

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

IN VITRO GAS PRODUCTION OF SWEET POTATO FLOUR USED AS REPLACEMENT FOR GROUND CORN FEED

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With the intensification of production systems, dairy cows feeding has undergone changes creating the need to increase the options of substitutes feeds, focusing on more efficient, modern and sustainable alternatives. Some of all the starch-rich foods studied in replacement of corn for ruminants are wheat bran and agro-industrial byproducts such as citrus pulp and, more recently, sweet potato flour. Brazil is the main producer of sweet potato in Latin America. Rare researches were carried out evaluating the inclusion of sweet potato flour as an energy source in substitution of ground corn for ruminants. The objective of this study was to evaluate the in vitro gas digestibility of ground corn replacement by sweet potato flour at different levels. For in vitro gas production, four treatments were performed, consisting of corn replacement by sweet potato flour at 0, 33, 66 and 100%, in a diet using corn silage, soybean meal, and ground corn. In vitro incubations were conducted in sealed bottles containing 50 ml of the inoculum prepared using ruminal fluid and 0.5 g of each treatment. Gas production was determined for 96 consecutive hours. The degradation rate presented a statistical difference between substitutions 0 and 100%, with mean values \pm standard error of 6.86 ± 0.24 and 8.23% per hour. Although there was a difference in the rate of degradation between ground corn and sweet potato flour (0 and 100% substitutions), there was no difference in gas production between the four substitution levels. In conclusion, sweet potato is more rapidly degraded, without affecting gas production.

Keywords: fermentation, alternative foods, ruminant nutrition.

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