



2016 Texas Oat Variety Trial Results

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2016

Texas Oat Variety Trials

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Texas Small Grains Regional Map

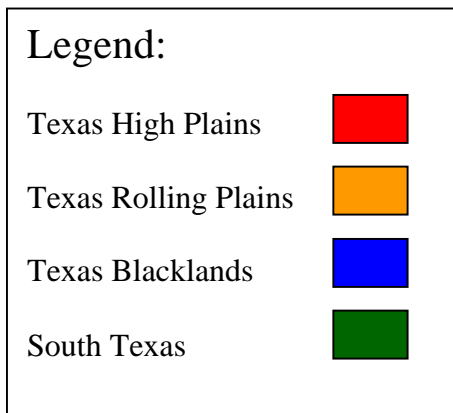
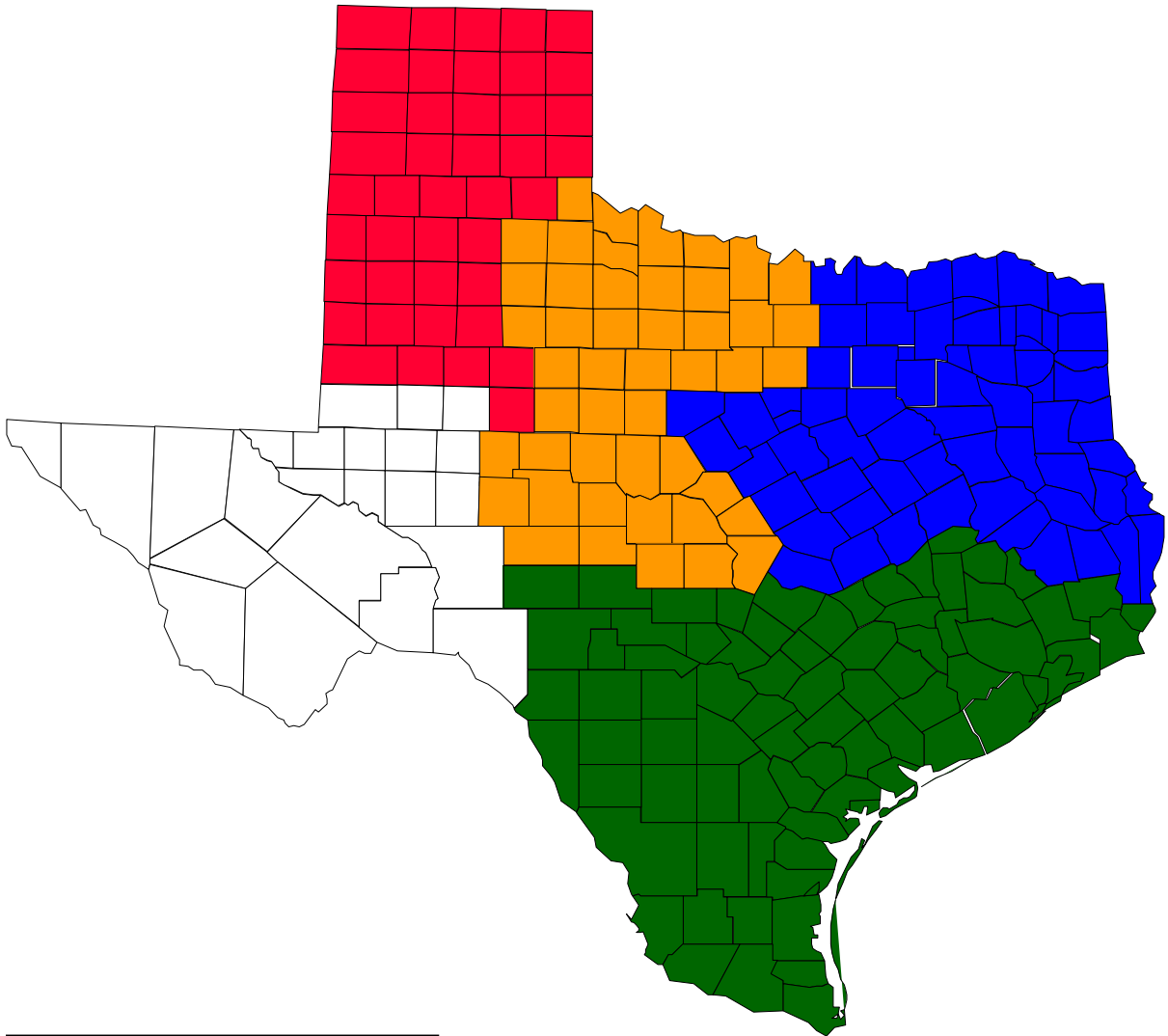


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Introduction

Texas producers planted 500,000 acres in oats for the 2015-16 cropping season according to the National Agricultural Statistics Service (NASS). This figure is up by 60,000 acres from last year. In 2016, only 55,000 acres were harvested for grain. Because the majority of oat acres in Texas are harvested for forage, this may be an important consideration for variety selection. Forage production of oat varieties is beyond the scope of this publication, but forage yield information can be found for many of the oat varieties included in this publication on our Statewide Cool-season Forage Variety Trial publication at <http://varietytesting.tamu.edu/wheat>.

The Uniform Oat Variety Trial (OVT) is coordinated and implemented by numerous Texas A&M AgriLife Extension and Research faculty and staff from Amarillo, Commerce, San Angelo and College Station. We also appreciate the cooperation from numerous County Extension Agents and producers that aid with locations and property to conduct these field trials. The purpose of this publication is to provide unbiased yield and disease data from field trials in major oat producing regions for oat producers across the state. With this information Texas oat producers can make a more educated decision about appropriate varieties for their geographic region.

Variety Selection:

Selection of varieties for any crop is one of the most important decisions a producer will make. This decision impacts potential yield (forage and grain), seed quality (test weight and protein), disease and insect management and maturity. It is important that producers diversify the varieties to be planted on their farms. Variety diversification spreads the risk associated with potentially devastating pests (crown rust, stem rust, barley yellow dwarf virus, greenbugs, etc.) and yield loss from adverse environmental factors (freeze, drought, etc.).

Producers would be advised to select no fewer than two or three varieties to plant on their farms and preferably more, depending on size and location of fields. Variety selection should be based upon a combination of sound data from university trials and other reliable sources. Oat varieties should be chosen based on multiple years of data (yield, pest resistance, grain quality and maturity). High yields over multiple years and multiple locations demonstrate a variety's ability to perform well over diverse environmental conditions. Stable yield performance is an excellent variety selection tool. It is important to consider decreasing yields over the past two or three years, which may reflect a change in disease and/or insect resistance.

When selecting a variety for the 2016-17 season, producers need to consider multiple year averages, recognizing the climatic variability that impacted yield and quality over the past several years. It is strongly encouraged that producers look at the 3-year averages where available, and to look at numerous relevant variety trial locations. There are typically ten or more oat variety trials conducted across the state each year, and most of these contain analyses from multiple years.

Interpreting the Data:

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

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

The CV (Coefficient of Variation) value, expressed as a percentage, indicates the level of unexplained variability present within the trial. A high CV value indicates 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 15% should cause the reader using the data to understand that there were problems in the trial that will cause concerns about 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 5 bu/ac in a trial in which Variety "A" yielded 36 bu/a and Variety "B" yielded 30 bu/a, then Variety "A" is said to be significantly better. In that same trial with an LSD value of 5 bu/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 5 bushel difference in yield. In this hypothetical comparison, you might have a 20th trial with a 5 bu/ac difference that there is not truly a difference between Variety "A" and "B", but random chance caused the 5 bushel difference.

2016 Texas Region Overview

Texas Blacklands:

The Texas Blacklands oat season started off dry in the months of September and much of October for producers planting early for fall forage production. Heavy rains arrived at the end of October and wet conditions continued through January. As the season progressed, excessive rainfall set in once again during late winter following a brief dry period in mid-winter and continued throughout the spring. This moisture allowed for the establishment of crown and stem rust infestations that, along with flooded or waterlogged oat fields, contributed to overall yield reductions. The moisture made harvest difficult if not impossible throughout much of the area and if the seed was harvestable, seed quality was an issue in many fields.

Texas High Plains:

Most of the oat fields planted in this area are for a graze-out scenario. Fall planting conditions were above average on the Texas High Plains as the result of summer and early fall precipitation that resulted in full soil moisture profiles and very good to excellent stand establishment. Regionally, late winter and early spring temperatures were above average and precipitation remained below average resulting in severe water stress on much of the acres. Winterkill wasn't as much an issue for oats this year as is typical throughout this region on most years.

Texas Rolling Plains:

Oat planting was delayed across the Rolling Plains especially in the southern regions due to the concentrated rain in October. Above average precipitation continued during fall through early winter. Some freeze-damaged oats were observed in the spring although no severe yield loss was reported. Strong storms during the end of May reduced yield through hail and wind damage.

South Texas:

In the southern part of the state, winter planting was challenging between rainfall events in November and December. Sufficient rainfall throughout the remainder of the winter allowed for good emergence and establishment. Excessive rainfall from late winter through the spring left many oat fields standing in water. Foliar diseases were plentiful in this area due to the moisture. Most fields lodged or sprouted due to the moisture and many were not harvestable. The warm conditions also contributed to some insect problems such as southern corn-rootworm.

2016 Oat Variety Characteristics¹

Variety	Developer	First Year Sold	Maturity	Crown Rust	Stem Rust	Height (inches)	Straw Strength
Bob	UA	1977	Medium	S	MS	32	fair
Dallas*	TAMU	1997	Medium	S	S	48	fair
Horizon 201	UF	2009	Medium Early	MR	MS	47	fair
Horizon 270	UF	2006	Medium Early	MR	S	40	fair
Horizon 306	LSU	2013	Medium	MS	MR	38	good
NF-402	Noble Foundation	2014	Medium Early	S	MS	39	poor
Ozark*	UA	1996	Medium	S	MS	38	poor
OKAY	OK	1978	Medium Late	S	MR	36	fair
LA9339	LSU	2002	Medium	MR	MR	44	fair
RAM 99016	LSU	2010	Medium	MS	MR	45	poor
TAMO 406	TAMU	2009	Medium	MS	MS	43	fair
TAMO 411	TAMU	2012	Medium Early	MS	MS	36	good
TAMO 606	TAMU	2006	Medium Late	MR	MS	36	fair

¹S - Susceptible, MS - Moderately Susceptible, MR - Moderately Resistant, and R - Resistant
 All ratings are subject to change as re-evaluation occurs.

*Estimation of "First Year Sold" based on previous data found through the Noble Foundation.

2016-17 Oat Variety Distributor List

Variety	Developer	Seed Type ^T	Distributor	Address	Phone Number
Bob	UA	C	East Texas Seed	1030-D East Commerce St. Tyler, TX 75702	(903) 597-6637
		C	Hancock Farm & Seed Company	18724 Hancock Farm Rd. Dade City, FL 33523	(325) 567-6971
Dallas	TAMU	C	J.H. Bayer & Sons Inc	3307 FM 2739 Muenster, TX 76252	(940) 736-3039
Horizon 201**	UF	C	Stratton Seed Co.	1530 Hwy. 79 South Stuttgart, AR 72160	(870) 673-4433
		C	Plantation Seed Conditioners	1113 Pretoria Rd. Newton, GA 39870-0398	(229) 734-5466
Horizon 270**	UF	C	Stratton Seed Co.	1530 Hwy. 79 South Stuttgart, AR 72160	(870) 673-4433
		C	Plantation Seed Conditioners	1113 Pretoria Rd. Newton, GA 39870-0398	(229) 734-5466
Horizon 306**	LSU	C	Stratton Seed Co.	1530 Hwy. 79 South Stuttgart, AR 72160	(870) 673-4433
		C	Plantation Seed Conditioners	1113 Pretoria Rd. Newton, GA 39870-0398	(229) 734-5466
NF-402**	Noble Foundation	C	East Texas Seed	1030-D East Commerce St. Tyler, TX 75702	(903) 597-6637
OKAY**	OK	F,R	Oklahoma Foundation Seed Stocks	102 Small Grains Bldg. Stillwater, OK 74078-0507	(405) 624-7041
RAM LA9339**	LSU	C	Ragan & Massey Inc	101 Ponchatoula Pkwy. Ponchatoula, LA 70454	(800) 264-5281
RAM 99016**	LSU	C	Ragan & Massey Inc	101 Ponchatoula Pkwy. Ponchatoula, LA 70454	(800) 264-5281
TAMO 406**	TAMU	C	Douglass King Co.	4627 Emil St. San Antonio, TX 78219	(210) 661-4191
TAMO 411**	TAMU	C	Justin Seed Co.	524 South Hwy. 156 Justin, TX 76247	(940) 648-2751
		C	Turner Seed Co.	211 County Road 151 Breckenridge, TX 76424	(800) 722-8616
		C	Pogue Agri-Partners	287 Hwy 72 West Kenedy, TX 78119	(830) 583-3456
TAMO 606**	TAMU	C	Turner Seed Co.	211 County Road 151 Breckenridge, TX 76424	(800) 722-8616
		C	Justin Seed Co.	524 South Hwy. 156 Justin, TX 76247	(940) 648-2751

^T C = Certified seed, R = Registered seed, F = Foundation seed

** This variety is protected by Title V of the Federal Seed Act. Unauthorized Propagation Prohibited
 Protected Variety - To Be Sold By Variety Name Only as a Class of Certified Seed – U.S.

Texas Oat Variety Trials: 2016 Agronomic Data

Location	Cooperator(s)	Planting / Harvest Dates	Fertilizer (Total lb N/A)	Pesticide Applied (Date)	Yield Limiting Issues
Brady	Holubec Farms;	11/20/15	70	MCPA Ester + Amber (1/28/16)	Lodging
	David Holubec	6/16/16			
Castroville	Rollin Mangold	11/10/15	155	Dimethoate (3/3/16)	ABANDONED Excessive rainfall; Crown Rust Lodging
		--			
Chillicothe	Texas A&M AgriLife Research Farm	11/11/15	80	--	ABANDONED Storm damage
		--			
College Station	Texas A&M AgriLife Research and Extension Farm	11/23/15	45	None	ABANDONED Excessive rainfall; Poor yields
		--			
Ellis County	Bob Beakley	10/20/15	--	--	ABANDONED Flooded Out
		--			
Lamar County	Ricky Snell	10/21/15	--	--	ABANDONED Flooded Out
		--			
McGregor	Texas A&M AgriLife Research Center	11/24/15	100	MCPA Ester + Amber (1/25/16)	Crown Rust
		5/25/16			
Thrall	Stiles Foundation Farm	12/11/15	70	MCPA Ester (1/29/16)	Crown Rust
		5/6/16			
Uvalde	Texas A&M AgriLife Research and Extension Center	11/19/15	70	MCPA Ester (2/3/16)	Crown Rust; Lodging
		5/5/16			


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2016 Uniform Oat Variety Trial: Brady, TX

Rank	Variety	Source	Yield (bu/a) [†]				Test Wt (lb/bu)
			4-Year [‡]	3-Year	2-Year	2016	2016
1	Horizon 270	UF	82.6	84.3	91.4	104.6	33.6
2	LA9339	LSU	80.1	85.1	97.4	100.3	33.3
3	TX09CS1029*	TAMU	80.0	83.4	88.8	92.2	31.6
4	TAMO 406	TAMU	77.6	78.3	83.8	93.5	35.7
5	Horizon 201	UF	77.6	79.0	85.2	109.6	33.4
6	TAMO 411	TAMU	76.3	76.3	81.0	83.0	33.8
7	Dallas	TAMU	76.1	77.3	79.4	87.9	34.4
8	TX07CS1948*	TAMU	73.8	73.3	87.3	98.8	37.2
9	Ozark	UA	73.1	76.7	80.9	82.4	37.1
10	RAM 99016	LSU	67.1	72.6	78.3	82.4	34.4
11	TAMO 606	TAMU	63.8	66.3	65.4	86.2	34.8
12	Bob	UA	60.6	58.6	62.2	75.9	36.7
13	TX09CS1112*	TAMU		89.0	102.2	111.5	32.7
14	LA07007SBSB-68*	LSU		73.7	78.3	94.0	30.3
15	LA6063SBSB-13*	LSU		73.3	79.9	97.6	37.6
16	FL720-R6*	UF			94.7	104.9	35.4
17	LA08085SS-T3*	LSU			93.4	98.7	34.7
18	TX07CS2257*	TAMU			88.2	87.0	35.8
19	TX09CS031*	TAMU			84.9	85.9	30.6
20	TX09CS049*	TAMU			80.9	73.3	37.5
21	Okay	Noble Foundation			77.2	76.9	34.8
22	Horizon 306	LSU			70.6	75.5	37.4
23	LA08084SBSB*	LSU			67.7	83.0	35.8
24	LA09045SBS-U*	LSU				111.7	35.8
25	LA08085BS-T2*	LSU				95.2	33.7
26	LA06059SBSB*	LSU				83.0	36.1
27	NF 402	Noble Foundation				81.5	34.0
28	LA09066SBS-U*	LSU				81.2	37.9
29	LA07059SBSB*	LSU				76.9	37.8
30	LA09092SBS-U*	LSU				70.6	36.1
LSD			11.1	12.3	16.1	29.1	
CV			18.4	17.3	17.2	19.9	
Mean			74.1	76.4	82.5	89.5	

*Experimental breeding line

†Varieties ranked according to 4-year, 3-year, 2-year, then 2016 yield averages.

‡4-year average based on 2012, 2013, 2015 and 2016.



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2016 Uniform Oat Variety Trial: Blacklands Regional Summary

Rank	Variety	Source	AVG	Yield (bu/a)		Test Wt (lb/bu) 2016
				McGregor	Thrall	
1	LA09045SBS-U*	LSU	94.8	114.7	75.0	32.4
2	LA07059SBSBS*	LSU	92.3	100.1	84.4	32.3
3	LA08085BS-T2*	LSU	90.5	110.8	70.1	34.5
4	RAM 99016	LSU	88.0	107.9	68.1	32.1
5	TX07CS2257*	TAMU	87.9	99.6	76.3	32.1
6	TX09CS049*	TAMU	87.8	106.2	69.3	33.5
7	TAMO 411	TAMU	85.3	97.7	73.0	30.5
8	TX09CS1029*	TAMU	85.3	97.8	72.7	31.1
9	Horizon 306	LSU	84.5	100.2	68.7	29.1
10	Horizon 201	UF	81.2	108.0	54.4	30.2
11	LA08084SBSBS*	LSU	81.0	95.8	66.2	34.8
12	TX09CS1112*	TAMU	80.2	104.8	55.5	29.0
13	LA6063SBSBSB-13*	LSU	79.4	99.3	59.4	34.3
14	LA09066SBS-U*	LSU	77.3	91.2	63.5	30.8
15	LA06059SBSBS*	LSU	77.0	84.7	69.3	32.9
16	LA09092SBS-U*	LSU	74.5	92.7	56.4	33.7
17	TX09CS031*	TAMU	74.5	80.1	68.9	29.0
18	TX07CS1948*	TAMU	74.2	87.0	61.3	32.6
19	Horizon 270	UF	73.6	83.6	63.5	32.6
20	LA08085SS-T3*	LSU	70.9	91.7	50.2	29.5
21	FL720-R6*	UF	69.8	78.7	61.0	28.8
22	LA07007SBSB-68*	LSU	69.0	70.6	67.4	29.4
23	TAMO 606	TAMU	68.3	82.0	54.5	30.5
24	Dallas	TAMU	65.5	78.8	52.2	28.1
25	TAMO 406	TAMU	61.5	72.4	50.7	30.0
26	Bob	UA	57.5	72.0	43.0	28.9
27	LA9339	LSU	56.7	75.0	38.3	30.6
28	NF 402	Noble Foundation	47.4	66.1	28.8	27.5
29	Ozark	UA	46.7	57.3	36.0	27.1
30	Okay	Noble Foundation	22.6	41.3	3.9	18.2
LSD			11.5	17.0	15.9	2.0
CV			13.7	11.8	16.5	3.1
Mean			73.5	88.3	58.7	30.5

*Experimental breeding line


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2016 Uniform Oat Variety Trial: McGregor, TX

Rank	Variety	Source	Yield (bu/a) [†]				Test Wt (lb/bu)
			4-Year [‡]	3-Year	2-Year	2016	2016
1	RAM 99016	LSU	81.0	78.8	90.1	107.9	32.4
2	Horizon 270	UF	79.7	75.2	86.8	83.6	32.6
3	Horizon 201	UF	70.7	70.7	79.9	108.0	30.2
4	TAMO 411	TAMU	67.7	65.4	72.7	97.7	31.2
5	TAMO 606	TAMU	62.9	60.7	60.2	82.0	30.5
6	LA9339	LSU	60.6	57.3	54.7	75.0	30.7
7	TAMO 406	TAMU	54.3	51.6	51.3	72.4	30.5
8	Dallas	TAMU	51.7	61.6	62.6	78.8	28.3
9	Bob	UA	50.8	54.4	56.1	72.0	28.9
10	Ozark	UA	40.0	46.1	36.8	57.3	27.2
11	TX07CS2257*	TAMU		77.3	83.2	99.6	32.4
12	TX09CS1029*	TAMU		75.8	78.8	97.8	31.3
13	LA07007SBSB-68*	LSU		74.5	81.7	70.6	29.3
14	Horizon 306	LSU		73.7	81.5	100.2	28.9
15	TX07CS1948*	TAMU		71.1	84.1	87.0	20.7
16	TX09CS1112*	TAMU		71.0	77.5	104.8	29.8
17	FL720-R6*	UF		54.8	55.1	78.7	29.8
18	Okay	Noble Foundation		39.4	29.5	41.3	20.7
19	LA6063SBSBSB-13*	LSU			86.0	99.3	34.4
20	LA08085SS-T3*	LSU			85.1	91.7	29.9
21	TX09CS049*	TAMU			84.6	106.2	34.3
22	LA08084SBSBS*	LSU			82.5	95.8	34.5
23	TX09CS031*	TAMU			66.6	80.1	28.8
24	LA09045SBS-U*	LSU				114.7	31.0
25	LA08085BS-T2*	LSU				110.8	34.7
26	LA07059SBSBS*	LSU				100.1	31.3
27	LA09092SBS-U*	LSU				92.7	33.8
28	LA09066SBS-U*	LSU				91.2	30.3
29	LA06059SBSBS*	LSU				84.7	33.1
30	NF 402	Noble Foundation				66.1	27.5
	LSD		8.5	9.5	13.3	17.0	
	CV		16.8	15.9	16.5	11.8	
	Mean		61.9	64.6	71.0	88.3	

*Experimental breeding line

† Varieties ranked according to 4-year, 3-year, 2-year, then 2016 yield averages.

‡ 4-year average based on 2012, 2014, 2015 and 2016.

2016 Uniform Oat Variety Trial: Thrall, TX

Rank	Variety	Source	Yield	Test Wt
			(bu/a)	(lb/bu)
			2016	2016
1	LA07059SBSBS*	LSU	84.4	33.3
2	TX07CS2257*	TAMU	76.3	31.7
3	LA09045SBS-U*	LSU	75.0	33.7
4	TAMO 411	TAMU	73.0	29.8
5	TX09CS1029*	TAMU	72.7	30.9
6	LA08085BS-T2*	LSU	70.1	34.3
7	LA06059SBSBS*	LSU	69.3	32.6
8	TX09CS049*	TAMU	69.3	32.7
9	TX09CS031*	TAMU	68.9	29.3
10	Horizon 306	LSU	68.7	29.3
11	RAM 99016	LSU	68.1	31.7
12	LA07007SBSB-68*	LSU	67.4	29.5
13	LA08084SBSBS*	LSU	66.2	35.0
14	Horizon 270	UF	63.5	0.0
15	LA09066SBS-U*	LSU	63.5	31.3
16	TX07CS1948*	TAMU	61.3	32.6
17	FL720-R6*	UF	61.0	27.8
18	LA6063SBSBSB-13*	LSU	59.4	34.3
19	LA09092SBS-U*	LSU	56.4	33.6
20	TX09CS1112*	TAMU	55.5	28.2
21	TAMO 606	TAMU	54.5	30.5
22	Horizon 201	UF	54.4	30.2
23	Dallas	TAMU	52.2	27.9
24	TAMO 406	TAMU	50.7	29.6
25	LA08085SS-T3*	LSU	50.2	29.2
26	Bob	UA	43.0	28.9
27	LA9339	LSU	38.3	30.5
28	Ozark	UA	36.0	26.9
29	NF 402	Noble Foundation	28.8	27.5
30	Okay	Noble Foundation	3.9	15.7
LSD			15.9	
CV			16.5	
Mean			58.7	

*Experimental breeding line


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2016 Uniform Oat Variety Trial: Uvalde, TX

Rank	Variety	Source	Yield (bu/a) [†]		Test Wt (lb/bu)
			2-Year [‡]	2016	2016
1	TX09CS1029*	TAMU	106.8	107.0	35.8
2	LA07007SBSB-68*	LSU	106.2	94.7	31.4
3	TX07CS2257*	TAMU	101.5	91.6	34.7
4	TX09CS1112*	TAMU	95.8	102.6	33.1
5	FL720-R6*	UF	94.0	90.2	35.0
6	Horizon 306	LSU	84.4	89.7	37.4
7	TX07CS1948*	TAMU	83.8	95.3	37.9
8	RAM 99016	LSU	78.8	88.5	34.4
9	LA9339	LSU	78.2	79.5	31.0
10	Dallas	TAMU	77.4	83.8	32.1
11	TAMO 406	TAMU	77.4	78.6	34.0
12	Bob	UA	75.9	67.3	34.0
13	TAMO 411	TAMU	72.7	77.6	33.3
14	Horizon 270	UF	71.9	90.2	34.4
15	Horizon 201	UF	66.1	74.2	32.0
16	TAMO 606	TAMU	57.3	62.1	29.0
17	Ozark	UA	45.3	24.9	27.6
18	Okay	Noble Foundation	35.3	13.8	26.2
19	LA08085SS-T3*	LSU		104.5	33.7
20	LA08085BS-T2*	LSU		100.2	37.6
21	TX09CS031*	TAMU		86.4	32.4
22	LA06059SBSBS*	LSU		85.0	36.8
23	LA09045SBS-U*	LSU		81.3	30.6
24	LA08084SBSBS*	LSU		78.2	38.4
25	TX09CS049*	TAMU		74.9	38.1
26	LA07059SBSBS*	LSU		61.9	35.1
27	NF 402	Noble Foundation		51.8	32.3
28	LA6063SBSBSB-13*	LSU		50.9	32.7
29	LA09066SBS-U*	LSU		50.7	31.9
30	LA09092SBS-U*	LSU		42.9	36.1
LSD			19.1	23.6	
CV			19.3	19.0	
Mean			78.3	76	

*Experimental breeding line

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

‡ 2-year average based on 2014 and 2016.

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