

Cow-calf contact systems for dairy: status of the literature

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The public is largely unaware that cow-calf separation at birth is a routine practice in the dairy industry. However, a series of studies undertaken over the last few years indicates that when made aware, there is little public support for this practice. This lack of public and consumer acceptance may undermine the social sustainability of the dairy industry. Unfortunately, there is a dearth of research to guide decisions regarding postnatal management. We conclude that there is a breadth of work required to fully understand the fundamental costs and benefits of immediate vs. delayed cow-calf separation and that there is great need to develop practical systems for delayed separation. Moreover, the little work available must be viewed with caution given the tremendous challenges associated with interpreting the literature. Currently, behavioural research on early separation has focused predominantly on calves. Studies suggest immediate separation reduces certain acute distress responses (e.g. vocalizations), while allowing suckling from the dam over the first weeks of life can reduce non-nutritive sucking. Conflicting results regarding pre-weaning calf performance may result from differences in breed and management. Although early separation is often recommended to reduce health risks to calves, their morbidity and mortality rates remain high; research is needed to determine whether any increased risk outweighs potential immunosuppressive effects of this practice. In cows, meanwhile, research has often focused on health in early lactation, mainly driven by the observed high incidence rates of post-partum disease. A few studies indicate that disease risks in this vulnerable period might be reduced if dams were able to nurse their calves. The literature suggests multiple alternative systems including allowing restricted suckling, housing calves with access to their dams and another milk supply, or using nurse cows. Many questions remain regarding the relative effectiveness and economic sustainability of these options, and how best to reduce distress at separation. Literature from other species and the limited evidence from cattle predicts that such systems may have long-term benefits for calves' learning, social and exploratory behaviour, and for the health and affective states of both cows and their offspring. These predictions merit investigation in dairy systems.

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