

Legumes to Grow with Fescue

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Tall fescue has long been an important forage crop in Alabama, and for years it has been the dominant species on more than a million acres of Alabama pasture and hay land. "Fescue" is an extremely useful forage grass, but it is not without its' drawbacks. Although it comes as close to being a year-around forage as any species we can grow in Alabama, mid-summer production and forage quality are poor, especially during summers that are unusually hot and dry.

Added to this problem is the fact that most of our fescue is infected with the endophytic fungus (*Acremonium coenophialum*), which is known to produce toxins that have an adverse effect on livestock gains and reproduction. Unfortunately, researchers have not been able to find a cost- effective way to kill the fungus in fescue plants without killing the plants as well.

Scientists continue to seek ways to minimize, counteract, or eliminate the adverse effects of the fescue fungus. However, to date, the best and most feasible ways for many cattlemen to reduce its' effects is to grow a legume with the infected fescue. Research has shown that legume grass mixtures, even when the legume makes up a relatively small percentage of the pasture stand, result in much better animal performance than when infected fescue alone makes up the majority of the animals' diets.

Legumes also offer the advantage of fixing nitrogen for their own growth and for the growth of associated grasses, which can help lower production costs by reducing the amounts of nitrogen fertilizer that needs to be applied to pastures. Thus, it is worthwhile for cattlemen who use tall fescue to consider which legumes are logical companion species.

White Clover

White clover (including Ladino) is the single most widely planted legume in fescue pastures in Alabama. White clover is a true perennial that will normally come back from the roots for several years in areas, which are not excessively droughty. In addition, some varieties also make a good deal of seed, which can often result in good reseeded stands.

White clover persists best in pastures with relatively good moisture-holding capacity that are kept grazed fairly closely. It should be planted in autumn in south Alabama, but can be planted either in autumn or late winter in central and north Alabama. Suppression of fescue competition by herbicides, tillage, or animal hoof action is

usually necessary to get good white clover stands in well-established, thick, fescue sods. Crickets may need to be controlled with an insecticide when establishing stands in the autumn.

Red Clover

Red clover is a better yielder than white clover and has a longer growing season, but red clover plants usually live only two years, even under good management and favorable climatic conditions. It is not as tolerant of close grazing as white clover, but will often provide a much greater quantity of forage, especially in summer. Red clover is a particularly good choice to use in a field that will be cut for hay because, once established, its upright growth habit allows it to be much more tolerant of grass competition.

Like white clover, it can be planted either in autumn or late winter, and its larger seed size facilitates drilling the seed into existing fescue with a grassland drill. The problems of fescue competition and crickets during establishment also apply to red clover, even though red clover seedlings are stronger.

Annual Lespedeza

There are several varieties of Korean annual lespedeza and of striate annual lespedeza, a separate but closely related species. Both Korean and striate lespedeza are well adapted in Alabama, but the strongest argument can be made for using one of the striate varieties.

Annual lespedeza is not a high yielder, but the forage quality is good and the timing of growth is such that it helps "fill in the gap" during hot, dry summers. Annual lespedeza is normally broadcast-seeded on closely grazed fescue pastures in early March. Once a good stand has been established, it normally is easy to get reseeded stands.

The place where annual lespedeza fits best is in upland fescue pastures that are too droughty to grow red clover or white clover, especially if the pasture will be grazed during mid-summer. Annual lespedeza is also much more tolerant of soil acidity and/or low fertility than are clovers and most other legumes.

Sericea Lespedeza

Sericea, of which several varieties are available, is a summer perennial relative of annual lespedeza and is adapted to similar soil conditions. However, sericea seedlings are weak and slow to grow and therefore this species is difficult to establish in existing fescue pastures unless there is very little fescue or other plants

present or the existing fescue plants are strongly suppressed with a herbicide.

Sericea lespedeza should be planted in the spring. The best approach to getting a fescue/sericea lespedeza mixture is to establish the sericea first and drill fescue into it later. Once

sericea is established, good grazing management is required to prevent the sericea from being grazed closer than about four inches. This is particularly important in late summer and autumn. A grazing-tolerant variety named 'AU Grazer' is more tolerant of close grazing than are other varieties.

Final Thoughts

Annual clovers, alfalfa, and several other legumes can be planted into, or at the same time as, fescue and used to advantage but they are not as good a choice for most situations as the legumes previously mentioned in this article. White clover, red clover, annual lespedeza, and sericea lespedeza are the most useful legume companion species for fescue on most Alabama farms.

Growing a legume with tall fescue offers major advantages in the form of better distribution of growth, dilution of the toxins produced by the fescue fungus, improved forage quality, and total annual forage yield. The best legume to use varies with soil and climatic conditions as well as how a field will be managed and utilized. Regardless of which species is used, the establishment and management requirements of the legume must be met in order to be successful.