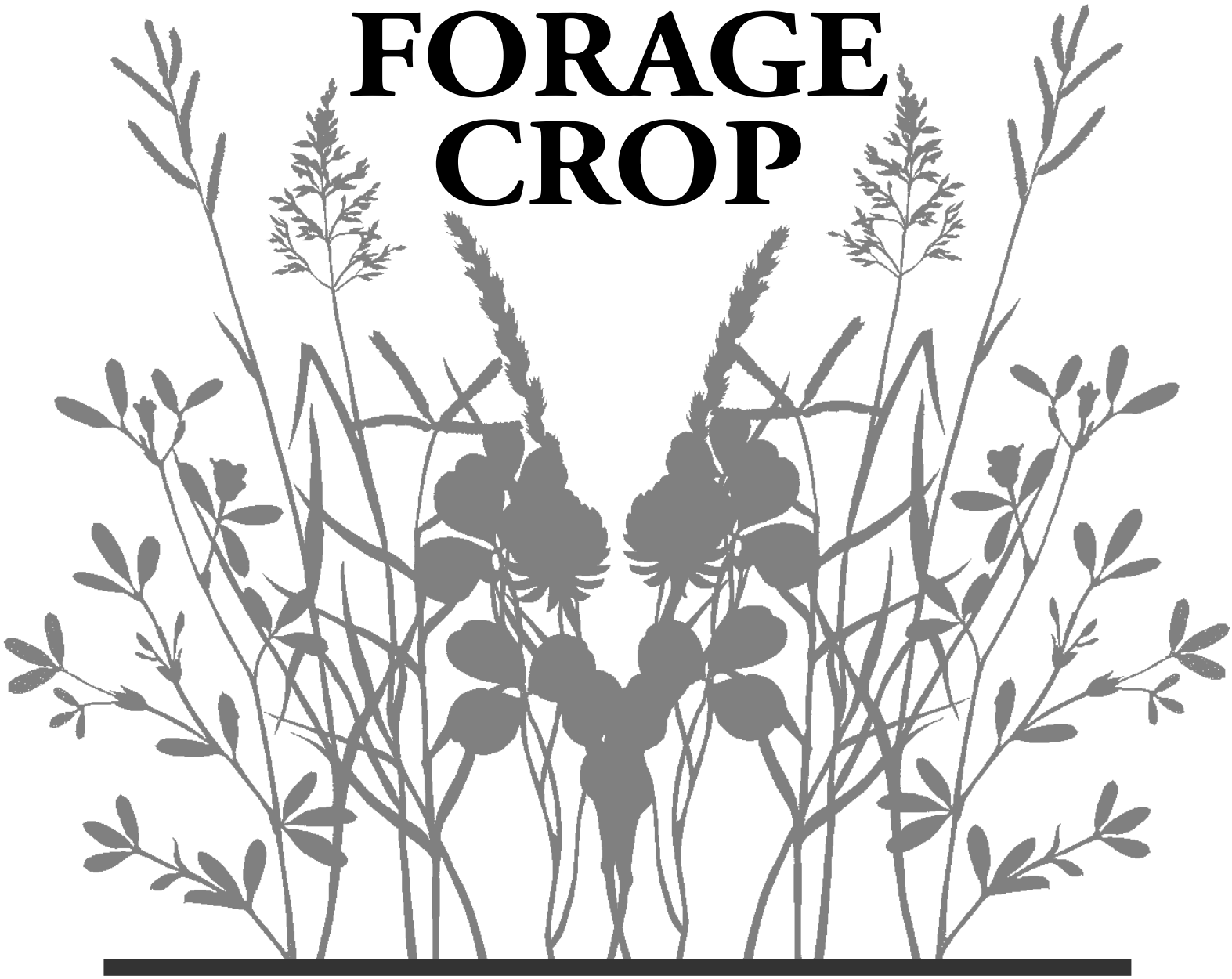
Information Bulletin 379 August 2001

Mississippi FORAGE CROP



VARIETY TRIALS 2001

Experiment Station
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Mississippi Agricultural & Forestry Experiment Station
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This report contains data generated as part of the Mississippi Agricultural and Forestry Experiment Station. Joint sponsorship by the organizations listed on pages 13-14 is gratefully acknowledged.

Commercial and public varieties tested in this research project (trade names, experiment code names or numbers, etc.) and source of seed are listed on pages 13-14.

Mississippi Forage Crop Variety Trials, 2001

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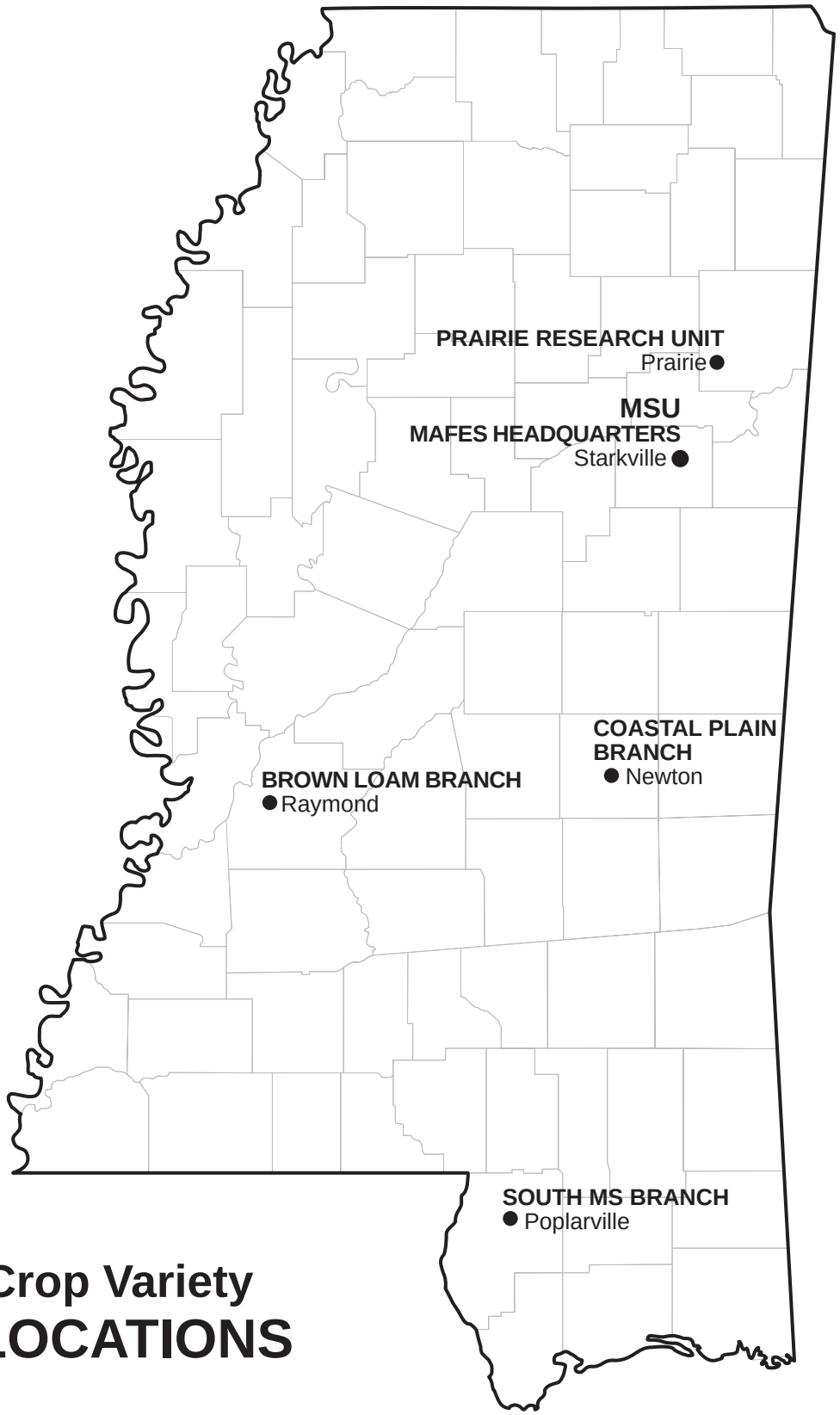

Forage Crop Variety
TEST LOCATIONS

Mississippi Forage Crop Variety Trials, 2001

Introduction

New, improved, and standard varieties of forage crops are evaluated in MAFES small-plot trials each year. Seed for the trials are obtained from commercial seed companies and state universities and tested at a number of locations in Mississippi. All entries from privately owned companies are tested on a fee basis. The Forage Crop Evaluation Committee may enter varieties of interest or proven varieties to be used as standards. This report contains data collected in 2000-01 on the performance of annual ryegrass, cool-season perennial grasses, and bermudagrass and other warm-season perennial grasses. A randomized complete block design was used with three to four replications, depending on location. These data were analyzed within locations and within harvest dates. The number of harvests during the season varied by location because of different planting dates and growing conditions.

Performance of Ryegrass

Thirty-two ryegrass varieties were planted at four locations. Most locations were extremely dry during the fall planting season, resulting in late planting and generally poor growth. At Prairie, the test was harvested four times and produced an average yield of 7,459 pounds per acre (Table 1). The highest yield was 8,524 pounds per acre, which was produced by TAM 90, compared with 6,812 pounds per acre produced by the standard variety Gulf. Five varieties produced more than 8,300 pounds. There were significant differences in percent stand, which probably influenced the first harvest. At Newton, the test was harvested four times and produced an average yield of 5,302 pounds of dry forage per acre. The highest yield was produced by Marshall with a yield of 5,858 compared with 5,705 pounds per acre for Gulf (Table 2). Six varieties produced more than 5,700 pounds. The varieties that have been in the test for four years are presented in Table 3. The highest yield was produced by Marshall with 6,158 pounds per acre compared with 5,698 for Gulf. At Raymond, the test was harvested three times and produced an average yield of 5,778 pounds per acre. Due to poor growing conditions, there were no significant differences in yield (Table 4). The highest four-year average was produced by Jackson with 5,736 pounds per acre compared with 5,483 for Gulf (Table 5). The test at Poplarville was harvested three times and had an average yield of 4,054 pounds per acre. Due to poor growing conditions, there were no significant differences in yield (Table 6). The highest four-year average yield was produced by Gulf with a yield of 5,456 pounds per acre (Table 7).

Table 1. Dry matter yield of ryegrass varieties, Prairie Research Unit, Prairie, MS, 2000-2001.

Variety	Yield by harvest date				Total	Stand
	3/26/01	4/18/01	5/14/01	6/25/01	yield	3/06/01
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*	*%*
Assertive	594	2212	2267	2162	7235	39
Bestfor II	623	1820	1994	3164	7601	65
Big Daddy	69	1468	260	2713	4510	22
Brigadier	874	2235	2575	2259	7943	89
Ed	581	2382	2156	2892	8011	80
Fantastic	565	2188	2471	2313	7537	75
Florlina	1110	2262	2284	2677	8333	90
FLX 2000 (New) 4X LR mid late	783	1995	2258	2527	7563	70
FLX 2000 (New 1) 4X LR late	637	1912	2057	2617	7223	59
Gulf	308	1524	2549	2431	6812	41
Jackson	649	1956	2413	2563	7581	75
Jumbo	125	1517	2073	2567	6282	52
King	1133	2460	2539	2237	8369	87
Louisiana	728	2519	2594	1727	7568	77
Marshall	753	2075	2131	2590	7549	90
ME 94	786	1877	2358	2770	7791	84
MCX	314	1773	2077	2544	6708	37
Passerel Plus	832	2206	2395	2997	8430	85
Prine	427	1888	2497	2645	7457	44
Ribeye	667	2312	2517	2379	7875	67
Rio	528	2086	2387	3048	8049	77
Stampede	652	1661	2373	2841	7527	79
Surrey II	608	2255	2339	2806	8008	87
Tam	247	1996	2515	2407	7165	59
TAM 90	887	2698	2361	2578	8524	77
TXR 99-Beau	798	2499	2458	2170	7925	82
TXR 2000-T-1	682	1618	2244	2622	7166	77
TXR 2000-2	263	1870	2211	2495	6839	71
WMN 97	1004	2288	2280	2562	8134	81
WVPB AR 98-7	103	1503	2439	2188	6233	27
WVPB AR 99-L	688	1776	2423	3426	8313	61
WVPB AR 99-M	501	2166	2442	2460	7569	77
Mean	610	2031	2279	2574	7495	68
LSD(0.05)	469	558	463	470	1627	14
CV%	55	20	14	13	15	15

Seeding rate: 35 lb/A
Planting date: 10/30/00
Fertilization: Fall – 0-60-60; February – 60-0-0; March – 30-0-0; April – 30-0-0; May – 30-0-0

Table 2. Dry matter yield of ryegrass varieties, Coastal Plain Branch, Newton, MS, 2000-2001.

Variety	Harvest date				Total
	1/22/01	2/21/01	3/27/01	4/30/01	yield
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*
Assertive	972	912	1681	1260	4825
Bestfor II	1128	1088	1903	1226	5345
Big Daddy	1295	1017	1650	1414	5376
Brigadier	1325	1296	1670	1119	5410
Ed	1457	1294	1716	1266	5733
Fantastic	1400	1326	1515	1307	5548
Florlina	1271	1227	1682	1086	5266
FLX 2000 (New) 4X LR mid late	1066	1144	1752	1306	5268
FLX 2000 (New 1) 4X LR late	1266	1071	1703	1116	5156
Gulf	1561	1226	1491	1427	5705
Jackson	1468	1203	1666	1154	5491
Jumbo	1257	1184	1664	1087	5192
King	1338	1186	1556	1201	5281
Louisiana	1220	1043	1554	1142	4959
Marshall	1464	1349	1876	1169	5858
ME 94	1158	1263	1918	1117	5456
MCX	1006	1173	1726	1386	5291
Passerel Plus	1347	1245	1832	1328	5752
Prine	1009	1129	1733	1122	4993
Ribeye	1486	1204	1804	1243	5737
Rio	1317	1196	1856	1088	5457
Stampede	1177	1183	1801	1140	5301
Surrey II	1234	1144	1786	1052	5216
Tam	1382	1100	1475	1533	5490
TAM 90	1158	1117	1759	1182	5216
TXR 99-Beau	990	1005	1927	1179	5101
TXR 2000-T-1	1092	1120	1799	1215	5226
TXR 2000-2	999	944	1817	1126	4886
WMN 97	1127	1113	1863	1044	5147
WVPB AR 98-7	1052	1229	1620	1339	5240
WVPB AR 99-L	698	906	1933	1059	4596
WVPB AR 99-M	1031	1188	1876	1078	5173
Mean	1210	1151	1738	1203	5302
LSD(0.05)	328	189	278	312	556
CV%	17	10	10	16	6

Seeding rate: 35 lb/A
Planting date: 10/13/00
Fertilization: 11/17/00 – 65-65-65 1/25/01 – 68-0-0 2/21/01 – 34-0-0 3/27/01 – 34-0-0
Herbicide: 1/10/01 – Weedmaster @ 1 qt/A

Table 3. Dry matter yield of ryegrass varieties, Coastal Plain Branch, Newton, MS, 1997-2001.

Variety	1997-98	1998-99	1999-00	2000-01	Mean
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*
Gulf	5733	5904	5452	5705	5698
Jackson	5409	5969	5148	5491	5504
Marshall	6054	6654	6065	5858	6158
Rio	6123	6512	5542	5457	5908
TAM 90	5879	6018	5868	5197	5745
Mean	5837	6143	5623	5542	5805

Table 4. Dry matter yield of ryegrass varieties, Brown Loam Branch, Raymond, MS, 2000-2001.

Variety	Yield by harvest date			Total
	1/10/01	3/15/01	4/20/01	yield
	lb/A	*lb/A*	*lb/A*	*lb/A*
Assertive	1377	2103	2127	5607
Bestfor II	1476	2051	1588	5115
Big Daddy	1502	1862	2737	6101
Brigadier	1479	2098	2985	6562
Ed	1600	1987	1978	5565
Fantastic	1553	1932	2248	5733
Florlina	1329	2046	2553	5928
FLX 2000 (New) 4X LR mid late	1489	1981	2716	6186
FLX 2000 (New 1) 4X LR late	1434	1873	3134	6441
Gulf	1408	1973	2383	5764
Jackson	1588	2282	2794	6664
Jumbo	1591	2029	2822	6442
King	1179	1885	2631	5695
Louisiana	1394	1655	2283	5332
Marshall	1421	2524	2177	6122
ME 94	1388	2116	2560	6064
MCX	1672	1871	1716	5259
Passerel Plus	1326	2002	2014	5342
Prine	1239	2279	3035	6553
Ribeye	1144	1764	2014	4922
Rio	1519	2151	2319	5989
Stampede	1322	2191	2127	5640
Surrey II	1272	2255	2702	6229
Tam	1332	1909	2078	5319
TAM 90	1682	1600	1837	5119
TXR 99-Beau	1377	2046	2099	5522
TXR 2000-T-1	1517	1961	1681	5159
TXR 2000-2	1370	1869	2276	5515
WMN 97	1452	2039	2744	6235
WVPB AR 98-7	1473	1893	2177	5543
WVPB AR 99-L	1364	1947	2333	5644
WVPB AR 99-M	1335	1842	2411	5588
Mean	1425	2001	2352	5778
LSD(0.05)	NS	NS	NS	NS
CV%	19	20	27	16

Seeding rate: 35 lb/A
Planting date: 10/19/00
Fertilization: 10/20/00 – 65-0-0 3/19/01 – 65-0-0

Table 5. Dry matter yield of ryegrass varieties, Brown Loam Branch, Raymond, MS, 1997-2001.

Variety	1997-98	1998-99	1999-00	2000-01	Mean
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*
Gulf	7180	4702	4288	5764	5483
Jackson	7784	4163	4334	6664	5736
Marshall	7112	4782	4282	6122	5574
Rio	6873	4080	5026	5989	5492
TAM 90	7686	4921	4345	5118	5517
Mean	7327	4529	4455	5931	5560

Table 6. Dry matter yield of ryegrass varieties, South Mississippi Branch, Poplarville, MS, 2000-2001.

Variety	Yield by harvest date			Total
	3/6/01	4/6/01	5/22/01	yield
	lb/A	*lb/A*	*lb/A*	*lb/A*
Assertive	863	1811	1234	3908
Bestfor II	1311	1413	1525	4249
Big Daddy	1151	1999	1405	4555
Brigadier	1288	1429	1251	3968
Ed	1260	1596	1645	4501
Fantastic	1347	1481	685	3513
Florlina	1110	1559	1542	4211
FLX 2000 (New 1) 4X LR late	1402	1941	994	4337
FLX 2000 (New) 4X LR mid late	1256	1957	1388	4601
Gulf	1251	1711	857	3819
Jackson	858	1847	1011	3716
Jumbo	1237	1858	2107	5202
King	1023	1607	651	3281
Louisiana	1110	1607	1131	3848
Marshall	1000	1507	1131	3638
ME 94	1137	1559	1405	4101
MCX	900	1968	788	3656
Prasserel Plus	1123	1586	2073	4782
Prine	1247	1832	1011	4090
Ribeye	1014	1654	1199	3867
Rio	1288	1612	1405	4305
Stampede	1009	1607	942	3558
Surrey II	1260	1753	1970	4983
Tam	1142	1507	1456	4105
TAM 90	813	1638	737	3188
TXR 99-Beau	831	1439	874	3144
TXR 2000-T-1	813	1690	1114	3617
TXR 2000-2	1251	1502	2364	5117
WMN 97	1320	1675	1353	4348
WVPB AR 98-7	1032	1575	1182	3789
WVPB AR 99-L	1091	1627	1422	4140
WVPB AR 99-M	1105	1470	1028	3603
Mean	1120	1657	1277	4054
LSD(0.05)	NS	NS	NS	NS
CV%	21	15	56	21

Seeding rate: 35 lb/A
Planting date: 11/22/00
Fertilization: 2/10/01 – 66-0-0

Table 7. Dry matter yield of ryegrass varieties, South Mississippi Branch, Poplarville, MS, 1997-2001.

Variety	1997-98	1998-99	1999-00	2000-01	Mean
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*
Gulf	6559	5447	5999	3819	5456
Jackson	5956	5703	6031	3717	5352
Marshall	6051	5316	5972	3638	5244
Rio	5951	5297	6196	4305	5437
TAM 90	6299	5106	6024	3188	5154
Mean	6163	5374	6044	3733	5329

Performance of Cool-Season Grasses

A study was established in 2000 to evaluate 17 varieties of tall fescue at five locations. The test at Prairie was lost due to extremely dry conditions in the fall and a record cold winter. At Mississippi State, the test was harvested four times with an average yield of 4,321 pounds of dry forage per acre. The highest yield of 4,874 pounds per acre was produced by an experimental variety, Quincy, from a natural selection in north Florida. There were 10 varieties with yields equal to the highest producing variety (Table 8). At Newton, the test was harvested three times and the highest yield was produced by Kentucky 31 with 5,035 pounds per acre (Table 9). There were six varieties with yields equal the highest yielding variety. At Raymond, the test was harvested two times, and due to poor growing conditions, there were no significant differences in yield. Although there were no significant differences, the highest numeric yield was produced from GA 5 (Table 10). At Poplarville, the growing conditions in the fall were very dry, and once rains came, the temperatures were colder than normal, resulting in poor stands and poor growth. These poor growing conditions resulted in there being no significant difference in yields (Table 11). Highest numeric yield was produced by Quincy. At Mississippi State, a test was established to evaluate other perennial cool-season grasses. The highest yield was produced by Matua prairie bromegrass with a yield of 7,738 pounds of dry forage per acre compared with the trial mean of 6,254. The test was harvested four times (Table 12).

Table 8. Dry matter yield of tall fescue, Mississippi State, MS, 2000-2001.

Variety	Yield by harvest date				Total	Heading
	3/7/00	4/6/01	4/30/01	6/11/01	yield	
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*	*%*
AGRFA 103	77	656	1367	1128	3228	75
AGRFA 110	75	460	1378	1288	3201	74
Bronson	207	1154	1826	1372	4559	58
CAS EA 79	245	1238	1645	1336	4464	26
GA 001 542	198	1160	1585	1265	4208	26
GA 002 542	303	1191	1666	1392	4552	46
GA 003 542	106	1174	1727	1156	4163	21
GA 5 FI	252	1093	1790	1291	4426	20
GA 5 Max Q	172	1078	1787	1495	4532	28
Hoedown	159	1020	1718	1341	4238	14
Jesup FI	302	1157	1877	1212	4548	34
Jesup Max Q	151	1057	1831	1238	4277	26
Kentucky 31	218	1153	1980	1508	4859	23
Quincy	250	1243	1956	1425	4874	49
Stag	234	1363	1768	1498	4863	25
WVPB 97-C-1	62	442	1687	1749	3940	30
WVPB 99KSM	223	1171	1675	1457	4526	25
Mean	190	1048	1721	1362	4321	35
LSD(0.05)	81	249	190	301	471	15
CV %	30	17	8	16	18	40

Planting date: 10/23/00 Irrigated on 10/30/00 with 0.5 inch of water
Fertilization: 12/4/00 – 300 lb/A 15-5-10 2/7/01 – 150 lb/A 34-0-0 4/9/01 – 150 lb/A 34-0-0
Herbicide: 2/8/01 – Weedmaster at 1 qt/A
Heading %: 4/30/01 Recorded visually as portion of tillers with seed heads

Table 9. Dry matter yield of fescue varieties, Coastal Plain Branch, Newton, MS, 2000-2001.

Variety	Yield by harvest date			Total
	3/8/01	4/10/01	5/20/01	yield
	lb/A	*lb/A*	*lb/A*	*lb/A*
AGRFA 103	1208	1005	1263	3476
AGRFA 110	983	1190	1923	4096
Bronson	1195	1361	1645	4201
CAS EA 79	1473	1207	1769	4449
Ga 001 542	1212	1137	1602	3951
Ga 002 542	1335	1094	1753	4182
Ga 003 542	880	1125	1913	3918
GA 5 FI	1345	1161	1774	4280
Ga 5 Max Q	1209	1299	1805	4313
Hoedown	1364	1381	2026	4771
Jesup FI	1464	1045	1677	4186
Jesup Max Q	1305	1237	1825	4367
Kentucky 31	1268	1353	2414	5035
Quincy	1188	1351	1902	4441
Stag	1254	1440	2105	4799
WVPB 97-C-1	888	1156	1906	3950
WVPB 99KSM	1446	1460	1923	4829
Mean	1236	1235	1837	4308
LSD(0.05)	335	212	535	663
CV%	16	10	18	9

Seeding rate: Fescue 20 lb/A
Planting date: 10/16/2000
Fertilization: 11/17/00 – 65-65-65 1/25/01 – 68-0-0 4/12/01 – 34-0-0
Herbicide: 1/26/01 – Weedmaster @ 1 qt/A

Table 10. Dry matter yield of tall fescue, Brown Loam Branch, Raymond, MS, 2000-2001.

Variety	Yield by harvest date		Total
	3/22/01	4/18/01	yield
	lb/A	*lb/A*	*lb/A*
AGRFA 103	2024	2150	4174
AGRFA 110	2253	2420	4673
Bronson	2543	2543	5086
CAS EA 79	2136	2753	4889
Ga 001 542	2482	2578	5060
Ga 002 542	1852	2429	4281
Ga 003 542	2013	2455	4468
GA 5 FI	2632	2604	5236
Ga 5 Max Q	2115	2770	4885
Hoedown	2281	2788	5069
Jesup FI	1982	2202	4184
Jesup Max Q	2069	2822	4891
Kentucky 31	2144	2543	4687
Quincy	1896	2455	4351
Stag	2604	2595	5199
WVPB 97-C-1	2015	2010	4025
WVPB 99KSM	2193	2359	4552
Mean	2190	2499	4689
LSD(0.05)	NS	NS	NS
CV%	18	20	14

Seeding rate: 20 lb/A
Planting date: 10/11/00
Fertilization: 10/12/00 – 65-0-0 3/27/01 – 65-0-0

Table 11. Dry matter yield of tall fescue, South Mississippi Branch, Poplarville, MS, 2000-2001.

Variety	Harvest date 5/22/01
	lb/A
AGRFA 103	710
AGRFA 110	438
Bronson	1006
CAS EA 79	1610
Ga 001 542	900
Ga 002 542	1101
Ga 003 542	1148
GA 5 FI	1539
Ga 5 Max Q	1160
Hoedown	817
Jesup Max Q	1054
Jesup FI	1338
Kentucky 31	1446
Stag	1409
Quincy	1645
WVPB 97-C-1	1089
WVPB 99KSM	899
Mean	1136
LSD(0.05)	NS
CV%	49

Seeding rate: 20 lb/A
Planting date: 11/22/00
Fertilization: 2/10/01 – 66-0-0

Table 12. Dry matter yield of cool-season grasses, Mississippi State, MS, 2000-2001.

Species	Variety	Yield by harvest date				Total	Heading
		3/7/01	4/6/01	4/30/01	6/11/01	yield	4/30/01
		lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*	*%*
Prairie Bromegrass	AGR B 101	539	1826	2080	2025	6470	91
Prairie Bromegrass	D 5633	628	1782	2055	2024	6489	76
Prairie Bromegrass	Gala	104	1300	1761	1656	4821	100
Prairie Bromegrass	G. Matua	470	1752	2405	2148	6775	95
Prairie Bromegrass	Lupreme	577	1832	1711	2138	6258	75
Prairie Bromegrass	M 5632	443	1473	2397	2030	6343	88
Prairie Bromegrass	Matua	497	2294	2534	2413	7738	70
Prairie Bromegrass	Stocker	938	2086	2062	2009	7095	79
Reed Canarygrass	AGR PA 101	40	610	2010	3141	5801	8
Orchardgrass	Quantum	82	577	1647	2814	5120	0
Tall Fescue	Barcel	259	1373	2408	2807	6847	4
Tall Fescue	Q 4508	438	1892	2326	2858	7514	24
Tall Fescue	R 4663	198	930	1325	1574	4027	39
Mean		401	1517	2055	2280	6254	58
LSD(0.05)		274	687	593	640	1527	26
CV%		41	31	20	19	17	31

Planting date: 10/23/00 Irrigated on 10/30/00 with 0.5 inch of water
Fertilization: 12/4/00 – 300 lb/A 15-5-10 Rainbow 2/7/01 – 150 lb/A 34-0-0 4/9/01 – 150 lb/A 34-0-0
Herbicide: 2/8/01 – Weedmaster at 1 qt/A

Performance of Bermudagrass and Other Warm-Season Perennials

Several of the bermudagrasses evaluated are experimental lines and may not be available for distribution at this time. Some of these are local ecotypes and others may be "sports" from established varieties. Murphy was selected in Leake County, Mississippi. Poplarville is a selection by Carl Hovermale at the South Mississippi Branch Experiment Station. Lott is a selection made by Harry Lott from Grenada County, Mississippi. These lines were included in the test because they are potential improvements over currently available varieties.

The other bermudagrasses are established varieties and are generally available. Coastal is the oldest of the improved bermudagrasses. It was developed by Glenn Burton at Tifton, Georgia. He also developed and released Tifton 44, Tifton 78, and Tifton 85. He developed Grazer, which was released jointly with Louisiana State University. Alicia was selected from an introduction growing in Edna, Texas. Lancaster was selected from a field of Coastal in Alcorn County, Mississippi. Russell, named for Russell County, Alabama, where it was found in 1970, was released by Auburn University and Louisiana State University in 1995. Sumrall 007 was selected by Gerald Sumrall from Monticello in Lawrence County, Mississippi.

At Prairie, Coastal was the highest yielding of the 16 varieties evaluated with a yield of 5,583 pounds per acre compared with 3,760 for the average of all varieties (Table 13). Three other varieties were significantly equal to Coastal. At Mississippi State, of the 11 varieties evaluated, the highest yield was produced by Alicia with 8,665 pounds of dry forage per acre (Table 14). Three other varieties had dry matter yields that were not significantly different from Alicia. At Mississippi State, in a test to evaluate seeded bermudagrass varieties, the highest yielding variety was an experimental variety, CD 90160, which produced 5,628 pounds per acre (Table 15). In another study at Mississippi State to evaluate experimental bermudagrass varieties, the highest yield was produced by Tifton 85 with a yield of 9,786 compared with the mean of 8,519 pounds of dry forage per acre (Table 16). At Newton, the highest yield was produced by Tifton 44, 11,990 pounds per acre, compared with 8,084 for the average (Table 17). Two other varieties, Tifton 85 and Alicia, also had yields not significantly different from Tifton 44.

Table 13. Dry matter yield of bermudagrass varieties, Prairie Research Unit, Prairie, MS, 2000-2001.

Variety	Yield by harvest date				Total
	5/24/01	6/21/01	7/19/01	8/29/01	yield
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*
CD90160	1736	640	1316	668	4360
Coastal	1688	1061	1904	930	5583
ED5	1375	477	930	307	3089
Grazer	962	378	789	166	2295
Hardie	679	405	978	227	2289
Lancaster	379	427	770	88	1664
Murphy	2192	426	1701	747	5066
Poplarville	807	663	1229	661	3360
Prairie I	1431	355	978	176	2940
Prairie II	1459	597	1003	376	3435
Prairie III	1149	724	1011	230	3114
Russell	1769	750	1378	659	4556
Sumrall 007	1805	782	1654	676	4917
Tierra Verde	939	527	1143	142	2751
Tifton 44	1966	669	1833	871	5339
Tifton 85	1906	836	1677	994	5413
Mean	1390	607	1268	495	3760
LSD(0.05)	451	263	400	283	868
CV%	23	30	22	40	16

Planting date: 5/18/01
Fertilization: Fall – 0-60-60 April – 60-0-0 May – 30-0-0 June – 30-0-0 July – 30-0-0

Table 14. Dry matter yield of bermudagrass varieties, Mississippi State, MS, 2000-2001.

Variety	Yield by harvest date			Total	BG stand	
	5/24/01	7/12/01	10/25/01	yield	5/24/01	7/12/01
	lb/A	*lb/A*	*lb/A*	*lb/A*	*%*	*%*
Alicia	3060	4007	1598	8665	99	100
Coastal	1988	3151	1490	6629	91	89
McDonald	2465	3826	995	7286	93	95
Murphy	1745	1711	437	3893	93	78
Russell	2531	3622	1490	7643	96	99
Sumrall 007	2755	3616	1434	7805	100	100
Tanberg	2804	3374	1862	8040	99	100
Tifton 44	1678	3101	743	5522	88	92
Tifton 78	1719	2608	591	4918	84	76
Tifton 78WH	2203	3097	808	6108	83	79
Tifton 85	729	1490	544	2763	34	47
Mean	2153	3055	1090	6298	87	87
LSD(0.05)	446	721	295	1243	11	14
CV %	26	29	33	24	15	20

Established: 6/7/93
Herbicide: Split plots – Zorial @ 1.25 lb ai/A, Karmex 80 WP @ 1.0 lb ai/A, Check on 3/15/00
Means are the average of each herbicide. Herbicide had no effect (NS) on bermudagrass growth.
Fertilizer: 4/18/00 – 400 lb/A 15-5-10 Rainbow; 5/11/00 – 200 lb/A 0-0-60
6/8/00 – 150 lb/A 34-0-0; 7/18/00 – 400 lb/A 15-5-10 Rainbow

Table 15. Dry matter yield of seeded forage bermudagrass, Mississippi State, MS, 2000.

Variety	Yield by harvest date			Total	Stand
	6/7/00	7/7/00	10/17/00	yield	6/7/00
	lb/A	*lb/A*	*lb/A*	*lb/A*	*%*
CD90160	1054	2501	2073	5628	86
Common	908	2093	1217	4218	95
ED-5	782	1823	1056	3661	100
LD-3	781	1883	1317	3981	100
Tierra Verde	981	1749	1077	3807	78
Mean	901	2010	1348	4259	92
LSD(0.05)	283	416	504	884	21
CV%	20	13	24	13	15

Established: 6/13/97
Fertilizer: 4/18/00 – 400 lb/A 15-5-10 Rainbow; 5/11/00 – 200 lb/A 0-0-60
6/5/00 – 150 lb/A 34-0-0; 7/8/00 – 400 lb/A 15-5-10 Rainbow
Herbicide: 3/24/00 – 1.5 pt/A Weedmaster

Table 16. Dry matter yield of experimental bermudagrass varieties, Mississippi State, MS, 2000.

Variety	Yield by harvest date			Total	Stand
	6/7/00	7/6/00	9/14/00	yield	7/6/00
	lb/A	*lb/A*	*lb/A*	*lb/A*	*%*
Coastal	1810	2741	4876	9427	94
Lott	993	1824	3496	6313	65
Poplarville	1616	2471	3379	7466	96
Sumrall 007	1727	2585	4795	9107	98
Tifton 44	1660	2697	4657	9014	80
Tifton 85	1434	3099	5253	9786	94
Mean	1540	2569	4409	8519	88
LSD(0.05)	510	769	925	1779	21
CV%	22	20	14	14	16

Established: 6/4/96
Fertilizer: 4/18/00 – 400 lb/A 15-5-10 Rainbow; 5/11/00 – 200 lb/A 0-0-60; 6/8/00 – 150 lb/A 34-0-0; 7/18/00 – 400 lb/A 15-5-10 Rainbow
Herbicide: 3-24-00 – 1.5 pt/A Weedmaster

Table 17. Dry matter yield of bermudagrass varieties, Coastal Plain Branch, Newton, MS, 2000.

Variety	Yield by harvest date			Total	6-Year
	6/1/00	7/2/00	8/17/00	yield	average
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*
Alicia	5771	1407	3235	10414	8447
Coastal	3693	1568	3115	8375	7902
Common	2252	827	2286	5364	5331
Grazer	2302	592	2313	5207	4507
Hardie	2258	410	2003	4671	5284
Landcaster	2778	622	2370	5770	4448
Lott	4139	1612	3090	8840	6886 [1]
Murphy	3560	959	2582	7101	7038
Poplarville	5771	585	2409	8765	5612
Sumrall 007	4346	1580	2805	8730	8059 [1]
Tifton 85	5326	1811	3516	10653	8628
Tifton 78 WH	4272	1940	3073	9285	8648
Tifton 78	4078	1874	3356	9308	8746
Tifton 44	6413	1852	3724	11990	9100
Mean	4068	1260	2848	8177	7045
LSD(0.05)	1948	610	576	2173	–
CV%	34	34	14	19	–

[1]Three-year average — Lott and Sumrall 007 were not planted until April 1997.
Planting date: 4/19/94
Fertilization: 3/24/00 – 65-65-65; 6/2/00 – 68-0-0; 7/18/00 – 68-0-0
Herbicide: 5/9/00 – Diuron @ 1 lb ai/A

Performance of Other Warm-Season Grasses

A study was initiated at Prairie to evaluate nine entries of native grasses. Highest yield was produced by the Alamo switchgrass with a yield of 7,133 pounds of forage (Table 18). Another study was established at Prairie to evaluate six experimental varieties of dallisgrass compared with the standard commercial line available. The highest yield was produced by the 460 variety with a yield of 10,815 compared with 4,897 for the commercial variety (Table 19).

Table 18. Dry matter yield of warm-season perennial grasses, Prairie Research Unit, Prairie, MS, 2000.

Species	Variety	Yield by harvest date		Total
		5/24/00	7/6/00	yield
		lb/A	*lb/A*	*lb/A*
Switchgrass	Alamo	3983	3150	7133
Switchgrass	Kanlow	2557	2329	4886
Big Bluestem	Kaw	2486	1815	4301
Big Bluestem	PMC BB	3299	1754	5053
Big Bluestem	PMC9029926	1879	1422	3301
Big Bluestem	PMC-77	2723	2526	5249
Indiangrass	Lometa	3113	2174	5287
Indiangrass	514673	2360	1381	3741
Eastern Gamagrass	Shepherd's	3834	2077	5911
Mean		2915	2070	4985
LSD(0.05)		1033	785	1541
CV%		23	24	20

Planting date: 5/12/95
Fertilization: Fall – 0-60-60 April – 60-0-0 May – 30-0-0

Table 19. Dry matter yield of experimental dallisgrass varieties, Prairie Research Unit, Prairie, MS, 2000.

Variety	Yield by harvest date				Total
	5/24/00	6/20/00	7/25/00	9/26/00	yield
	lb/A	*lb/A*	*lb/A*	*lb/A*	*lb/A*
459	2699	1038	2245	3063	9045
554	2950	978	2305	2830	9063
460	4029	1122	2305	3359	10815
432	3091	994	2009	3085	9179
Commercial	1501	464	1141	1791	4897
458	3647	1015	2416	2812	9890
461	2894	1066	2281	2563	8804
Mean	2973	954	2100	2786	8813
LSD(0.05)	985	269	487	682	1970
CV%	22	19	16	16	15

Planting date: September 1999
Fertilization: Fall – 0-60-60 April – 60-0-0 May – 30-0-0
June – 30-0-0 July – 30-0-0

Seed Sources

Annual Ryegrass

Assertive	Plainview Seed
Bestfor II	Plainview Seed
Big Daddy	Southern States
Brigadier	East Texas Seed Co./ Ragan and Massey
Fantastic	Ampac Seed
Florlina	North Carolina State University/ProSeeds Marketing
FLX 1995 (GA) LR	University of Florida
FLX 2000 (New) 4X LR mid late	University of Florida
FLX 2000 (New 1) 4XLR late	University of Florida
Gulf	Oregon Seed Producers
Jackson	Wax Seed Co.
Jumbo	Smith Seed Services
King	Lewis Seed Co.
Louisiana	Barenburg Southeast
Marshall	Wax Seed Co.
MCX	Barenburg Southeast
ME 94	Wax Seed Co.
Prassell Plus	Pennington Seed
Prine	East Texas Seed Co./ Ragan and Massey
Ribeye	Barenburg Southeast
Rio	ProSeed Marketing
Stampede	ProSeed Marketing
Surrey II	CEBECO International Seed
Tam	Barenburg Southeast
TAM 90	Texas A & M – Overton
TXR 99-Beau	Texas A & M – Overton
TXR 2000-T1	Texas A & M – Overton
TXR 2000-2	Texas A & M – Overton
WMN 97	Wax Seed Co.
WVPB AR 98-7	Willamette Valley Plant Breeders
WVPD AR 99-L	Willamette Valley Plant Breeders
WVPB AR 99-M	Willamette Valley Plant Breeders

Tall Fescue

AGRFA 103	AgResearch Limited
AGRFA 110	AgResearch Limited
Barcel	Barenburg
Bronson	Ampac Seed
CAS EA 79	Cascade International
Ga 001 542	University of Georgia
Ga 002 542	University of Georgia
Ga 003 542	University of Georgia
GA 5 FI	University of Georgia
Ga 5 Max Q	Pennington Seed/University of Georgia
Hoedown	Jenks Seed Connections
Jesup Max Q	Pennington Seed/University of Georgia
Jesup FI	University of Georgia
Kentucky 31	University of Georgia
Q 4508	Wrightson Research
Quincy	University of Florida/Willamette Valley Plant Breeders
R 4663	Wrightson Research
Stag	ProSeeds Marketing
WVPB 97-C-1	Willamette Valley Plant Breeders
WVPB 99KSM	Willamette Valley Plant Breeders

Orchardgrass

Quantum	Cascade International Seed Co.

Prairie Brome

AGR B 101	AgResearch
D5633	Wrightson Research
Gala	Barenburg
G. Matua	AgResearch
Lupreme	Barenburg
M 5632	Wrightson Research
Matua	Commercial Seed Trade
Stocker	Barenburg

Reed Canarygrass

Reed	AgResearch

Switchgrass

Alamo	USDA - Plant Material Center
Kanlow	USDA - Plant Material Center

Indiangrass

514678	USDA - Plant Material Center	**Lometa**	USDA - Plant Material Center

Big Bluestem

Kaw	USDA - Plant Material Center	**PMC9029926**	USDA - Plant Material Center
PMC BB	USDA - Plant Material Center	**PMC-77**	USDA - Plant Material Center

Eastern Gamagrass

Shepherd's	USDA - Plant Material Center

Dallisgrass

Commercial	Commercial Seed Trade	**Experimental**	USDA - ARS/Texas A & M

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