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The Influence of *Sauropus androgynus* leaves on the Blood Serum Volatile Fatty Acids in Lactating Sheep

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ABSTRACT

The leaves of *Sauropus androgynus* (SA) plant can stimulate milk production in lactating ruminants. It has however not been established if the SA leaves influence milk production through the improvement of nutritional factors or hormonal factors. This experiment was conducted to elucidate the influence of either the powder from SA leaves (SAp) or SA leaf alcohol extract (SAx) on the profiles of blood serum volatile fatty acids (VFAs) in lactating sheep.

Thirty-five lactating ewes were divided into four groups and fed with concentrate and dry elephant grass at approximately 880.50 ($\pm$45.75) g and 460.80 ($\pm$38.35) g respectively for 35 days. Each group was given orally twice a day SA leaf extract solution at 1.89 g d^{-1} ewe^{-1} as SAx-group (10 ewes), SA leaf powder suspension at 7.44 g d^{-1} ewe^{-1} as SAp-group (10 ewes), distilled water as control-group (10 ewes), and untreated-group (5 ewes). Blood serum VFAs concentration were measured using the gas chromatography technique. The study showed that SAp administration had higher contribution to the increase in nutrient supply to the mammary gland (as indicated by total VFAs concentration in the portal vein) than SAx administration, with differences of 55.86 % vs 20.81 % of total VFAs respectively, compared to the control. The possible reason of the biological effects is that the active substances in the SA leaves might improve the fermentative processes in the rumen environment

Keywords: *Sauropus androgynus*, Blood, VFAs, Sheep