Legumes (clovers, alfalfa, birdsfoot trefoil) are welcome additions to grass pastures because they improve forage nutritive quality, supply free nitrogen (75 to 200 lb N/acre/year), and often extend the productive season. Planting failures are common, sometimes a result of drought, but more commonly it is caused by poor management.

Successful establishment of legumes in grass sods depends on following some general principles that can greatly reduce the risk of failure:

1. Soil test and apply the recommended lime, phosphorus, and potassium that are recommended.

2. Choose a legume adapted to your situation.

In south Georgia, annual clovers such as Tibbee crimson, Yuchi arrowleaf are excellent choices for sodseeding on Bermudagrass or Bahia grass. Other clovers such as Mount Barker subterranean is a good natural reseeder, and Bigbee berseem is a long-season legume but requires well-limed soil for success.

On tall fescue sods of central and north Georgia, perennial clovers such as Regal and Osceola ladino clovers are satisfactory. Redland II and III red clovers are excellent choices as they are more drought-tolerant and provide more summer grazing than ladino clover. Alfagraze alfalfa is a new grazing-tolerant alfalfa developed at the University of Georgia that can provide more grazing over a longer season than the clovers but will require a soil pH of 6.3 or above for success. AU Dewey and Fergus birdsfoot trefoil varieties can be planted in the mountains and upper Piedmont. Trefoil is a perennial no-bloat legume that reseeds naturally.

3. Control existing grass vegetation. Failure to reduce vegetative cover on a pasture is the most common reason for stand failures from sodseeding. Heavy stocking and close grazing or mowing prior to planting will make it easier to get good seed-soil contact and prevent shading. On tall fescue sods seeded in September or October, it is important to apply 3/4 pint of Gramoxone herbicide to suppress (but not kill) the grass to reduce competition for water needed by new legume seedlings. If clovers are being planted in September (well before frost) on bermuda and bahiagrass, a grass suppressant herbicide should be applied to the sod.

4. Plant high-quality seed. Poor quality seed may be low in germination, have weak vigor, and have a high percentage of weed seed so is no bargain.

5. Inoculate seed with the correct strain of bacteria before planting.

6. Plant with a sod seeding machine if at all possible to get seed in the correct depth and in contact with the soil. A grain drill often does not penetrate the grass sod so seed fail to make good soil contact. Broadcast seeding in autumn will require more seed and even then stands are generally poorer. Winter broadcast seeding of ladino or red clovers on tall fescue sod in January or February can be effective if large numbers of cattle are allowed to trample the seed into the ground. Broadcast seeding of alfalfa on grass sod is generally not successful.

7. Control insects. Summer-seed legume seedlings are sometimes destroyed by insects, especially in bermuda and bahiagrass sods. New clover seedling stands should be carefully checked and if half-moon shaped cuts occur in leaves, then a labelled insecticide such as Diazanon or Lorsban should be applied. Failure to check stands and apply an insecticide sometimes results in total loss of clover seedlings, and the pasture owner later concludes that “drought got his stand”.

Following the above principles can greatly reduce the risk of losing legume stands in grass sods. With a good legume stand in a grass sod, the free nitrogen can reduce fertilizer costs, and the higher nutritive quality can insure high cow conception rates and calf weaning weights.

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