

## Influence of stocking density on weight gain and behavior of feedlot lambs

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### Abstract

The aim of this study was to verify the influence of the animal density on the weight gain and behavior of confined lambs. 86 animals were confined after weaning in 23 pens of two lambs each (double pens) and four pens of ten animals each (collective pens). During the 80 days of confinement all lambs received the same diet and the animals were weighed at the beginning of the trial and every 14 days for the control of the weight gain. The behavioral patterns were recorded by focal sampling method using a time sampling of 30 minutes, from 6:00 am to 6:00 pm, for 4 days. The behavioral variables were: posture (standing; lying), activity (eating; ruminating; leisure; drinking water; grooming) and events (nid-nodding; pushing; picking up; bellowing; mounting; defecating; urinating). For the evaluation of the weight gain and behavior of the animals an analysis of variance and multiple comparison procedure by Student t test was used. The average weight gain was higher for pen animals (0.228kg/day) compared to the animals housed in the collective pens (0.208kg/day;  $P=0.07$ ). A higher percentage of animals housed in double pens remained standing compared to the animals housed in collective pens at 8:30 am ( $P<0.05$ ), 11:30 am ( $P<0.01$ ), 2:30 pm ( $P<0.01$ ), 4:30 pm ( $P<0.01$ ), and 5:30 pm ( $P<0.01$ ). For the eating activity, it was observed that 6.9% more animals kept in the double pens remained in this activity at 8:30 am ( $P<0.05$ ) and 4:30 pm ( $P<0.05$ ), than in collective pen. No statistical difference was found for the other activities and events between treatments. The number of animals per group influenced the behavior of confined lambs, changing the pattern of food intake which could improve the weight gain.

**Keywords:** [Animal welfare](#), [Confinement](#), [Performance](#), [Sheep](#)