Summary

A brief description is given of a mathematical model that simulates beef production in the eastern savannas of Colombia where extensive cattle production systems are practiced. The model is energy-driven and can be used to simulate numerous management strategies such as controlled mating, introduction of sown pastures, culling criteria, milking of cows, and others.

The model is highly sensitive to changes in the nutritional value of the forage resources simulated. However, the model suggests that forage availability is seldom a limiting factor.

Simulated results on the effect of introducing sown pastures of moderate nutritional value show significant increases of animal yields. Even

so, management-intensive practices such as short duration matings are not feasible. However, a mating season that avoids maintaining suckling cows during the dry season would be beneficial in terms of system performance.

Milking of cows during the wet season is biologically and economically feasible in systems that incorporate sown pastures.