

Managing Native Grass Forages

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Fertility Management for Native Grass Forages

Native grasses have relatively low fertility requirements. The reason for this nutrient efficiency is not fully understood, but the high volume of underground organic matter produced by the vigorous root systems of these plants may be part of the explanation. There is also some evidence of mycorrhizal relationships that help these grasses fix nitrogen. Regardless of the explanation, recent increases in fertilizer costs have placed a premium on low input production options.

The first step in managing native grass fertility is the same as that for any other forage – sample your fields before applying amendments. Soil tests are not expensive and can save you considerable expense by ensuring appropriate application rates. Timing of application is also critical. Because warm-season native grasses have a later growth season than cool-season grasses, fertilizer application also must be later. A good rule of thumb is to apply in the spring when stand heights have reached 12 – 16 inches (usually, late April). At this point, the natives will be rapidly growing and can take full advantage of the amendments. Applying fertilizers sooner will result in cool-season weeds receiving the benefit of the fertilizers rather than the native grass.

This same problem can result from applying more fertilizer than the native grasses are able to use. These excess soil nutrients will be available for weeds and will increase competition. For instance, once warm-season natives go dormant in the fall, cool-season grasses will take advantage of excess nutrients, become well-established competitors, and eventually weaken your stand and reduce yield. During summer, excess nutrients encourage more nutrient-demanding competitors such as common bermudagrass with the same effect – weakened native grass stands.

With respect to rates, only apply 60 units of nitrogen (N) per acre to native grass forage stands. If less production is needed, foregoing an N application for one or two years is fine. Levels above 60 units may improve total yield, but typically will not pay for themselves at current prices. One exception to this is eastern gamagrass, which may be able to profitably use 2 – 3 times this amount of N.

Neither phosphorous (P) nor potassium (K) has been consistently linked to increased yield of native grasses. Therefore, in a pasture setting, neither of these elements need be applied unless soil tests indicate their levels have dropped below medium. In that case, fertilize per test recommendations to return levels to medium. If you are producing hay, removals of nutrients in the hay itself will likely require more frequent applications of P and K to prevent soil depletion. However, actual replacement would rarely be practical and is not necessary. Simply maintaining a medium fertility level should be the goal. With respect to soil pH, past research has not indicated any negative impact on yield as long as pH stays above about 5.0.

The good news in an era of increased fertilizer prices is that native grasses can reduce input costs leaving more of the revenue in your pocket.