Effect of the Use of Mulberry Forage (Morus alba) on the Performance Traits of Swine Livestock

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The XXI International Grassland Congress / VIII International Rangeland Congress took place in Hohhot, China from June 29 through July 5, 2008.

Proceedings edited by Organizing Committee of 2008 IGC/IRC Conference

Published by Guangdong People's Publishing House

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Key Words: Mulberry foliage, NUPROVIM-10, sugar cane molasses

Introduction The poverty is the main allied of the environmental problems in the third world countries and that is why it is very important to find alternatives in all senses. The integration of the trees as substitute of the protein source in the pig feeding is an interesting strategy in Cuba (González, 2006) and nowadays it is a fact the use of the arboreal foliages of low cost for the feeding of pigs (Figueroa 1999). One of the viable alternatives to reduce the costs of production in the tropical regions, is the partial inclusion of the bushes foliage in the diet of the pigs, such is the case of the mulberry (Morus alba). The aim of this work was to make a feeding test at the production conditions comparing two diets in growing-fattening pigs, to evaluate the inclusion of the mulberry foliage (Morus alba) in 20% substituting the protein source.

Materials and Methods It was carrying out a feeding test at the production conditions. For this test, 16 castrated male pigs of commercial crossing (YL x CC21) with the initial live weight of 28 kg and 70 days of age. The pigs were distributed in two treatments with 8 replications each one in a randomized complete block design. The experimental treatments were: diet I, with sugar cane molasses and NUPROVIM-10 (vitamins, minerals and soybean meal concentrated) and diet II, with sugar cane molasses, NUPROVIM-10 (substituting the 20% of the soybean meal by mulberry foliage in dry base). Daily the surplus of sugar cane molasses was weighed early in the morning to control the consumption of this ingredient in the diet. The performance traits (up to approximately 100 kg live weight) were studied and the measures were analyzed by means of a mathematical model of simple classification and to process the data the statistical package SAS (1997) was used.

Results and Discussion There was not significant effect between the treatments for the final weight and the daily gain of the pigs, although there was certain movement of the values toward an increase in the pigs that did not consume the mulberry foliage (table 1).

Table 1 *Performance traits of growing-fattening pigs in both treatments*

	Treatments		
	Diet I	Diet II	SE ±
Initial weight, kg	27.63	29.38	0.73*
Daily intake, kg/día	2.86	2.67	0.08
Daily gain, g/día	638	575	14
Conversion, kg of feed/kg of gain	4.48	4.64	0.09
Final weight, kg	104.87	99.00	5.13
Test days, días	121	121	-

* $P < 0.05$

Conclusions It is possible to substitute up to 20% the protein source of the NUPROVIM-10 diet for growing-fattening pigs with mulberry foliage without detriment of the productive parameters in sugar cane molasses diets.

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