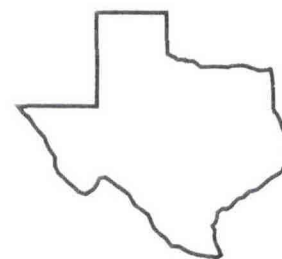
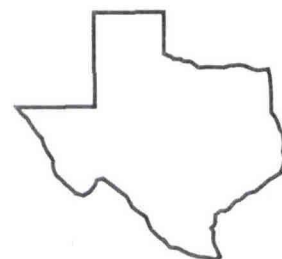
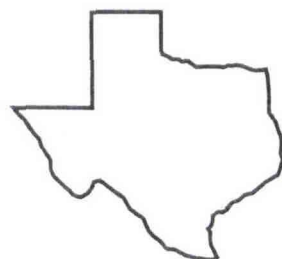
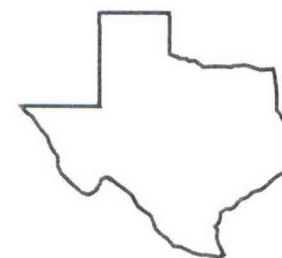




Texas Agricultural Experiment Station  
Texas Agricultural Extension Service  
The Texas A&M University System



# Overton Field Day Report - 1994



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**1994  
Research Center  
Technical  
Report**

**No. 94-1**

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## COMPARISON OF RYE, WHEAT, OAT, AND RYEGRASS FALL AND WINTER GROWTH

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**Background.** Small grains and ryegrass are used extensively for winter pasture in East Texas. Although seed and fertilizer costs are high, they provide a high quality forage when warm-season perennial grasses like bermudagrass are dormant. Planting in the last half of September is recommended to produce as much forage as possible before winter temperatures limit growth. The early planting date requires a prepared (disked) seedbed for deep seed placement (small grains 3/4-1 in., ryegrass 1/2 in.) so that the young seedlings can survive hot and sometimes dry conditions during fall. Overseeding warm-season grasses in late September is not recommended unless they are disked because they are still growing at that time. Without disking, the warm-season grass would compete for light and moisture which would result in poor stands and growth of the cool-season grasses.

Seeding rates are 100 lb/acre of rye, wheat, or oats mixed with 20 lb/acre of ryegrass or 25-30 lb of ryegrass if planted alone. Ryegrass is later maturing than rye, wheat, and oats and is added to the mixture to extend the grazing season. 'Elbon' rye, 'Florida 302' wheat, 'Ozark' oats, and 'TAM 90' ryegrass were planted in a prepared seedbed on September 16, 1992 at the Texas A&M University Agricultural Research and Extension Center at Overton. Forages were sampled every 2 weeks to compare fall and winter forage production.

**Research Findings.** Rye was always the most productive especially under cooler temperatures in late October and November (Fig. 1). Wheat was intermediate until November. Ryegrass exceeded both wheat and oats on November 23. All plots were mowed off after sampling on November 23 and then sampled every 2 weeks to compare winter regrowth production. In December, regrowth of rye, wheat, and oats was similar with ryegrass 20-25% lower. Thereafter, rye was the most productive, with wheat and ryegrass intermediate, and oats the least productive. The better cold tolerance of rye is probably responsible for its higher yields. Ryegrass is considered less cold tolerant than small grains. However, new varieties such as TAM 90, 'Jackson', 'Surry', and 'Marshall' were selected for improved cold tolerance and appear to be equal to oats and maybe wheat.

**Application.** The most productive winter pasture is a mixture of rye and ryegrass. Yields would be slightly less if wheat were used instead of rye. The new, more cold hardy ryegrass varieties are equal to, and sometimes slightly better than, oats and wheat in East Texas.

Fig 1. Comparison of rye, wheat, oat, and ryegrass fall growth.

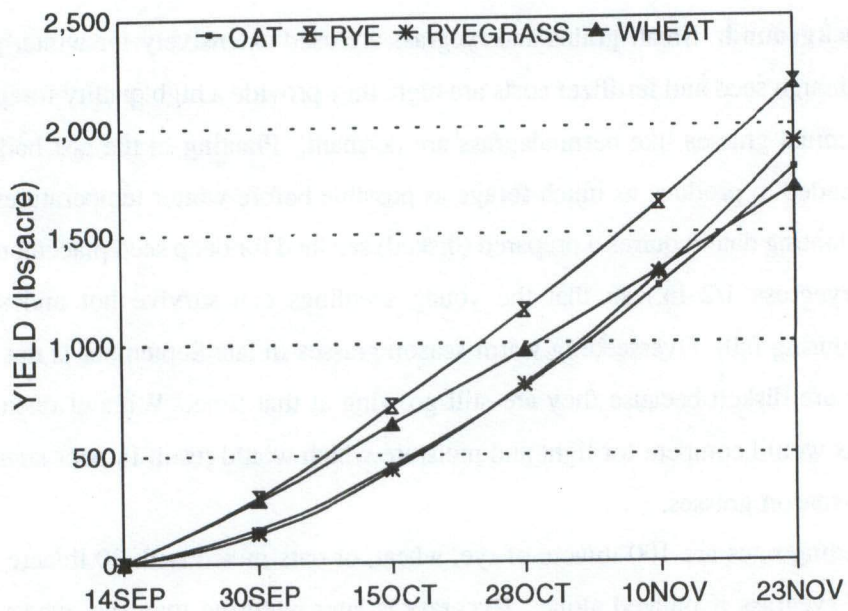


Fig 2. Comparison of rye, wheat, oat, and ryegrass winter regrowth.

