

complete randomized experimental design was used and the results were analysed by analysis of variance. The inclusion of all plants resulted in significant reduction ($p < 0.05$) of CH₄ production, the highest decline was observed when *T. erecta* (<41.8%) and *S. hirsuta* (<23.3%) were included at 20% rate ($p < 0.05$) in comparison with the control diet. The NDFD was not affected by *Tejetes erecta*, while *Senna hirsuta* increased it ($p < 0.05$).

PO120

GRAZING FREQUENCY EFFECT OF UROCHLOA BRIZANTHA CV. MARANDU ON THE DIVERSITY OF THE ARCHAEA DOMAIN IN DAIRY BRAZILIAN COWS

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The aim of this study was to assess the genetic diversity of the Archaea domain by Denaturing Gradient Gel Electrophoresis (DGGE). The experiment was carried out on *Urochloa brizantha* cv. Marandu managed under rotational stocking with a fixed rest period of 30 days or variable according to the light interception (LI) of 95% by the canopy to investigate effects of two systems of grazing management on the rumen microbial profile. Sixteen multiparous Holstein x Gyr cows were fed according to the milk production with concentrated containing 20% crude protein and 70% TDN. Rumen fluid samples were collected through esophageal probe. DNA extraction was processed by phenol-chloroform and bead beating method. Polymerase Chain Reaction (PCR) primers Arch21f/Arch958r and Nested-PCR primers ARC344f-GC/517r were used for amplification of 16SrRNA genes from Archaea. PCR-DGGE patterns were analyzed using BioNumerics software 5.1 with which hierarchical cluster comparisons were carried out to group similar profiles and to generate a binary matrix of band classes. All the images were normalized using the internal control samples and the comparison among whole profiles was performed using the Dice similarity coefficient. The total number of the detected bands represented the species richness. Shannon-Wiener index was calculated based on relative band intensity and the total of number bands of each DGGE profile. The statistical analyses were done using the software R. Based upon the Shannon-Wiener diversity index no significant differences ($p > 0.05$) between the two systems of grazing management were found 2.63 and 2.78 respectively, indicating that diversity of the

methanogen community was largely maintained. In this study, was not observed effect of the systems of grazing management on the archaeal population, although future studies will be conducted using more sensitive molecular techniques such as sequencing for a better approach of understanding of rumen microbiota populations in Brazilian dairy cows.

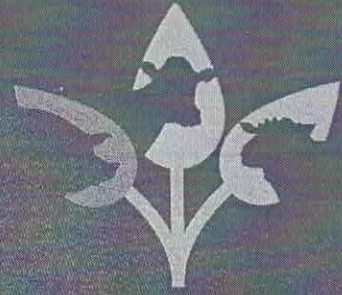
PO121

AMMONIA VOLATILIZATION FROM DIFFERENT BEEF CATTLE PRODUCTION SYSTEMS WITH TROPICAL PASTURES DURING THE SEASONS

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The Brazilian beef production is based on tropical pastures production systems. The direct recovery and adoption of intensive management of pastures have shown potential for mitigation of greenhouse gases (GHG) due to high biomass production of tropical grasses. Urea is the most common nitrogen fertilizer in Brazil due to its low cost per unit of nutrient. However, the efficiency of these N sources is highly affected by the process of ammonia volatilization. The amount of N loss by volatilization from fertilized surface soil with urea can reach up to 90% of the total N provided by urea fertilizer. The aim of this study was to evaluate the impact of pasture management on the ammonia volatilization. The study was performed at an experimental station of the Brazilian Agricultural Research Corporation (EMBRAPA), located in São Carlos, state of São Paulo, Southeast of Brazil, in two years. The grazing areas covers 4 livestock systems: Intensive irrigated with high stocking rate (IHS) and Intensive dryland with high stocking (DHS), have been covered by *Panicum maximum* since 2002; Dryland with moderate stocking rate (DMS) and Degraded pasture (DP), have been covered by *Brachiaria decumbens* since 1996. Also, the native forest (Atlantic forest), near the experimental area, was sampled as representing the original conditions of this site. Foam absorbers, developed by ALVES et al. (2011), were used to measure the ammonia volatilization in the pots. The analyses were conducted in a completely randomized experimental design, using the SAS MIXED procedure. There was significant interaction between systems x seasons x year ($P < 0.05$). In the first year, high volatilization occurred in summer (13.75 kg N-Urea/ha) and autumn (14.43 kg N-Urea/ha) ($P < 0.05$). The systems DMS and DHS showed higher volatilization (16.37 and 13.06 kg N-Urea/ha, respectively) compared to other systems production ($P < 0.05$).



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