

Agronomy Forage Research Update

L. Sollenberger¹, A. Blount², J. Vendramini², K. Quesenberry¹, M. Castillo¹,
K. Mullenix¹, M. Wallau¹

¹Agronomy Department, University of Florida, Gainesville, FL,

²Range Cattle Research and Education Center, University of Florida, Ona, FL

Two major problems faced by cattlemen in Florida are the high cost of nitrogen fertilizer and winter supplement feeds. Research is ongoing in the Agronomy Department to address these critical issues through introduction of new forages or improved forage management.

Limpoggrass produces more forage during the cool season than any other warm-season grass used in Florida. Consequently, it is an important forage crop for winter grazing in South Florida, and its use can reduce the need for purchased supplements. Recently, Drs. Quesenberry, Blount, and their colleagues developed 50 new limpoggrass lines by crossing the more digestible Bigalta with the more persistent Floralta. Testing at Ona and Gainesville reduced the number of lines to the eight best, and subsequent grazing research at Gainesville resulted in identification of five lines (Numbers 1, 4F, 10, 32, and 34) with good persistence under heavy grazing. Lines 1 and 4F have shown greatest potential with both outyielding Floralta, both being at least as persistent as Floralta, and 4F having greater digestibility than Floralta. These five lines of limpoggrass are currently being tested under a wider range of grazing management and stockpiling strategies prior to a final decision regarding cultivar release. It is anticipated that one or two new limpoggrass varieties will be recommended for release in 2014.

Nitrogen fertilizer costs have increased due to greater fossil fuel prices making nitrogen fertilization of pastures economically challenging. Legumes use nitrogen from the atmosphere and fix it in forms that plants can use, so having legumes in pastures offers an alternative to nitrogen fertilizer. In Florida, the forage legume that has been most persistent in pastures is perennial peanut, but cost to establish peanut is very high. To reduce per acre

establishment costs, we have tested a strip-planting approach for establishing peanut in existing bahiagrass pastures during the last four years. We have learned that defoliation management and control of weed competition during the year of establishment are critical factors affecting the success of this technique. In the establishment year, harvesting the entire field for hay (most forage is produced on the undisturbed areas of bahiagrass) results in much better peanut establishment than allowing animals on the pasture. Grazing animals target first the strips planted to peanut, and they graze these areas heavily putting a large amount of stress on the establishing peanut. Use of the herbicide Impose® or Impose® + 2,4-D amine in the planted strip was critical for peanut establishment, and application of 45 lb nitrogen/acre/year in the strip after applying Impose® was not essential but it did increase rate of peanut establishment. Florigraze perennial peanut was better suited to the strip-planting approach than Arblick or UF-Peace. Peanut spread into the surrounding bahiagrass at a rate of about 1 foot per year in the first and second years, but it is likely that it will spread considerably faster as the plants get better established.