



## Eventos

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Milk fatty acid composition of dairy ewes and cows supplemented with black wattle tannin extract

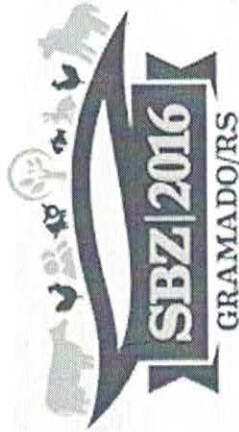
**Milk fatty acid composition of dairy ewes and cows supplemented with black wattle tannin extract - (Kamila Maciel Dias (UDESC), Dias K.M., Ribeiro Filho, H.M.N., Marco Antonio Sundfeld da Gama, Pereira R.S., Alves T.P., Pinho, A.P.G., Dors I., Brandalise M.M., Carraro P.C., Burig G.)**

Linolenic acid is the main fatty acid (FA) of forages and tannin supplementation can reduce ruminal biohydrogenation of this FA (binding to microbial enzymes, dietary proteins and carbohydrates) increasing trans-11 C18:1 content in rumen and mammary gland, which can be desaturated by  $\Delta 9$ -enzyme and form cis-9, trans-11 CLA in mammary gland (endogenous synthesis), as well as in the rumen. Studies in vitro and in vivo evaluating the effect of tannins on the accumulation of BH intermediates in the rumen and on the animal performance often show conflicting results. However, some studies observed that tannins from *Acacia* spp can change growth of rumen microbial population, increasing trans-11 C18:1 and reducing C18:0 in ruminal fluid. The aim of this work was evaluated the effect of moderate levels of *Acacia mearnsii* (black wattle) supplementation on milk FA profile, especially trans-11 C18:1, cis-9, trans-11 CLA and PUFA content of bovine (first experiment) and ovine (second experiment) feed a fresh forage-based diets. Twenty-four lactating ewes and third Jersey cows were separated into two homogeneous groups according to racial group (Lacaune  $\times$  Milchscharf), milk production ( $1.3 \pm 0.3$  or  $16.3 \pm 3.1$  kg/day) and live weight ( $57.5 \pm 5.6$  or  $386.2 \pm 39.1$  kg). The supplementation levels tested for ewes were: zero (Control) and 20 (T20) g/kg of concentrate in first essay and 30 (T30) and 40 (T40) g/kg of concentrate in second essay. These supplementation levels corresponded to 0.8%, 1.2% and 1.5% of DMI. The supplementation levels tested for cows were: zero (Control) and 15 g/kg of fresh partial mixture ration (PMR; TAN), which was equivalent to 0 and 1.5% of DMI, respectively. Cows received 10 kg/day of PMR (6 kg of fresh corn silage and 4 kg of fresh concentrate) and ewes received 600 g/day of a concentrate feed and 1 kg/day of fresh corn silage. Paddocks with white clover (first experiment) and fescue (second experiment) predominant pastures, under rotational grazing, with similar pre-grazing heights were available for the animals. There was not meaningful difference in milk FA profile in first essay and second experiment, however in second essay tannin supplementation linear decreased cis-11 and c-12 C18:1 and increased trans-10 C18:1 and cis-9, trans-11 CLA. Milk from T30 treatment had higher content of long and branched chain FA and lower content of odd chain FA. Black wattle supplementation with 1.2% and 1.6% of estimate DMI mixed with concentrate was able to modulate ruminal BH without impairing animal performance and improved the level of healthy fatty acids.

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