Low protein degradability and precision protein feeding improve nitrogen efficiency of dairy cows
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To cite this version:

HAL Id: hal-01210651
https://hal.science/hal-01210651
Submitted on 3 Jun 2020

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Animal performance and carcass characteristics of cattle fed different levels of yerba mate
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Animal performance and carcass characteristics of cattle fed different levels of yerba mate (Ilex paraguariensis, St. Hilaire) were evaluated in order to obtain a healthier and higher oxidative stability meat. Forty-eight Nellore steers with an average age of 21 months and an initial weight of 419 kg were individually fed during 94 days with the same base diet, differing only by yerba mate levels (0, 0.5, 1.0 and 1.5% w/w). Diets were composed of maize silage and concentrate (60:40 w/w) with 11% crude protein and 72% of total digestible nutrients. Diets were balanced using 0, 0.5, 1.0 and 1.5% w/w of Kaolinite (kaolin), an inert ingredient. The experimental design was completely randomized with 4 treatments and 12 replications, with diet as a fixed factor. Dry matter intake (DMI) was calculated by weighting offer and leftover daily. Animal live weights were obtained every 28 days. Hot carcass weights were collected immediately after slaughter and the rib eye area and backfat thickness were measured in longissimus muscle between the 12th and 13th ribs. Statistical data treatment was performed using XLSTAT statistical program with a significance level, P-value, at 0.05. There were no significant differences (P-value>0.05) between diets in DMI, daily gain, feed conversion, fasted slaughter weight, hot carcass weight, carcass yield, backfat thickness and rib eye area. The addition of yerba mate extract, at varying levels from 0.5 to 1.5% w/w, in the diet of feedlot cattle did not affect performance and carcass characteristics of the animals, showing expected values for feedlot-finished Nellore cattle. These results were positive as the use of the yerba mate is recent and there is a lack of information about the use of yerba mate as an antioxidant in diets for beef cattle.