's forage crop. Late season rainfall came steady and often, causing delayed forage cuttings.

Texas High Plains:

Producers in the Texas High Plains struggled this winter with a continuing severe drought and numerous freezing events. Stand establishment was very difficult early in the season due to the drought when irrigation wasn't available. Dual-purpose crops were substantially injured by the March and April freezes. Insects and diseases were not a major problem in winter pastures in this area.

Texas Rolling Plains:

The Texas Rolling Plains producers also struggled while growing winter pastures. Dry conditions early in the season led to reduced stands and crop loss. Freezing events later in the season reduced the potential of grain yield significantly in crops grown also for seed production. Like the rest of the state, insects and diseases were not a major problem this year.

South Texas:

In the southern part of the state, conditions were not favorable to initiate winter pasture due to persistent drier conditions. If irrigation was not available, stands were reduced and even lost. Periods of lower temperatures were experienced in this part of the state as well; however, economic yield losses were not to the extent of the rest of the state. In some parts of South Texas, early dry conditions changed to late season storms with damaging winds and hail. Early season leaf rust was present and in some cases may have been a forage limiting factor. Insects were not a significant problem this season.

Forage Trial Agronomic Data

Location ¹	Cooperator(s)	Yield Limiting Issues	Planting Date	Fertilizer (Total)	Pesticide Applied (Date)
				(lb N/a)	
College Station: Forage Only	Texas A&M Research and Extension Agronomy Farm	None	10/3/12	90	Huskie (10/30/12) Weedmaster (2/8/13)
College Station: Dual Purpose²	Texas A&M Research and Extension Agronomy Farm	Volunteer Corn Early	9/22/11	80	Finess G&B (10/11/11) Buctril (10/25/11) Dimethoate (2/22/12)
Comanche	Indian Creek Farm; Rodney Stephens	Dry Conditions Throughout	9/26/12	65	None
Delta County	Texas A&M Commerce Research Farm	Volunteer Wheat Early; Abandoned	9/28/12	None	None
McGregor: Dual Purpose	Texas A&M AgriLife Research and Extension Center	Some Barley Yellow Dwarf Virus	9/30/11	100	Dimethoate (2/27/12)
Millersview	Mickey Dillard Joe Beach Millersview Community Producers	Wildlife; Volunteer Small Grains	9/27/12	None	None
Vernon²	Texas A&M AgriLife Research and Extension Center —	Dry Conditions Throughout	9/27/12	45	None

¹These locations were planted with a seeding rate of 90 lb/a. All seed was treated with Gaucho XT at a rate of 3.4 oz/cwt.

²College Station, Comanche and Vernon were the only locations that irrigation was available. College Station required an additional 1.25 inches of supplemental irrigation, while Vernon only applied 0.5" for stand establishment.

2012 Dual-Purpose Small Grains Forage and Grain Trial - College Station (Irrigated)

				2 YR Mean	2012 Total	2012 1st	2012 Grain		
2 Year				Forage	Forage	Clipping	Grain	Test	Protein
				Yield [†]	Yield	Yield	Yield	Weight	
Rank	Variety	Class ¹	Source	dry ton/a	dry ton/a	dry ton/a	bu/a	lb/bu	%
1	Doans	HRWW	Syngenta	2.93	3.57	2.35	49.0	63	12.0
2	Pete	HRWW	OSU	2.77	4.01	2.57	22.0	57	11.9
3	Coronado	HRWW	Syngenta	2.69	3.46	2.36	38.3	60	12.6
4	Coker 9553**	SRWW	Syngenta	2.67	3.77	2.41	51.0	62	12.2
5	Fuller	HRWW	KSU	2.67	3.87	2.45	30.6	58	13.1
6	TAM 401**	HRWW	TAMU	2.58	3.58	2.02	43.4	58	-
7	Terral LA 841	SRWW	Terral	2.58	3.22	1.89	49.0	60	12.6
8	Fannin	HRWW	Syngenta	2.57	3.18	2.12	38.4	62	13.7
9	Magnolia	SRWW	Syngenta	2.54	3.47	2.36	44.7	59	12.0
10	TAM 111	HRWW	TAMU	2.52	3.46	2.19	26.7	59	12.3
11	Weathermaster 135**	HRWW	Unknown	2.48	3.32	2.20	29.0	52	11.3
12	Bullet	HRWW	OSU	2.48	3.65	2.55	17.1	57	12.4
13	USG 3555	SRWW	UniSouth Genetics	2.47	3.15	1.62	49.4	58	12.9
14	Endurance	HRWW	OSU	2.45	3.34	2.37	36.5	59	11.5
15	TAM 304	HRWW	TAMU	2.44	3.00	1.73	43.3	59	12.5
16	Shocker	HRWW	WestBred	2.44	3.21	1.93	42.1	59	12.6
17	Duster	HRWW	OSU	2.43	3.19	1.89	38.4	59	12.3
18	HG 76-30	Oat	East Texas Seed	2.41	2.81	1.91	12.5	28	-
19	Heavy Grazer	SRWW	East Texas Seed	2.40	3.34	1.93	26.5	53	13.2
20	Billings	HRWW	OSU	2.39	3.00	1.88	38.2	61	12.0
21	Jagger	HRWW	KSU	2.36	3.34	2.11	17.3	52	13.3
22	TAM 112	HRWW	TAMU	2.35	2.86	1.66	17.0	56	12.7
23	TAMsoft 700	SRWW	TAMU	2.33	3.06	1.78	52.4	58	12.9
24	Jagalene	HRWW	Syngenta	2.33	3.39	2.04	13.5	53	12.8
25	RAM 99016	Oat	LSU	2.30	2.78	1.52	45.2	32	-
26	Sturdy 2K	HRWW	TAMU	2.28	3.16	2.02	34.8	59	11.7
27	Greer	HRWW	Syngenta	2.18	2.99	1.77	31.1	54	12.1
28	Jackpot	HRWW	Syngenta	2.14	3.05	2.08	25.4	53	12.3
29	Deliver	HRWW	OSU	2.06	2.75	1.79	36.7	61	12.0
30	Bob	Oat	UA	2.03	2.58	1.99	19.6	30	-
31	Armour	HRWW	WestBred	2.01	2.57	1.62	44.0	57	11.8
32	TAMO 406	Oat	TAMU	2.00	2.74	1.90	41.6	32	-
33	TAM 203	HRWW	TAMU	1.93	2.57	1.53	45.3	58	12.5
34	Horizon 201	Oat	Horizon	1.92	2.53	1.80	53.0	33	-
35	Harrison	Oat	LSU	1.85	2.55	1.79	23.8	30	-
36	TAMO 606	Oat	TAMU	1.80	2.26	1.20	34.3	28	12.9
37	SantaFe	HRWW	WestBred	-	3.54	2.05	23.1	55	13.0
Mean				2.35	3.14	1.98	34.7	53	12
CV (%)				20.1	18.7	23.4	15.6		
LSD (5%)				0.49	0.82	0.65	7.7		

**Awnless/Beardless

¹Hard Red Winter Wheat (HRWW)

Soft Red Winter Wheat (SRWW)

[†] Yield average for 2012 and 2011

2012 Dual-Purpose Small Grains Forage and Grain Trial - McGregor (Dryland)

				2 YR Mean	2012 Total	2012 Grain		
2 Year				Forage	Forage	Grain	Test	
				Yield [†]	Yield	Yield	Weight	Protien
Rank	Variety	Class ¹	Source	dry ton/a	dry ton/a	bu/a	lb/bu	%
1	Jagalene	HRWW	Syngenta	1.67	2.97	22.1	54	11.4
2	Billings	HRWW	OSU	1.64	2.67	49.7	59	12.0
3	Greer	HRWW	Syngenta	1.63	2.87	34.0	53	11.7
4	Fuller	HRWW	KSU	1.62	2.77	44.2	58	11.7
5	RAM 99016	Oat	LSU	1.60	2.72	43.6	42	-
6	Bullet	HRWW	OSU	1.55	2.86	20.0	55	12.5
7	Jackpot	HRWW	Syngenta	1.55	2.69	27.8	54	11.8
8	Deliver	HRWW	OSU	1.52	2.74	43.7	60	12.0
9	Magnolia	SRWW	Syngenta	1.51	2.59	48.1	56	11.6
10	HG 76-30	Oat	East Texas Seed	1.50	2.40	32.5	38	-
11	USG 3555	SRWW	UniSouth Genetics	1.46	2.47	49.2	56	11.5
12	Terral LA 841	SRWW	Terral	1.45	2.43	43.6	55	12.0
13	TAM 401**	HRWW	TAMU	1.44	2.39	51.7	56	11.9
14	Fannin	HRWW	Syngenta	1.44	2.42	50.2	60	12.4
15	TAM 304	HRWW	TAMU	1.41	2.33	51.9	56	12.6
16	Duster	HRWW	OSU	1.40	2.38	43.6	58	11.9
17	Pete	HRWW	OSU	1.40	2.49	30.5	57	11.8
18	Bob	Oat	UA	1.35	2.29	40.7	38	-
19	Armour	HRWW	WestBred	1.34	2.39	47.5	55	11.8
20	Heavy Grazer	SRWW	East Texas Seed	1.33	1.99	34.5	54	11.5
21	Horizon 201	Oat	Horizon	1.30	2.30	48.5	41	-
22	TAMO 606	Oat	TAMU	1.30	2.17	45.6	39	-
23	Harrison	Oat	LSU	1.27	2.23	39.2	41	-
24	TAMsoft 700	SRWW	TAMU	1.26	2.24	52.5	56	11.5
25	TAM 112	HRWW	TAMU	1.25	1.92	19.7	54	11.5
26	Coker 9553**	SRWW	Syngenta	1.25	2.02	50.4	59	12.1
27	Coronado	HRWW	Syngenta	1.24	2.04	37.4	57	11.7
28	Shocker	HRWW	WestBred	1.21	2.03	47.0	58	12.1
29	Weathermaster 135**	HRWW	Unknown	1.18	2.04	36.6	53	12.1
30	TAMO 406	Oat	TAMU	1.16	2.01	42.2	42	-
31	Endurance	HRWW	OSU	1.14	1.99	39.1	56	11.8
32	Doans	HRWW	Syngenta	1.13	1.80	44.2	60	12.5
33	Sturdy 2K	HRWW	TAMU	1.13	1.99	37.0	58	11.2
34	Jagger	HRWW	KSU	1.13	1.85	22.6	53	12.4
35	TAM 203	HRWW	TAMU	1.06	1.71	43.2	58	12.2
36	TAM 111	HRWW	TAMU	0.78	1.25	30.8	57	11.9
37	SantaFe	HRWW	WestBred	0.00	1.93	27.4	55	11.9
Mean				1.31	2.28	39.8	53	11.9
CV (%)				34.1 ^a	27.4 ^a	15.3		
LSD (5%)				0.46	0.89	8.5		

**Awnless/Beardless

¹Hard Red Winter Wheat (HRWW)

Soft Red Winter Wheat (SRWW)

[†] Yield average for 2012 and 2011

^aTrials with a coefficient of variation (CV) $\geq$ 25% contain excessive experimental error.

Readers should consider trials in a similar environment to confirm varietal yield.

2013 Small Grains Forage Trial - Summary by Location

				2013 Dry Matter Yield (ton/a)		
2013		Class ¹	Source	All Locations ²	College Station	Vernon
Rank	Variety			Average	4 Clips	3 Clips
1	P-919**	WB	Paramount Seeds	3.58	4.51	2.65
2	Walken	Oat	UK	3.51	4.62	2.39
3	RAM 99016	Oat	LSU	3.40	4.49	2.32
4	Heavy Grazer 76-30	Oat	East Texas Seed	3.40	4.41	2.39
5	TAMO 411	Oat	TAMU	3.26	4.23	2.28
6	TX10CAS581*	Oat	TAMU	3.25	4.21	2.28
7	TX08A001249*	HRWW	TAMU	3.21	4.32	2.10
8	TAMO 606	Oat	TAMU	3.21	3.91	2.50
9	TAMbar 501	WB	TAMU	3.17	4.52	1.82
10	TX10CAS279*	Oat	TAMU	3.17	4.29	2.05
11	TX07Z001505*	HRWW	TAMU	3.16	4.09	2.22
12	Heavy Grazer 73-06	SRWW	East Texas Seed	3.11	3.88	2.35
13	TAM 401**	HRWW	TAMU	3.11	4.14	2.07
14	Bob	Oat	UA	3.08	3.94	2.22
15	TX08V7173*	HRWW	TAMU	3.05	4.02	2.08
16	TX09CS1029*	Oat	TAMU	3.04	4.04	2.03
17	TX09CS1112*	Oat	TAMU	3.04	3.76	2.31
18	TAMO 406	Oat	TAMU	2.96	3.99	1.93
19	TAM 305	HRWW	TAMU	2.94	3.77	2.10
20	Weathermaster 135**	HRWW	Unknown	2.93	3.99	1.88
21	Maton	Rye	Noble Foundation	2.92	3.31	2.54
22	Fannin	HRWW	Syngenta	2.89	3.40	2.38
23	TX08V7313*	HRWW	TAMU	2.87	3.58	2.16
24	TAMcale 6331	TRIT	TAMU	2.86	3.45	2.27
25	TAMcale 5019	TRIT	TAMU	2.83	3.37	2.29
26	TX06V7266*	HRWW	TAMU	2.76	3.34	2.18
27	TX12VT8220*	TRIT	TAMU	-	-	2.75
28	HG-9	HRWW	Hardeman Grain	-	-	1.93
29	Razor	HRWW	Syngenta	-	-	1.90
30	TX12VT8224*	TRIT	TAMU	-	-	1.71
31	NF95418	Oat	Noble Foundation	-	4.74	-
32	Shooter	Oat	Orego Seeds	-	4.44	-
33	Nelson	Ryegrass	TAMU	-	4.32	-
34	TAMTBO	Ryegrass	TAMU	-	4.19	-
35	Prine	Ryegrass	Ragan and Massey	-	3.93	-
36	EK 102	SRWW	Erwin Kieth Seed	-	3.56	-
37	Elbon	Rye	Noble Foundation	-	3.47	-
38	Maximus	Ryegrass	Barenbrug	-	3.12	-
Mean				3.09	3.98	2.20
CV (%)				14.5	12.4	17.2
LSD (5%)				0.45	0.69	0.44

*Experimental Lines

**Awnless/Beardless

¹Hard Red Winter Wheat (HRWW)

Soft Red Winter Wheat (SRWW)

Triticale (TRIT)

Winter Barley (WB)

Ryegrass entries were all Tetraploids

²Comanche was not included in this average due to lack of dry forage weights.

2013 Small Grains Forage Trial - College Station (Irrigated)

				Dry Matter Yield (ton/a)			
3 Year				3 Year Total [‡]	2 Year Total [†]	2013 Total ^a	2013 First Clip
Rank	Variety	Class ¹	Source	Mean	Mean	4 Clips	1/22/13
1	P-919**	WB	Paramount Seeds	3.92	4.27	4.51	1.00
2	TAMbar 501	WB	TAMU	3.78	3.88	4.52	0.40
3	TAMO 606	Oat	TAMU	3.51	3.66	3.91	0.50
4	TX06V7266*	HRWW	TAMU	3.50	3.73	3.34	0.40
5	Heavy Grazer 73-06	SRWW	East Texas Seed	3.46	3.92	3.88	0.70
6	TAMO 411	Oat	TAMU	3.45	3.75	4.23	0.70
7	TAM 401**	HRWW	TAMU	3.41	3.85	4.14	1.10
8	RAM 99016	Oat	LSU	3.33	3.73	4.49	1.20
9	Fannin	HRWW	Syngenta	3.30	3.67	3.40	0.70
10	Weathermaster 135**	HRWW	Unknown	3.24	3.63	3.99	0.60
11	TAMcale 6331	TRIT	TAMU	3.24	3.55	3.45	1.30
12	TAMO 406	Oat	TAMU	3.15	3.48	3.99	0.60
13	Bob	Oat	UA	3.10	3.55	3.94	1.10
14	TAMcale 5019	TRIT	TAMU	3.09	3.43	3.37	0.50
15	Maton	Rye	Noble Foundation	3.06	3.48	3.31	0.40
16	TX07Z001505*	HRWW	TAMU	-	3.82	4.09	0.70
17	Walken	Oat	UK	-	3.64	4.62	0.80
18	NF95418	Oat	Noble Foundation	-	-	4.74	0.90
19	Shooter	Oat	Orego Seeds	-	-	4.44	1.30
20	Heavy Grazer 76-30	Oat	East Texas Seed	-	-	4.41	0.90
21	TX08A001249*	HRWW	TAMU	-	-	4.32	0.70
22	Nelson	Ryegrass	TAMU	-	-	4.32	0.70
23	TX10CAS279*	Oat	TAMU	-	-	4.29	0.60
24	TX10CAS581*	Oat	TAMU	-	-	4.21	0.70
25	TAMTBO	Ryegrass	TAMU	-	-	4.19	0.50
26	TX09CS1029*	Oat	TAMU	-	-	4.04	1.20
27	TX08V7173*	HRWW	TAMU	-	-	4.02	0.90
28	Prine	Ryegrass	Ragan and Massey	-	-	3.93	0.60
29	TAM 305	HRWW	TAMU	-	-	3.77	0.70
30	TX09CS1112*	Oat	TAMU	-	-	3.76	0.90
31	TX08V7313*	HRWW	TAMU	-	-	3.58	0.50
32	EK 102	SRWW	Erwin Kieth Seed	-	-	3.56	0.40
33	Elbon	Rye	Noble Foundation	-	-	3.47	0.50
34	Maximus	Ryegrass	Barenbrug	-	-	3.12	0.40
Mean				3.37	3.71	3.98	0.74
CV (%)				15.0	15.0	12.4	43.7 ^b
LSD (5%)				0.41	0.55	0.69	0.45

*Experimental Lines

**Awnless/Beardless

¹Hard Red Winter Wheat (HRWW)

Soft Red Winter Wheat (SRWW)

Triticale (TRIT)

Winter Barley (WB)

Ryegrass entries were all Tetraploids

[†]Yield average for 2013 and 2012

[‡]Yield average for 2013, 2012, and 2011

^aTotal forage is the sum of all forage clippings

^bTrials with a coefficient of variation (CV) ≥ 25% contain excessive experimental error.

Readers should consider trials in a similar environment to confirm varietal yield.

2013 Small Grains Forage Trial - Vernon (Irrigated)

				Dry Matter Yield (ton/a)			
3 Year				3 Year Total [‡]	2 Year Total [†]	2013 Total ^a	2013 First Clip
Rank	Variety	Class ¹	Source	Mean	Mean	3 Clips	12/6/12
1	Maton	Rye	Noble Foundation	2.34	2.19	2.54	0.54
2	TAMcale 6331	TRIT	TAMU	2.16	2.21	2.27	0.52
3	P-919**	WB	Paramount Seeds	2.14	2.30	2.65	0.49
4	TAMcale 5019	TRIT	TAMU	2.07	2.14	2.29	0.32
5	Fannin	HRWW	Syngenta	2.02	2.11	2.38	0.57
6	TX06V7266*	HRWW	TAMU	1.99	2.03	2.18	0.40
7	Heavy Grazer 73-06	SRWW	East Texas Seed	1.92	2.00	2.35	0.38
8	TAMO 411	Oat	TAMU	1.91	2.04	2.28	0.41
9	TAMO 606	Oat	TAMU	1.89	2.15	2.50	0.44
10	Bob	Oat	UA	1.88	1.94	2.22	0.33
11	RAM 99016	Oat	LSU	1.86	1.98	2.32	0.47
12	TAM 401**	HRWW	TAMU	1.81	1.95	2.07	0.37
13	Weathermaster 135**	HRWW	Unknown	1.79	1.74	1.88	0.28
14	TAMO 406	Oat	TAMU	1.76	1.77	1.93	0.25
15	TAMbar 501	WB	TAMU	1.61	1.74	1.82	0.44
16	TX07Z001505*	HRWW	TAMU	-	2.10	2.22	0.47
17	Walken	Oat	UK	-	2.06	2.39	0.41
18	TX12VT8220*	TRIT	TAMU	-	-	2.75	0.52
19	Heavy Grazer 76-30	Oat	East Texas Seed	-	-	2.39	0.31
20	TX09CS1112*	Oat	TAMU	-	-	2.31	0.24
21	TX10CAS581*	Oat	TAMU	-	-	2.28	0.34
22	TX08V7313*	HRWW	TAMU	-	-	2.16	0.36
23	TAM 305	HRWW	TAMU	-	-	2.10	0.32
24	TX08A001249*	HRWW	TAMU	-	-	2.10	0.29
25	TX08V7173*	HRWW	TAMU	-	-	2.08	0.37
26	TX10CAS279*	Oat	TAMU	-	-	2.05	0.46
27	TX09CS1029*	Oat	TAMU	-	-	2.03	0.34
28	HG 9	HRWW	Hardeman Grain	-	-	1.93	0.53
29	Razor	HRWW	Syngenta	-	-	1.90	0.34
30	TX12VT8224*	TRIT	TAMU	-	-	1.71	0.48
Mean				1.9	2.03	2.20	0.40
CV (%)				19.4	18.15	17.2	33.4 ^b
LSD (5%)				0.3	0.36	0.44	0.16

*Experimental Lines

**Awnless/Beardless

¹Hard Red Winter Wheat (HRWW)

Soft Red Winter Wheat (SRWW)

Triticale (TRIT)

Winter Barley (WB)

[†]Yield average for 2013 and 2012

[‡]Yield average for 2013, 2012, and 2011

^aTotal forage is the sum of all forage clippings

^bTrials with a coefficient of variation (CV) $\geq$ 25% contain excessive experimental error.

Readers should consider trials in a similar environment to confirm varietal yield.

2013 Small Grains Forage Trial - Comanche (Irrigated)

2013 Rank	Variety	Class ¹	Source	Wet Matter Yield (ton/a)	
				2013 Total ^a	2013 First Clip
				3 Clips	12/4/12
1	TX09CS1029*	Oat	TAMU	13.72	4.73
2	TAMcale 6331	TRIT	TAMU	12.88	4.02
3	TAMO 411	Oat	TAMU	11.21	2.03
4	Bob	Oat	UA	10.90	2.44
5	Shooter	Oat	Orego Seeds	9.79	1.85
6	RAM 99016	Oat	LSU	9.44	2.42
7	Heavy Grazer 76-30	Oat	East Texas Seed	8.82	2.41
8	P-919**	WB	Paramount Seeds	8.62	2.59
9	Fannin	HRWW	Syngenta	7.98	2.62
10	TX09CS1112*	Oat	TAMU	7.47	1.53
11	TX08A001249*	HRWW	TAMU	7.47	1.41
12	TX10CAS279*	Oat	TAMU	7.45	2.41
13	TX07Z001505*	HRWW	TAMU	7.24	2.06
14	TAM 401**	HRWW	TAMU	6.96	1.36
15	TX08V7173*	HRWW	TAMU	6.72	1.56
16	TAMcale 5019	TRIT	TAMU	6.70	1.26
17	Marshall	Ryegrass	MSU	6.70	1.25
18	TAMO 606	Oat	TAMU	6.69	2.25
19	Elbon	Rye	Noble Foundation	6.69	1.73
20	Walken	Oat	UK	6.66	2.06
21	Heavy Grazer 73-06	SRWW	East Texas Seed	6.48	0.70
22	Maton	Rye	Noble Foundation	6.25	1.22
23	NF95418	Oat	Noble Foundation	6.08	0.95
24	TX10CAS581*	Oat	TAMU	6.07	1.96
25	TAMO 406	Oat	TAMU	5.89	1.42
26	TAM 305	HRWW	TAMU	5.64	1.68
27	EK 102	SRWW	Erwin Keith Seed	5.10	1.40
28	TAMbar 501	WB	TAMU	4.98	2.15
29	TX08V7313*	HRWW	TAMU	4.91	1.67
30	Weathermaster 135**	HRWW	Unknown	4.66	1.73
31	Nelson	Ryegrass	TAMU	4.63	1.78
32	TX06V7266*	HRWW	TAMU	4.59	0.89
33	TAMTBO	Ryegrass	TAMU	4.38	1.20
Mean				7.27	1.90
CV (%)				14.4	26.2^b
LSD (5%)				0.20	0.20

*Experimental Lines

**Awnless/Beardless

¹Hard Red Winter Wheat (HRWW)

Soft Red Winter Wheat (SRWW)

Triticale (TRIT)

Winter Barley (WB)

Ryegrass entries were all Tetraploids

^aTotal forage is the sum of all forage clippings

^bTrials with a coefficient of variation (CV) $\geq$ 25% contain excessive experimental error.

Readers should consider trials in a similar environment to confirm varietal yield.

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