



Forage Research in Texas

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SEEDING RATE AND ESTABLISHMENT METHOD
FOR SUBTERRANEAN CLOVER

OBJECTIVE:

To evaluate three methods of planting at various seeding rates in establishing subterranean clover.

PROCEDURE:

Mt. Barker subterranean clover was planted in a prepared seedbed on a Lake Charles clay on 27 Sept. 1978 at the Agricultural Research Station at Angleton. Experimental design was split plot with four replications. Main plots were planted method 1) drilled in 10 inch rows and rolled, 2) broadcast and 3) broadcast, drug with a spiketooth harrow and rolled. Subplots were seedling rates of 10, 15, 20, 25 and 30 lbs. seed/ac. Fertilization at planting was 60 lb. P₂O₅/ac. Plots were harvested with a flail mower at a 1.5 in. height on March 28 and April 27, 1979.

RESULTS AND DISCUSSION:

Dry matter production increased as seeding rate increased at the first harvest. Average production across seeding rates where the seed was broadcast, harrowed and rolled was 50% greater than where the seed was drilled and rolled or broadcast only. The higher yield caused by harrowing and rolling the broadcast seed is due to mixing the seed in the soil, coverage of the seed by soil and good soil to seed contact which improves moisture conditions for germination.

The lower average yield for the drilled and rolled seed is probably due to seedling competition within the row for light, nutrients and moisture. Subterranean clover seedlings are large with a high seedling growth rate compared with other cool season annual clovers. Coupled with the prostrate type growth of subterranean clover, an isolated plant can cover a circular area 6 in. in diameter 2 months after emergence. If narrower rows had been used, the difference between drilled and broadcast would probably be less.

There were no major differences in yield at the second harvest between planting method and seeding rate. Larger clover plants at the lower seeding rates had compensated for the difference in plant density. If harvesting had been initiated earlier and more frequent, differences between treatments might have been more pronounced.

TABLE 1

DRY MATTER PRODUCTION OF SUBTERRANEAN CLOVER AT THE FIRST HARVEST
(MAR. 28) FOR PLANTING METHOD AND SEEDING RATE

| Planting method | Seeding rate | | | | | Avg. |
|------------------------------|-------------------|------|------|------|------|------|
| | 10 | 15 | 20 | 25 | 30 | |
| | ----- lb/ac ----- | | | | | |
| Drilled, rolled | 580 | 927 | 1058 | 1248 | 1502 | 1063 |
| Broadcast | 678 | 806 | 1078 | 986 | 1276 | 965 |
| Broadcast, harrow, rolled | 872 | 1360 | 1608 | 1778 | 1938 | 1511 |
| Average | 710 | 1031 | 1248 | 1337 | 1572 | |

TABLE 2

DRY MATTER PRODUCTION OF SUBTERRANEAN CLOVER AT THE SECOND HARVEST
(APR. 27) FOR PLANTING METHOD AND SEEDING RATE

| Planting method | Seeding rate | | | | | Avg. |
|------------------------------|-------------------|------|------|------|------|------|
| | 10 | 15 | 20 | 25 | 30 | |
| | ----- lb/ac ----- | | | | | |
| Drilled, rolled | 1293 | 1458 | 1363 | 1371 | 1424 | 1382 |
| Broadcast | 1228 | 1389 | 1386 | 1304 | 1425 | 1346 |
| Broadcast, harrow, rolled | 1325 | 1352 | 1308 | 1314 | 1398 | 1339 |
| Average | 1282 | 1400 | 1352 | 1330 | 1416 | |