**Complete diet in pellet for ruminants nutrition**

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The aim of this study was to evaluate nutritional and dietetic effects, rumen pH and rumination time of a pelleted forage based diet fed to growing heifers compared to TMR one.

Eight tie-stall heifers (age 336 ± 30d, BW 346 ± 35 kg), were used in a 12 weeks study (4 periods of 3 weeks: 2 adaptive and 1 for data collection). Diets had the same ingredients (hay 41,8%, barley straw 27,4%, sunflower 13,7%, grain 16,4%, salt 0,7%), but fed in two different physical forms: TMR and PELLET (∅=8mm), thus differing in fiber particle size (pef= 38,73% and 66,12% respectively). The animals, divided in two groups, were fed *ad libitum* with the two diets to alternate periods, and dry matter intake (DMI), DMI/BW (%), water intake, rumination time, rumen temperature and pH (average, pH area<5,8 and 5,5 and pH<5,8 or 5,in min/d) were evaluated daily.

The data of the third week of each period were statistically analyzed with ANOVA for repeated measures using the software Statistica v.10.

The DMI and DMI/BW% was higher (*P<0,001*) in pellet diet (11,3 *vs* 8,8 kg SE 0,35) (3,0 *vs* 2,35%, SE 0,05) and also water intake increased (*P<0,01*) during pellet administration (51,9 *vs* 41,5 liters/day, SE 2,05).

Rumination time was considerably lower (*P<0,001*) with pellet than TMR (256 *vs* 521 minutes/day SE 12,86). Diet had no effect on rumen temperature and all the pH parameters were not statistically significant.

The results of this study suggest that complete pelleted diet is well accepted by animals, and DMI was maintained on high levels, thanks to its reduced fill effect. Thus, a complete pelleted diet with those physical characteristics can be fed to growing ruminants without creating dietetic problems. In fact even if rumination time drops with this particular diet, rumen pH maintained same average values as that with TMR.