

GRAZING MANAGEMENT OF EASTERN GAMAGRASS IN SOUTHWEST GEORGIA



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ABSTRACT

***Grazing Management of Eastern
Gamagrass in Southwest Georgia***

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Grazing management of Eastern Gamagrass is being demonstrated at the Jimmy Carter Plant Materials Center at Americus, Georgia. This USDA Natural Resources Conservation Service Plant Materials Center is located on the upper coastal plains region of southwest Georgia. Livestock producers in this part of the country often disregard native forages in deference to introduced forage species. One reason for utilization of introduced species is the higher level of grazing management required for persistence of native plants in the face of high grazing pressures.

This demonstration attempts to show how management of the frequency and severity of defoliation by growing cattle can result in persistence of Eastern gamagrass while providing forage in adequate quantity and quality to justify utilization of this native plant in livestock operations. Eastern Gamagrass (*Tripsacum dactyloides*) was established on 2.02 ha in spring of 1993 and subsequently divided into 10 uniform paddocks. In the summers of 1999-2001 a rotational grazing system was utilized that provided a maximum grazing period of 3.5 days per cycle and a minimum plant stubble height of 25 cm.

NIRS analysis of fecal samples indicated an average forage crude protein of 10-14 % and digestible organic matter of 62-67 %. Average daily gains of 0.72 kg per animal were realized on the demonstration.

INTRODUCTION

Eastern gamagrass, *Tripsacum dactyloides*, is a warm-season, native perennial grass suited to most of the Eastern United States. One of its potential uses is forage for livestock. The Jimmy Carter Plant Materials Center in Americus, Georgia is demonstrating intensive grazing management of this plant. The Lamar County Soil and Water Conservation District is providing cattle for this demonstration.



MATERIALS AND METHODS

In the spring of 1993, a 2.02 ha acre field of 'Pete' Eastern Gamagrass was planted in 36" rows with a corn planter. It was allowed to establish during 1994-95. This demonstration is located in the upper coastal plain of Southwest Georgia where mean annual precipitation is 125 cm and mean annual temperature is 18.5 degrees C. The site is divided into ten paddocks, approximately 0.2 hectares each, with a single strand of electric fence wire about 90cm high. Water was provided in each paddock using one inch plastic pipe and 60 gallon water troughs. Steers (1999-2000) and heifers (2001) grazed the demonstration site. Each year animals were weighed, vaccinated, wormed, treated for flies and tagged. A maximum of 3.5 day grazing periods in each paddock was employed. 68 kg of ammonium nitrate was applied to each paddock after each grazing period. Manure samples were taken periodically to determine crude protein and digestible organic matter of forage consumed.





Cattle were weighed before and after utilization of Eastern Gamagrass

RESULTS AND DISCUSSION



Cattle were rotated through ten paddocks on a 3.5 day grazing cycle. Each year the cattle moved through the entire ten paddocks from 2 to 4 times. Under this intensive grazing system, forage quality ranged from 10% to 14% crude protein and 62% to 67% digestible organic matter.



*Collection of Fecal Samples for analysis
of Crude Protein and Digestible
Organic Matter*

ANIMAL PERFORMANCE

AVG.DAILY GAIN

1999 - .80 Kg 2000 - .68 Kg 2001- .67 Kg

12 Steers were utilized in 1999 and in the drought year of 2000. 10 Heifers grazed the Eastern Gamagrass in 2001

SUMMARY

Cattle performance and results of NIRS analysis of fecal samples for crude protein and digestibility suggest that forage quality and quantity is adequate for typical livestock operations in this region.