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Fertilizer Requirements of Hamadhria (Limpogress)

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Limpogress is a popular grass grown for cattle in Florida. When managed correctly, limpogress can be a high yielding and good quality grass. Few studies have been conducted to evaluate the fertilizer and limestone requirements for limpogress. Thus, growers were forced to guess as to how much fertilizer and lime to apply to limpogress pastures. With today's low cattle prices and escalating costs of fertilizers it is essential that we carefully evaluate how much to spend on pasture management in the hope of obtaining a profit. Pasture fertilization is one of the most expensive costs in beef production. It is no longer realistic to apply high rates of fertilizer on pastures and expect greater profits from increased pasture and cattle production.

Over the past three years the Range Cattle Research and Education Center evaluated the fertilization and lime requirements for limpogress. Results indicate that limpogress will respond to small amounts of either phosphorus or potassium. The results show that approximately 15 to 20 pounds of P_2O_5 and 30 to 40 lbs of K_2O should be applied per acre in a onetime application in early spring. Our nitrogen studies show that limpogress will respond to as high as 300 pounds of nitrogen per acre. Our results indicate that nitrogen be applied in two or three applications throughout the growing season. Higher limpogress production was also obtained with ammonium sulfate as compared to ammonium nitrate fertilizer. This increase in production is probably a result of the ammonium sulfate supplying needed sulfur for the limpogress.

Limestone is important for crop production by increasing soil pH and providing calcium and /or magnesium. The majority of soils in Florida are acid, coarse textured sands. These soils tend to be low in calcium and magnesium, both are required for plant growth. Acid mineral soils found in Florida can contain toxic aluminum which stunts plant root systems and reduces nutrient and water uptake. Addition of limestone can also affect nutrient availability to crops. It is important to take soil samples to determine pH and

lime requirements prior to applying limestone. The amount of limestone needed depends upon the initial soil pH, soil texture and the crop to be grown. Whenever it is cost effective one should use dolomitic limestone. Ordinary calcitic limestone only increases soil pH and calcium, while dolomite limestone provides magnesium in addition to increasing soil pH and calcium.

Results of a three-year lime study on limpograss conducted at Ona show that there is a yield response in limpograss from the one-time application of one ton of limestone per acre which increased the soil pH to 5.0. Addition of one ton of limestone per acre increased average annual limpograss production by as much as 0.8 tons of dry matter per acre over three years. The application of two and four tons of lime per acre increased the soil pH to 5.9 and 6.5 respectively but did not increase limpograss yield.

This research suggests that one should apply about 300 lbs of 20-5-10 per acre in the spring with an additional 50 pounds of nitrogen applied one or two times during the growing season, and apply approximately one ton per acre of limestone to limpograss when the soil pH is less than 5.0. In new plantings of limpograss, limestone needs to be applied at least six months prior to planting to allow ample time for the soil pH to increase.