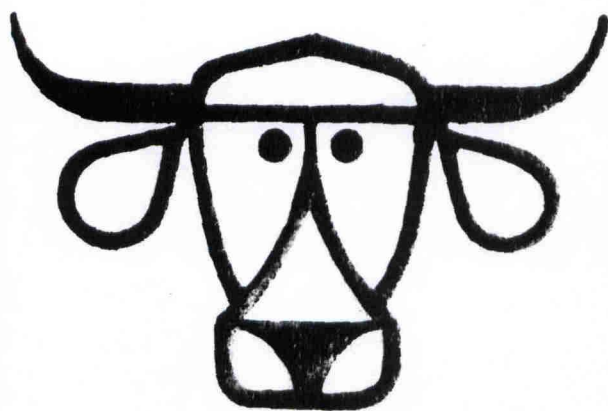




Forage Research in Texas

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VARIETY TESTS FOR WINTER ANNUAL FORAGE PRODUCTION

SUMMARY

When making variety recommendations to growers, performance rated over several years is more valid than only one year's data because of unusual weather conditions that may favor one variety more than another during a particular year. For this reason, the forage yields for the oat, rye, ryegrass and wheat forage tests have been compiled to provide a better estimate of yield potential of individual varieties. It is important to consider forage distribution throughout the growing season and not only total forage yield. Early fall and winter forage production may be of more value to a forage program than forage produced in April or May.

OBJECTIVES

These trials were conducted to determine which varieties produce highest forage yields in East Texas. A second objective was to test newly released or experimental lines to determine their adaptation and cold potential under East Texas environmental conditions.

PROCEDURE

In each of these forage tests, a number of varieties were planted in small plots replicated four times. Forage yields are determined by clipping the plants at a uniform height on a representative portion of each plot. The samples are then dried in an oven, weighed, and pounds of dry forage per acre calculated. A test may be clipped from three to as many as five times throughout the growing season, depending on the amount of forage growth made by the plants.

Forages were planted into conventionally tilled seedbeds usually during the first 2 weeks in September. A broadcast application of fertilizer at a rate of 60-60-60 (N-P₂O₅-K₂O) lbs/ac was applied in late August. Additional nitrogen was applied in split application in November and February for a total N rate of about 210 lbs/acre.

RESULTS

Data presented are mean yields for three growing seasons except for a few varieties where only 2 years data are available as noted on the tables. Yields from the oat forage tests (Table 1) indicate that fall forage production was quite high. On oats, cold weather will delay growth and may kill some varieties under severe cold in December and January. Most varieties produce good regrowth with warmer weather in March. About one half of the total forage production will occur in late March and April. Little or no forage production should be expected in May.

Rye will produce good forage yields in the fall as indicated in Table 2. Forage production can also be expected for December and January if temperatures are near normal for East Texas. Rye produces little forage after the end of March particularly under grazing conditions.

Ryegrass (Table 3) will also produce fairly good forage yields in the fall if planted in a prepared seedbed as shown by this data. Little production can be expected during December and January unless warmer than normal temperatures occur. Most of the forage from ryegrass will occur in March and April, and some forage production will also be available in May.

Forage production from wheat is fairly uniform throughout the growing season (Table 4). Total wheat forage produced at Overton has been somewhat less than oats, rye or ryegrass. Most wheat varieties are fairly winter-hardy and will survive severe cold when oats or ryegrass may winterkill. Little regrowth can be expected after April.

Table 1. Mean oat forage yields from 1976-77 through 1978-79 at Overton, Texas.

Variety	December	March	April	Total
Pounds of dry matter per acre				
Coker	1923	2398	3407	7728*
Coker 76-19	1918	2369	3108	7457*
Coker Four Twenty Two	1613	2271	3293	7176*
Noble Foundation 105	1606	1958	3331	6895
Tx-Exp. 72C-1026	1974	1571	3194	6739*
Walken	1646	1901	3129	6675*
Coker 7723	1804	1837	2892	6533*
Coker 234	1907	1924	2494	6326
Noble Foundation 85	1896	1234	2786	5916*
Tam-0-301	1971	1032	2895	5898*
Tam-0-312	1353	1197	3239	5807
Noble Foundation 188	1288	1613	2854	5754*
New Nortex	1820	1113	2263	5196
Tx-Exp. 72C-3034	746	1496	2743	4985*
Bob	942	1528	2375	4845*
Ora	942	1459	2304	4704*

*Means for this variety are from 2 year's data.

Table 2. Mean rye forage yields from 1976-77 through 1978-79 at Overton, Texas.

Variety	December	February	March	April	Total
Pounds of dry matter per acre					
Elbon	1858	3906	2552	769	9468*
Acco WR-811	2138	2591	3089	953	8770*
Wintergrazer 70	1947	3537	2042	760	8665*
Bonel	1691	2258	2844	914	7708
Gurley's 2000	1912	2600	2162	1241	7581
Noble Foundation 74	1816	2181	2566	1003	7565
Noble Foundation 72	1895	2271	2453	850	7469
Maton	1601	2183	2896	789	7463
Athens Abruzzi	1602	2238	2459	761	7060

*Means for this variety are for 2 year's data.

Table 3. Mean ryegrass forage yields from 1976-77 through 1978-79 at Overton, Texas.

Variety	December	March	April	May	Total
Pounds of dry matter per acre					
Tx-O-R-78-2	1631	1808	2463	1651	7552*
Sunbelt	1478	1499	2881	1560	7417*
Fla 1977B	1606	1422	2669	1674	7369*
North Miss Res (Marshall)	1525**	1049	3543	1034	7151**
Meritra	1229	1149	1923	2738	7033*
Magnolia	1278	1526	2339	1856	6999
Tx-O-R-78-3	1397	1385	2669	1478	6928*
Tetralend 444	1436	1255	2278	1904	6873
Tx-O-R-78-1	1397	1348	2537	1548	6829*
NAPB-0051	919	1940	1887	1789	6534*
Ninak	1220	1182	2196	1896	6494
Common	1291	1154	2139	1756	6339
Gulf	1129	1071	2398	1792	6307
Tetrone	1130	882	2194	1958	6163
Billion	1181	1169	1986	1632	5968

*Means for this variety are from 2 year's data.

Table 4. Mean wheat yields from 1976-77 through 1978-79 at Overton, Texas.

Variety	December	February	March	April	Total
Pounds of dry matter per acre					
McNair 1003	1443	1610	1459	1203	5716
Coker 76-22	1053	2103	1149	1055	5360
Coker 68-15	1243	1382	1919	809	5353
Noble Foundation 21	1209	1035	955	1309	5161*
Coker 747	895	876	1932	1095	4797
Sturdy	965	755	2350	489	4558*
Noble Foundation 2	1575	942	814	757	4467*
Arthur 71	763	654	1841	1106	4364
Delta Queen	963	1502	808	1025	4298
Oasis	667	592	1861	1002	4121*

*Means for this variety are from 2 year's data.