

IMPROVING WELFARE FOR DAIRY COWS AND CALVES AT SEPARATION

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Introduction

Separation of cow and calf after a period of suckling breaks the established bond causing behavioural reactions. The intensity and extent of these reactions reflect distress and hence reduced animal welfare. Fence-line weaning allows physical contact after separation (and weaning) (Stookey et al. 1997). The method has been shown to alleviate behavioural responses in beef cattle in the days following separation (Stookey et al., 1997, Price et al. 2001).

Objective

Compare the behavioural reactions of cow and calf of dairy breed (Norwegian Red) following separation (but not weaning) with or without physical contact.

Materials & Methods

The study compared two separation methods (Fig. 1). The barrier between the cows and calves after separation consisted either of an open fence (FL) allowing physical contact between cow and calf, or an opaque, two meter high wall (A), allowing only auditory (and olfactory) contact. Two cow-calf pairs were separated at a time at eight weeks and the test animals were allocated to one of the two treatments. Behaviour of cow and calf was recorded by manual observation using a combination of instantaneous recording every 5th minute and continuous recording for 2x2 hours at day 0, 1, 2, 3 and 4 after separation. Calves were bottle fed 3x2 litres of milk per day after separation and were fed just before observation periods.

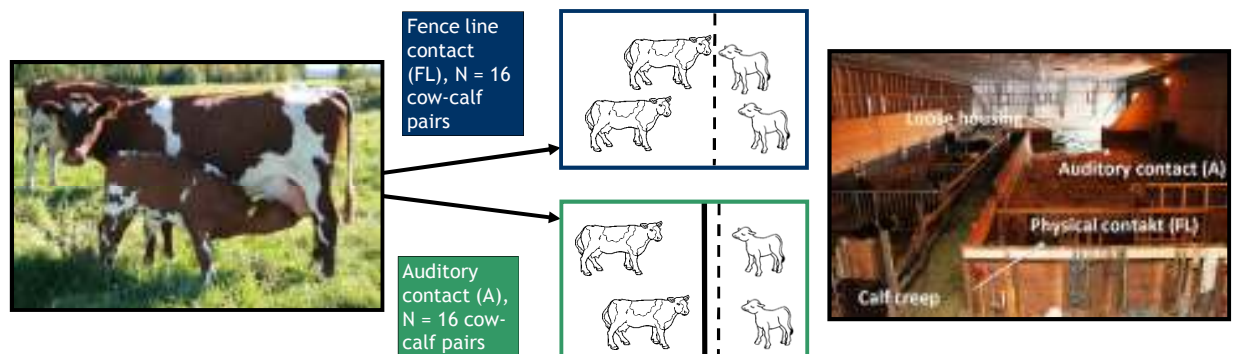


Fig.1. Schematic presentation of the two separation methods: The barrier between the cows and calves after separation consisted either of an open fence (FL) or an opaque, two meter high wall (A).

Results

Preliminary analyses show that FL significantly reduced high pitched vocalization at day 0, 1, 2, 3 and 4 ($p < 0.05$) (Fig. 2). For calves FL also resulted in less alert behaviour including restless walking and more time lying ($p < 0.001$). FL cows rested and ruminated more ($p < 0.001$). Following the days of separation, FL calves resumed behaviour comparable to “baseline behaviour” sooner.

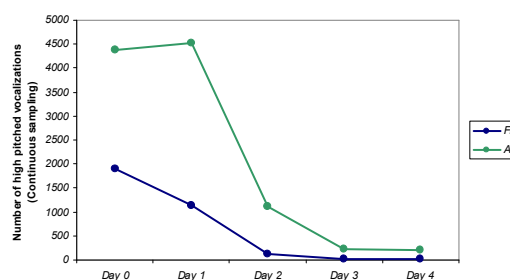


Fig.2. The number of high pitched vocalizations (n=16 cow-calf pairs) for days 0-4 following separation with an open fence (FL) or an opaque, two meter high wall (A).

Summary and conclusion

The results indicate that both the intensity and extent of the behavioural reaction to separation is alleviated when cow and calf are separated with physical contact. In dairy herds practicing suckling systems, fence-line separation may increase cow and calf welfare compared to separation into pens allowing merely auditory contact.

References

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Stookey, J.M.S., G.K.S., Waltz, C.S., Watts, J.M., 1997. Effects of remote and contact weaning on behaviour and weight gain of beef calves. *Journal of Animal Science* 75 (Suppl. 1).