

# Protein metabolites of sheep fed with corn silage or different fiber levels in extruded roughage of different fiber levels

Faria, L.O.<sup>1\*</sup>, Siqueira, M.T.S.<sup>2</sup>, Ribeiro, P.H.C.<sup>2</sup>, Oliveira, K.A.<sup>3</sup>, Vilaça, L.E.G.<sup>4</sup>, Macedo, G.L.<sup>4</sup>

<sup>1</sup> Departamento de Zootecnia, Universidade Federal de São João del Rei, São João del Rei, Brazil

<sup>2</sup> Departamento de Zootecnia, Universidade Estadual Paulista “Júlio de Mesquita Filho”, Jaboticabal, Brazil

<sup>3</sup> EMBRAPII Polo Soluções Agroalimentares, Instituto Federal do Triângulo Mineiro, Uberaba, Brazil

<sup>4</sup> Faculdade de Medicina Veterinária e Zootecnia, Universidade Federal de Uberlândia, Uberlândia, Brazil  
luanaolifaria@gmail.com

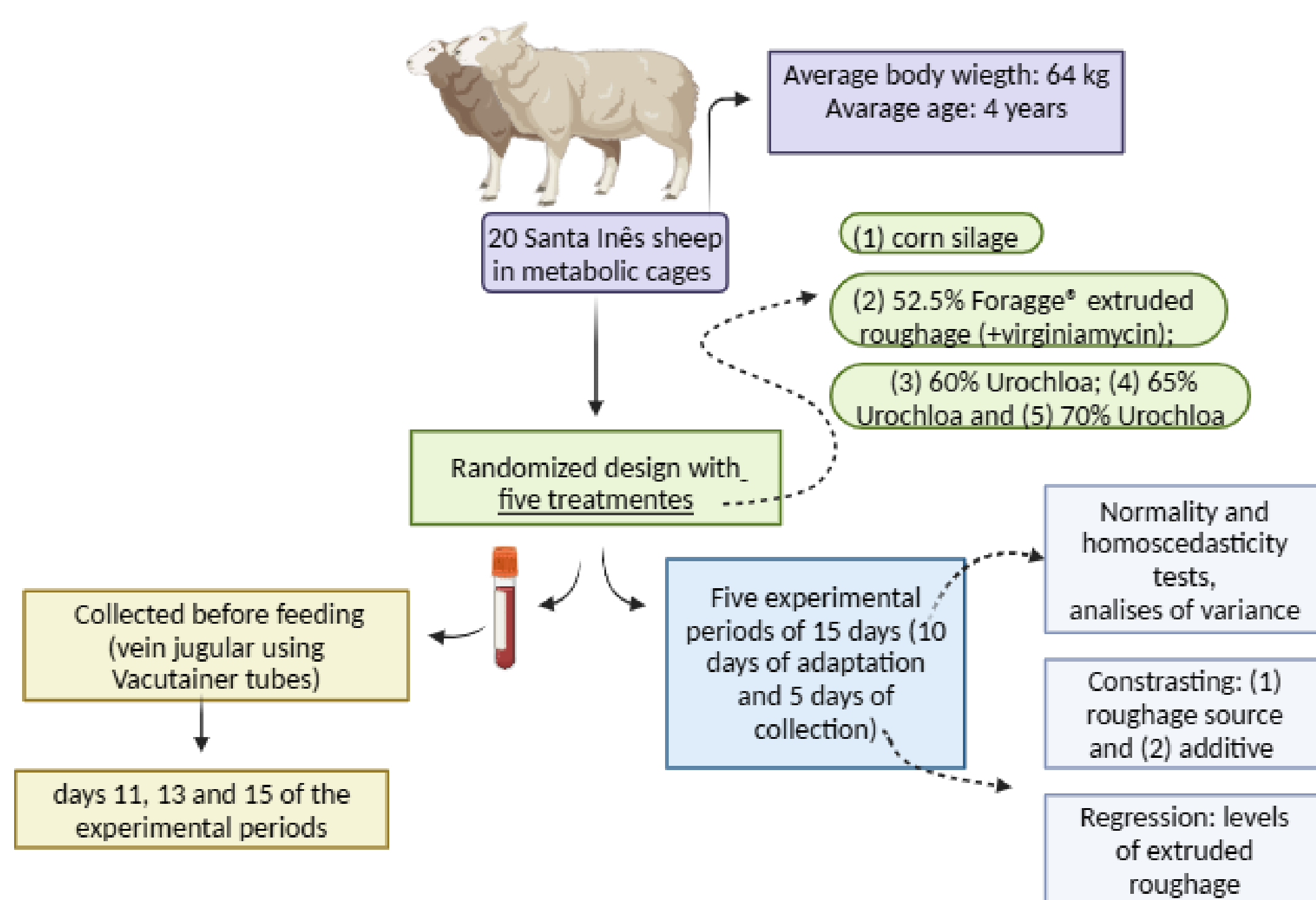
## INTRODUCTION

Different forage sources and nutritional strategies, such as additives and processing methods, can significantly impact animal metabolism. Extrusion, in particular, improves fiber digestibility, increasing nutrient availability and potentially improving animal performance. Given this, it is essential to investigate how extruded forage influences protein metabolism (Oliveira, et al., 2018).

We wished to evaluate the protein metabolism of sheep fed with corn silage or extruded roughage of different fiber levels.

## METHOD

The experiment was conducted at the Small Ruminants Sector of the Federal University of Uberlândia, Minas Gerais, Brazil.



## RESULTS

**Table 1 – Protein metabolism of sheep fed an extruded diet**

Parameters	Treatments						P value			
	Silage	VMAX	60%F	65%F	70%F	SEM	ROU	ADT	Forrage levels	
									L	Q
TP	5.50	5.71	5.62	5.40	5.48	0.068	0.79	0.26	0.49	0.56
UA	0.29	0.13	0.12	0.20	0.08	0.027	0.01	0.95	0.62	0.28
UREA	26.06	40.21	38.40	32.89	31.96	1.736	0.02	0.15	0.24	0.47
CREA	0.84	0.79	0.85	0.82	0.79	0.016	0.48	0.52	0.18	0.43

TP: protein total; UA: uric acid; CREA: creatinine; VMAX: 52% Forrage + virginiamycin as na additivie; F: Forrage; SEM: standard error of the mean; ROU: roughage; ADT: additive; L: linear Q: quadratic

## CONCLUSION

The use of extruded roughage results in higher plasma urea, albumin, and uric acid levels compared to those with corn silage, indicating differences in protein metabolism between these two roughage sources.

## REFERENCES

Oliveira, K. A., de Lima Macedo, G., da Silva, S. P., Araújo, C. M., Varanis, L. F. M., & Sousa, L. F. (2018). Nutritional and metabolic parameters of sheep fed with extruded roughage in comparison with corn silage. *Semina: Ciências Agrárias*, 39(4), 1795-1804.