

Intake and digestibility of tropical grasses in steers with nitrogen supplementation and *Saccharomyces cerevisiae*

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Abstract

A metabolism trial was conducted to study the effect of nitrogen supplementation and *Saccharomyces cerevisiae* (Sc), on intake and digestibility of tropical grasses. Five duodenal and ruminal fistulated Holstein-Cebu steers (308.92 ± 30.40 kg BW) were randomly assigned to a 5 x 5 Latin square during 100 days. The supplements were: 50% of the nitrogen in form of urea and 50% meal meat (S1) and 100 % of total nitrogen from urea (S2). The Sc was dosed in the rumen (10 g per head per day). The treatments were control group, S1, S2, S1+Sc and S2+Sc. Response variables were: pH, N-NH₃, supplement intake, forage intake, dry matter intake, total and ruminal apparent digestibility of NDF, ADF, dry matter and forage. The treatments did not affect the pH and N-NH₃. The nitrogen source affected (P<.05) the intake supplement (S: 1.685^a vs S2: 0.825^b kg per head per day), forage intake and DM (P <.05) in 1.55 and 2.86 kg. The total and ruminal apparent digestibility of NDF was increased 2.9 to 3.0% with the supplementation. The ruminal digestibility of ADF was increased in 4.7% with supplement and 1.72% with Sc. The urea supplement increased the total and ruminal apparent digestibility of NDF in 1.93 and 2.1% also the ruminal of ADF in 1.66%. Nitrogen supplementation increased the digestibility of the fiber and improved the intake. The *Saccharomyces cerevisiae* increased the ruminal digestibility of acid detergent fiber.

Key words: Intake, Digestibility, nitrogen supplementation, *Saccharomyces cerevisiae*, tropical pastures.

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