

Tall Fescue Nitrogen Fertilization Strategies

Love it or hate it, tall fescue here to stay. Much to the chagrin of many forage producers, Missouri is known as the fescue state. The driving force behind this distinction is the fact that fescue grows so well in Missouri, on all kinds of soils and in all kinds of situations. Detractors of tall fescue point out that it is lower in quality than other forages, contains an endophyte that affects livestock performance, and isn't very suitable for wildlife. While all these things are true, no one can argue with its versatility. Tall fescue can be grown for silage, seed production, grazing, haying, and winter stockpiling. It is important, however, to remember that all of these different uses require different nitrogen fertilization strategies.

The primary use of fescue in Missouri is for grazing animals. Tall fescue dry matter availability for grazing is highest in spring (April-June) and Fall (September and October) with more than 60% of growth occurring during the spring. The spring growing period usually produces more than enough forage for cattle grazing during these months. It makes little sense to apply nitrogen fertilizer prior to this growing period because additional forage growth is not needed. Instead, nitrogen should be applied immediately following the spring growing period (May) to stretch the growing season into the summer or to increase dry matter availability in the fall.

The fall growing season may or may not produce enough dry matter for livestock needs, depending on the weather. If you suspect that the amount of dry matter may not be enough for cattle grazing in the late summer or early fall, then it is a good idea to apply additional nitrogen immediately before this second peak growing period. Ideally, nitrogen would be applied in August at a rate of 40-80 pounds. Stick to the lower end of the range if the weather has been dry or to the higher end of the range if rainfall has been adequate. Nitrogen fertilization strategies for pastures that are to be used for winter grazing vary only slightly from the strategies used for fall grazing. Nitrogen should still be applied in August at a rate of 40-80 pounds, depending on the weather. The only difference in this case is that animals must be removed from the pasture at time of application and kept off until after the first freeze, at which time they can be turned loose to graze throughout the winter.

The main difference in haying and grazing is that with haying you are trying to maximize tall fescue production throughout the growing season. The key to maximizing dry matter availability is to apply nitrogen when fescue begins to green up in the spring (March) and then to apply additional nitrogen after each hay cutting to maximize regrowth. It is important not to overlook the importance of including legumes in your tall fescue, no matter whether it is to be used for grazing or hay. Legumes increase the overall forage quality, reduce the negative effects of the endophyte, and, when making up a sufficient portion of available forages (greater than 30%), reduce the need for nitrogen application of any kind.

Nitrogen fertilization of tall fescue fields to be used for seed production is a completely different ballgame. High seed yields depend on two management strategies: removing stubble after the seed crop is harvested and timing of nitrogen application. It is necessary to remove stubble to a height of 3-4 inches to encourage tiller development. Tiller development is key to producing high seed yields. Variations in nitrogen application rates depend on whether or not this same field is used for grazing cattle. Many producers that graze cattle after harvesting seed will apply nitrogen in August to maximize dry matter availability for their cattle. If this is the case, 50-60 additional pounds of nitrogen should be applied in late December or early January to maximize seed production. If no nitrogen is applied in August, producers should apply 70-100

pounds of nitrogen to maximize seed production, again in late December or early January. Nitrogen applied too early (late summer or early fall) may be lost or metabolize by fall growth and not available for the seed crop. If nitrogen is applied too late (late winter or early spring) may cause lodging and excessive vegetative growth rather than heavier seed heads.