

# Ryegrass and Oat Variety Trials in Southeast Texas

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## Summary

Ryegrass variety trials were conducted during 1982-83 and 1984-85 and an oats variety trial in 1982-83 at the Angleton Research Station. In the earlier ryegrass trial TX-R-80-4, TX-R-80-T, and TX-R-81-T breeding lines had the best combination of early and total forage production. There were only minor differences between oat cultivars. Marshall and TX-R-84-1 ryegrass were the most productive in the 1984-85 trial.

## Introduction

Annual ryegrass is the primary species used for temporary winter pasture in southeast Texas. It is tolerant of water-logged soils during the winter which are characteristic of the area. Seed burial is not necessary for establishment which makes it the leading choice for overseeding warm season perennial pastures. Oats are frequently mixed with ryegrass on the better drained soils to increase early forage production. Variety trials of oats and ryegrass were established at Angleton to identify the most productive cultivars for the Upper Gulf Coast of Texas.

## Procedure

Oat and ryegrass cultivars were seeded at 90 and 25 lb/A, respectively on a Lake Charles clay. The 1982-83 trials were established on September 17, 1982 and fertilized with a 50-60-0 at planting and 50 lb of nitrogen/A after each of the first three cuttings. The 1984-85 study was planted on November 8, 1984 and fertilized with 50-60-0 at planting and 50 lb of nitrogen/A after each of the first two cuttings. Plots were 4 x 15 feet and consisted of six 8-inch rows. Experimental design was randomized block with four replications.

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KEYWORDS: Ryegrass/forage yield/oats.

## Results and Discussion

There were no significant differences between oat cultivars in forage production at the first harvest or total yield (Table 1). In the 1982-83 ryegrass test TX-R-81-T, Marshall, Shannon, TX-R-80-T, TX-R-80-4, and Georgia Reseeding had the best early production with over 1,000 lb/A by the first harvest (Table 2). TX-R-80-4, TX-R-80-T, TX-R-81-T, TX-R-81-1, Florida 80, and Gulf were the most productive for the season. In the 1984-85 ryegrass trial there was little difference between cultivars with Marshall and TX-R-84-1 being the most productive (Table 3).

**TABLE 1. OATS VARIETY TEST AT ANGLETON 1982-83**

Variety	Dec. 9	Jan. 26	Mar. 2	May 3	Total
Pounds of Dry Matter/Acre					
Coker 422	1,217 a <sup>1</sup>	868 b	1,312 a	3,093 a	6,489 a
Big Mac	1,469 a	1,001 ab	1,376 a	2,589 a-c	6,435 a
Mesquite	1,341 a	930 ab	1,322 a	2,780 ab	6,373 a
Coker 234	1,528 a	1,066 a	1,372 a	2,346 bc	6,312 a
New Nortex	1,189 a	1,123 a	1,303 a	2,676 a-c	6,291 a
Coronado	1,616 a	930 ab	1,242 a	2,207 c	5,994 a

<sup>1</sup>Yields within a column followed by the same letter are not significantly different, Duncans Multiple Range Test, 0.05 level.

**TABLE 2. RYEGRASS VARIETY TEST AT ANGLETON 1982-83**

Variety	Dec. 9	Jan. 26	Mar. 2	May 3	Total
Pounds of Dry Matter/Acre					
TX-R-80-4	1,000 a-c <sup>1</sup>	1,464 ab	1,680 a-c	3,138 a	7,282 a
TX-R-80-T	1,052 ab	1,318 ab	1,673 a-c	3,179 a	7,221 a
TX-R-81-T	1,132 a	1,309 ab	1,633 bc	3,057 a	7,131 ab
TX-R-81-1	748 cd	1,260 ab	1,698 a-c	3,097 a	6,803 a-c
Florida 80	789 bc	1,346 ab	1,892 a	2,751 ab	6,778 a-c
Gulf	740 cd	1,287 ab	1,617 bc	2,955 ab	6,599 a-d
Marshall	1,089 a	1,287 ab	1,488 c	2,527 bc	6,390 b-d
Georgia					
Re.	1,002 a-c	1,337 ab	1,770 ab	2,201 cd	6,309 c-e
Common	511 d	1,118 b	1,792 ab	2,527 bc	5,948 d-f
Shannon	874 a-c	1,356 ab	1,562 bc	1,814 de	5,606 ef
Ninak	1,072 a	1,569 a	1,689 a-c	1,141 f	5,471 f
Urbana	799 bc	1,416 ab	1,605 b-c	1,467 ef	5,288 f

<sup>1</sup>Yields within a column followed by the same letter are not significantly different, Duncans Multiple Range Test, 0.05 level.

**TABLE 3. RYEGRASS VARIETY TEST AT ANGLETON 1984-85**

Variety	Jan. 8	Mar. 8	Apr. 3	May 3	Total
Pounds of Dry Matter/Acre					
Marshall	997 a <sup>1</sup>	1,907 a	1,484 a	943 b	5,331 a
TX-R-84-1	1,118 a	1,770 ab	1,332 a	1,083 ab	5,303 a
Common	1,084 a	1,593 ab	1,271 ab	982 b	4,930 a
Florida 80	1,381 a	1,607 ab	715 c	1,130 ab	4,833 a
Gulf	803 a	1,539 b	1,089 b	1,241 a	4,672 a

<sup>1</sup>Yields within a column followed by the same letter are not significantly different, Duncan's Multiple Range Test, 0.05 level.