

Performance of
COOL-SEASON ANNUAL FORAGE CROPS
in Louisiana, 2017-2018

LAES Research Summary No. 215

LOUISIANA STATE UNIVERSITY AGRICULTURAL CENTER
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Performance of Cool-season Annual Forage Crops in Louisiana, 2017-2018

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Introduction

Winter annual forages are adapted for grazing, green chop, hay and silage production in Louisiana. Each year scientists of the Louisiana State University Agricultural Center conduct performance trials to evaluate the forage production of annual ryegrass and oat varieties. Trials are conducted at various Louisiana State University Agricultural Center research stations throughout the state to provide information on the performance of varieties under varying soil and climatic conditions.

Information provided by these trials is used by Louisiana State University Agricultural Center scientists to develop a list of varieties that have performed satisfactorily in forage performance trials in Louisiana. Louisiana forage producers can use this information to decide on varieties to use in their production systems. To be included on the list of varieties that are considered to have performed satisfactorily from a crop for which several varieties are available, a commercial variety must be tested for three consecutive years and have an average yield not less than 90 percent of the three-year statewide mean of the top three yielding commercial varieties. A variety will be listed as “Promising” if, following two consecutive years of testing, it has shown acceptable agronomic performance and has yielded at least 90 percent of the statewide average of the top three commercial varieties. A variety previously suggested for planting consideration will be dropped from the list if it fails to perform satisfactorily considering both two and three year yield data, if it is no longer commercially available to producers or if not submitted for evaluation.

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Testing Procedures

The cool-season annual forage variety testing program is open to all commercially available varieties and advanced experimental lines of annual ryegrass and oats developed by either public or private plant breeding programs. The trials are managed using production practices suggested by the Louisiana Cooperative Extension Service (LCES) for each species, with soil amendments applied as indicated by soil test and herbicides used as appropriate.

Data on the cumulative forage yield and seasonal distribution of forage yield are collected for each trial to evaluate the adaptation of varieties to specific geographic regions of the state. The trials are conducted in randomized complete-block designs with at least three replications. Plots of each species are cut to a 2- to 4-inch stubble height when growth reaches eight to twelve inches. Cumulative forage yield data are combined across locations and years and analyzed by analysis of variance procedures to evaluate variety yields. The least significant difference (LSD) value represents the minimum amount by which variety yields must differ to be considered statistically different from one another. If differences are not detected among varieties, the LSD value is not presented.

ANNUAL RYEGRASS

Annual ryegrass (*Lolium multiflorum*) is suggested for use as a high-quality winter grazing, hay or silage crop on most soils throughout Louisiana. Annual ryegrass should be planted at rates of 30 pounds per acre if seeded alone or 20 pounds per acre if seeded with another species such as clover. Suggested planting dates for annual ryegrass are between Sept. 20 and Oct. 15 if planted into a prepared seedbed and approximately Oct. 15 if planted into an existing sod.

Annual ryegrass forage variety trials were conducted at three Louisiana State University Agricultural Center research stations during the 2017-18 growing season (Table 1). Lack of rainfall in late summer and into the fall delayed planting somewhat. Plots at all locations were seeded at the rate of 30 pounds per acre into a prepared seedbed. Phosphorus (P) and potassium (K) fertilizer was applied at all locations according to soil test recommendations made by the Louisiana Cooperative Extension Service. Total nitrogen (N) applied varied among locations but was at least 180 pounds per acre during the growing season and applied in multiple applications

during the season. Submitting agencies for annual ryegrass varieties evaluated for forage yield are listed in Appendix A.

Table 1. Planting dates and soil types of locations cooperating in the 2017-2018 annual ryegrass variety tests.

Research Station	Location	Planting Date	Soil Type
Southeast	Franklinton	October 12, 2017	Tangi silt loam
Iberia	Jeanerette	November 8, 2017	Baldwin silty clay loam
Macon Ridge	Winnsboro	October 25, 2017	Gigger silt loam

Results of annual ryegrass trials

Annual ryegrass entry, location and statewide yield means over one, two and three years are presented in Tables 2, 3 and 4, respectively. Dry forage production from annual ryegrass entries through the 2017-18 growing season at the three locations is presented in Tables 5, 6 and 7. Varieties considered to have performed satisfactorily over the past three growing seasons and suggested for consideration in fall 2018 are Diamond T, Double Diamond, Earlyploid, Flying A, Herdsman, Jackson, Jumbo, Maximus, Wax Marshall, Nelson Tetraploid, Passerel Plus, Prine, RM4L, Spicer, TAMTBO, Triangle T and Winterhawk. Bashaw Diploid, Bashaw Tetraploid and FrostProof annual ryegrass varieties have performed satisfactorily in trials during the past two years and would be considered promising varieties for use in Louisiana. Dry conditions, extreme drought in some areas, predominated through most of Louisiana during late summer and into October. Later planting and periodic extreme declines in temperature delayed forage accumulation so initial harvests tended to be slightly later than normal.

Table 2. Dry forage production from annual ryegrass entries grown in two locations in Louisiana during the 2017-2018 growing season.

Entry	Location			2017-2018
	Franklinton	Iberia	Winnsboro	Mean
	----- Dry forage, lb/acre -----			
Bashaw Tetraploid	10,982	13,048	7,830	10,620
ME4 (expt) [†]	10,958	13,082	7,794	10,611
Wax Marshall	11,027	13,215	7,405	10,549
Lagniappe II (expt)	10,228	13,992	7,247	10,489
BAR LM 17514 (expt)	10,009	13,736	7,122	10,289
TAMTBO	10,482	12,901	7,318	10,234
ME94 (expt)	9,591	14,150	6,922	10,221
Maximus	9,534	13,437	7,399	10,123
Jumbo	9,830	13,207	7,155	10,064
BAR LM 17490-3 (expt)	9,037	13,945	7,172	10,051
Passerel Plus	9,905	13,723	6,489	10,039
Prine	9,907	13,136	6,949	9,997
Andes	10,389	12,495	7,069	9,984
Flying A	9,192	13,697	7,054	9,981
Bashaw Diploid	9,464	13,659	6,736	9,953
M2CVS (expt)	9,483	12,815	7,415	9,904
Diamond T	9,394	13,109	7,011	9,838
Double Diamond	9,837	12,775	6,881	9,831
Ribeye	9,174	13,311	6,991	9,825
RM4L	10,439	12,014	6,897	9,783
LSC-B1191 (expt)	9,195	12,767	7,181	9,714
WMWL (expt)	8,996	12,923	7,198	9,706
Herdsmen	9,721	12,940	6,424	9,695
McKinley	8,438	12,723	7,886	9,682
FrostProof	9,450	12,096	7,490	9,679
Winterhawk	9,175	12,415	7,405	9,665
BAR LM 17477 (expt)	9,614	12,330	6,909	9,618
Lagniappe (expt)	9,226	12,876	6,654	9,586
BAR LM 17490-4 (expt)	8,227	12,973	7,058	9,419
Triangle T	9,002	12,243	7,006	9,417
Gulf (certified)	8,054	12,731	7,067	9,284
Jackson	8,340	12,319	7,194	9,284

(Table continued on next page)

Table 2. (continued) Dry forage production from annual ryegrass entries grown in two locations in Louisiana during the 2017-2018 growing season.

Entry	Location			2017-2018
	Franklinton	Iberia	Winnsboro	Mean
	----- Dry forage, lb/acre -----			
Nelson Tetraploid	8,770	11,614	7,201	9,195
BAR LM 17534 (expt)	9,828	11,768	5,645	9,080
Grits	8,609	11,852	6,778	9,079
Spicer	8,645	11,571	7,003	9,073
PS15 (expt)	8,844	11,843	6,487	9,058
Angusta	8,294	11,871	6,718	8,961
EarlyPloid	8,667	11,553	6,435	8,885
Koga	7,524	11,271	5,881	8,226
Mean	9,387	12,753	7,012	9,717
LSD (.1)	1,452	1,379	774	710
CV%	11	8	8	9

†Entries followed by (expt) are experimental and not commercially available.

Table 3. Mean dry forage production from annual ryegrass entries at three locations in Louisiana during two growing seasons, 2016-2017 and 2017-2018.

Entry	Location		Mean Five Year/Location Environments Over 2 years [†]
	Franklinton	Winnsboro	
	----- Dry forage, lb/acre -----		
ME4 (expt) [‡]	9,582	6,426	9,019
Wax Marshall	9,394	6,384	8,954
Bashaw Tetraploid	8,586	6,730	8,736
ME94 (expt)	8,346	6,179	8,640
M2CVS (expt)	8,553	6,534	8,598
Bashaw Diploid	8,014	6,412	8,502
Jumbo	8,222	6,346	8,469
Prine	8,597	5,940	8,442
TAMTBO	8,436	6,114	8,400
Maximus	7,639	6,481	8,335
Passerel Plus	8,204	5,681	8,299
Lagniappe (expt)	8,051	6,080	8,228
Flying A	7,406	6,272	8,211
Double Diamond	8,198	5,919	8,202
FrostProof	7,999	6,416	8,185
WMWL (expt)	7,899	6,064	8,170
RM4L	8,626	5,754	8,155
Nelson Tetraploid	8,057	6,422	8,114
Herdsmen	8,108	5,656	8,094
Jackson	7,846	6,186	8,077
Diamond T	7,454	6,140	8,059
Triangle T	8,047	5,956	8,050
Winterhawk	7,672	6,157	8,015
EarlyPloid	8,039	5,829	7,857
Spicer	7,789	6,003	7,831
Gulf (certified)	6,992	5,972	7,732
PS15 (expt)	7,364	5,785	7,628
Mean	8,115	6,142	8,259
LSD (.1)	1007	543	515
CV%	13	9	6

[†]Iberia location was not able to complete harvests during 2016-2017 growing season so only 2017-2018 growing season data included from that location.

[‡]Entries followed by (expt) are experimental and not commercially available.

Table 4. Mean dry forage production from annual ryegrass entries at three locations in Louisiana during three growing seasons, 2015-2016 through 2017-2018.

Entry	Location			Mean Eight Year/Location Environments Over 3 years [‡]
	Franklinton	Winnsboro	Iberia [†]	
	----- Dry forage, lb/acre -----			
Wax Marshall	10,336	6,572	11,035	9,167
ME4 (expt) [¶]	10,471	6,500	10,442	9,057
Nelson Tetraploid	9,532	6,584	11,504	8,923
Prine	9,989	6,083	11,336	8,917
ME94 (expt)	9,526	6,344	11,346	8,876
Jumbo	9,381	6,575	11,285	8,865
M2CVS (expt)	9,571	6,684	10,710	8,839
RM4L	9,616	5,893	11,302	8,664
TAMTBO	9,241	6,064	11,390	8,634
Double Diamond	9,379	6,090	10,990	8,604
Herdsman	9,151	5,856	11,342	8,513
Triangle T	9,089	6,232	10,768	8,484
Maximus	8,531	6,490	11,054	8,471
EarlyPloid	9,192	5,930	11,121	8,465
Passerel Plus	9,136	6,137	10,337	8,417
Flying A	7,875	6,580	11,659	8,399
Winterhawk	8,726	6,416	10,641	8,394
Jackson	8,965	6,192	10,312	8,325
Diamond T	8,328	6,284	10,984	8,292
Spicer	8,451	6,084	10,939	8,205
PS15 (expt)	8,403	6,007	10,362	8,041
Gulf (certified)	7,638	6,014	11,080	7,941
Mean	9,115	6,255	10,997	8,568
LSD (.1)	821	426	NS	483
CV%	12	9	13	7

[†]Only data from 2015-2016 and 2017-2018 growing seasons included in mean yields from Iberia.

[‡]Includes data from only two growing seasons (2015-2016 and 2017-2018) from Iberia location.

[¶]Entries followed by (expt) are experimental and not commercially available.

Table 5. Dry forage production from annual ryegrass entries during the 2017-2018 growing season at Southeast Research Station, Franklinton, Louisiana.

Entry	Harvest Date					2017-2018 Total
	Dec. 15	Feb. 19	Mar. 14	Apr. 6	May 7	
	----- Dry forage, lb/acre -----					
Wax Marshall	1,856	1,344	2,307	3,239	2,281	11,027
Bashaw Tetraploid	1,827	1,215	2,032	3,364	2,546	10,982
ME4 (expt)	2,135	1,013	2,647	2,944	2,219	10,958
TAMTBO	2,227	1,259	2,561	2,401	2,035	10,482
RM4L	1,756	1,012	2,250	2,861	2,560	10,439
Andes	1,731	1,154	1,913	2,983	2,607	10,389
Lagniappe II (expt)	1,500	1,479	2,170	2,931	2,147	10,228
BAR LM 17514 (expt)	1,207	1,256	2,196	2,555	2,794	10,009
Prine	1,979	683	2,325	2,698	2,222	9,907
Passerel Plus	1,829	675	2,124	2,281	2,995	9,905
Double Diamond	2,087	811	2,522	2,306	2,112	9,837
Jumbo	1,784	1,065	2,189	2,576	2,217	9,830
BAR LM 17534 (expt)	1,622	1,318	1,958	2,448	2,482	9,828
Herdsmen	1,514	1,330	2,180	2,194	2,503	9,721
BAR LM 17477 (expt)	1,065	927	2,115	2,602	2,904	9,614
ME94 (expt)	1,696	733	2,201	2,989	1,973	9,591
Maximus	1,799	1,234	2,149	2,550	1,802	9,534
M2CVS (expt)	1,186	1,023	2,251	2,370	2,652	9,483
Bashaw Diploid	1,470	1,197	2,325	2,439	2,033	9,464
FrostProof	1,383	1,310	1,984	2,942	1,832	9,450
Diamond T	1,925	730	2,138	2,480	2,121	9,394
Lagniappe (expt)	1,338	1,138	2,067	2,621	2,062	9,226
LSC-B1191 (expt)	1,318	1,106	2,113	2,637	2,020	9,195
Flying A	2,018	994	2,210	2,293	1,678	9,192
Winterhawk	1,580	1,009	2,183	2,663	1,739	9,175
Ribeye	1,547	1,221	2,010	2,397	1,999	9,174
BAR LM 17490-3 (expt)	1,144	899	1,991	2,458	2,545	9,037
Triangle T	1,779	875	1,996	2,369	1,982	9,002
WMWL (expt)	1,378	1,267	2,229	2,402	1,720	8,996
PS15 (expt)	1,525	750	2,008	2,872	1,690	8,844
Nelson Tetraploid	1,944	659	1,800	2,442	1,925	8,770
EarlyPloid	1,236	1,216	1,880	2,633	1,703	8,667

(Table continued on next page)

Table 5. (continued) Dry forage production from annual ryegrass entries during the 2017-2018 growing season at Southeast Research Station, Franklinton, Louisiana.

Entry	Harvest Date					2017- 2018 Total
	Dec. 15	Feb. 19	Mar. 14	Apr. 6	May 7	
	----- Dry forage, lb/acre -----					
Spicer	1,828	1,134	1,690	2,160	1,833	8,645
Grits	1,739	831	1,879	2,569	1,591	8,609
McKinley	1,510	800	1,854	2,159	2,114	8,438
Jackson	1,451	874	1,935	2,328	1,753	8,340
Angusta	1,408	980	1,884	1,903	2,120	8,294
BAR LM 17490-4 (expt)	806	1,223	1,961	2,003	2,233	8,227
Gulf (certified)	1,828	1,047	1,845	2,164	1,170	8,054
Koga	1,077	419	1,626	2,371	2,032	7,524
Mean	1,601	1,030	2,092	2,540	2,124	9,387
LSD (.1)	392	539	477	580	695	1,452
CV (%)	18	38	17	17	24	11

†Entries followed by (expt) are experimental and not commercially available.

Table 6. Dry forage production from annual ryegrass entries during the 2017-2018 growing season at Iberia Research Station, Jeanerette, LA.

Entry	Harvest Date				2017-2018 Total
	Feb. 1	Mar. 9	Apr. 2	May 24	
	-----Dry forage, lb/acre-----				
ME94 (expt) [†]	1,758	4,546	1,941	5,906	14,150
Lagniappe II (expt)	2,356	2,715	2,620	6,302	13,992
BARLM17490-3 (expt)	1,759	3,971	2,391	5,823	13,945
BARLM17514 (expt)	2,208	3,272	1,855	6,402	13,736
Passerel Plus	2,039	3,939	2,245	5,500	13,723
Flying A	2,323	3,568	2,452	5,353	13,697
Bashaw Diploid	2,541	3,662	2,021	5,435	13,659
Maximus	2,090	3,569	2,281	5,496	13,437
Ribeye	2,149	3,333	2,086	5,744	13,311
Wax Marshall	1,796	3,571	2,437	5,412	13,215
Jumbo	2,155	3,743	2,038	5,271	13,207
Prine	2,012	3,491	1,846	5,788	13,136
Diamond T	2,078	3,030	2,161	5,840	13,109
ME4 (expt)	2,276	3,836	1,798	5,173	13,082
Bashaw Tetraploid	1,550	3,611	2,225	5,662	13,048
BARLM17490-4 (expt)	1,122	3,923	2,571	5,358	12,973
Herdsmen	1,492	3,263	2,105	6,079	12,940
WMWL (expt)	2,069	3,813	1,826	5,214	12,923
TAMTBO	2,227	3,007	1,892	5,777	12,901
Lagniappe (expt)	2,117	3,283	1,946	5,531	12,876
M2CVS (expt)	2,045	3,697	2,119	4,955	12,815
Double Diamond	1,785	3,303	2,240	5,447	12,775
LSC-B1191 (expt)	1,699	3,289	1,535	6,244	12,767
Gulf Certified	1,904	3,489	2,141	5,198	12,731
McKinley	1,558	3,432	1,886	5,847	12,723
Andes	1,584	3,042	2,001	5,869	12,495
Winterhawk	1,895	2,842	1,905	5,773	12,415
BARLM17477 (expt)	1,640	2,827	2,040	5,822	12,330
Jackson	1,509	3,184	1,639	5,988	12,319
Triangle T	1,767	3,106	1,677	5,694	12,243
FrostProof	1,888	3,646	1,172	5,389	12,096
RM4L	1,338	3,209	1,814	5,653	12,014
Angusta	1,871	3,188	1,485	5,327	11,871
Grits	1,843	3,599	1,498	4,912	11,852

(Table continued on next page)

Table 6. (continued) Dry forage production from annual ryegrass entries during the 2017-2018 growing season at Iberia Research Station, Jeanerette, LA.

Entry	Harvest Date				2017-2018
	Feb. 1	Mar. 9	Apr. 2	May 24	Total
	-----Dry forage, lb/acre-----				
PS15 (expt)	1,584	3,565	2,045	4,650	11,843
BARLM17534 (expt)	1,501	3,106	1,919	5,240	11,768
Nelson Tetraploid	1,676	2,867	1,652	5,419	11,614
Spicer	1,277	3,465	2,074	4,755	11,571
Earlyploid	1,755	3,640	1,464	4,695	11,553
Koga	1,134	2,751	2,415	4,972	11,271
Mean	1,834	3,410	1,986	5,523	12,753
LSD (.1)	601	683	397	NS	1,379
CV (%)	24	15	15	15	8

†Entries followed by (expt) are experimental and not commercially available.

Table 7. Dry forage production from annual ryegrass entries during the 2017-2018 growing season at Macon Ridge Research Station, Winnsboro, LA.

Entry	Harvest Date				2017-2018
	Jan. 31	Mar. 9	6-Apr	15-May	Total
	-----Dry forage, lb/acre-----				
McKinley	1,011	2,713	1,811	2,350	7,886
Bashaw Tetraploid	951	2,441	2,035	2,404	7,831
ME4 (expt)†	1,037	2,575	1,879	2,303	7,794
FrostProof	990	2,709	1,638	2,153	7,490
M2CVS (expt)	442	2,659	2,224	2,090	7,415
Winterhawk	890	2,446	1,706	2,363	7,405
Wax Marshall	935	2,283	1,995	2,190	7,404
Maximus	822	2,838	1,697	2,042	7,399
TAMTBO	1,153	2,351	1,486	2,327	7,317
Lagniappe II (expt)	896	2,511	1,654	2,186	7,247
Nelson Tetraploid	1,056	2,458	1,584	2,104	7,202
WMWL (expt)	825	2,549	1,979	1,845	7,198
Jackson	837	2,193	1,631	2,533	7,194
LSC-B1191 (expt)	848	2,371	1,794	2,169	7,181
BARLM17490-3 (expt)	652	2,386	1,974	2,160	7,172
Jumbo	894	2,411	1,543	2,307	7,155
BARLM17514 (expt)	991	2,341	1,485	2,305	7,122
Andes	1,000	2,033	1,765	2,271	7,069
Gulf Certified	536	2,355	2,119	2,057	7,066
BARLM17490-4 (expt)	551	2,167	1,992	2,348	7,058
Flying A	857	2,280	1,874	2,043	7,054
Diamond T	1,088	2,160	1,344	2,418	7,011
Triangle T	593	2,166	1,849	2,399	7,007
Spicer	756	2,256	1,887	2,104	7,003
Ribeye	685	2,318	1,921	2,068	6,991
Prine	952	2,039	1,797	2,160	6,948
ME94 (expt)	854	2,025	1,750	2,292	6,922
BARLM17477 (expt)	694	2,270	1,786	2,158	6,909
RM4L	809	2,443	1,735	1,910	6,897
Double Diamond	730	2,406	1,740	2,005	6,881
Grits	921	1,990	1,555	2,312	6,778
Bashaw Diploid	851	2,173	1,589	2,122	6,736
Angusta	829	2,199	1,608	2,081	6,718
Lagniappe (expt)	725	2,116	1,773	2,040	6,653
Passerel Plus	732	2,136	1,662	1,960	6,489

(Table continued on next page)

Table 7. (continued) Dry forage production from annual ryegrass entries during the 2017-2018 growing season at Macon Ridge Research Station, Winnsboro, LA.

Entry	Harvest Date				2017-2018
	Jan. 31	Mar. 9	6-Apr	15-May	Total
	-----Dry forage, lb/acre-----				
PS15 (expt)	702	1,873	1,677	2,235	6,487
Earlyploid	963	2,152	1,228	2,092	6,435
Herdsmen	780	1,873	1,567	2,203	6,423
Koga	488	1,870	1,644	1,880	5,882
BARLM17534 (expt)	739	1,548	1,304	2,054	5,645
Mean	827	2,277	1,732	2,176	7,012
LSD (.1)	282	477	378	321	774
CV%	25	15	16	11	8

[†]Entries followed by (expt) are experimental and not commercially available.

Small Grains

Winter annual small grains produce high-quality forage during the early winter. Oats (*Avena sativa*) should be seeded at rates of 100 pounds per acre if planted alone or 60 pounds per acre if planted with annual ryegrass (which should be planted at 20 pounds per acre). Cereal rye (*Secale cereale*), triticale (*Triticosecale*) and wheat (*Triticum aestivum*) should be seeded at rates of 90 pounds per acre if planted alone or 60 pounds per acre if planted with annual ryegrass (which should be planted at 20 pounds per acre). Small grains should be planted for forage production between Sept. 1 and Oct. 15 in northern Louisiana and between Sept. 15 and Oct. 15 in southern Louisiana if planted into a prepared seedbed and approximately Oct. 15 if planted into an existing sod.

The forage production tests for small grain varieties were conducted at the Louisiana State University Agricultural Center's Southeast and Macon Ridge Research Stations during the 2017-18 growing season (Table 9). Plots were planted as pure stands at the rate of 100 and 90 pounds seed per acre for oats and triticale, respectively, into a prepared seedbed. Phosphorus (P) and potassium (K) fertilizers were applied according to soil test recommendations made by the

Louisiana Cooperative Extension Service. Total nitrogen (N) applied varied between locations but was at least 150 pounds per acre in multiple applications at planting and post-harvest. Originating agencies for small grain varieties evaluated in the forage variety test during the 2017-18 growing season are listed in Appendix B.

Table 8. Planting dates and soil types of locations cooperating in the 2017-18 oat variety test.

Research Station	Location	Planting Date	Soil Type
Southeast	Franklinton	October 12, 2017	Tangi silt loam
Macon Ridge	Winnsboro	October 25, 2017	Gigger silt loam

Results of oat trials

The two year and three year yield means from entries entered the past 2 and 3 years are presented in Table 9. Dry forage production from oat entries through the 2017-2018 growing season at the Southeast and Macon Ridge Research Stations are presented in Tables 10 and 11, respectively. RAM LA99016, TAMO 606 and TAMO 411 are oat varieties suggested for planting as a forage crop in 2018.

Table 9. Performance of small grain entries in forage production evaluation trials at LSU AgCenter Research Stations, Franklinton and Winnsboro, Louisiana, during two (2016-17 and 2017-18) and three growing seasons (2015-16 through 2017-18).

Entry	Specie	Location		Mean
		Franklinton	Winnsboro	
----- Dry forage, lb/acre -----				
2-Year Performance				
RAM LA99016	Oat	6,193	3,933	5,063
TAMO 411	Oat	5,836	3,996	4,916
TAMO 606	Oat	5,117	4,265	4,691
Mean		5,715	4,065	4890
LSD (.1)		732	NS	NS
CV (%)		12	8	12
Trical 342	Triticale	----	2,910	3,409 [‡]
Fl 01143	Triticale	----	2,665	3,169
FL 08128 (expt) [†]	Triticale	----	2,562	3,162
Mean			2712	3,247
LSD (.1)			NS	NS
CV (%)			14	21
3-Year Performance				
RAM LA99016	Oat	6,198	4,033	5,116
TAMO 411	Oat	6,056	4,022	5,039
TAMO 606	Oat	5,365	4,272	4,818
Mean		5,873	4,109	4,991
LSD (.1)		620	NS	NS
CV (%)		13	7	12

[†]Entries followed by (expt.) are experimental and not commercially available.

[‡]Triticale was evaluated at only the Winnsboro location in both years so means represent 3 year/location environments.

Table 10. Dry forage production from oat entries during the 2017-2018 growing season at Southeast Research Station, Franklinton, Louisiana.

Entry	Harvest Date				2017-2018
	Dec. 15	Feb. 19	Mar. 14	April 6	Total
-----Dry forage, lb/acre-----					
TAMO 411	1,878	489	979	2,028	5,375
LA09015SBS-U1 (expt) [†]	1,686	436	555	2,432	5,109
RAM LA99016	1,741	504	904	1,846	4,995
LA09044SBS-U1 (expt)	1,749	265	797	1,928	4,738
LA09030SBS-U3 (expt)	1,456	182	749	2,259	4,646
TAMO 606	1,311	262	930	1,315	3,818
Mean	1,637	357	819	1,968	4,780
LSD (.1)	NS	NS	NS	453	NS
CV%	29	85	32	16	16

[†]Entries followed by (expt.) are experimental and not commercially available.

Table 11. Dry forage production from small grain entries during the 2017-2018 growing season at Macon Ridge Research Station, Winnsboro, Louisiana

Entry	Species	Harvest Date			2017-2018
		Feb. 1	Mar. 15	Apr. 17	Total
-----Dry forage, lb/acre-----					
LA09015SBS-U1 (expt) [†]	Oat	645	1,564	1,259	3,467
PennOat (expt)	Oat	679	2,055	432	3,166
FL 08128 (expt)	Triticale	898	1,960	245	3,103
TAMO 606	Oat	117	1,608	1,370	3,095
LA09044SBS-U1 (expt)	Oat	357	1,361	1,353	3,071
LA99016	Oat	404	1,752	903	3,059
LA09030SBS-U3 (expt)	Oat	338	1,342	1,146	2,826
TAMO 411	Oat	572	1,597	630	2,799
Trical 342	Triticale	466	1,751	518	2,735
FL 01143	Triticale	720	1,786	169	2,676
Mean		520	1,678	803	3,000
LSD (.1)		147	256	206	395
CV%		20	11	18	9

[†]Entries followed by (expt.) are experimental and not commercially available.

Appendix A. Originating Agencies for Annual Ryegrass Entries in 2017-2018 LSU
AgCenter Forage Variety Tests.

Entry	Originating Agency
Koga, FrostProof	Smith Seed Services, PO Box 288, Halsey, OR 97348
Jumbo, Maximus, Ribeye, BAR LM 17477, BAR LM 17490-3, BAR LM 17490-4, BAR LM 17514, BAR LM 17534	Barenbrug USA, 33477 Hwy 99E, P.O. Box 239, Tangent, OR 97389
Bashaw Tetraploid, Bashaw Diploid, Lagniappe, Lagniappe II	Crop Production Services, 5012 Hot Wells Road, Boyce, LA 71409
Diamond T, Flying A, TAMTBO, Winterhawk, Double Diamond, Triangle T	OreGro Seeds, Inc., 33080 Red Bridge Rd. SE, Albany, OR 97322
Earlyploid, Prine, RM4L	Ragan and Massey, 100 Ponchatoula Parkway, Ponchatoula, LA 70454
Gulf (certified)	Acquired for Check Variety
Herdsmen	Nusbaum Farms, LLC., 26894 Bellfountain Road, Monroe, OR 97456
Jackson, Wax Marshall, Nelson Tetraploid, ME94, ME4, M2CVS, WMWL	The Wax Company, LLC, P.O. Box 60, Amory, MS 38821
Passerel Plus, Spicer, PS15	Pennington Seed, Inc., 1280 Atlanta Hwy., Madison, GA 30650
Grits, LSC-B1191	Lewis Seed Co. P.O. Box 100 31810 Fayetteville Dr., Shedd, OR 97355
McKinley, Angusta, Andes	DLF Pickseed USA Inc., 175 West H Street, Halsey OR 97348

Appendix B. Originating Agencies for Small Grain Entries in 2017-2018 LSU AgCenter Forage Variety Tests.

Entry	Originating Agency
Oat (PennOat)	Pennington Seed, P.O. Box 290, Madison, GA 30650
Oat (RAM LA99016)	Ragan and Massey, 100 Ponchatoula Parkway, Ponchatoula, LA 70454
Oat (TAMO 411, TAMO 606)	Specialty Seed Inc., P.O. Box 605, Brandon, MS 39043
Triticale (Tricale 342, FL 01143, FL 08128)	University of Florida, 155 Research Road, Quincy, FL 32351
Oat (LA09015SBS-U1, LA09030SBS-U3, LA09044SBS-U1)	School of Plant, Environmental & Soil Sciences, LSU AgCenter, Baton Rouge, LA 70803