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Behavior of feedlot cattle affects voluntary oral and physical interactions with manila ropes

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Abstarc :

Providing cattle with access to manila ropes has shown promiseas a means of monitoring zoonotic bacteria in pens of feedlotcattle. Studies were conducted to determine the impacts of climate,animal age and BW, number of ropes, duration of placement, andprevious rope access on efficacy of ropes as a sampling techniquefor feedlot cattle. Eight pens of commercial finishing cattle(average 196 ± 19 animals per pen, 536.7 ± 22.9kg) were monitored for a total of 7 d in October of 2003 (commercialstudy). One rope was tied on the pen railing adjacent to thefeed bunk in each pen, and the proportion of animals withinthe pen contacting the rope was recorded. In a second study,80 cattle housed in 8 pens (each 270 m^2; 10 animals/pen) weremonitored for 1 d/wk using video cameras (video study). Videoimages were collected for 8 consecutive weeks immediately afterweaning (average BW = 252.7 ± 30.6 kg) and for 6 wk atthe end of the finishing period (average BW 541.2 ± 42.8kg). In the commercial study, the proportion of cattle contactingthe rope per pen increased over the first 6 h to 70% (P <0.05), although approximately 50% of the cattle contacted therope within 2 h after placement. A 40°C reduction in ambienttemperature on d 6 caused cattle to cease contact with the ropes,although after 6 d of acclimation to reduced ambient temperature,interactions with ropes recovered to 47% of previous values.In the video study, weaned calves required 2 wk of acclimationto the feedlot environment before contact with the rope wasmaximized. Contact with the rope was most frequent 3 to 8 wkafter entry into the feedlot and decreased (P < 0.05) ascattle approached slaughter weight. It is likely that ropeswill be most effective at monitoring zoonotic bacteria in pensof cattle during the mid-feeding period where the pen environmentis stable and cattle are inquisitive but not highly reactive.

Key Word :
bacteria monitoring, behavior, feedlot cattle, rope

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