

## **Be careful with high nitrogen lawn fertilizers in fall**

Current research suggests that it's best not to fertilize centipede or St. Augustine lawns late in the year with high nitrogen fertilizers.

Dr. Laurie Trenholm, UF/IFAS Extension Turfgrass Specialist, summarizes this research in today's article.

Warm-season grasses slow down their growth in response to temperature and day length. Nitrogen application disrupts this natural cycle by promoting growth, leaving the turf susceptible to other stresses. Because the root system is less active during fall and winter, the lawn is able to take up less nitrogen. Nitrogen that's not taken up has a greater probability of leaching, potentially resulting in pollution of ground waters.

Research on late fall nitrogen fertilization of lawngrasses has looked only at bermudagrass. Nitrogen applied at the onset of short-days (fall) increased clippings and color in bermudagrass but this practice could also potentially increase leaching loss of the nitrogen. The increased color does not justify the potential risk of nitrogen leaching into our waters. While it appears bermudagrass can safely be fertilized with late-season nitrogen applications, none of the research directly measured the fate of the nitrogen and how much was taken up by the grass vs. how much was leached through the soil.

When considering these findings, it's critical to take into account the differences of bermudagrass vs. centipedegrass and St. Augustinegrass. Bermudagrass has rhizomes, which are below ground stems or runners. Centipedegrass and St. Augustinegrass do not have rhizomes, which makes them more vulnerable to environmental stresses and leaves them less able to survive severe injury, including cold injury, to shoot tissue. This is an important, and often overlooked, disadvantage of these two types of grasses.

When looked at from a turf physiological and morphological perspective, there is not much to recommend late season nitrogen applications to centipedegrass and St. Augustinegrass. Late season potassium, on the other hand, may offer benefits to both species, provided it's not applied too late in the season for adequate root uptake. This is the justification for winterizers such as 5-0-15, 5-0-20, 0-0-7 or 9-2-24. But, considering research findings don't support the benefit of higher nitrogen winterizers and considering the potential negative environmental implications due to potential nitrogen leaching, late fall fertilization with nitrogen should be approached with a great deal of caution.

UF/IFAS research is currently being conducted in three locations, including Milton and Gainesville, on these late season nitrogen application issues. Until this research is complete, we suggest proceeding cautiously with late season fertilizations, particularly those with much nitrogen.

For more information on maintaining a Florida lawn, contact your County UF/IFAS Extension Office or visit <http://yourfloralawn.ifas.ufl.edu>.

Larry Williams, UF/IFAS Extension Agent, Okaloosa County, August 28, 2008