

Abstract

Over the last two decades, increasing concern for environmental protection, as well as quality of life for themselves and their animals, has led some livestock owners to move away from confinement operations to management intensive grazing (MIG). MIG ensures sufficient monitoring and control over animal health, development, and the utilization of resources. Grazing pressure can be controlled through the number of animals allowed to graze an area, and timing can be adjusted to keep animals out of vulnerable areas such as wet or erodible ground during critical periods.

In an attempt to compare benefits of management intensive grazing versus continuous grazing and row crop management, this project sought to determine the impacts of these three management systems on soil quality parameters. Physical, chemical, and biological indicators of soil quality were measured and compared statistically over an eight-year period. Results indicate that most biological indicators of soil quality are better in MIG and CG systems compared to RC. Physical indicators of soil quality indicated that RC management has poorer aggregation, but MIG can result in high bulk densities and penetration resistance. Comparison of chemical indicators of soil quality under the three management systems did not produce definitive results.