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Economic and Environmental Impact of the Missouri Grazing Schools

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Abstract : Management-intensive Grazing (MiG) is a practice that rotates livestock through paddocks in a way that best matches the nutrient requirements of the animal to the yield and quality of the pasture. In the USA, MiG has been taught to livestock producers throughout the state of Missouri in 2- and 3-day workshops called “Missouri Grazing Schools.” The economic impact of these schools was quantified using IMPLAN software. The model included hectares of adoption, animal performance, carrying capacity, and input costs. To date, MiG, as taught in the Missouri Grazing Schools, has been implemented on more than 70,000 hectares in Missouri. The economic impact of these schools is presently $125 million USD per year added to the state economy. This magnitude of impact is the result not only of widespread adoption but also because of increased livestock carrying capacity; in Missouri, a capacity increase of 25 to 30% has been well documented. Additional impacts have been MiG improving forage quality and reducing the cost of feed and fertilizer. The environmental impact of MiG in the state of Missouri is currently being estimated. Environmental impact takes into account the reduction in the application of commercial fertilizers; in MiG systems, nitrogen is supplied by N fixation from legumes, and much of the P and K is recycled naturally by well-distributed manure. The environmental impact also estimates carbon sequestration and methane production; MiG can increase carbon sequestration and reduce methane production in comparison to default grazing practices and feedlot operations in the USA.

Keywords : agricultural education, forage quality, management-intensive grazing, nutrient cycling, stock density, sustainable agriculture
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