HILL FARM RESEARCH STATION
OCTOBER 14, 2004
FIELD DAY SUMMARY REPORT

COMMODITY; Forages

TITLE: Liming for Cool Season Forages

CONTACT: J Stevens, Central Region Office, (318) 427-4424,
JStevens@agcenter.lsu.edu

TAKE HOME MESSAGE:

Forage producers should maintain a soil pH of about 6.0 for maximum production from winter forages. Grasses are not as sensitive to low pH as legumes, however, unless you adequately lime acid soils, you will not get maximum growth or acceptable fertilizer efficiency. Soil tests should be used to determine lime and nutrient requirements.

PROBLEM / TOPIC:

Soil acidity is a major factor limiting forage production on many of the Coastal Plain soils in the south and southeastern part of the United States. Often, soil pH values range from 4.0 to 5.0, with low soil levels of exchangeable calcium and magnesium and high concentrations of aluminum. In a recent five year period, 41% of the soil samples on forages submitted to the LSU AgCenter Soil Testing and Plant Analysis Lab had a pH of less than 5.5. In addition, 41% had low levels of magnesium, with 65% having low levels of calcium and 53% with low levels of potassium.

ACTION:

Research on forage fertilization and liming has been conducted on the Coastal Plain soils at the Hill Farm, in east Texas and other locations in the south and southeast. It is a scientific fact that fertilization programs work best when soils have been properly limed. Both winter and summer forage crop yields can be increased with applications of lime on acid soils.

IMPACT:

On acid Coastal Plain soils, liming will significantly increase soil pH, exchangeable soil calcium and magnesium and lower exchangeable aluminum. Balanced plant nutrition, with timely grazing and hay harvest can result in profitable production of both cool season and warm season forages. Management must focus on adequate liming and phosphorus and potassium nutrition to provide a greater opportunity for success. Poor plant nutrition results in reduced yields and lost profits.