

SCS-2017-12



# 2017 Texas Cool-Season Annual Forage Results



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# 2017

## Forage Variety Results

Texas Cool-Season Annual Variety Trials

[varietytesting.tamu.edu/wheat](http://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 six 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 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 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 2017-18 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:**

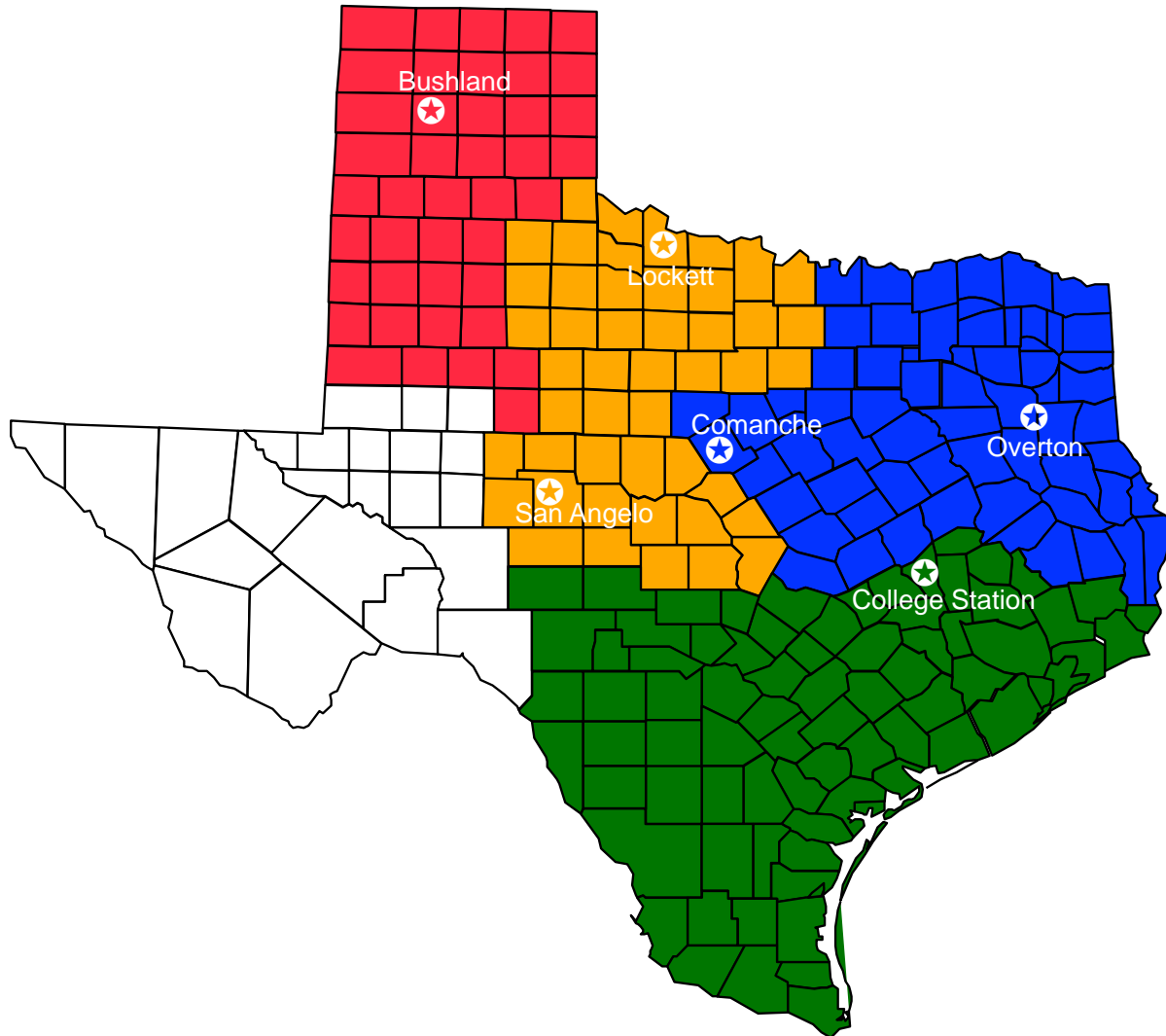
Forage yield at each location has been analyzed using appropriate statistical procedures. The statistical analysis provides the mean, CV, and LSD values. It is important to note these statistical values to prevent misinterpretation of any replicated data.

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 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 20<sup>th</sup> 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: 2017 Forage Trials



## Legend:

Texas High Plains



Texas Rolling Plains



Texas Blacklands and East Texas



South Texas



# 2017 Texas Region Overview

## **Texas Blacklands:**

The 2016-2017 growing season was atypical for the production winter pasture in the Northern Texas Blacklands. The fall growing conditions were extremely favorable. Adequate moisture at planting helped establish acceptable stands. Small grain crops progressed slowly with below normal rainfall in January and February 2017. Warm winter and spring temperatures promoted earlier than normal crop development with jointing and heading one to two weeks earlier than last year, depending on variety. Above normal temperatures in February promoted favorable conditions for leaf rust with very high and earlier than usual disease pressure across the region. Even resistant varieties sustained infection from the pathogen.

## **Texas High Plains:**

Across the Texas High Plains, moisture was variable at planting resulting in some dryland locations being dry sowed in the northern High Plains. Conditions in the central and southern Texas High Plains were above average at planting with good soil moisture and precipitation. Warm fall temperatures resulted in heavy fall forage production; however, in some areas, heavy growth resulted in depletion of soil water as there was below average winter precipitation across much of the region. The dry winter resulted in deteriorating small grain conditions especially on dryland acres. With February precipitation and the initiation of late-winter irrigation in response to warm temperatures, conditions significantly improved across much of the region with the exception of the northeastern Texas High Plains that received below average winter and early spring precipitation. With warm spring temperatures, maturity was earlier than normal. A late spring snow storm hit the northern Texas High Plains on April 30-May 1 bringing more than 4 inches of snow and wind speeds greater than 50 mph that resulted in frozen plants across the region. Stripe rust was heavier in the eastern counties and southern High Plains. Precipitation and cool temperatures persisted throughout the remainder of the spring. Scattered storms and heavy hail resulted in severe damage and losses in the Central High Plains in late May and early June.

## **Texas Rolling Plains:**

Fall planting conditions were above average with good moisture in September throughout the Rolling Plains in 2016. However, forage fields suffered from lack of winter precipitation, which continued throughout the growing season. Winter temperatures were mild; therefore, little damage from freeze injury was observed. There were a few reports of stripe rust infestation in the late fall of 2016 due to the warm temperatures. Stripe and leaf rust started later than expected in late-March to early-April in 2017.

## **South Texas:**

Conditions were favorable for planting small grain fields in South Texas in fall 2016. Adequate moisture throughout the region enabled good stand establishment throughout. Above normal winter temperatures created an environment that favored development and growth for grazing. Good moisture conditions continued throughout the spring allowing for the development and spread of foliar diseases; in particular leaf rust. Mild winter and spring temperatures led to crops maturing at a rate faster than expected. All crop stages occurred approximately two weeks earlier than anticipated.

# Forage Trial Agronomic Data

| Location <sup>1</sup>              | Cooperator(s)                                    | Yield Limiting Issues | Planting Date | Fertilizer Total (lb N/A) | Pesticide Applied (Date) |
|------------------------------------|--|-----------------------|---------------|---------------------------|--------------------------|
| <b>Bushland<sup>2</sup></b>        | Texas A&M AgriLife Research and Extension Center | NONE                  | 10/4/16       | 25                        | NONE                     |
| <b>College<sup>2</sup> Station</b> | Texas A&M Research and Extension Agronomy Farm   | NONE                  | 9/29/16       | 100                       | Weedmaster (2/13/17)     |
| <b>Comanche<sup>2</sup></b>        | Indian Creek Farm; Rodney Stephens               | Winterkill on Oats    | 9/30/16       | 120                       | Weedmaster (2/2/17)      |
| <b>Lockett</b>                     | Texas A&M AgriLife Research and Extension Center | Drought, ABANDONED    | --            | --                        | --                       |
| <b>Overton</b>                     | Texas A&M Research and Extension Center          | --                    | 10/17/16      | 375                       | NONE                     |
| <b>San Angelo</b>                  | Texas A&M AgriLife Research and Extension Center | Drought, ABANDONED    | 10/5/16       | --                        | --                       |

<sup>1</sup>These locations were planted with a seeding rate of 1.2 million Seed/A. All seed was treated with Cruiser Maxx Vibrance for Cereals

<sup>2</sup>Bushland, College Station, and Comanche were the only locations where irrigation was available.



**2017 Small Grains Forage Trial - Total Season Forage Yield Statewide**

| Class <sup>1</sup>      | Variety                    | Company                | Dry Matter Yield (lbs/a) |                                 |                      |                                |
|-------------------------|----------------------------|------------------------|--------------------------|---------------------------------|----------------------|--------------------------------|
|                         |                            |                        | Bushland (Irrigated)     | College Station (Lim.Irrigated) | Comanche (Irrigated) | Overton <sup>1</sup> (Dryland) |
| Blend                   | BigMac/Trical 348          | --                     | --                       | --                              | 11743                | --                             |
|                         | Haybet/Nelson              | --                     | --                       | 1484                            | --                   | --                             |
|                         | Haybet/TAM 114             | --                     | --                       | 1904                            | 10130                | --                             |
| HRWW                    | Endurance                  | OSU                    | 20736                    | --                              | --                   | --                             |
|                         | Fannin                     | Syngenta               | --                       | 1855                            | 10648                | --                             |
|                         | Gallagher                  | OSU                    | 23109                    | 2161                            | 11443                | --                             |
|                         | Iba                        | OSU                    | 26085                    | --                              | --                   | --                             |
|                         | SY Razor**                 | Syngenta               | 22931                    | 1653                            | 9579                 | --                             |
|                         | TAM 111                    | TAMU                   | 24755                    | --                              | --                   | --                             |
|                         | TAM 112                    | TAMU                   | 24535                    | --                              | --                   | --                             |
|                         | TAM 114                    | TAMU                   | 30172                    | 1968                            | 11997                | --                             |
|                         | TAM 204**                  | TAMU                   | 20627                    | --                              | --                   | --                             |
|                         | TAM 401**                  | TAMU                   | 23411                    | 1957                            | 9468                 | --                             |
|                         | TX07CS1948*                | TAMU                   | 16101                    | --                              | --                   | --                             |
|                         | TX11A001295*               | TAMU                   | 24865                    | 1423                            | 10646                | --                             |
|                         | TX12M4068*                 | TAMU                   | 25194                    | 2012                            | 11269                | --                             |
|                         | WB 4458                    | Westbred               | --                       | 2006                            | --                   | --                             |
|                         | WB Cedar                   | Westbred               | --                       | 1738                            | --                   | --                             |
|                         | WB Grainfield              | Westbred               | 23329                    | --                              | --                   | --                             |
| Weathermaster 135**     | Unknown                    | 23466                  | --                       | --                              | --                   |                                |
| Oat                     | FL 720                     | UF                     | --                       | 1641                            | 3723                 | --                             |
|                         | Harrison                   | LSU                    | --                       | --                              | 12489                | --                             |
|                         | Heavy Grazer II            | East Texas Seed        | --                       | 2686                            | 14037                | 6146                           |
|                         | Heavy Grazer 7630          | East Texas Seed        | --                       | 2561                            | 11268                | --                             |
|                         | Horizon 201                | UF                     | --                       | 2393                            | 10107                | --                             |
|                         | Okay                       | Noble Foundation       | 16965                    | 2708                            | 11970                | --                             |
|                         | TAMO 411                   | TAMU                   | --                       | 2472                            | 11947                | --                             |
|                         | TAMO 606                   | TAMU                   | --                       | 2530                            | 11242                | --                             |
|                         | TX09CS031*                 | TAMU                   | --                       | 2284                            | 9927                 | --                             |
|                         | TX09CS049*                 | TAMU                   | --                       | 2242                            | 11879                | --                             |
|                         | TX14OCS5098*               | TAMU                   | --                       | 2603                            | 11288                | --                             |
|                         | TX14OCS5139*               | TAMU                   | --                       | 2281                            | 7794                 | --                             |
|                         | TX14OCS5161*               | TAMU                   | --                       | 2228                            | 4227                 | --                             |
| Rye                     | Elbon                      | Noble Foundation       | --                       | --                              | --                   | 6479                           |
|                         | Maton                      | Noble Foundation       | 22794                    | 1149                            | 11530                | 6238                           |
|                         | Maton II                   | Noble Foundation       | 22478                    | 1494                            | 11029                | --                             |
|                         | Oklon                      | Noble Foundation       | 22053                    | 810                             | 10714                | --                             |
| Ryegrass                | Angusta                    | DLF Pickseed           | --                       | --                              | --                   | 7370                           |
|                         | Arnie                      | Heritage Seeds         | --                       | --                              | --                   | 4764                           |
|                         | Big Boss                   | Smith Seed             | --                       | --                              | --                   | 7094                           |
|                         | Credece                    | DLF Pickseed           | --                       | --                              | --                   | 7099                           |
|                         | Diamond T                  | Oregro Seeds           | --                       | --                              | --                   | 6082                           |
|                         | Double Diamond             | Oregro Seeds           | --                       | --                              | --                   | 6486                           |
|                         | Flying A <sup>1</sup>      | Oregro Seeds           | --                       | --                              | --                   | 6808                           |
|                         | Fria <sup>1</sup>          | Allied Seed            | --                       | --                              | --                   | 6847                           |
|                         | Gulf <sup>1</sup>          | TAMU                   | --                       | 1378                            | 7085                 | 7105                           |
|                         | Jackson <sup>1</sup>       | --                     | --                       | 1661                            | 9178                 | 7493                           |
|                         | Jumbo                      | Barenbrug              | --                       | --                              | --                   | 8067                           |
|                         | Kodiak                     | DLF Pickseed           | --                       | --                              | --                   | 7176                           |
|                         | Lonestar <sup>1</sup>      | Missouri Southern Seed | --                       | --                              | --                   | 9525                           |
|                         | Marshall <sup>1</sup>      | MSU                    | --                       | 1486                            | 8754                 | 7099                           |
|                         | Maximus                    | Barenbrug              | --                       | --                              | --                   | 6935                           |
|                         | Nelson                     | TAMU                   | --                       | 1816                            | 10182                | 6999                           |
|                         | New Dawn                   | DLF Pickseed           | --                       | --                              | --                   | 6016                           |
|                         | Passerel <sup>1</sup>      | Pennington Seed        | --                       | 1490                            | 9021                 | --                             |
|                         | Passerel Plus <sup>1</sup> | Pennington Seed        | --                       | --                              | --                   | 6906                           |
|                         | Prine                      | UF                     | --                       | 1417                            | 9838                 | 7230                           |
|                         | Spicer                     | Pennington Seed        | --                       | 1714                            | 8441                 | --                             |
|                         | Sungrazer                  | Oregro Seeds           | --                       | 1803                            | 9539                 | --                             |
|                         | TAM 90 <sup>1</sup>        | TAMU                   | --                       | 1145                            | 6933                 | 8290                           |
|                         | TAMTBO                     | TAMU                   | --                       | --                              | --                   | 7105                           |
|                         | Testratar                  | DLF Pickseed           | --                       | --                              | --                   | 7010                           |
|                         | Triangle T                 | Oregro Seeds           | --                       | --                              | --                   | 7394                           |
|                         | Vortex                     | Heritage Seeds         | --                       | --                              | --                   | 6772                           |
| WinterHawk <sup>1</sup> | Oregro Seeds               | --                     | --                       | --                              | 6490                 |                                |
| SRWW                    | Oakes                      | Syngenta               | --                       | --                              | 10287                | --                             |
| Triticale               | Forerunner**               | Gaylon Ward            | 20970                    | --                              | --                   | --                             |
|                         | Fridge**                   | Elliot Plant Breeding  | 21326                    | --                              | --                   | --                             |
|                         | NF 201                     | Noble Foundation       | 22149                    | 2169                            | 13168                | --                             |
|                         | Slicktrit II               | Watley Seed            | 25002                    | 440                             | 9031                 | --                             |
|                         | SY TF 131                  | Syngenta               | 21943                    | --                              | --                   | --                             |
|                         | SY TF 135                  | Syngenta               | 17061                    | --                              | --                   | --                             |
|                         | SY TF 813**                | Syngenta               | 24165                    | --                              | --                   | --                             |
|                         | TAMcale 5019               | TAMU                   | 25989                    | --                              | --                   | --                             |
|                         | Texan                      | Gaylon Ward            | 29719                    | --                              | --                   | --                             |
|                         | Trical 336                 | Trical                 | 24865                    | --                              | --                   | --                             |
|                         | Trical 348**               | Northern Seed          | 25094                    | --                              | 9326                 | --                             |
|                         | Trical 718                 | Northern Seed          | 22807                    | --                              | --                   | --                             |
|                         | Trical Gainer 154          | Northern Seed          | 21258                    | --                              | --                   | --                             |
|                         | TX12VT8220*                | TAMU                   | 19488                    | --                              | 12636                | --                             |
|                         | TX12VT8227*                | TAMU                   | 22300                    | --                              | 11931                | --                             |
|                         | TX12VT8228*                | TAMU                   | 20380                    | --                              | 11698                | --                             |
| WS1                     | Watley Seed                | 24755                  | --                       | --                              | --                   |                                |
| Winter Barley           | P-919**                    | Paramount Seed         | 22944                    | 2275                            | 11378                | --                             |
|                         | Pennbar 66                 | Gaylon Ward            | 17500                    | --                              | --                   | --                             |
|                         | Post 90                    | OSU                    | 21477                    | 1549                            | 10795                | --                             |
|                         | TAMbar 500                 | TAMU                   | 19831                    | --                              | --                   | --                             |
| TAMbar 501              | TAMU                       | 19159                  | 1610                     | 13094                           | --                   |                                |
| <b>Mean</b>             |                            |                        | <b>22595</b>             | <b>1854</b>                     | <b>10328</b>         | <b>6943</b>                    |
| <b>LSD (5%)</b>         |                            |                        | <b>4886</b>              | <b>389</b>                      | <b>2580</b>          | <b>1480</b>                    |
| <b>CV (%)</b>           |                            |                        | <b>13</b>                | <b>15</b>                       | <b>15</b>            | <b>18</b>                      |

<sup>1</sup>Hard Red Winter Wheat (HRWW); Soft Red Winter Wheat (SRWW)

<sup>1</sup>Diploid ryegrass variety

\*Experimental Lines

\*\*Awnless/Beardless

<sup>5</sup>Rye and oat entries not included in statistical analysis.

## 2017 Small Grains Forage Trial - Total Yield (lb/a) by Class

### 2017 Statewide

| Class <sup>1</sup> | Bushland<br>(Irrigated) | College<br>Station<br>(Lim.Irrigated) | Comanche<br>(Irrigated) | Overton<br>(Dryland) |
|--------------------|-------------------------|---------------------------------------|-------------------------|----------------------|
| HRWW               | 23522                   | 1833                                  | 10722                   | --                   |
| Oat                | --                      | 2453                                  | 10146                   | 6359                 |
| Rye                | 22442                   | 1151                                  | 11091                   | --                   |
| Ryegrass           | --                      | 1541                                  | 8775                    | 6943                 |
| Triticale          | 22898                   | 1304                                  | 11298                   | --                   |
| Winter Barley      | 20182                   | 1811                                  | 11756                   | --                   |
| <b>Mean</b>        | <b>22739</b>            | <b>1854</b>                           | <b>10329</b>            | <b>6943</b>          |
| <b>LSD (5%)</b>    | <b>2466</b>             | <b>285</b>                            | <b>1861</b>             | <b>1480</b>          |
| <b>CV (%)</b>      | <b>16</b>               | <b>21</b>                             | <b>23</b>               | <b>18</b>            |

### 2017 Bushland

| Class <sup>1</sup> | Cut 1       | Cut 2                 | Cut 3                 | Cut 4                 | Total        |
|--------------------|-------------|-----------------------|-----------------------|-----------------------|--------------|
| HRWW               | 2949        | 3016                  | 6195                  | 11363                 | 23522        |
| Triticale          | 3378        | 2249                  | 4166                  | 13105                 | 22898        |
| Rye                | 3036        | 3740                  | 6848                  | 8818                  | 22442        |
| Winter Barley      | 3473        | 2241                  | 4241                  | 10228                 | 20182        |
| <b>Mean</b>        | <b>3210</b> | <b>2638</b>           | <b>5110</b>           | <b>11781</b>          | <b>22739</b> |
| <b>LSD (5%)</b>    | <b>361</b>  | <b>493</b>            | <b>1012</b>           | <b>1994</b>           | <b>2466</b>  |
| <b>CV (%)</b>      | <b>17</b>   | <b>28<sup>a</sup></b> | <b>30<sup>a</sup></b> | <b>26<sup>a</sup></b> | <b>16</b>    |

### 2017 College Station

| Class <sup>1</sup> | Cut 1                 | Cut 2                 | Cut 3      | Cut 4     | Total       |
|--------------------|-----------------------|-----------------------|------------|-----------|-------------|
| Oat                | 760                   | 701                   | 993        | --        | 2453        |
| HRWW               | 604                   | 447                   | 789        | --        | 1833        |
| Winter Barley      | 496                   | 410                   | 905        | --        | 1811        |
| Blend              | 801                   | 296                   | 597        | --        | 1694        |
| Ryegrass           | 98                    | 562                   | 881        | --        | 1541        |
| Triticale          | 312                   | 490                   | 502        | --        | 1304        |
| Rye                | 191                   | 323                   | 636        | --        | 1151        |
| <b>Mean</b>        | <b>491</b>            | <b>525</b>            | <b>839</b> | <b>--</b> | <b>1854</b> |
| <b>LSD (5%)</b>    | <b>94</b>             | <b>141</b>            | <b>138</b> | <b>--</b> | <b>285</b>  |
| <b>CV (%)</b>      | <b>26<sup>a</sup></b> | <b>36<sup>a</sup></b> | <b>22</b>  | <b>--</b> | <b>21</b>   |

### 2017 Comanche

| Class <sup>1</sup> | Cut 1                 | Cut 2                 | Cut 3                 | Cut 4     | Total        |
|--------------------|-----------------------|-----------------------|-----------------------|-----------|--------------|
| Winter Barley      | 2347                  | 556                   | 8853                  | --        | 11756        |
| Triticale          | 2390                  | 411                   | 8498                  | --        | 11298        |
| Rye                | 1968                  | 813                   | 8310                  | --        | 11091        |
| Blend              | 2165                  | 95                    | 8677                  | --        | 10937        |
| HRWW               | 2412                  | 483                   | 7826                  | --        | 10722        |
| Oat                | 2748                  | 85                    | 7314                  | --        | 10146        |
| Ryegrass           | 2419                  | 360                   | 5996                  | --        | 8775         |
| <b>Mean</b>        | <b>2465</b>           | <b>337</b>            | <b>7527</b>           | <b>--</b> | <b>10329</b> |
| <b>LSD (5%)</b>    | <b>NS</b>             | <b>178</b>            | <b>1704</b>           | <b>--</b> | <b>1861</b>  |
| <b>CV (%)</b>      | <b>34<sup>a</sup></b> | <b>67<sup>a</sup></b> | <b>29<sup>a</sup></b> | <b>--</b> | <b>23</b>    |

<sup>1</sup>Hard Red Winter Wheat (HRWW)

<sup>a</sup>Trials with a coefficient of variation (CV) ≥ 25% contain excessive experimental error.

\*Soft Red Winter Wheat (SRWW) not included due to limited number of varieties.

**2017 Small Grains Forage Trial - Bushland (Irrigated)**

| Rank <sup>1</sup> | Variety             | Class <sup>2</sup> | Company               | Dry Matter Yield (lb/a) |             |             |              |              |
|-------------------|---------------------|--------------------|-----------------------|-------------------------|-------------|-------------|--------------|--------------|
|                   |                     |                    |                       | Clip 1                  | Clip 2      | Clip 3      | Clip 4       | Total        |
|                   |                     |                    |                       | 12/15/16                | 2/24/17     | 3/21/17     | 5/1/17       | 2017         |
| 1                 | TAM 114             | HRWW               | TAMU                  | 2962                    | 3484        | 9038        | 14688        | 30172        |
| 2                 | Texan               | Triticale          | Gaylon Ward           | 3607                    | 3333        | 5335        | 17445        | 29719        |
| 3                 | Iba                 | HRWW               | OSU                   | 3292                    | 2880        | 5980        | 13934        | 26085        |
| 4                 | TAMcale 5019        | Triticale          | TAMU                  | 3511                    | 2428        | 4540        | 15511        | 25989        |
| 5                 | TX12M4068*          | HRWW               | TAMU                  | 3154                    | 3333        | 7598        | 11109        | 25194        |
| 6                 | Trical 348**        | Triticale          | Gaylon Ward           | 3333                    | 1769        | 4732        | 15261        | 25094        |
| 7                 | Slicktrit II        | Triticale          | Watley Seed           | 3237                    | 2921        | 3730        | 15113        | 25002        |
| 8                 | Trical 336          | Triticale          | Northern Seed         | 3676                    | 3072        | 6460        | 11657        | 24865        |
| 9                 | TX11A001295*        | HRWW               | TAMU                  | 2674                    | 3154        | 6268        | 12768        | 24865        |
| 10                | TAM 111             | HRWW               | TAMU                  | 3182                    | 2770        | 6199        | 12604        | 24755        |
| 11                | WS1                 | Triticale          | Watley Seed           | 2784                    | 2496        | 3854        | 15621        | 24755        |
| 12                | TAM 112             | HRWW               | TAMU                  | 3689                    | 3758        | 5349        | 11740        | 24535        |
| 13                | SY TF 813**         | Triticale          | Syngenta              | 3333                    | 1742        | 2565        | 16526        | 24165        |
| 14                | Weathermaster 135** | HRWW               | Unknown               | 2935                    | 3182        | 6350        | 10999        | 23466        |
| 15                | TAM 401**           | HRWW               | TAMU                  | 2688                    | 3346        | 6638        | 10738        | 23411        |
| 16                | WB Grainfield       | HRWW               | Monsanto              | 3100                    | 2620        | 5568        | 12041        | 23329        |
| 17                | Gallagher           | HRWW               | OSU                   | 3113                    | 3264        | 6048        | 10684        | 23109        |
| 18                | P-919**             | Winter Barley      | Paramount Seeds       | 3525                    | 3223        | 4869        | 11328        | 22944        |
| 19                | SY Razor**          | HRWW               | Syngenta              | 2469                    | 2894        | 5705        | 11863        | 22931        |
| 20                | Trical 718          | Triticale          | Northern Seed         | 3154                    | 1769        | 3950        | 13934        | 22807        |
| 21                | Maton               | Rye                | Noble Foundation      | 3168                    | 4320        | 7008        | 8297         | 22794        |
| 22                | Maton II            | Rye                | Noble Foundation      | 3100                    | 3250        | 6844        | 9285         | 22478        |
| 23                | TX12VT8227*         | Triticale          | TAMU                  | 3538                    | 2304        | 4142        | 12316        | 22300        |
| 24                | NF 201              | Triticale          | Noble Foundation      | 4142                    | 2236        | 4402        | 11369        | 22149        |
| 25                | Oklon               | Rye                | Noble Foundation      | 2839                    | 3648        | 6693        | 8873         | 22053        |
| 26                | SY TF 131           | Triticale          | Syngenta              | 2853                    | 1426        | 3141        | 14524        | 21943        |
| 27                | Post 90             | Winter Barley      | OSU                   | 3772                    | 2016        | 4444        | 11246        | 21477        |
| 28                | Fridge**            | Triticale          | Elliot Plant Breeding | 2551                    | 1371        | 3415        | 13989        | 21326        |
| 29                | Trical Gainer 154   | Triticale          | Northern Seed         | 3730                    | 3346        | 6487        | 7694         | 21258        |
| 30                | Forerunner**        | Triticale          | Gaylon Ward           | 3113                    | 2441        | 4018        | 11397        | 20970        |
| 31                | Endurance           | HRWW               | OSU                   | 2482                    | 2441        | 7529        | 8284         | 20736        |
| 32                | TAM 204**           | HRWW               | TAMU                  | 3031                    | 2853        | 4361        | 10382        | 20627        |
| 33                | TX12VT8228*         | Triticale          | TAMU                  | 3634                    | 1961        | 3223        | 11561        | 20380        |
| 34                | TAMbar 500          | Winter Barley      | TAMU                  | 3264                    | 1948        | 3909        | 10711        | 19831        |
| 35                | TX12VT8220*         | Triticale          | TAMU                  | 3292                    | 2702        | 5157        | 8338         | 19488        |
| 36                | TAMbar 501          | Winter Barley      | TAMU                  | 3744                    | 2277        | 4608        | 8530         | 19159        |
| 37                | Pennbar 66          | Winter Barley      | Gaylon Ward           | 3058                    | 1742        | 3374        | 9326         | 17500        |
| 38                | SY TF 135           | Triticale          | Syngenta              | 3936                    | 919         | 1673        | 10533        | 17061        |
| 39                | Okay                | Oat                | Noble Foundation      | 2825                    | 1646        | 3772        | 8722         | 16965        |
| 40                | TX07CS1948*         | HRWW               | TAMU                  | 2510                    | 2249        | 4101        | 7241         | 16101        |
| <b>Mean</b>       |                     |                    |                       | <b>3200</b>             | <b>2613</b> | <b>5077</b> | <b>11705</b> | <b>22595</b> |
| <b>LSD (5%)</b>   |                     |                    |                       | <b>804</b>              | <b>936</b>  | <b>2011</b> | <b>4005</b>  | <b>4886</b>  |
| <b>CV (%)</b>     |                     |                    |                       | <b>16</b>               | <b>22</b>   | <b>24</b>   | <b>21</b>    | <b>13</b>    |

<sup>1</sup>Rank is based on Total Forage Weight

<sup>2</sup>Hard Red Winter Wheat (HRWW)

\*Experimental Lines

\*\*Awnless/Beardless

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

| Rank <sup>1</sup> | Variety             | Class <sup>2</sup> | Company               | Dry Matter Yield (lb/a)      |                 |                 |               |              |
|-------------------|---------------------|--------------------|-----------------------|------------------------------|-----------------|-----------------|---------------|--------------|
|                   |                     |                    |                       | 4-Year <sup>‡</sup><br>Total | 3-Year<br>Total | 2-Year<br>Total | 2017<br>Total |              |
| 1                 | TAM 114             | HRWW               | TAMU                  | 14142                        | 15505           | 18752           | 30172         |              |
| 2                 | Maton               | Rye                | Noble Foundation      | 13116                        | 13133           | 14683           | 22794         |              |
| 3                 | TAMcale 5019        | Triticale          | TAMU                  | 12390                        | 13752           | 16097           | 25989         |              |
| 4                 | Weathermaster 135** | HRWW               | Unknown               | 12169                        | 13109           | 15434           | 23466         |              |
| 5                 | P-919**             | Winter Barley      | Paramount Seeds       | 12004                        | 13166           | 15487           | 22944         |              |
| 6                 | Fridge**            | Triticale          | Elliot Plant Breeding | 11573                        | 12266           | 14749           | 21326         |              |
| 7                 | TAMbar 501          | Winter Barley      | TAMU                  | 11520                        | 12581           | 14374           | 19159         |              |
| 8                 | TAM 401**           | HRWW               | TAMU                  | 11151                        | 12782           | 15142           | 23411         |              |
| 9                 | TAM 204**           | HRWW               | TAMU                  | 11127                        | 12116           | 14196           | 20627         |              |
| 10                | Maton II            | Rye                | Noble Foundation      |                              | 12932           | 14198           | 22478         |              |
| 11                | SY Razor**          | HRWW               | Syngenta              |                              | 12417           | 14522           | 22931         |              |
| 12                | TX12VT8220*         | Triticale          | TAMU                  |                              | 12340           | 13597           | 19488         |              |
| 13                | Iba                 | HRWW               | OSU                   |                              |                 | 17107           | 26085         |              |
| 14                | Slicktrit II        | Triticale          | Watley Seed           |                              |                 | 16666           | 25002         |              |
| 15                | WS1                 | Triticale          | Watley Seed           |                              |                 | 15809           | 24755         |              |
| 16                | Oklon               | Rye                | Noble Foundation      |                              |                 | 14678           | 22053         |              |
| 17                | Endurance           | HRWW               | OSU                   |                              |                 | 14270           | 20736         |              |
| 18                | Texan               | Triticale          | Gaylon Ward           |                              |                 |                 | 29719         |              |
| 19                | TX12M4068*          | HRWW               | TAMU                  |                              |                 |                 | 25194         |              |
| 20                | Trical 348**        | Triticale          | Gaylon Ward           |                              |                 |                 | 25094         |              |
| 21                | Trical 336          | Triticale          | Northern Seed         |                              |                 |                 | 24865         |              |
| 22                | TX11A001295*        | HRWW               | TAMU                  |                              |                 |                 | 24865         |              |
| 23                | TAM 111             | HRWW               | TAMU                  |                              |                 |                 | 24755         |              |
| 24                | TAM 112             | HRWW               | TAMU                  |                              |                 |                 | 24535         |              |
| 25                | SY TF 813**         | Triticale          | Syngenta              |                              |                 |                 | 24165         |              |
| 26                | WB Grainfield       | HRWW               | Monsanto              |                              |                 |                 | 23329         |              |
| 27                | Gallagher           | HRWW               | OSU                   |                              |                 |                 | 23109         |              |
| 28                | Trical 718          | Triticale          | Northern Seed         |                              |                 |                 | 22807         |              |
| 29                | TX12VT8227*         | Triticale          | TAMU                  |                              |                 |                 | 22300         |              |
| 30                | NF 201              | Triticale          | Noble Foundation      |                              |                 |                 | 22149         |              |
| 31                | SY TF 131           | Triticale          | Syngenta              |                              |                 |                 | 21943         |              |
| 32                | Post 90             | Winter Barley      | OSU                   |                              |                 |                 | 21477         |              |
| 33                | Trical Gainer 154   | Triticale          | Northern Seed         |                              |                 |                 | 21258         |              |
| 34                | Forerunner**        | Triticale          | Gaylon Ward           |                              |                 |                 | 20970         |              |
| 35                | TX12VT8228*         | Triticale          | TAMU                  |                              |                 |                 | 20380         |              |
| 36                | TAMbar 500          | Winter Barley      | TAMU                  |                              |                 |                 | 19831         |              |
| 37                | Pennbar 66          | Winter Barley      | Gaylon Ward           |                              |                 |                 | 17500         |              |
| 38                | SY TF 135           | Triticale          | Syngenta              |                              |                 |                 | 17061         |              |
| 39                | OKAY                | Oat                | Noble Foundation      |                              |                 |                 | 16965         |              |
| 40                | TX07CS1948*         | HRWW               | TAMU                  |                              |                 |                 | 16101         |              |
|                   |                     |                    |                       | <b>Mean</b>                  | <b>12132</b>    | <b>13008</b>    | <b>15280</b>  | <b>22595</b> |
|                   |                     |                    |                       | <b>LSD (5%)</b>              | <b>1231</b>     | <b>1326</b>     | <b>2282</b>   | <b>4886</b>  |
|                   |                     |                    |                       | <b>CV (%)</b>                | <b>14</b>       | <b>12</b>       | <b>14</b>     | <b>13</b>    |

<sup>1</sup>Rank is based on 4-Year, 3-Year, 2-Year, then 2017 Totals

<sup>2</sup>Hard Red Winter Wheat (HRWW)

<sup>‡</sup>4-year average based on 2014, 2015, 2016 and 2017 yields.

\*Experimental Lines

\*\*Awnless/Beardless

**2017 Small Grains Forage Trial - College Station (Limited Irrigation)**

| Rank <sup>1</sup> | Variety               | Class <sup>2</sup> | Company          | Dry Matter Yield (lb/a) |                       |                  |               |
|-------------------|-----------------------|--------------------|------------------|-------------------------|-----------------------|------------------|---------------|
|                   |                       |                    |                  | Clip 1<br>12/1/16       | Clip 2<br>2/9/17      | Clip 3<br>3/3/17 | Total<br>2017 |
| 1                 | Okay                  | Oat                | Noble Foundation | 857                     | 821                   | 1030             | 2708          |
| 2                 | Heavy Grazer II       | Oat                | East Texas Seed  | 890                     | 702                   | 1094             | 2686          |
| 3                 | TX14OCS5098*          | Oat                | TAMU             | 890                     | 729                   | 985              | 2603          |
| 4                 | Heavy Grazer 7630     | Oat                | East Texas Seed  | 782                     | 721                   | 1059             | 2561          |
| 5                 | TAMO 606              | Oat                | TAMU             | 540                     | 765                   | 1225             | 2530          |
| 6                 | TAMO 411              | Oat                | TAMU             | 685                     | 687                   | 1101             | 2472          |
| 7                 | Horizon 201           | Oat                | UF               | 798                     | 644                   | 950              | 2393          |
| 8                 | TX09CS031*            | Oat                | TAMU             | 750                     | 683                   | 851              | 2284          |
| 9                 | TX14OCS5139*          | Oat                | TAMU             | 745                     | 726                   | 810              | 2281          |
| 10                | P-919**               | Winter Barley      | Paramount Seed   | 510                     | 517                   | 1248             | 2275          |
| 11                | TX09CS049*            | Oat                | TAMU             | 751                     | 544                   | 947              | 2242          |
| 12                | TX14OCS5161*          | Oat                | TAMU             | 672                     | 690                   | 867              | 2228          |
| 13                | NF 201                | Triticale          | Noble Foundation | 548                     | 903                   | 718              | 2169          |
| 14                | Gallagher             | HRWW               | OSU              | 600                     | 552                   | 1000             | 2161          |
| 15                | TX12M4068*            | HRWW               | TAMU             | 708                     | 387                   | 917              | 2012          |
| 16                | WB 4458               | HRWW               | Monsanto         | 605                     | 601                   | 801              | 2006          |
| 17                | TAM 114               | HRWW               | TAMU             | 619                     | 500                   | 848              | 1968          |
| 18                | TAM 401**             | HRWW               | TAMU             | 553                     | 559                   | 846              | 1957          |
| 19                | Haybet/TAM 114        | SB/HRWW Blend      | Blend            | 767                     | 423                   | 715              | 1904          |
| 20                | Fannin                | HRWW               | Syngenta         | 640                     | 475                   | 741              | 1855          |
| 21                | Nelson                | Ryegrass           | TAMU             | 199                     | 581                   | 1037             | 1816          |
| 22                | Sungrazer             | Ryegrass           | Oregro Seed      | 136                     | 680                   | 987              | 1803          |
| 23                | WB Cedar              | HRWW               | Monsanto         | 500                     | 420                   | 818              | 1738          |
| 24                | Spicer                | Ryegrass           | Pennington Seed  | 96                      | 710                   | 714              | 1714          |
| 25                | Jackson <sup>†</sup>  | Ryegrass           | --               | 58                      | 599                   | 1004             | 1661          |
| 26                | SY Razor**            | HRWW               | Syngenta         | 424                     | 482                   | 748              | 1653          |
| 27                | FL 720                | Oat                | UF               | 841                     | 228                   | 572              | 1641          |
| 28                | TAMbar 501            | Winter Barley      | TAMU             | 554                     | 298                   | 758              | 1610          |
| 29                | Post 90               | Winter Barley      | OSU              | 424                     | 416                   | 710              | 1549          |
| 30                | Maton II              | Rye                | Noble Foundation | 243                     | 474                   | 776              | 1494          |
| 31                | Passerel <sup>†</sup> | Ryegrass           | Pennington Seed  | 108                     | 511                   | 873              | 1490          |
| 32                | Marshall <sup>†</sup> | Ryegrass           | MSU              | 86                      | 548                   | 852              | 1486          |
| 33                | Haybet/Nelson         | SB/Ryegrass Blend  | Blend            | 836                     | 170                   | 479              | 1484          |
| 34                | TX11A001295*          | HRWW               | TAMU             | 554                     | 264                   | 605              | 1423          |
| 35                | Prine                 | Ryegrass           | UF               | 113                     | 411                   | 894              | 1417          |
| 36                | Gulf <sup>†</sup>     | Ryegrass           | TAMU             | 48                      | 572                   | 758              | 1378          |
| 37                | Maton                 | Rye                | Noble Foundation | 200                     | 290                   | 660              | 1149          |
| 38                | TAM 90 <sup>†</sup>   | Ryegrass           | TAMU             | 37                      | 485                   | 624              | 1145          |
| 39                | Oklon                 | Rye                | Noble Foundation | 131                     | 206                   | 473              | 810           |
| 40                | Slicktrit II          | Triticale          | Watley Seed      | 77                      | 77                    | 286              | 440           |
| <b>Mean</b>       |                       |                    |                  | <b>491</b>              | <b>525</b>            | <b>834</b>       | <b>1854</b>   |
| <b>LSD (5%)</b>   |                       |                    |                  | <b>124</b>              | <b>213</b>            | <b>203</b>       | <b>389</b>    |
| <b>CV (%)</b>     |                       |                    |                  | <b>18</b>               | <b>29<sup>a</sup></b> | <b>17</b>        | <b>15</b>     |

<sup>1</sup>Rank is based on Total Forage Weight

<sup>2</sup>Hard Red Winter Wheat (HRWW); Spring Barley (SB)

<sup>†</sup>Diploid ryegrass variety

\*Experimental Lines

\*\*Awnless/Beardless

<sup>a</sup>Trials with a coefficient of variation (CV) ≥ 25% contain excessive experimental error.

**Multi-Year Small Grains Forage Trial - College Station (Limited Irrigation)**

| Rank <sup>1</sup> | Variety               | Class <sup>2</sup> | Company          | Dry Matter Yield (lb/a)      |                 |                 |               |
|-------------------|-----------------------|--------------------|------------------|------------------------------|-----------------|-----------------|---------------|
|                   |                       |                    |                  | 4-Year <sup>‡</sup><br>Total | 3-Year<br>Total | 2-Year<br>Total | 2017<br>Total |
| 1                 | Nelson                | Ryegrass           | TAMU             | 5140                         | 4206            | 3924            | 1816          |
| 2                 | P-919**               | Winter Barley      | Paramount Seed   | 4746                         | 4228            | 3845            | 2275          |
| 3                 | TAMO 606              | Oat                | TAMU             | 4646                         | 3987            | 3339            | 2530          |
| 4                 | TAMO 411              | Oat                | TAMU             | 4542                         | 4017            | 3558            | 2472          |
| 5                 | Heavy Grazer 7630     | Oat                | East Texas Seed  | 4481                         | 3923            | 3454            | 2561          |
| 6                 | TAM 114               | HRWW               | TAMU             | 4398                         | 3540            | 2886            | 1968          |
| 7                 | TAMbar 501            | Winter Barley      | TAMU             | 3987                         | 3003            | 2710            | 1610          |
| 8                 | Fannin                | HRWW               | Syngenta         | 3719                         | 3154            | 2770            | 1855          |
| 9                 | TX09CS031*            | Oat                | TAMU             | 3701                         | 2973            | 2957            | 2284          |
| 10                | TAM 401**             | HRWW               | TAMU             | 3455                         | 2993            | 2962            | 1957          |
| 11                | Maton                 | Rye                | Noble Foundation | 3447                         | 2522            | 2066            | 1149          |
| 12                | Maton II              | Rye                | Noble Foundation | 3404                         | 2755            | 2214            | 1494          |
| 13                | Sungrazer             | Ryegrass           | Oregro Seed      |                              | 3794            | 3399            | 1803          |
| 14                | Okay                  | Oat                | Noble Foundation |                              | 3673            | 3052            | 2708          |
| 15                | Gulf <sup>†</sup>     | Ryegrass           | TAMU             |                              | 3606            | 2945            | 1378          |
| 16                | TAM 90 <sup>†</sup>   | Ryegrass           | TAMU             |                              | 3494            | 2942            | 1145          |
| 17                | Marshall <sup>†</sup> | Ryegrass           | MSU              |                              | 3001            | 2576            | 1486          |
| 18                | SY Razor**            | HRWW               | Syngenta         |                              | 2946            | 2632            | 1653          |
| 19                | Oklon                 | Rye                | Noble Foundation |                              | 2453            | 2000            | 810           |
| 20                | Heavy Grazer II       | Oat                | East Texas Seed  |                              |                 | 3471            | 2686          |
| 21                | NF 201                | Triticale          | Noble Foundation |                              |                 | 3270            | 2169          |
| 22                | TX09CS049*            | Oat                | TAMU             |                              |                 | 3034            | 2242          |
| 23                | WB Cedar              | HRWW               | Monsanto         |                              |                 | 2707            | 1738          |
| 24                | WB 4458               | HRWW               | Monsanto         |                              |                 | 2692            | 2006          |
| 25                | TX14OCS5098*          | Oat                | TAMU             |                              |                 |                 | 2603          |
| 26                | Horizon 201           | Oat                | UF               |                              |                 |                 | 2393          |
| 27                | TX14OCS5139*          | Oat                | TAMU             |                              |                 |                 | 2281          |
| 28                | TX14OCS5161*          | Oat                | TAMU             |                              |                 |                 | 2228          |
| 29                | Gallagher             | HRWW               | OSU              |                              |                 |                 | 2161          |
| 30                | TX12M4068*            | HRWW               | TAMU             |                              |                 |                 | 2012          |
| 31                | Haybet/TAM 114        | SB/HRWW Blend      | Blend            |                              |                 |                 | 1904          |
| 32                | Spicer                | Ryegrass           | Pennington Seed  |                              |                 |                 | 1714          |
| 33                | Jackson <sup>†</sup>  | Ryegrass           | --               |                              |                 |                 | 1661          |
| 34                | FL 720                | Oat                | UF               |                              |                 |                 | 1641          |
| 35                | Post 90               | Winter Barley      | OSU              |                              |                 |                 | 1549          |
| 36                | Passerel <sup>†</sup> | Ryegrass           | Pennington Seed  |                              |                 |                 | 1490          |
| 37                | Haybet/Nelson         | SB/Ryegrass Blend  | Blend            |                              |                 |                 | 1484          |
| 38                | TX11A001295*          | HRWW               | TAMU             |                              |                 |                 | 1423          |
| 39                | Prine                 | Ryegrass           | UF               |                              |                 |                 | 1417          |
| 40                | Slicktrit II          | Triticale          | Watley Seed      |                              |                 |                 | 440           |
|                   |                       |                    | <b>Mean</b>      | <b>4134</b>                  | <b>3370</b>     | <b>2975</b>     | <b>1854</b>   |
|                   |                       |                    | <b>LSD (5%)</b>  | <b>507</b>                   | <b>493</b>      | <b>592</b>      | <b>389</b>    |
|                   |                       |                    | <b>CV (%)</b>    | <b>17</b>                    | <b>17</b>       | <b>19</b>       | <b>15</b>     |

<sup>1</sup>Rank is based on 4-Year, 3-Year, 2-Year, then 2017 Totals

<sup>2</sup>Hard Red Winter Wheat (HRWW); Spring Barley (SB)

<sup>†</sup>Diploid ryegrass variety

<sup>‡</sup>4-year average based on 2014, 2015, 2016, and 2017 yields.

\*Experimental Lines

\*\*Awnless/Beardless

### 2017 Small Grains Forage Trial - Comanche (Irrigated)

| Rank <sup>1</sup> | Variety               | Class <sup>2</sup>  | Company          | Dry Matter Yield (lb/a) |                       |             |              |
|-------------------|-----------------------|---------------------|------------------|-------------------------|-----------------------|-------------|--------------|
|                   |                       |                     |                  | Clip 1                  | Clip 2                | Clip 3      | Total        |
|                   |                       |                     |                  | 12/9/16                 | 2/2/17                | 4/20/17     | 2017         |
| 1                 | Heavy Grazer II       | Oat                 | East Texas Seed  | 3407                    | 151                   | 10479       | 14037        |
| 2                 | NF 201                | Triticale           | Noble Foundation | 2400                    | 597                   | 10171       | 13168        |
| 3                 | TAMbar 501            | Winter Barley       | TAMU             | 2083                    | 256                   | 10755       | 13094        |
| 4                 | TX12VT8220*           | Triticale           | TAMU             | 2916                    | 995                   | 8724        | 12636        |
| 5                 | Harrison              | Oat                 | LSU              | 2968                    | 182                   | 9339        | 12489        |
| 6                 | TAM 114               | HRWW                | TAMU             | 2907                    | 513                   | 8577        | 11997        |
| 7                 | Okay                  | Oat                 | Noble Foundation | 3749                    | 295                   | 7927        | 11970        |
| 8                 | TAMO 411              | Oat                 | TAMU             | 3099                    | 68                    | 8780        | 11947        |
| 9                 | TX12VT8227*           | Triticale           | TAMU             | 2146                    | 377                   | 9407        | 11931        |
| 10                | TX09CS049*            | Oat                 | TAMU             | 2690                    | 48                    | 9141        | 11879        |
| 11                | BigMac/Trical 348     | Oat/Triticale Blend | Blend            | 1908                    | 144                   | 9691        | 11743        |
| 12                | TX12VT8228*           | Triticale           | TAMU             | 2611                    | 462                   | 8625        | 11698        |
| 13                | Maton                 | Rye                 | Noble Foundation | 2014                    | 815                   | 8700        | 11530        |
| 14                | Gallagher             | HRWW                | OSU              | 2267                    | 516                   | 8660        | 11443        |
| 15                | P-919**               | Winter Barley       | Paramount Seed   | 2838                    | 923                   | 7618        | 11378        |
| 16                | TX14OCS5098*          | Oat                 | TAMU             | 2631                    | 61                    | 8597        | 11288        |
| 17                | TX12M4068*            | HRWW                | TAMU             | 1963                    | 350                   | 8956        | 11269        |
| 18                | Heavy Grazer 7630     | Oat                 | East Texas Seed  | 2317                    | 80                    | 8871        | 11268        |
| 19                | TAMO 606              | Oat                 | TAMU             | 2579                    | 118                   | 8546        | 11242        |
| 20                | Maton II              | Rye                 | Noble Foundation | 1787                    | 979                   | 8263        | 11029        |
| 21                | Post 90               | Winter Barley       | OSU              | 2119                    | 491                   | 8186        | 10795        |
| 22                | Oklon                 | Rye                 | Noble Foundation | 2103                    | 645                   | 7966        | 10714        |
| 23                | Fannin                | HRWW                | Syngenta         | 2916                    | 238                   | 7494        | 10648        |
| 24                | TX11A001295*          | HRWW                | TAMU             | 2582                    | 563                   | 7501        | 10646        |
| 25                | Oakes                 | SRWW                | Syngenta         | 2351                    | 346                   | 7591        | 10287        |
| 26                | Nelson                | Ryegrass            | TAMU             | 2828                    | 270                   | 7084        | 10182        |
| 27                | Haybet/TAM 114        | SB/HRWW Blend       | Blend            | 2421                    | 46                    | 7664        | 10130        |
| 28                | Horizon 201           | Oat                 | UF               | 2297                    | 49                    | 7762        | 10107        |
| 29                | TX09CS031*            | Oat                 | TAMU             | 2126                    | 49                    | 7752        | 9927         |
| 30                | Prine                 | Ryegrass            | UF               | 2444                    | 335                   | 7059        | 9838         |
| 31                | SY Razor**            | HRWW                | Syngenta         | 2244                    | 461                   | 6874        | 9579         |
| 32                | Sungrazer             | Ryegrass            | Oregro Seed      | 2650                    | 199                   | 6689        | 9539         |
| 33                | TAM 401**             | HRWW                | TAMU             | 2004                    | 743                   | 6722        | 9468         |
| 34                | Trical 348**          | Triticale           | Gaylon Ward      | 2027                    | 35                    | 7264        | 9326         |
| 35                | Jackson <sup>†</sup>  | Ryegrass            | --               | 2912                    | 740                   | 5526        | 9178         |
| 36                | Slicktrit II          | Triticale           | Watley Seed      | 2237                    | 0                     | 6794        | 9031         |
| 37                | Passerel <sup>†</sup> | Ryegrass            | Pennington Seed  | 2682                    | 248                   | 6091        | 9021         |
| 38                | Marshall <sup>†</sup> | Ryegrass            | MSU              | 2341                    | 635                   | 5778        | 8754         |
| 39                | Spicer                | Ryegrass            | Pennington Seed  | 2575                    | 101                   | 5766        | 8441         |
| 40                | TX14OCS5139*          | Oat                 | TAMU             | 2399                    | 0                     | 5395        | 7794         |
| 41                | Gulf <sup>†</sup>     | Ryegrass            | TAMU             | 1609                    | 272                   | 5203        | 7085         |
| 42                | TAM 90 <sup>†</sup>   | Ryegrass            | TAMU             | 1725                    | 444                   | 4765        | 6933         |
| 43                | TX14OCS5161*          | Oat                 | TAMU             | 2852                    | 0                     | 1375        | 4227         |
| 44                | FL 720                | Oat                 | UF               | 2608                    | 0                     | 1116        | 3723         |
|                   |                       |                     | <b>Mean</b>      | <b>2462</b>             | <b>337</b>            | <b>7528</b> | <b>10328</b> |
|                   |                       |                     | <b>LSD (5%)</b>  | <b>NS</b>               | <b>207</b>            | <b>2299</b> | <b>2580</b>  |
|                   |                       |                     | <b>CV (%)</b>    | <b>35<sup>a</sup></b>   | <b>38<sup>a</sup></b> | <b>19</b>   | <b>15</b>    |

<sup>1</sup>Rank is based on Total Forage Weight

<sup>2</sup>Hard Red Winter Wheat (HRWW); Soft Red Winter Wheat (SRWW); Spring Barley (SB)

<sup>†</sup>Diploid ryegrass variety

\*Experimental Lines

\*\*Awnless/Beardless

<sup>a</sup>Trials with a coefficient of variation (CV)  $\geq$  25% contain excessive experimental error.

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

| Rank <sup>1</sup> | Variety               | Class <sup>2</sup>  | Company          | Dry Matter Yield (lb/a)      |                 |               |
|-------------------|-----------------------|---------------------|------------------|------------------------------|-----------------|---------------|
|                   |                       |                     |                  | 3-Year <sup>‡</sup><br>Total | 2-Year<br>Total | 2017<br>Total |
| 1                 | TAMbar 501            | Winter Barley       | TAMU             | 9339                         | 10328           | 13094         |
| 2                 | TAM 114               | HRWW                | TAMU             | 9257                         | 10336           | 11997         |
| 3                 | Okay                  | Oat                 | Noble Foundation | 9190                         | 9658            | 11970         |
| 4                 | Maton II              | Rye                 | Noble Foundation | 8821                         | 9604            | 11029         |
| 5                 | Horizon 201           | Oat                 | UF               | 8726                         | 8602            | 10107         |
| 6                 | P-919**               | Winter Barley       | Paramount Seed   | 8707                         | 9874            | 11378         |
| 7                 | Heavy Grazer 7630     | Oat                 | East Texas Seed  | 8615                         | 9123            | 11268         |
| 8                 | Maton                 | Rye                 | Noble Foundation | 8607                         | 9862            | 11530         |
| 9                 | TAMO 411              | Oat                 | TAMU             | 8541                         | 9824            | 11947         |
| 10                | Oklon                 | Rye                 | Noble Foundation | 8466                         | 9033            | 10714         |
| 11                | TAMO 606              | Oat                 | TAMU             | 8209                         | 8719            | 11242         |
| 12                | SY Razor**            | HRWW                | Syngenta         | 7875                         | 9266            | 9579          |
| 13                | Prine                 | Ryegrass            | UF               | 7765                         | 8081            | 9838          |
| 14                | Fannin                | HRWW                | Syngenta         | 7582                         | 9036            | 10648         |
| 15                | Nelson                | Ryegrass            | TAMU             | 7555                         | 7486            | 10182         |
| 16                | Sungrazer             | Ryegrass            | Oregro Seed      | 7409                         | 6900            | 9539          |
| 17                | TAM 401**             | HRWW                | TAMU             | 7242                         | 8491            | 9468          |
| 18                | TX09CS031*            | Oat                 | TAMU             | 6941                         | 8063            | 9927          |
| 19                | Gulf <sup>†</sup>     | Ryegrass            | TAMU             | 6809                         | 6309            | 7085          |
| 20                | TAM 90 <sup>†</sup>   | Ryegrass            | TAMU             | 6678                         | 5624            | 6933          |
| 21                | Heavy Grazer II       | Oat                 | East Texas Seed  |                              | 11071           | 14037         |
| 22                | NF 201                | Triticale           | Noble Foundation |                              | 10923           | 13168         |
| 23                | TX09CS049*            | Oat                 | TAMU             |                              | 8650            | 11879         |
| 24                | TX12VT8220*           | Triticale           | TAMU             |                              |                 | 12636         |
| 25                | Harrison              | Oat                 | LSU              |                              |                 | 12489         |
| 26                | TX12VT8227*           | Triticale           | TAMU             |                              |                 | 11931         |
| 27                | BigMac/Trical 348     | Oat/Triticale Blend | Blend            |                              |                 | 11743         |
| 28                | TX12VT8228*           | Triticale           | TAMU             |                              |                 | 11698         |
| 29                | Gallagher             | HRWW                | OSU              |                              |                 | 11443         |
| 30                | TX14OCS5098*          | Oat                 | TAMU             |                              |                 | 11288         |
| 31                | TX12M4068*            | HRWW                | TAMU             |                              |                 | 11269         |
| 32                | Post 90               | Winter Barley       | OSU              |                              |                 | 10795         |
| 33                | TX11A001295*          | HRWW                | TAMU             |                              |                 | 10646         |
| 34                | Oakes                 | SRWW                | Syngenta         |                              |                 | 10287         |
| 35                | Haybet/TAM 114        | SB/HRWW Blend       | Blend            |                              |                 | 10130         |
| 36                | Trical 348**          | Triticale           | Gaylon Ward      |                              |                 | 9326          |
| 37                | Jackson <sup>†</sup>  | Ryegrass            | --               |                              |                 | 9178          |
| 38                | Slicktrit II          | Triticale           | Watley Seed      |                              |                 | 9031          |
| 39                | Passerel <sup>†</sup> | Ryegrass            | Pennington Seed  |                              |                 | 9021          |
| 40                | Marshall <sup>†</sup> | Ryegrass            | MSU              |                              |                 | 8754          |
| 41                | Spicer                | Ryegrass            | Pennington Seed  |                              |                 | 8441          |
| 42                | TX14OCS5139*          | Oat                 | TAMU             |                              |                 | 7794          |
| 43                | TX14OCS5161*          | Oat                 | TAMU             |                              |                 | 4227          |
| 44                | FL 720                | Oat                 | UF               |                              |                 | 3723          |
|                   |                       |                     | <b>Mean</b>      | <b>8110</b>                  | <b>8883</b>     | <b>10328</b>  |
|                   |                       |                     | <b>LSD (5%)</b>  | <b>1061</b>                  | <b>1657</b>     | <b>2580</b>   |
|                   |                       |                     | <b>CV (%)</b>    | <b>14</b>                    | <b>16</b>       | <b>15</b>     |

<sup>1</sup>Rank is based on 3-Year, then 2-Year then 2017 Totals

<sup>2</sup>Hard Red Winter Wheat (HRWW); Soft Red Winter Wheat (SRWW); Spring Barley (SB)

<sup>†</sup>Diploid ryegrass variety

<sup>‡</sup>3-year average based on 2015, 2016 and 2017 yields.

\*Experimental Lines

\*\*Awnless/Beardless



**2017 Small Grains Forage Variety Trial - Overton (Dryland)**

| Rank <sup>1</sup> | Variety         | Class | Company          | Dry Matter Yield (lb/a) |                   |                   |                       |                       | Total<br>2017 |
|-------------------|-----------------|-------|------------------|-------------------------|-------------------|-------------------|-----------------------|-----------------------|---------------|
|                   |                 |       |                  | Clip 1<br>12/15/16      | Clip 2<br>1/24/17 | Clip 3<br>2/23/17 | Clip 4<br>3/21/17     | Clip 5<br>4/19/17     |               |
| 1                 | Tx-Rye-13*      | Rye   | TAMU             | 881                     | 972               | 1625              | 2015                  | 2023                  | 7516          |
| 2                 | Tx-Rye-12*      | Rye   | TAMU             | 698                     | 837               | 1107              | 2282                  | 2312                  | 7236          |
| 3                 | Elbon Rye       | Rye   | Noble Foundation | 643                     | 883               | 1291              | 2152                  | 1510                  | 6479          |
| 4                 | Maton Rye       | Rye   | Noble Foundation | 812                     | 1086              | 1384              | 1810                  | 1146                  | 6238          |
| 5                 | Heavy Grazer II | Oat   | East Texas Seed  | 771                     | 1118              | 1406              | 1393                  | 1458                  | 6146          |
| <b>Mean</b>       |                 |       |                  | <b>741</b>              | <b>989</b>        | <b>1385</b>       | <b>1872</b>           | <b>1512</b>           | <b>6500</b>   |
| <b>LSD (5%)</b>   |                 |       |                  | <b>159</b>              | <b>223</b>        | <b>367</b>        | <b>765</b>            | <b>608</b>            | <b>1259</b>   |
| <b>CV (%)</b>     |                 |       |                  | <b>17</b>               | <b>18</b>         | <b>21</b>         | <b>32<sup>a</sup></b> | <b>32<sup>a</sup></b> | <b>15</b>     |

<sup>1</sup>Rank is based on 2017 Total

\*Experimental Line - Not commercially available

<sup>a</sup>Trials with a coefficient of variation (CV)  $\geq$  25% contain excessive experimental error.

**2017 Ryegrass Forage Trial - Overton (Dryland)**

| Rank <sup>1</sup> | Variety                    | Dry Matter Yield (lb/a) |                       |             |                       |             |                       |                     | 2017<br>Total |
|-------------------|----------------------------|-------------------------|-----------------------|-------------|-----------------------|-------------|-----------------------|---------------------|---------------|
|                   |                            | Clip 1                  | Clip 2                | Clip 3      | Clip 4                | Clip 5      | Clip 6                | 3-Year <sup>‡</sup> |               |
|                   |                            | 12/15/16                | 1/24/17               | 2/23/17     | 3/21/17               | 4/19/17     | 5/24/17               | Total               |               |
| 1                 | Jackson <sup>†</sup>       | 360                     | 892                   | 1499        | 1423                  | 2697        | 622                   | 9291                | 7493          |
| 2                 | Lonestar <sup>†</sup>      | 503                     | 834                   | 1646        | 1867                  | 3869        | 806                   | 9098                | 9525          |
| 3                 | WinterHawk <sup>†</sup>    | 493                     | 604                   | 1014        | 1242                  | 2436        | 701                   | 8553                | 6490          |
| 4                 | Flying A <sup>†</sup>      | 536                     | 801                   | 1052        | 1294                  | 2560        | 565                   | 8398                | 6808          |
| 5                 | TAMTBO                     | 281                     | 782                   | 1330        | 1310                  | 2770        | 632                   | 8299                | 7105          |
| 6                 | Double Diamond             | 464                     | 677                   | 1112        | 1339                  | 2438        | 456                   | 8243                | 6486          |
| 7                 | Gulf <sup>†</sup>          | 371                     | 766                   | 1142        | 1562                  | 2528        | 736                   | 8167                | 7105          |
| 8                 | TAM 90 <sup>†</sup>        | 404                     | 985                   | 1356        | 1828                  | 2817        | 900                   | 8101                | 8290          |
| 9                 | Marshall <sup>†</sup>      | 401                     | 747                   | 1059        | 1472                  | 2785        | 635                   | 8028                | 7099          |
| 10                | Testratar                  | 487                     | 783                   | 1225        | 1437                  | 2428        | 650                   | 8006                | 7010          |
| 11                | 07-WW*                     | 520                     | 805                   | 1124        | 1509                  | 2373        | 451                   | 8002                | 6782          |
| 12                | Triangle T                 | 415                     | 662                   | 1411        | 1673                  | 2649        | 584                   | 7998                | 7394          |
| 13                | Big Boss                   | 297                     | 793                   | 1225        | 1494                  | 2681        | 604                   | 7991                | 7094          |
| 14                | Nelson                     | 621                     | 726                   | 1185        | 1280                  | 2652        | 535                   | 7983                | 6999          |
| 15                | Jumbo                      | 527                     | 865                   | 1284        | 1490                  | 3199        | 702                   | 7849                | 8067          |
| 16                | Passerel Plus <sup>†</sup> | 365                     | 720                   | 1274        | 1430                  | 2572        | 545                   | 7798                | 6906          |
| 17                | ME 94*                     | 495                     | 567                   | 1028        | 1366                  | 2502        | 617                   | 7414                | 6575          |
| 18                | Diamond T                  | 365                     | 775                   | 1067        | 1243                  | 2161        | 471                   | 7371                | 6082          |
| 19                | Maximus                    | 335                     | 883                   | 1184        | 1043                  | 2881        | 609                   | 7346                | 6935          |
| 20                | M2CVS*                     | 311                     | 867                   | 1056        | 1385                  | 3112        | 381                   | 6130                | 7112          |
| 21                | Prine                      | 342                     | 759                   | 1247        | 1486                  | 2845        | 551                   | 6036                | 7230          |
| 22                | ME 4*                      | 500                     | 775                   | 1153        | 1978                  | 2838        | 582                   | 4681                | 7826          |
| 23                | K014-SPP*                  | 292                     | 823                   | 1499        | 1505                  | 3100        | 745                   |                     | 7964          |
| 24                | Angusta                    | 355                     | 748                   | 1219        | 1456                  | 2946        | 648                   |                     | 7370          |
| 25                | K014-WMA*                  | 380                     | 851                   | 1304        | 1529                  | 2621        | 669                   |                     | 7354          |
| 26                | BARLM14167-1*              | 207                     | 652                   | 1148        | 1552                  | 3134        | 657                   |                     | 7350          |
| 27                | PS 15*                     | 524                     | 747                   | 1400        | 1412                  | 2599        | 605                   |                     | 7287          |
| 28                | BARLM15476*                | 375                     | 704                   | 1178        | 1578                  | 2850        | 599                   |                     | 7284          |
| 29                | BARLM15477*                | 340                     | 785                   | 1213        | 1633                  | 2640        | 619                   |                     | 7230          |
| 30                | Kodiak                     | 379                     | 781                   | 1120        | 1563                  | 2828        | 505                   |                     | 7176          |
| 31                | Credence                   | 361                     | 682                   | 1259        | 1573                  | 2554        | 670                   |                     | 7099          |
| 32                | BARLM15426*                | 450                     | 812                   | 1061        | 1333                  | 2892        | 548                   |                     | 7096          |
| 33                | BARLM16168-2*              | 148                     | 742                   | 1328        | 1341                  | 2701        | 777                   |                     | 7037          |
| 34                | SARG-FL*                   | 399                     | 751                   | 1217        | 1623                  | 2544        | 490                   |                     | 7024          |
| 35                | K014-DP*                   | 272                     | 678                   | 1776        | 1338                  | 2398        | 495                   |                     | 6957          |
| 36                | K014-WEAR*                 | 568                     | 684                   | 860         | 1240                  | 2809        | 739                   |                     | 6900          |
| 37                | B-16.444*                  | 236                     | 749                   | 1882        | 1494                  | 1947        | 574                   |                     | 6882          |
| 38                | Fria <sup>†</sup>          | 619                     | 953                   | 1233        | 1299                  | 2265        | 478                   |                     | 6847          |
| 39                | BARLM16498*                | 212                     | 641                   | 1343        | 1145                  | 2871        | 632                   |                     | 6844          |
| 40                | BARLM16488*                | 94                      | 852                   | 1030        | 1091                  | 3034        | 725                   |                     | 6826          |
| 41                | GO-16LN*                   | 229                     | 607                   | 1190        | 1160                  | 2830        | 787                   |                     | 6803          |
| 42                | Vortex                     | 152                     | 838                   | 1018        | 1326                  | 2837        | 601                   |                     | 6772          |
| 43                | BARLM14167-4*              | 307                     | 629                   | 1218        | 1442                  | 2729        | 416                   |                     | 6741          |
| 44                | BARLM15425*                | 472                     | 597                   | 1075        | 1311                  | 2597        | 610                   |                     | 6662          |
| 45                | PS 12*                     | 589                     | 681                   | 1003        | 1416                  | 2348        | 549                   |                     | 6586          |
| 46                | K014-WEMA*                 | 719                     | 646                   | 1036        | 1210                  | 2213        | 445                   |                     | 6269          |
| 47                | K014-WLS*                  | 354                     | 542                   | 1112        | 1170                  | 2473        | 602                   |                     | 6253          |
| 48                | BARLM15427*                | 293                     | 351                   | 914         | 1349                  | 2593        | 748                   |                     | 6248          |
| 49                | WMWL*                      | 380                     | 738                   | 1203        | 1472                  | 1902        | 539                   |                     | 6234          |
| 50                | New Dawn                   | 271                     | 656                   | 1070        | 1503                  | 1900        | 616                   |                     | 6016          |
| 51                | BARLM16168-1*              | 277                     | 710                   | 1029        | 1143                  | 2208        | 528                   |                     | 5895          |
| 52                | BARLM16502*                | 159                     | 549                   | 1036        | 1177                  | 2297        | 603                   |                     | 5821          |
| 53                | Arnie                      | 374                     | 628                   | 1197        | 527                   | 1551        | 487                   |                     | 4764          |
|                   | <b>Mean</b>                | <b>381</b>              | <b>737</b>            | <b>1200</b> | <b>1397</b>           | <b>2623</b> | <b>605</b>            | -                   | <b>6943</b>   |
|                   | <b>LSD (5%)</b>            | <b>183</b>              | <b>234</b>            | <b>325</b>  | <b>437</b>            | <b>642</b>  | <b>248</b>            | -                   | <b>1480</b>   |
|                   | <b>CV (%)</b>              | <b>41<sup>a</sup></b>   | <b>27<sup>a</sup></b> | <b>23</b>   | <b>27<sup>a</sup></b> | <b>21</b>   | <b>35<sup>a</sup></b> | -                   | <b>18</b>     |

<sup>1</sup>Rank is based on 3-Year total, then 2017 Total

<sup>†</sup>Diploid ryegrass variety

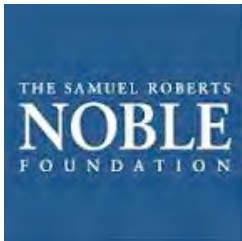
<sup>‡</sup>3-year average based on 2015, 2016 and 2017 yields.

\*Experimental Line - Not commercially available

<sup>a</sup>Trials with a coefficient of variation (CV) ≥ 25% contain excessive experimental error.

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