

***Performance of
COOL-SEASON ANNUAL FORAGE CROPS
in Louisiana, 2004-2005***

LAES Research Summary No. 166

LOUISIANA STATE UNIVERSITY AGRICULTURAL CENTER
William B. Richardson, Chancellor

LOUISIANA AGRICULTURAL EXPERIMENT STATION
David J. Boethel, Vice Chancellor and Director

LOUISIANA COOPERATIVE EXTENSION SERVICE
Paul D. Coreil, Vice Chancellor and Director

*The Louisiana State University Agricultural Center provides equal opportunities in
programs and employment.*

RETURN TO:

Dr. Wink Alison
Macon Ridge Research Station Phone: (318) 435-2157
LSU Agricultural Center Fax: (318) 435-2133
212 A Macon Ridge Road E-mail: walison@agcenter.lsu.edu
Winnsboro, LA 71295 <http://www.lsuagcenter.com>

Web Site . . .

This publication is on the Web and can be found at
<http://www.lsuagcenter.com/forage/>

IF . . .

you would like your name added to the permanent mailing list for the cool-season forage variety performance evaluations, please complete and mail the form below.

Please . . .

let us know if you no longer wish to receive this publication. This research summary series is provided free as a service of the Louisiana State University Agricultural Center. You can help us minimize costs by returning this form indicating your desire to be removed from the mailing list.

Thanks . . .

for your interest in this publication. We welcome your comments and suggestions.

Name:

Address:

Phone:

E-mail:

ADD / DELETE . . . (circle one)

my name from the mailing list for the LAES forage research summary series.

Table of Contents

Introduction and Procedures	1
Test Results	
Annual Ryegrass	2
Table 1. Planting Dates and Soil Types.....	2
Table 2. Louisiana, 2005	3
Table 3. Two-year Louisiana, 2005	4
Table 4. Three-year Louisiana, 2005.....	5
Table 5. Franklinton, 2005	6
Table 6. Homer, 2005.....	7
Table 7. Jeanerette, 2005.....	8
Table 8. Lake Charles, 2005.....	9
Table 9. Rosepine, 2005.....	10
Table 10. Winnsboro, 2005.....	11
Cereal Rye	12
Table 10. Planting Dates and Soil Types.....	12
Table 11. Franklinton, 2005	13
Table 12. Two-year Louisiana, 2005	13
Table 13. Three-year Louisiana, 2005.....	13
Oats.....	14
Table 10. Planting Dates and Soil Types.....	14
Table 11. Louisiana, 2005	15
Table 12. Two-year Louisiana, 2005	15
Table 13. Three-year Louisiana, 2005.....	16
Table 14. Franklinton, 2005.....	16
Table 15. Rosepine, 2005.....	17
Appendix A. Originating Agencies for Annual Ryegrass	18
Appendix B. Originating Agencies for Oats	19
Appendix C. Originating Agencies for Cereal Rye	19

Performance of Cool-season Annual Forage Crops in Louisiana, 2004-2005

M. W. Alison¹, J. L. Ashley¹, H. Aymond², Tara Doughty³, M. E. McCormick³, W. D. Pitman⁴, J. E. Richard⁵, Jerry Simmons³, K. Tucker⁶, E. K. Twidwell⁷, H.P. Viator⁵ and C. C. Willis⁴

Introduction

Winter annual forages are recommended 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, cereal rye and oat varieties. Trials are conducted at various LSU 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 the LSU AgCenter scientists to develop a list of varieties recommended for use by Louisiana forage producers. To be included on the recommended list of 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% of the three-year mean of the top three yielding 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% of the average of the top three varieties. A variety will be dropped from the recommended list if it fails to perform satisfactorily or if it is no longer available to the producers or if not submitted for evaluation.

Testing Procedures

The cool-season annual forage variety testing program is open to all commercially available varieties and advanced experimental lines of annual ryegrass, cereal rye and oats developed by either public or private plant breeding programs. The trials are managed using production practices recommended 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 three to four replications. Plots of each species are cut to a 2- to 4-inch stubble height when growth reaches 8 to 12 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

¹Associate Professor and Research Specialist II, LSU Agricultural Center, Northeast Research Station – Macon Ridge Location, Winnsboro, LA 71295. ²Professor, McNeese State University, Lake Charles, LA, 70609, ³Research Associate, Professor and Research Associate, LSU Agricultural Center, Southeast Research Station, Franklinton, LA 70438. ⁴Professor and Research Associate, LSU Agricultural Center, Rosepine Research Station, Rosepine, LA 70659. ⁵Research Associate and Professor, LSU Agricultural Center, Iberia Research Station, Jeanerette, LA 70544. ⁶Research Associate, LSU Agricultural Center, Hill Farm Research Station, Homer, LA 71040. ⁷Specialist (Agronomy), LSU Agricultural Center, Baton Rouge, LA 70803.

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 recommended for use as a high quality winter grazing, hay or silage crop on most soils. Annual ryegrass should be planted at rates of 30 pounds per acre if seeded alone or 20 pounds per acre if seeded with clover. Recommended seeding dates for annual ryegrass are between September 20 and October 15 if planted into a prepared seedbed and approximately October 15 if planted into an existing sod.

Annual ryegrass variety tests were conducted at five LSU AgCenter research stations and at McNeese State University during the 2004-05 growing season (Table 1). 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 was 250 pounds per acre in multiple applications at planting and after second and fourth harvests. 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 2004-05 annual ryegrass variety tests.

Research Station	Location	Planting Date	Soil Type
Southeast	Franklinton	October 7, 2004	Tangi silt loam
Hill Farm	Homer	October 22, 2004	Darley fine-sandy loam
Iberia	Jeanerette	October 22, 2004	Iberia silty-clay loam
McNeese State University*	Lake Charles	October 12, 2004	Midland silty clay loam
Rosepine	Rosepine	October 5, 2004	Bowie fine-sandy loam
Macon Ridge	Winnsboro	October 18, 2004	Gigger silt loam

*McNeese State University is not an LSU AgCenter research station.

Results of annual ryegrass trials

Annual ryegrass entry, location and statewide yield means for one, two and three years are presented in Tables 2, 3 and 4. Dry forage production from annual ryegrass entries through the 2004-05 growing season at each location is presented in Tables 5 through 10. Recommended varieties for 2005 are Beefbuilder III, Brigadier, Diamond T, Ed, Gulf, Jackson, Marshall, Passerel Plus, Prine and TAM 90. Promising varieties for 2005 are Dyna-Gain, Graze-N-Gro, King, Rio and 4X.

Table 2. Dry forage production from annual ryegrass entries grown at six locations in Louisiana during the 2004-2005 growing season.

Variety/Brand	Trial Locations						2004-05 Mean
	Franklinton	Homer	Jeanerette	Lake Charles	Rosepine	Winnsboro	
	----- Dry forage, lbs./acre -----						
Prine	11443	6942	4762	8073	4983	7993	7366
FLX2003(BD)4XLRCT	9593	7380	4785	7760	5084	8377	7163
M/FL X2004 (4X) LRCT	10053	7210	4988	8443	4928	7332	7159
FLX2001(New 1) 4XLRLate	10647	6693	5204	7520	4283	8111	7076
Jumbo	10045	5631	5352	8590	4452	8029	7016
Rio	9841	7461	4932	7790	4066	7769	6976
Wax ME94	10353	5993	4696	7177	5134	8469	6970
Striker	10372	5427	5006	7940	4799	7663	6868
M/FL X2004 (New 4) LRCT	9165	6091	4875	7547	5682	7832	6865
Beefbuilder III	9559	6553	4696	6113	5259	8093	6712
Marshall	10190	5426	4700	6400	4779	8712	6701
King	8747	6099	4760	8037	4661	7383	6615
FL/NE X2004 (Misc. 2X) LRCT	9119	5373	5002	6597	4834	8390	6552
Diamond T	9172	7205	4458	5980	4367	8118	6550
4X	9808	7045	4903	4203	4477	8808	6541
Graze-N-Gro	9785	6654	4808	6163	4448	7328	6531
Dyna-Gain	9303	6404	4780	6150	4488	7891	6503
Jackson	9403	6144	4497	6320	4618	7651	6439
Passerel Plus	10578	4451	4794	5317	4653	8824	6436
Ed	8815	5807	4830	6013	5135	7707	6385
TXR2004-BAR	9736	5469	4808	5613	3943	7733	6217
Gulf	9663	6099	4314	5613	4561	6963	6202
Maximus	8868	6993	5097	4807	3972	7453	6198
Lone Star	8992	6042	5042	5293	3856	7873	6183
Flying A	8862	6297	4667	5217	4017	7957	6169
Brigadier	9056	6644	4946	4077	3888	7669	6046
WMN97	8406	5722	4441	4477	3862	8642	5925
Tam-90	10168	5571	4487	2993	3909	8129	5876
WD-40	9245	6677	4353	3363	3955	7145	5790
Abundant	9424	5646	4356	2860	4649	7699	5772
WVPB-SS-93-AR-K4N	8535	6000	4621	2863	4286	7858	5694
Shiwasuaoba	6552	5581	3993	3983	3180	5823	4852
ME3	-----	-----	-----	-----	-----	8167	-----
Mean	9484	6210	4748	5915	4475	7866	6448
CV%	8	13	9	19	19	8	12
LSD (0.05)	1313	1281	594	1826	NS	1005	492

Table 3. Dry forage production from annual ryegrass entries at five locations in Louisiana during two growing seasons, 2003-2005.

Variety/Brand	Trial Locations					2-year mean
	Franklinton	Jeanerette	Lake Charles	Rosepine	Winnsboro	
	----- Dry forage, lbs./acre -----					
Prine	9866	6708	7518	5708	8239	7608
Wax ME94	9086	6546	7267	5712	8440	7410
Beefbuilder III	8997	6463	7405	5560	8420	7369
Marshall	9187	6561	6476	5389	9005	7324
Passerel Plus	9318	6583	6248	4981	8968	7219
Graze-N-Gro	8660	6766	6992	5487	7849	7151
King	8258	6677	7645	5127	8056	7152
Rio	8855	6735	6725	5124	8024	7093
Ed	8145	6451	6828	5889	8204	7103
Dyna-Gain	8813	6466	6615	5342	8160	7079
Jackson	8539	6460	6623	5182	8224	7006
4X	9057	6935	5048	5132	8675	6969
Gulf	8846	6382	6705	4950	8070	6990
Diamond T	8558	6416	6285	4922	8641	6964
TAM-90	9015	6621	5004	4659	8578	6776
Brigadier	8146	6276	5990	4933	8021	6673
Abundant	8519	6400	5355	5102	7943	6664
WD-40	8762	6166	5158	4932	7608	6525
WMN97	8033	5868	5198	4351	8840	6458
Shiwasuaoba	6274	5395	4620	3343	6039	5134
Mean	8647	6444	6285	5091	8200	6933
CV%	11	9	13	17	8	13
LSD (0.05)	1105	605	965	981	719	450

Table 4. Dry forage production from annual ryegrass entries at four locations in Louisiana during three growing seasons, 2002-2005.

Variety/Brand	Trial Locations				3-Year Mean
	Franklinton	Jeanerette	Rosepine	Winnsboro	
	----- Dry forage, lbs./acre -----				
Prine	9150	6632	5082	8419	7321
Passerel Plus	9031	6524	4669	8872	7274
Beefbuilder III	9426	6417	4999	8228	7267
Marshall	8715	6452	4966	8727	7215
Wax ME94	8965	6492	5085	8199	7185
Ed	8069	6407	5359	8042	6969
TAM-90	8589	6457	4328	8244	6905
Diamond T	8161	6348	4635	8413	6889
Brigadier	8394	6418	4734	7947	6873
Jackson	7792	6353	4711	8191	6762
Gulf	8145	6177	4596	7876	6698
WD-40	8016	6077	4510	7582	6546
WMN97	7337	5875	4202	8507	6480
Mean	8445	6356	4760	8250	6953
CV%	15	10	16	7	12
LSD (0.05)	1165	NS	NS	516	384

Table 5. Dry forage production from annual ryegrass entries during the 2004-2005 growing season at Southeast Research Station, Franklinton, Louisiana.

Variety/Brand	Harvest Date					2004-05
	Jan. 10	Feb. 11	Mar. 8	Apr. 18	May 19	Total
	----- Dry forage, lbs./acre -----					
Prine	699	705	2147	3988	3904	11443
FLX2001(New 1) 4XLRLate	1343	688	1724	3253	3640	10647
Passerel Plus	927	644	1508	3856	3642	10578
Striker	907	602	1654	3181	4028	10372
Wax ME94	1754	528	1538	3248	3284	10353
Marshall	1097	670	1542	3718	3164	10190
Tam-90	664	643	3200	3003	2657	10168
M/FL X2004 (4X) LRCT	1189	653	1702	2947	3562	10053
Jumbo	980	594	1584	3250	3637	10045
Rio	992	897	1882	3196	2875	9841
4X	731	589	1439	3853	3196	9808
Graze-N-Gro	1302	772	1609	3038	3066	9785
TXR2004-BAR	605	635	1738	3729	3028	9736
Gulf	903	821	1705	3250	2984	9663
FLX2003(BD)4XLRCT	968	530	1532	3350	3212	9593
Beefbuilder III	858	701	1529	3408	3064	9559
Abundant	873	654	1542	3471	2885	9424
Jackson	1126	687	1720	2975	2895	9403
Dyna-Gain	1028	704	1468	2909	3194	9303
WD-40	626	624	1976	3627	2392	9245
Diamond T	966	600	1523	2653	3431	9172
M/FL X2004 (New 4) LRCT	1181	679	1413	2889	3003	9165
FL/NE X2004 (Misc. 2X) LRCT	1002	645	1622	3100	2750	9119
Brigadier	438	575	1771	3409	2864	9056
Lone Star	937	710	1619	2961	2764	8992
Maximus	894	625	1513	2832	3003	8868
Flying A	1185	658	1484	2850	2685	8862
Ed	1178	624	1524	2667	2822	8815
King	732	617	1644	3188	2566	8747
WVPB-SS-93-AR-K4N	570	585	1742	3294	2344	8535
WMN97	595	493	1715	2875	2727	8406
Shiwasuaoba	750	576	1813	1757	1656	6552
Mean	937	648	1691	3179	3029	9484
CV%	37	20	8	10	15	8
LSD (0.05)	573	NS	234	545	753	1313

Table 6. Dry forage production from annual ryegrass entries during the 2004-2005 growing season at Hill Farm Research Station, Homer, Louisiana.

Variety/Brand	Harvest Date				2004-05
	Jan. 11	Feb. 22	April 14	May 25	Total
	----- Dry forage, lbs./acre -----				
Rio	794	1350	4152	1165	7461
FLX2003(BD)4XLRCT	601	1007	4253	1519	7380
M/FL X2004 (4X) LRCT	495	975	4168	1572	7210
Diamond T	359	662	4627	1558	7205
4X	376	762	4334	1573	7045
Maximus	552	1261	3869	1310	6993
Prine	409	1111	4136	1286	6942
FLX2001(New 1) 4XLRLate	746	791	3514	1643	6693
WD-40	369	642	4362	1304	6677
Graze-N-Gro	726	731	3510	1688	6654
Brigadier	281	978	4049	1335	6644
Beefbuilder III	640	981	3393	1538	6553
Dyna-Gain	452	1161	3552	1238	6404
Flying A	500	842	3638	1317	6297
Jackson	577	861	3281	1424	6144
Gulf	351	782	3566	1400	6099
King	559	642	3373	1524	6099
M/FL X2004 (New 4) LRCT	329	710	3601	1452	6091
Lone Star	365	723	3387	1568	6042
WVPB-SS-93-AR-K4N	597	953	3172	1278	6000
Wax ME94	758	882	3079	1275	5993
Ed	556	841	3000	1411	5807
WMN97	743	737	2908	1333	5722
Abundant	412	829	3268	1138	5646
Jumbo	185	546	3475	1424	5631
Shiwasuaoba	424	665	3479	1013	5581
Tam-90	583	685	3108	1195	5571
TXR2004-BAR	724	600	2837	1308	5469
Striker	741	717	2867	1103	5427
Marshall	354	765	3055	1253	5426
FL/NE X2004 (Misc. 2X) LRCT	407	473	3210	1284	5373
Passerel Plus	552	569	2085	1245	4451
Mean	516	820	3510	1365	6210
CV%	51	39	19	25	13
LSD (0.05)	NS	NS	1075	NS	1281

Table 7. Dry forage production from annual ryegrass entries during the 2004-2005 growing season at Iberia Research Station, Jeanerette, Louisiana.

Entry	Harvest Date					2004-05
	Jan. 11	Feb. 21	Mar. 15	April 11	May 5	Total
	----- Dry forage, lbs./acre -----					
Jumbo	1399	766	1075	1008	1105	5352
FLX2001(New 1) 4XLRLate	1073	950	1115	1001	1065	5204
Maximus	1374	787	1003	1016	917	5097
Lone Star	1221	883	1002	1061	877	5042
Striker	1035	794	906	946	1327	5006
FL/NE X2004 (Misc. 2X) LRCT	672	783	998	1318	1232	5002
M/FL X2004 (4X) LRCT	1100	648	978	1084	1178	4988
Brigadier	924	997	1101	1207	718	4946
Rio	989	867	949	1249	876	4932
4X	1131	963	996	1044	768	4903
M/FL X2004 (New 4) LRCT	913	643	994	1280	1045	4875
Ed	1032	821	911	1068	998	4830
TXR2004-BAR	1008	932	992	1037	839	4808
Graze-N-Gro	1056	760	898	1017	1078	4808
Passerel Plus	1144	661	777	930	1282	4794
FLX2003(BD)4XLRCT	1041	838	1007	1022	877	4785
Dyna-Gain	1117	959	879	1006	820	4780
Prine	892	639	929	912	1391	4762
King	1017	729	935	1124	956	4760
Marshall	1136	567	797	943	1258	4700
Wax ME94	1131	598	874	977	1117	4696
Beefbuilder III	1008	728	980	1115	865	4696
Flying A	1132	845	972	943	775	4667
WVPB-SS-93-AR-K4N	1082	883	984	997	676	4621
Jackson	945	590	918	1096	949	4497
Tam-90	1195	705	943	940	705	4487
Diamond T	966	748	954	889	901	4458
WMN97	1238	569	774	855	1006	4441
Abundant	1031	622	876	1023	804	4356
WD-40	1111	703	873	1092	574	4353
Gulf	1059	797	885	980	593	4314
Shiwasuaoba	922	1215	601	1009	245	3993
Mean	1065	781	934	1037	932	4748
CV%	17	25	15	14	13	9
LSD (0.05)	248	275	203	199	165	594

Table 8. Dry forage production of annual ryegrass entries during the 2004-2005 growing season at McNeese State University, Lake Charles, Louisiana.

Variety/Brand	Harvest Date				2004-05
	Jan. 18	Feb. 24	April 5	May 3	Total
	----- Dry forage, lbs./acre -----				
Jumbo	2160	1810	2347	2273	8590
M/FL X2004 (4X) LRCT	2170	1907	2267	2100	8443
Prine	2020	1667	2373	2013	8073
King	2113	1863	2200	1860	8037
Striker	2040	1740	2120	2040	7940
Rio	2017	1733	2117	1923	7790
FLX2003(BD)4XLRCT	1930	1593	1907	2330	7760
M/FL X2004 (New 4) LRCT	1913	1727	2073	1833	7547
FLX2001(New 1) 4XLRLate	1913	1657	1953	1997	7520
Wax ME94	1853	1653	1817	1853	7177
FL/NE X2004 (Misc. 2X) LRCT	1727	1503	1740	1627	6597
Marshall	1630	1427	1597	1747	6400
Jackson	1627	1480	1587	1627	6320
Graze-N-Gro	1400	1217	2007	1540	6163
Dyna-Gain	1203	1073	2047	1827	6150
Beefbuilder III	1560	1280	1637	1637	6113
Ed	1593	1327	1500	1593	6013
Diamond T	1580	1303	1640	1457	5980
Gulf	1400	1273	1407	1533	5613
TXR2004-BAR	1343	1190	1600	1480	5613
Passerel Plus	1243	1143	1397	1533	5317
Lone Star	1253	1143	1503	1393	5293
Flying A	1373	1220	1347	1277	5217
Maximus	1220	1073	1210	1303	4807
WMN97	1127	1097	1127	1127	4477
4X	997	927	1127	1153	4203
Brigadier	1037	970	1057	1013	4077
Shiwasuaoba	1150	1113	960	760	3983
WD-40	863	767	883	850	3363
Tam-90	540	577	1043	833	2993
WVPB-SS-93-AR-K4N	727	697	713	727	2863
Abundant	620	567	817	857	2860
Mean	1479	1304	1597	1535	5915
CV%	21	17	20	25	19
LSD (0.05)	506	360	531	634	1826

Table 9. Dry forage production from annual ryegrass entries during the 2004-2005 growing season at Rosepine Research Station, Rosepine, Louisiana.

Variety/Brand	Harvest Date					2004-05	
	Jan. 10	Feb. 23	Mar. 22	April 4	April 20	May 10	Total
	----- Dry forage, lbs./acre -----						
M/FL X2004 (New 4) LRCT	669	1423	1996	505	776	314	5682
Beefbuilder III	756	1347	1730	520	589	316	5259
Ed	522	1230	1808	510	734	331	5135
Wax ME94	411	1117	1857	668	733	348	5134
FLX2003(BD)4XLRCT	576	1262	1912	563	501	269	5084
Prine	530	1231	1709	589	585	339	4983
M/FL X2004 (4X) LRCT	477	1221	1878	488	613	253	4928
FL/NE X2004 (Misc. 2X) LRCT	507	1155	1773	500	685	215	4834
Striker	519	1039	1655	807	576	203	4799
Marshall	536	891	1649	690	728	285	4779
King	301	1059	1732	482	795	293	4661
Passerel Plus	376	762	1631	755	796	332	4653
Abundant	438	1111	1598	627	594	282	4649
Jackson	385	1027	1843	537	591	234	4618
Gulf	400	1255	1628	510	575	193	4561
Dyna-Gain	441	1112	1567	520	589	258	4488
4X	415	969	1604	588	664	237	4477
Jumbo	310	900	1665	582	649	345	4452
Graze-N-Gro	341	966	1576	645	614	304	4448
Diamond T	357	817	1615	598	694	286	4367
WVPB-SS-93-AR-K4N	497	1044	1478	528	530	208	4286
FLX2001(New 1) 4XLRLate	482	942	1532	587	554	186	4283
Rio	462	1013	1409	519	468	195	4066
Flying A	387	906	1467	491	566	201	4017
Maximus	397	922	1309	629	539	177	3972
WD-40	271	868	1525	502	634	155	3955
TXR2004-BAR	265	747	1649	468	578	236	3943
Tam-90	355	738	1363	541	621	292	3909
Brigadier	413	732	1406	484	599	255	3888
WMN97	381	704	1311	619	625	223	3862
Lone Star	370	870	1270	476	645	226	3856
Shiwasuaoba	293	1073	903	264	442	204	3180
Mean	433	1014	1595	556	621	256	4475
CV%	47	34	19	14	17	37	19
LSD (0.05)	NS	NS	482	131	170	NS	NS

Table 10. Dry forage production from annual ryegrass entries during the 2004-2005 growing season at Macon Ridge Research Station, Winnsboro, Louisiana.

Variety/Brand	Harvest Date					2004-05
	Jan. 3	Feb. 7	Mar. 4	April 1	May 5	Total
	----- Dry forage, lbs./acre -----					
Passerel Plus	1959	875	956	1769	3265	8824
4X	1438	807	1165	2150	3249	8808
Marshall	2113	857	899	1740	3103	8712
WMN97	1828	920	885	1997	3012	8642
Wax ME94	1991	900	995	2029	2554	8469
FL/NE X2004 (Misc. 2X) LRCT	1574	859	1108	1954	2895	8390
FLX2003(BD)4XLRCT	1853	921	1059	1923	2621	8377
ME3	1962	751	896	1869	2688	8167
Tam-90	1919	787	997	1828	2599	8129
Diamond T	1755	905	976	1839	2643	8118
FLX2001(New 1) 4XLRLate	1596	920	1111	1932	2552	8111
Beefbuilder III	1600	834	1104	1909	2646	8093
Jumbo	1608	901	1107	1780	2632	8029
Prine	1689	814	1095	1685	2710	7993
Flying A	1665	799	1017	1859	2618	7957
Dyna-Gain	1821	879	955	1739	2498	7891
Lone Star	1633	829	1033	2147	2231	7873
WVPB-SS-93-AR-K4N	1625	870	1002	1740	2621	7858
M/FL X2004 (New 4) LRCT	1893	822	1036	1693	2389	7832
Rio	1752	943	1025	1740	2309	7769
TXR2004-BAR	1495	767	966	2009	2495	7733
Ed	1871	786	920	1582	2548	7707
Abundant	1714	779	1025	1565	2616	7699
Brigadier	804	903	1322	1975	2665	7669
Striker	1779	840	933	1656	2454	7663
Jackson	1561	814	1011	1755	2509	7651
Maximus	1612	679	972	1633	2558	7453
King	1713	826	994	1618	2232	7383
M/FL X2004 (4X) LRCT	1569	802	1002	1684	2276	7332
Graze-N-Gro	1484	857	883	1660	2444	7328
WD-40	1641	737	832	1591	2343	7145
Gulf	1469	833	962	1743	1956	6963
Shiwasuaoba	1216	709	891	1240	1768	5823
Mean	1673	834	1004	1789	2567	7866
CV%	15	12	14	16	13	8
LSD (0.05)	415	NS	NS	NS	530	1005

CEREAL RYE

Cereal rye (*Secale cereale*) is more cold tolerant and generally produces more forage during late fall and early winter than does annual ryegrass. Cereal rye is recommended either alone or in mixtures with annual ryegrass for use as a winter grazing and/or spring hay crop on most soils and is more tolerant of soil acidity than ryegrass or other small-grain species. It is recommended that cereal rye be planted at rates of 90 pounds per acre if seeded alone or 60 pounds per acre if seeded with annual ryegrass (which should be seeded at 20 pounds per acre). Cereal rye should be planted between September 20 and October 15 if planted into a prepared seedbed and approximately October 15 if planted into an existing sod.

The cereal rye variety test was conducted at one LSU AgCenter research station during the 2004-05 growing season (Table 11). Plots at this location were seeded as pure stands at the rate of 90 lb/acre into a prepared seedbed. Phosphorus (P) and potassium (K) fertilizer was applied according to soil test recommendations made by the Louisiana Cooperative Extension Service. Total nitrogen (N) applied was 250 pounds per acre in multiple applications at planting and post harvest. Submitting agencies for cereal rye varieties are listed in Appendix B.

Table 11. Planting date and soil type at the cooperating location in the 2004-05 cereal rye variety test.

Research Station	Location	Planting Date	Soil Type
Southeast	Franklinton	October 7, 2004	Tangi silt loam

Results of cereal rye trials

Cereal rye entry, location and statewide yield means for one, two and three years are presented in Tables 12 and 13. Recommended varieties for 2005 are Bates, Elbon, Maton, Oklon and Wintergrazer 70. Wintermore has performed satisfactorily over the past two years to be listed as a promising variety in 2005.

Table 12. Dry forage production from cereal rye entries during the 2004-2005 growing season at Southeast Research Station, Franklinton, Louisiana.

Variety/Brand	Harvest Date				2004-05
	Dec. 20	Jan. 27	Feb. 22	April 28	Total
	----- Dry forage, lbs./acre -----				
NF65	241	948	1014	6115	8318
Oklon	307	1035	932	5251	7525
Wintermore	415	715	814	5018	6962
AGS 104	514	1319	1105	3917	6855
Boss	281	900	1023	4575	6779
FL96RP16-34-1	192	626	1153	4726	6697
Maton	201	560	776	5127	6663
Wintergrazer 70	159	581	882	5034	6657
Elbon	103	491	910	4732	6236
Bates	277	873	902	3962	6014
WR 2001	162	627	640	4353	5783
Mean	259	789	923	4801	6772
CV%	66	31	31	12	14
LSD (0.05)	NS	418	NS	1006	NS

Table 13. Dry forage production from cereal rye entries at Southeast Research Station in Louisiana during two and three growing seasons, 2002-2005.

Variety/Brand	2-year Mean	3-year Mean
	----- Dry forage, lbs./acre -----	
NF65	6385	5928
Oklon	6216	5563
Wintergrazer 70	5672	5313
Elbon	5661	5277
Maton	5783	5213
Bates	5475	5123
Wintermore	5764	-----
WR 2001	5392	-----
Mean	5793	5402
CV%	13	17
LSD (0.05)	NS	NS

OATS

Oats (*Avena sativa*) produce high quality forage during the early winter. Oats 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). Oats should be planted between September 1 and October 15 in northern Louisiana and between September 15 and October 15 in southern Louisiana if planted into a prepared seedbed and approximately October 15 if planted into an existing sod. Plots at all locations were planted as pure stands at the rate of 100 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 was 250 pounds per acre in multiple applications at planting and post harvest.

The oat variety tests were conducted at two LSU AgCenter research stations during the 2004-05 growing season (Table 14). Originating agencies for oat varieties evaluated in the forage variety test during the 2004-05 growing season are listed in Appendix C.

Table 14. Planting dates and soil types of locations cooperating in the 2004-05 cereal rye variety test.

Research Station	Location	Planting Date	Soil Type
Southeast	Franklinton	October 7, 2004	Tangi silt loam
Rosepine	Rosepine	October 5, 2004	Bowie fine-sandy loam

Results of oat trials

Oat entry, location and statewide yield means for one, two and three years are presented in Tables 15, 16 and 17. Dry forage production from oat entries through the 2004-05 growing season at each location are presented in Tables 18 and 19. Recommended varieties for 2005 are Horizon 314, Horizon 321, PlotSpike LA 9339, and Horizon 474. No currently available commercial varieties or brands are listed as promising for 2005.

Table 15. Dry forage production from oat entries grown at two locations in Louisiana during the 2004-2005 growing season.

Variety/Brand	Location		2004-05 Mean
	Franklinton	Rosepine	
	----- Dry forage, lbs./acre -----		
PlotSpike LA 9339	8254	5124	6689
LA976GBS-22-B-S2	7951	5054	6503
Horizon 321	7855	5077	6466
LA98009SBSB-58-B	8185	4702	6443
LA9825SBSB-59-C	7755	5099	6427
Horizon 474	8325	4517	6421
Horizon 314	7818	4635	6227
LSUAGCTR LA9810SBS-58 (I's to S's (03))	7995	4421	6208
LA95033D63-1-C-S3	7786	4551	6168
LSUAGCTR LA966BSB119-1 (I to S (03))	7273	4515	5894
LA966BSB270-S2-C	7741	3991	5866
LA98002SBS-26-B-S1	6390	4564	5477
Mean	7777	4688	6232
CV%	11	14	12
LSD (0.05)	1436	NS	886

Table 16. Dry forage production from oat entries at two locations in Louisiana during two growing seasons, 2003-2005.

Variety/Brand	Location		2-Year mean
	Franklinton	Rosepine	
	----- Dry forage, lbs./acre -----		
PlotSpike LA 9339	7441	4873	6157
Horizon 474	7163	4825	5994
Horizon 321	7156	4692	5924
LA976GBS-22-B-S2	6822	4706	5764
LSUAGCTR LA9810SBS-58 (I's to S's (03))	6570	4439	5505
Horizon 314	6399	4422	5410
LSUAGCTR LA966BSB119-1 (I to S (03))	6293	3975	5134
Mean	6835	4562	5698
CV%	10	20	15
LSD (0.05)	NS	NS	687

Table 17. Dry forage production from oat entries at two locations in Louisiana during three growing seasons, 2002-2005.

Variety/Brand	Location		3-year Mean
	Franklinton	Rosepine	
	----- Dry forage, lbs./acre -----		
Horizon 474	6483	4426	5454
PlotSpike LA 9339	6200	4403	5301
Horizon 321	6270	4309	5290
LSUAGCTR LA9810SBS-58 (I's to S's (03))	5952	4234	5093
Horizon 314	5674	3971	4823
LSUAGCTR LA966BSB119-1 (I to S (03))	5560	3794	4677
Mean	6023	4190	5106
CV%	11	20	15
LSD (0.05)	626	NS	512

Table 18. Dry forage production from oat entries during the 2004-2005 growing season at Southeast Research Station, Franklinton, Louisiana.

Variety/Brand	Harvest Date				2004-05 Total
	Dec. 20	Jan. 27	Feb. 22	Apr. 28	
	----- Dry forage, lbs./acre -----				
Horizon 474	992	833	1041	5459	8325
PlotSpike LA 9339	898	827	886	5643	8254
LA98009SBSB-58-B	626	588	716	6255	8185
LSUAGCTR LA9810SBS-58 (I's to S's (03))	854	1014	930	5196	7995
LA976GBS-22-B-S2	1037	686	868	5360	7951
Horizon 321	577	593	821	5864	7855
Horizon 314	760	896	1048	5114	7818
LA95033D63-1-C-S3	1217	723	900	4947	7786
LA9825SBSB-59-C	984	544	979	5248	7755
LA966BSB270-S2-C	1037	855	818	5031	7741
LSUAGCTR LA966BSB119-1 (I to S (03))	1035	439	753	5046	7273
LA98002SBS-26-B-S1	782	620	758	4231	6390
Mean	900	718	877	5283	7777
CV%	53	36	18	11	11
LSD (0.05)	814	435	271	978	1436

Table 19. Dry forage production from oat entries during the 2004-2005 growing season at Rosepine Research Station, Rosepine, Louisiana.

Variety/Brand	Harvest Date					2004-05 Total
	Dec. 15	Jan. 20	Feb. 28	Mar. 28	April 27	
	----- Dry forage, lbs./acre -----					
LA 9339	1516	555	1117	970	966	5124
LA9825SBSB-59-C	1500	467	901	947	1284	5099
Horizon 321	1390	425	1124	1086	1053	5077
LA976GBS-22-B-S2	1385	442	906	1274	1047	5054
LA98009SBSB-58-B	1374	409	969	1070	880	4702
Horizon 314	1276	367	1109	1091	793	4635
LA98002SBS-26-B-S1	1518	348	808	770	1121	4564
LA95033D63-1-C-S3	1479	296	892	895	989	4551
Horizon 474	1679	540	1061	704	532	4517
LSUAGCTR LA966BSB119-1 (I to S (03))	1451	452	782	945	885	4515
LSUAGCTR LA9810SBS-58 (I's to S's (03))	1391	447	949	925	710	4421
LA966BSB270-S2-C	1427	341	722	796	705	3991
Mean	1405	433	942	915	880	4574
CV%	17	30	20	20	29	14
LSD (0.05)	NS	NS	NS	310	432	NS

Appendix A. Originating Agencies for Annual Ryegrass Entries in 2004-2005 Variety Tests.

Brand/Variety	Originating Agency
Abundant	DLF International Seeds, P.O. Box 229, Halsey, OR 97348
Beefbuilder III	Forbes Seed & Grain, Inc., P.O. Box 85, Junction City, OR 97448
Brigadier, Prine	Ragan and Massey, 100 Ponchatoula Parkway, Ponchatoula, LA 70454
Diamond T, Flying A, 4X, WD-40	Oregro Seeds, Inc., P.O. Box 10, Shedd, OR 97377
Dyna-Gain	UAP Delta, 57 Germantown Court, Suite 200, Cordova, TN 38018
Ed, FLX2001(New 1) 4XLRLate, FLX2003(BD)4XLRCT, WVPB-SS-93-AR-K4N	Smith Seed Services, P.O. Box 288, Halsey, OR 97348
FL/NE X2004(Misc. 2X) LRCT, M/FL X2004 LRCT, M/FL X2004 (New 4) LRCT	University of Florida, P.O. Box 110500, 304 Newell Hall, Gainesville, FL 32611-0500
Graze-N-Gro, Striker	Seed Research of Oregon, 27630 Llewellyn Rd., Corvallis, OR 97333
Gulf	Acquired locally
Jackson, Marshall, ME3, ME94, WMN 97	The Wax Company, LLC, P.O. Box 60, Amory, MS 38821
Jumbo, Maximus	Barenbrug USA, 33477 Hwy 99E, P.O. Box 239, Tangent, OR 97389
King	Lewis Seed Co., 33820 Linn West Drive, Shedd, OR 97377
Lone Star	Grassland Oregon, 5825 Shoreview Lane, Keizer, OR 97303
Passerel Plus, Shiwasuaoba	Pennington Seed, Inc., P. O. Box 290, Madison, GA 30650
Rio	Pro Seeds Marketing, 13963 Westside Lane S, Jefferson, OR 97352
TAM 90	East Texas Seeds, P.O. Box 569, Tyler, TX 75710
TXR2004-BAR	Texas A & M Research and Extension Center, P. O. Box 200, Overton, TX 75684

Appendix B. Originating Agencies for Cereal Rye Entries in 2004-2005 Variety Tests.

Brand/Variety	Originating Agency
Bates, Elbon, Maton, NF65, Oklon	The Samuel Roberts Noble Foundation, Inc., P.O. Box 2180, Ardmore, OK 73402
AGS 104, Boss, FL96RP16-34-1	Univ. of Florida, North Florida Res. & Ext. Ctr., 155 Research Road, Quincy, FL 32351
Wintergrazer 70	Pennington Seed, Inc., P.O. Box 290, Madison, GA 30650
Wintermore, WR 2001	Seed Resource, P.O. Box 326, Tulia, TX 79088

Appendix C. Originating Agencies for Oat Varieties Entered in 2004-2005 Variety Tests.

Brand/Variety	Originating Agency
Horizon 314, Horizon 321, Horizon 474	North Florida Research & Educ. Center, University of Florida, 155 Research Rd, Quincy, FL 32351
PlotSpike LA 9339	Ragan and Massey, 100 Ponchatoula Parkway, Ponchatoula, LA 70454
LA966BSB119-1, LA976GBS-22-B-S2, LA9810SBS-58, LA9825SBSB-59-C, LA966BSB270-S2-C, LA95033D63-1-C-S3, LA98002SBS-26-B-S1, LA98009SBSB-58-B	Agronomy Department, LSU AgCenter, Baton Rouge, LA 70803