

Overstocking the Feed Bunk May Effect Dairy Cow Temperament

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Our objective was to investigate the effect overstocking the feed bunk may have on dairy cow behavioral responses to human approach and reactivity to blood sampling. One hundred twenty dry Holstein cows were allocated to one of two treatment groups with different stocking densities (Overstocked (OS): 0.88 headlocks/cow; Understocked (US): 1.17 headlocks/cow). Over two testing periods (seven d apart), flight response was assessed using a human-approach test with an eleven-point ordinal scale defining the distance at which the cow stepped away from the approaching experimenter (0=Not approachable to 10=Cow does not move away within 5 min). A qualitative assessment was also made of the cow's response to the experimenter using a visual analogue scale (VAS) that included the terms: relaxed, nervous, alert, shy, aggressive, social, and curious. Reactivity to blood sampling via the coccygeal vein was assessed in the pen using a four-point scale (0=Least reactive to 3=Most reactive). Overall, treatment did not affect the cow's flight response. However, there was a significant treatment by time interaction in which flight response scores decreased with time among the OS cows and increased with time among the US cows (OS: 1.65 to 1.47, US: 1.33 to 1.68; $P = 0.02$). Reactivity to blood sampling did not differ by treatment (OS: 1.11, US: 0.98; $P = 0.47$). The overall correlation between qualitative terms was low. However, the terms 'relaxed' and 'nervous' showed significant correlation (OS: $r = -0.71$; $P < 0.0001$; US: $r = -0.61$; $P < 0.0001$). In conclusion, overstocking the feed bunk affected the animal's response to an approaching human; OS cows became less approachable and potentially more fearful of humans over time. Future research should investigate the effect overstocking may have on the human-animal relationship for longer than was investigated in the current study.