Grazing Strategies for Beef Production

Escalating energy costs and alternative cropping systems for biofuels production have dramatically increased costs of fertilizer, seed, and feed grains. These increased primary costs for beef production have created a shift in models previously used to manage both pasture and feedlot strategies. The economic stability of the end phase of beef production in the feedlot sets the foundation for grazing management strategies for both cow-calf and stocker-backgrounding components. The end-product target remains unchanged to produce beef that is safe and has consumer sensory appeal.

The Process
- High-nutritive-value and dry matter production of warm-season forages such as Tifton 85 bermudagrass and cool-season annual forages such as small grains, ryegrass, and/or clovers will be evaluated under stocking strategies to optimize animal performance.
- Stocking strategies will be assessed for increased gain per acre and reduced costs of beef production.
- Supplementation strategies will be incorporated into stocker-backgrounding to compare carcass and sensory attributes of beef harvested directly from pasture versus after feedlot residence.
- Nutritional characteristics of nonfed, direct-harvested beef will be assessed, and constraints associated with harvesting and marketing/merchandising of beef products will be identified.

Research Objectives
- Define forage and nutritive parameters with animal performance attributes under an array of stocking strategies.
- Quantify birth-to-harvest production parameters with pasture-feedlot management alternatives.
- Assess economic implications of beef production using an array of stocking-finishing strategies.

Outcomes
- Identification of forage-animal systems to allow increased forage-use and beef cattle efficiency, and enhanced economic returns for existing and emerging clientele.
- Assessment of potential environmental impacts of nutrient cycling under stocking conditions, and increased time on pasture with reduced feedlot residence.
- Identification of biological and economic strategies for niche marketing of beef from direct-harvest off-pasture systems and the associated nutritional characteristics of beef that may provide an alternative lean-to-fat composition for consumers.