# Nutrients Uptake by Ryegrass Cultivars and Crabgrass from a Highly Phosphorus Enriched Soil. (S08sistani142226-Poster)

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## Abstract:

The long-term broiler litter application to pastures has resulted in the buildup of nutrients in the soil. Cool-season ryegrass and warm season crabgrass are annual forages, which can be used as an alternative year-around green pasture in a forage-livestock system. We initiated this study to evaluate the P uptake efficiency of five ryegrass cultivars grown during the winter and spring, followed by the annual crabgrass during summer. The experiment was conducted in 2000 and 2001 growing seasons in Mize MS, on a highly P enriched soil. The ryegrass was grazed during the winter and then harvested once in June. Cultivar rio produced the greatest drymatter (DM), 2839 and 3043 kg/ha in 2000 and 2001, respectively. In 2001, cultivars gulf and TAM 90 produced more DM than 2000 (dry year). Crabgrass planted after TAM 90 produced significantly greater DM (7565 kg/ha) than crabgrass following the other ryegrass cultivars in 2001. Cultivar marshal was the most effective in removing P from soil in 2000 (7.38 kg/ha), while rio was superior in 2001 (8.73 kg/ha). In general, crabgrass was more effective in removing P from soil than ryegrass cultivars. However, the combination of ryegrass and crabgrass provide an effective pasture-livestock system.

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