

Forage Research in Texas

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Subterranean Clover Seeding Rates

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SUMMARY

Subterranean clover seed is more expensive than other clover seed so that it is critical to know the minimum seeding rate necessary for a satisfactory stand. On a prepared seedbed good stands were obtained with 4 lb of seed per acre. If early production is critical, seeding rates no lower than 12 lb/ac are necessary. Drilling seed in 5 inch rows resulted in slightly higher yields than broadcasting the seed or drilling in 10 inch rows.

Introduction

Subterranean clover (Trifolium subterraneum L.), also called sub-clover, is a relatively new clover to the Southeastern United States. Advantages of subterranean clover over other cool season annual clovers are: 1) prostrate growth which permits close grazing without loss of stand and 2) seed development and placement on the soil surface which promotes reseeding. Presently most of the subterranean clover seed is imported from Australia, which makes it more expensive than other clover seed. Therefore determination of the lowest seeding rate which still results in satisfactory forage production is necessary to keep seed cost per acre to a minimum. Subterranean clover forage production and distribution was evaluated at six seeding rates under three methods of establishment.

Methods and Materials

Mt. Barker subterranean clover was seeded Oct. 8 on a Lake Charles clay at the Angleton Research Station. Plot size was 5 x 15 ft in a split plot experimental design with four replications. Main plots were planting methods which included seed 1) broadcast, 2) drilled in 5 inch rows, and 3) drilled in 10 inch rows. Subplots were seeding rates of 4, 8, 12, 16, 24 and 32 lb/ac. After planting, all plots were rolled to insure good seed to soil contact. Plots were harvested at a 1 inch height with a flail mower.

Results and Discussion

There was only about 300 lb/ac difference in total yield between the methods of clover establishment (Table 1). However subclover seeded in 5 inch rows did produce significantly more forage. Seeding rate had its greatest effect on forage production at the first harvest (Table 2). There was no large increase in yield above 12 lb seed/ac. By the second harvest, only the 4 lb seeding rate produced significantly less forage

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than the highest seeding rates. Total forage production generally increased as seeding rate increased with the major difference between the 4 lb and higher seeding rates.

Table 1. Effect of planting method on subterranean clover production averaged over six seeding rates.

Planting method	Jan. 13	Feb. 27	Mar. 27	May 7	Total
	----- 1b/ac -----				
Broadcast	845 ab*	1702 a	1346 b	1010 c	4902 b
5 inch rows	943 a	1670 a	1459 a	1155 b	5226 a
10 inch rows	811 b	1477 b	1397 ab	1272 a	4958 b

*Yields within a column followed by the same letter are not significantly different at the .05 level, Duncan's Multiple Range Test.

Table 2. Subterranean clover production at six seeding rates averaged over three planting methods.

Seeding rate	Jan. 13	Feb. 27	Mar. 27	May 7	Total
	----- 1b/ac -----				
4	285 e*	1294 b	1329 a	1397 a	4305 d
8	606 d	1621 a	1457 a	1257 ab	4941 c
12	902 c	1655 a	1446 a	1028 c	5031 bc
16	1027 bc	1686 a	1435 a	1158 bc	5305 ab
24	1231 a	1711 a	1438 a	1018 c	5397 a
32	1145 ab	1733 a	1299 a	1018 c	5195 abc

*Yields within a column followed by the same letter are not significantly different at the .05 level, Duncan's Multiple Range Test.