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Gliricidia sepium in dairy cattle integrated systems in Brazil´s Northeast

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Introduction

In the Semiarid and Coastal Tablelands of Brazil´s Northeast, the incorporation of gliricídia (*Gliricidia sepium*) in silvopastoral systems works with a dual purpose: 1. Improving soil fertility and 2. Serving as a food supplement to lower livestock production costs during the dry season of the year (Rangel et al., 2010). The objective of this study was to measure the effect of substituting corn silage by gliricídia silage on milk yield and fat content.

Material and Methods

It was used a single Latin Square design with five cows, five treatments (silage substitution levels of 0%, 25%, 50% 75% and 100%) and five periods. The experiment was conducted at Embrapa Semi-Arid experimental station - CPATSA in Gloria county, Sergipe, from January, 30 to March, 29, 2012, with the diets being offered to animals during 12 days per period, being the first of 05 days used to adapt animals to the diets and the remaining 07 days to collect data. The evaluated variables were milk yield (MY) and fat content (FC). The statistical analysis was carried out using the PROC MIXED procedure of the Statistical Analysis System (SAS).

Results and Conclusions

There was a quadratic effect (P <0.05) (Table 1) of the diets on milk production, such that the maximum level of gliricídia silage inclusion was of 34.65%, which corresponds to the yield of 9.7 kg Milk / day. However, there was no effect of diets on fat content.

Table 1 – Milk yield (MY) and fat corrected milk (FCM) in crossbred cows HxZ fed diets containing different inclusion rates of gliricídia silage

Item	Gliricídia Silage % (dry matter)					SEM	Value P[1]		
	0	25	50	75	100		L	Q	C
MP (kg/dia)	9,39	12,02	11,00	8,74	5,04	1,69	0,0003	0,0003	0,3710
FCM (%)	3,79	3,89	3,27	4,04	3,82	0,25	0,7381	0,3466	0,6802

[1]L, Q e C: linear, quadratic and cubic effects on the inclusion amount of gliricídia silage.
SEM – Standard Error of the Mean

Although gliricídia is considered as an important protein source to lower production costs of dairy cattle systems in the Semiarid and Coastal Tablelands of Brazil´s Northeast, its inclusion in diets at levels above 34%, approximately, can reduce milk production.

Reference cited

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