
pH, buffering capacity and activity of cellulolytic enzymes in cattle and buffaloes fed on different diets

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SUMMARY

The paper presents the efficiency with which cattle and buffaloes degrade the cellulose contained in the fibrous forages, determined based on the dynamic of the cellulolytic enzymatic activity and on the factors influencing its hydrolysis. Four steers and four growing buffaloes, fitted with ruminal fistulas, were fed diets based on Sudan -grass with or without a concentrate supplement (barley, soybean meal). Compared to buffaloes, cattle displayed a higher cellulolytic activity, a more constant pH and a higher buffering capacity for all types of diets. The results suggest a better aptitude of cattle to control the physical and chemical conditions of the ruminal content for a more efficient degradation of the cell wall.

Keywords: cattle, buffaloes, fibrous forages, cellulose, degradation, cellulolytic activity