



Calf Transportation ANH.12.10

Project Title: Effect of ventilation management strategies and stocking density during transport on trailer microclimate and calf welfare

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Background: Transportation is one of the most essential, visible and controversial aspects of the beef industry. Newly weaned calves are particularly vulnerable given the stress of weaning, unpredictable fall weather, diet changes, and the nature of the marketing system. However, few transportation studies use commercial transport trucks, and most studies end once the cattle are unloaded. Little information is available regarding the effects of industry standard transportation practices on animal health and performance early in the feeding period. Identifying cost-effective approaches that may improve animal health and improve feedlot performance will benefit both the animal and the industry at large.

Objective: To compare the effects of trailer ventilation management (side boards) and stocking density on trailer microclimate and calf health welfare, and to develop recommendations regarding best management practices for calf transportation.

A total of 32 liner loads of commercial calves will be taken on 15 hour journeys to a feedlot. Trailers will either have no side boards or 50% side boards, and will be loaded to CFIA recommendations or industry standard loading density. Trailers will be fitted with sensors to monitor internal and external temperature and humidity. For each load, 15 calves will be weighed and measured for cortisol (a stress hormone), immune status, body temperature and general condition before and after transport. Heart rate will be measured throughout the journey. Transport shrink will be determined, and animal health (particularly respiratory disease) will be monitored during the first 60 days on feed.

Implications: Quantifying the effect of long distance transport on weaned calves will determine whether adjustments to transport practices will improve animal health and welfare, and economics early in the feeding period.

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