Grazing Management Systems to Minimize Phosphorus Losses from Upland Pastures. (S06-boehm144506-Poster)

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Abstract:

The purpose of this research is to determine the effects of grazing management practices on Phosphorus (P) losses from upland pastures in Iowa. In 2001, five grazing treatments, including an ungrazed control, hay and stockpile, rotational grazing to 10 cm, rotational grazing to 5 cm, and continuous grazing to 5 cm, were established in each of three pastures at a research farm in Marshall County, Iowa. Initial total P, available P, labile P, and root length density were measured in each pasture. Rainfall simulations were conducted in June, August, and October 2001. Sward heights and dry matter accumulation were measured at the time of rainfall simulation. All measures of soil P varied with soil type and were highest in the surface soil layers. Root length density varied among treatments and pastures, but differences were not statistically significant. Although data have been collected only one year, results suggest that P losses are related to antecedent soil water content and sward height. The results of this study will provide information on improved grazing management practices, which will reduce amounts of P in runoff and maintain yield and quality of forage grasses.

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Presentation Information:

Presentation Date: Wednesday, November 13, 2002
Presentation Time: 9:00-11:00 am

Poster Board Number: 1906

Keywords:
grazing, phosphorus losses, simulated rainfall, root length density