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RYEGRASS FORAGE YIELDS AT OVERTON FOR 1996-97 AND 5-YEAR MEANS

L. R. Nelson, Steve Ward, and Jim Crowder

Background. Annual ryegrass is an important forage crop in East Texas. Varieties vary in total forage yield and distribution, winter hardiness, and for disease resistance. This study is conducted each year at the TAMU Agricultural Research and Extension Center at Overton to compare varieties for East Texas soils and climatic conditions.

Research Findings. All available ryegrass varieties and some experimental lines were evaluated during the past 5 years. Fertilizer rates are noted in Table 1. Tests were planted into a prepared seedbed at 1/4 inch depth at 30 lb/ac. Planting dates were mid-September normally and on 9 October in 1996. Plot size was 4 x 12 ft with four replications. During the 1996-97 season, plots were harvested with a Hege plot harvester at a cutting height of 2 inches at six harvest dates. Ryegrass was approximately 6-inches tall at first harvest on 3 January. Entries demonstrating best seedling vigor and rapid fall growth were ME 94, Gulf, and several experimentals (Table 1). The second harvest was 21 February, indicating a warm winter and good ryegrass growth during this period. Better forage yields in the 2nd harvest were produced by Southern Star, Surrey, Grazer, Rio, closely followed by several experimental lines. A major portion of the ryegrass forage was produced during March when nearly all entries produced excellent yields. This is demonstrated in the 14 March harvest and the 7 April harvest. On the 14 March harvest, TAM 90, Southern Star, Marshall, Surrey, Rio, and Jackson all produced similar forage yields. In the 4th harvest, the highest yielding varieties were Marshall, Blizzard, Big Daddy, TAM 90, Southern Star, Hercules, which were closely followed by Magnolia, Beef Master, Abundant and Gulf. Good yields were also produced on the 6 May harvest where the better yielding cultivars were TAM 90, Big Daddy, Hercules, Magnolia, and Beef Master. The last harvest was on 23 May and all yields were quite low due to moisture and heat stress during late spring season. For total seasonal yield, released varieties which produced the highest yield were TAM 90 at 6884 lbs/ac which was closely followed by Southern Star, Big Daddy, Hercules, and Marshall. A 5-year total season mean yield is presented and indicates best yields for TAM 90 and Marshall, with Surrey, Rio, and Jackson producing somewhat lower yields. Differences in yield between varieties of less than the LSD (647 lbs for total yield) may be due to experimental error and should not be considered significant.

Application. The data presented from these experiments should be useful in selecting ryegrass varieties best adapted to northeast Texas. Winterhardiness is extremely valuable in those years when winterkill occurs. The small additional seed cost of new varieties such as TAM 90, and Marshall should be well worth their extra forage yielding potential.
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<th>Variety</th>
<th>HAR 1 1-3</th>
<th>HAR 2 2-21</th>
<th>HAR 3 3-14</th>
<th>HAR 4 4-7</th>
<th>HAR 5 5-6</th>
<th>HAR 6 5-23</th>
<th>Total Yield</th>
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*Experimental line, seed presently not available to growers.