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## INFLUENCE OF PLANTING METHOD AND SEEDING RATE OF OVERSEEDED RYEGRASS

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**Background.** Annual ryegrass is used extensively throughout the eastern half of Texas and the southeastern US for overseeding warm-season perennial grasses. Its primary attributes are (1) adaptation to a wide range of soil types, (2) ease of establishment, (3) higher yielding than small grains, and (4) high forage quality. Ryegrass stands can be obtained even when the seed is broadcast on the soil surface. Higher seeding rates are recommended when broadcasting seed instead of drilling because it is assumed a smaller percentage of the broadcast seed germinate and survive. A 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 for each planting method (Figure 1). The disk-broadcast planting method had a higher seedling density than the other planting methods at seeding rates of 25 lb/ac or higher. Disking reduced competition from bermudagrass and exposed some loose soil that was a better environment for establishment than the undisked sod. Broadcasting the seed provided a more even distribution of seed which delayed competition between ryegrass seedlings which does occur in a drill row.

Early forage production was higher in the disked planting methods because of reduced bermudagrass competition and exposed soil for better seed placement (Figure 2). Within the disked and undisked planting methods, broadcasting the seed resulted in higher forage production than drilling at the higher seeding rates. After the first harvest there was little difference between planting methods or seeding rates (data not shown). At the lowest seeding rate of 15 lb/ac, total yield was a little higher in the disk-drill planting method.

**Application.** A seeding rate of about 25 lb/ac is recommended unless early production is critical and higher rates can be justified such as with a lactating dairy herd. Disking the grass sod before drilling or broadcasting ryegrass seed will enhance the ryegrass stand and increase early forage production.

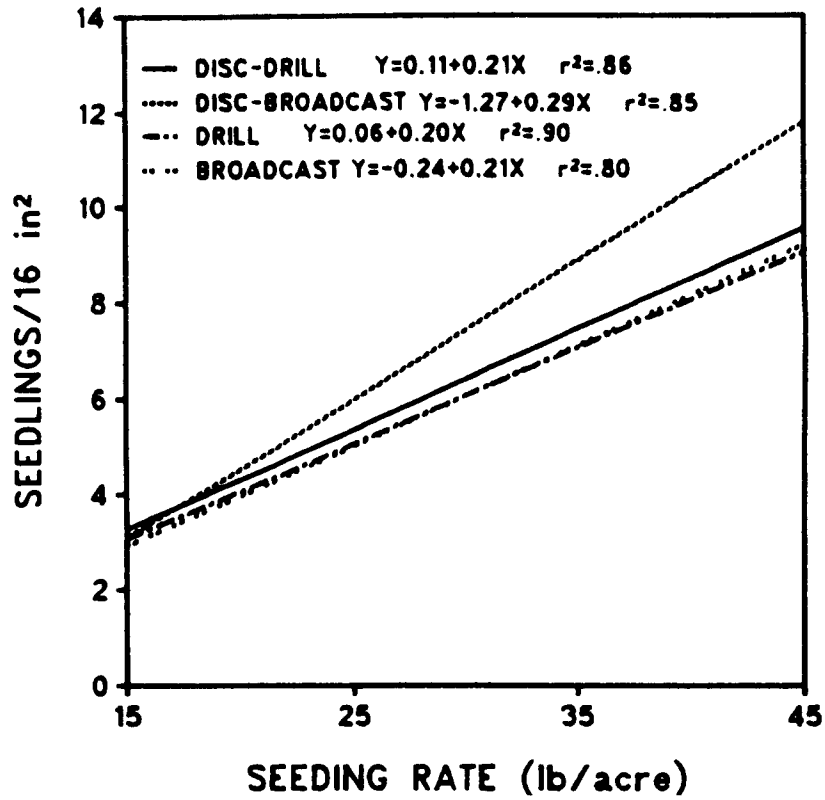


Figure 1. Relationship of seeding rate and planting method to annual ryegrass seedling density 6 weeks after planting.

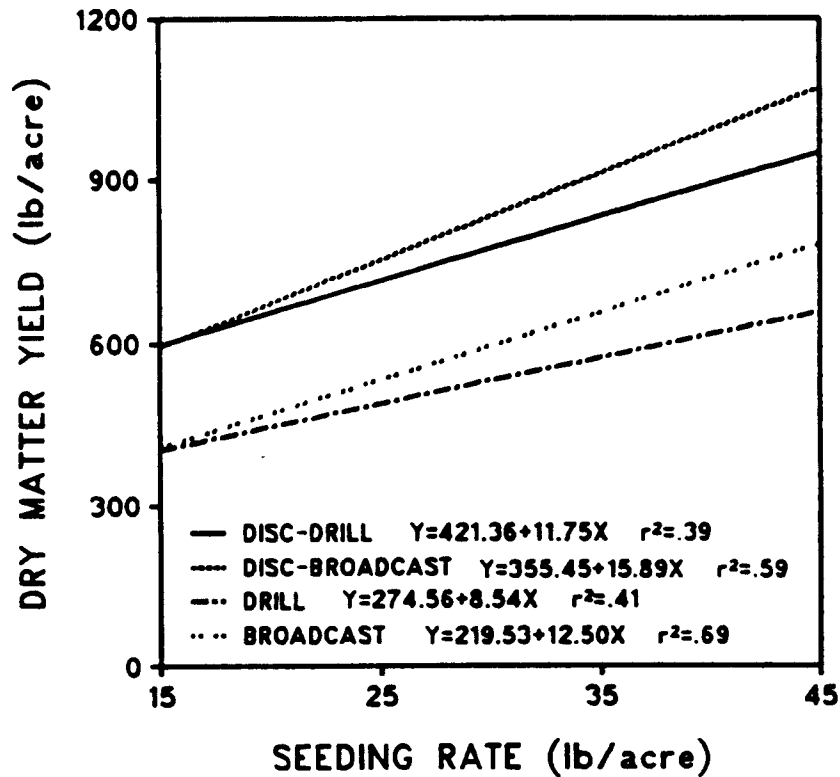


Figure 2. Influence of seeding rate and planting method on first harvest yields of annual ryegrass.