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For Immediate Release

**ROTATIONAL GRAZING AND BUFFER STRIPS CAN
MINIMIZE SEDIMENT AND PHOSPHORUS LOSSES**

AMES, Iowa - - Concerns about the amounts of sediment and phosphorus in water runoff from agricultural lands have increased over the past few years. As a result, a group of researchers from Iowa State University (ISU) and the National Soil Tilth Laboratory in Ames, Iowa have studied the amounts of sediment and phosphorus (P) in runoff as related to grazing management.

The amounts of sediment and P in water runoff have the potential for siltation and eutrophication of surface waters. Eutrophication occurs when a body of water becomes enriched in dissolved nutrients (as phosphates), enhancing aquatic plant life and therefore depleting oxygen in surface waters. The Environmental Protection Agency (EPA) plans to implement regulations to control the total maximum daily loads of nutrients in watersheds in the near future, generating the need for more research.

The pasture experiment included 3 blocks of five, one-acre paddocks, grazed by beef cows over the course of three years. Management for the five paddocks ranged from ungrazed control to rotational stocking with different sward heights. At four times throughout the growing season, rainfall simulations were conducted and runoff was collected from all paddocks and analyzed for total sediment, total P, and total soluble P.

“Our results showed that losses of sediment, total P, and total soluble P were generally greater from grazed paddocks than ungrazed paddocks,” says Jim Russell, animal science professor at ISU who participated in the study.

However, losses from paddocks with two of the grazing management treatments did not differ from ungrazed paddocks. These two treatments included a rotational stocking to sward height of four inches, and the other harvested as hay during the summer and grazed during the winter.

The results of the experiment imply that sediment and phosphorus losses in pasture runoff may be reduced by managing rotational stocking to maintain adequate sward height, and/or using vegetative buffer strips along pasture streams. "This is particularly important in pastures on soils with high P concentrations," adds Russell.

More information about this study can be found at the Iowa Beef Center's Forage & Grazing resource at www.iowabeefcenter.org, or by contacting Dr. Russell at (515)294-4631 or jrussell@iastate.edu.

The Iowa Beef Center began operation in 1996 to support the growth and vitality of the beef cattle industry of the state. A part of Iowa State University Extension, the Iowa Beef Center is the central access point for Iowa State University programs related to the beef industry. For more information, visit the website at www.iowabeefcenter.org or call 515.294.BEEF.