Phosphorus in Surface Runoff from Grasslands Fertilized with Broiler Litter. (S11-cabrera180028-Poster)

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Abstract:

The U.S. broiler industry produces about 10 million tons of broiler litter each year, most of which is used to fertilize grasses and crops. Surface applicaction of broiler litter may lead to elevated concentrations of phosphorus in surface runoff, which may cause eutrophication problems in streams and lakes. Pasture aeration may increase infiltration, reducing the volume and concentration of phosphorus in runoff and thereby reducing potential environmental problems. This study is being conducted to evaluate the effect of pasture aeration on runoff volume and quality in pastures fertilized with broiler litter. Broiler litter (5000 kg/ha) was applied to six, 0.8-ha, tall fescue-bermudagrass paddocks in October, 2000, March 2001, October 2001, and February 2002. Three of the plots were treated with an AerWay machine (10 cm depth) immediately after each litter application, whereas the other three plots were left untreated as controls. Runoff volume was measured in each runoff event and samples were taken with an automatic sampler for subsequent phosphorus analysis. The results obtained so far show no effect of the aeration treatment on runoff volume or concentration of dissolved reactive P in surface runoff.

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