Nitrogen is Utilized When Applied to Pastures Early

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Last month we discussed the early fertilization of bahiagrass pastures with nitrogen to get a good growth of forage as early in the spring as possible. The questions often asked regarding early fertilization relate to weather. What if the weather remains cool? What if we have a dry spring as often occurs in south Florida? What if we have a heavy rainfall shortly after applying fertilizer? The answer to all three questions is; you will not lose the benefits of nitrogen applied to bahiagrass pasture.

Nitrogen in the form of ammonium nitrate or ammonium sulfate will be efficiently utilized by bahiagrass regardless of weather conditions. A few Florida studies indicated that urea nitrogen, a nitrogen source seldom used in south Florida, could be lost under dry weather situations. A three-year trial conducted by Dr. Jack Rechcigl, Range Cattle REC soil scientist, in Desoto County showed that urea nitrogen was effectively utilized. If urea nitrogen is favorably priced in comparison to other nitrogen sources, its use is recommended.

In situations where the weather remains cool following nitrogen fertilization, bahiagrass will not grow. However, once the weather warms following an extended cool spell, the applied nitrogen will be immediately available to the bahiagrass plants.

During dry periods, nitrogen from ammonium nitrate and ammonium sulfate will remain in a stable form that will be available when rain comes. In fact, small amounts of rain, or even a heavy dew, will allow the nitrogen to be absorbed by bahiagrass and the forage will ‘green-up’.

What if we get that heavy rainfall? Again, applied nitrogen would not be lost except for surface runoff. Runoff seldom occurs on the flat terrain of south Florida where winter and spring months are commonly dry and even a heavy rainfall soaks into the soil.

A heavy rainfall will not wash nitrogen through the soil such that it is leached into the ground water. Dr. Jack Rechcigl has demonstrated that the root system of bahiagrass is so massive and efficient in absorbing nitrogen that essentially no nitrogen is lost by leaching, even when very large quantities of nitrogen are applied. This characteristic is
very important in preventing the contamination of ground water with nitrates and nitrites, an increasing problem in well water in many areas.

For questions or comments regarding this publication contact Findlay Pate