



Legume Evaluations for East Texas, 1979

Research Center

TECHNICAL
REPORT

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SEEDING RATE AND INOCULATION OF SUBTERRANEAN AND ARROWLEAF CLOVER

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SUMMARY

Arrowleaf clover was not able to withstand the severe climatic conditions of 1978-79. Subterranean clover germinated late, thereby, delaying the time of first harvest until April 10. Yield of subterranean clover increased with an increase in seeding rate. Inoculated seeded plots produced slightly more than did uninoculated plots, especially at the higher seeding rates. The naturally reseeded plots were available for harvest on December 18, 1979. Yields from the original low seeding rates were of particular interest. Yields from the previously inoculated seed plots produced more at the first harvest than did the uninoculated plots.

OBJECTIVE

To determine the influence of seeding rate and inoculation of subterranean and arrowleaf clovers on earliness of growth and reseeding ability.

PROCEDURES

Inoculated and uninoculated subterranean and arrowleaf clovers were seeded in 6x16 ft plots at the rates of 2.5, 5, 10, 20, 40, 80 and 160 lbs/ac in separate four-replicated trials. Plantings were delayed until November 10, 1978 because of the extremely dry fall conditions. All plots were harvested one time in the spring of 1979 and the regrowth forage was allowed to set seed. Germination of these naturally reseeded plots occurred in late September of 1979 and dry matter yields were taken with a reel-type mower on December 18, 1979. All plots received 25-100-100 lbs/ac N-P₂O₅-K₂O at the initial planting and the same amount during September of 1979.

RESULTS

The fall and winter of 1978-79 was unseasonably dry and cold. Consequently, none of the arrowleaf clover plots produced sufficient forage for harvest. Thus, all of these plots received a 0 rating for both earliness of growth and reseeding. Subterranean, however, made significant and impressive growth under the existing climatic conditions. Germination was delayed and, therefore, plots were harvested for the first time on April 10, 1979 (Table 1). The 2.5 lbs/ac seeding rate did not have enough forage for harvest on April 10. Forage dry matter production increased with seeding rate. The differences between inoculated and uninoculated were not as great at the higher seeding rates.

Dry matter yields from naturally reseeding are shown in Table 2. The most interesting portions of this data are: the early date (December 18) at which forage was produced; the yield from the 2.5 lbs/ac seeding rate which indicates some degree of hard seed; and the small, but apparent differences between the inoculation treatments.

Table 1. Dry matter production of subterranean clover at first harvest from hand-seeded plots.

SEEDING RATE (lbs/ac)	April 10, 1979		
	UNINOCULATED	INOCULATED	AVG
	1bs/ac		
2.5	0	0	0
5	30	132	81
10	576	468	522
20	819	916	868
40	926	1491	1209
80	1732	1582	1657
160	1402	1948	1675
AVG	784	934	

Table 2. Dry matter production of subterranean clovers at first harvest from naturally reseeded plots.

<u>SEEDING RATE</u> (lbs/ac)	December 18, 1979		
	<u>UNINOCULATED</u>	<u>INOCULATED</u>	<u>AVG</u>
	<hr/> —lbs/ac— <hr/>		
2.5	163	307	235
5	295	548	422
10	548	782	665
20	662	812	737
40	715	973	844
80	768	965	867
160	864	1086	975
AVG	574	782	