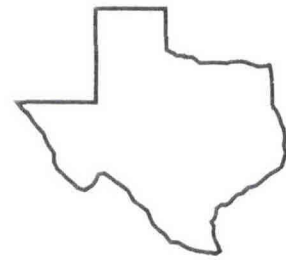
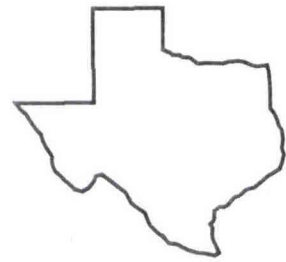
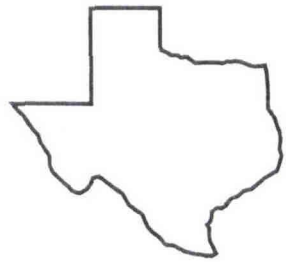
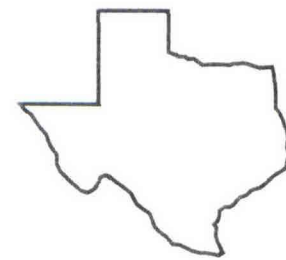




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RYEGRASS PLANTING METHODS AND SEEDING RATES FOR OVERSEEDING BERMUDAGRASS

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Background. Annual ryegrass is used extensively throughout the eastern half of Texas because of its (1) adaptation to a wide range of soil types, (2) ease of establishment, (3) higher yield than small grains, and (4) high forage quality. Ryegrass stands can be obtained even when the seed is broadcast on the soil surface. However, there is no information on how ryegrass stands and production are influenced by planting method and seeding rate. A 2 year study evaluating four ryegrass planting methods at four seeding rates was conducted at the Overton Center on a 'Coastal' bermudagrass sod. The Coastal sod was mowed to a 1- to 2-in. height before planting. Planting methods were (1) light disking, drilling seed, (2) light disking, broadcasting seed, (3) drilling seed in undisturbed sod, and (4) broadcasting seed on undisturbed sod. Seeding rates were 15, 25, 35, and 45 lb/ac. All plots were dragged with a harrow to help cover the seed in the disked plots and shake the seed to the soil surface in the broadcast plots.

Research Findings. Ryegrass seedling density increased as seeding rate increased within each planting method (Fig. 1). At each seeding rate the best ryegrass stands occurred when ryegrass was drilled into a lightly disked bermudagrass sod. Broadcasting seed on a disked sod also resulted in good stands with the difference between drilling and broadcasting decreasing as seeding rate increased. Drilling or broadcasting ryegrass seed on a short undisturbed sod resulted in lower seedling densities with drilling slightly better than broadcasting.

Early forage production was greatest when ryegrass seed was either drilled or broadcast on a lightly disked sod (Fig. 2). Disking reduced competition from bermudagrass and exposed some loose soil which permitted good seed placement, and therefore, improved seedling establishment. For each planting method, forage production increased with seeding rate and doubled from 15 lb to 45 lb seed/acre. Planting 25 lb/acre into a disked sod produced the same amount of early forage production as planting 45 lb/acre on an undisturbed sod. Planting method and seeding rate had the same effect on total forage production except that broadcasting ryegrass seed was more productive than drilling on an undisturbed sod at the highest seeding rate (Fig. 3).

Application. Drilling or broadcasting ryegrass seed at 25 lb/acre on a lightly disked bermudagrass sod is recommended. If disking is not possible, a seeding rate of 45 lb/acre can be used to obtain the same amount of early and total forage production.

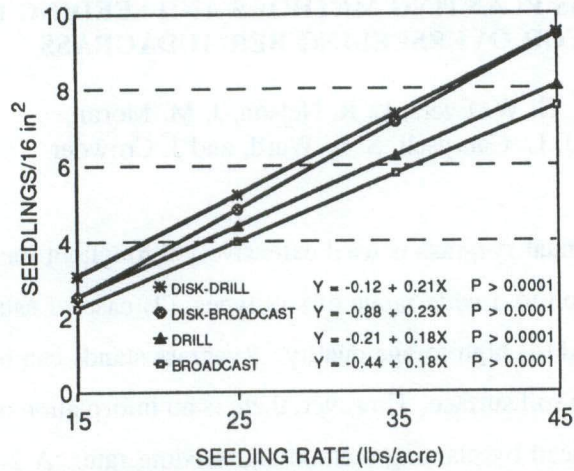


Figure 1. Influence of planting method and seeding rate on ryegrass seedling density (2 yr avg).

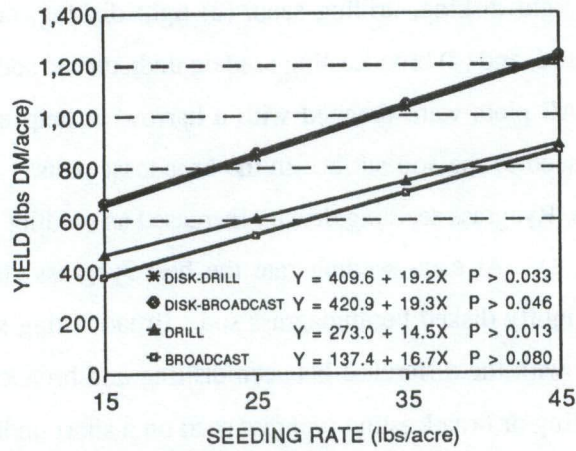


Figure 2. Influence of planting method and seeding rate on first harvest ryegrass yields (2 yr avg).

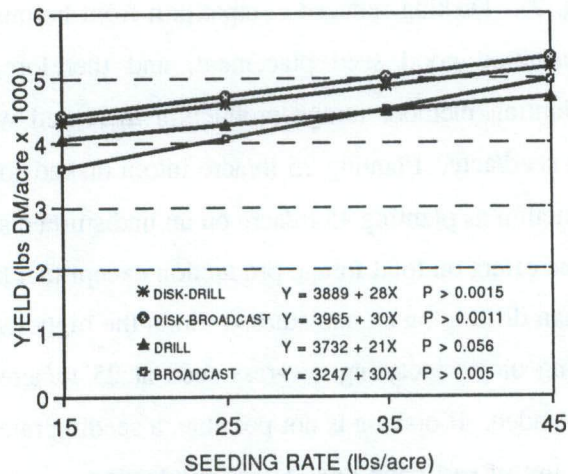


Figure 3. Influence of planting method and seeding rate on total ryegrass yields (2 yr avg).