

## **Feeding behavior of dairy calves reared by the dam with access to automatic milk feeders**

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Although dam rearing can have beneficial effects on both dairy cow and calf, the separation and weaning period may prove to be challenging. Providing supplementary milk using automated milk feeders (AMF) can support dam-reared calves during this period. Milk feeder data from a previous study in Canada was analyzed to characterize the feeding behavior in dairy calves with and without access to suckling. Data from 20 cow-calf pairs were analyzed. In the first 6 weeks during the day, all calves were housed in a calf creep next to the cow pen, allowing visual and auditory contact with the dam. During the night, all calves had access to the adjacent cow pen. Ten calves could suckle the dam (AMF + dam treatment), while the other 10 calves could not (AMF treatment) because of udder nets attached to the dams. All calves had 24h/d access to 12L of milk from the AMF. After 6 weeks, the calves were moved to the nearby separation pen. The separation period was divided into 2 phases: partial separation from day 43 to 46 (i.e. audiovisual contact with dam still possible, without suckling) and total separation from day 47 to 50 (i.e. no more contact with dam). All calves continued to have access to the AMF 24h/d during this period. Behaviors were also recorded during these phases. At day 51, the calves were gradually weaned with a reduced milk allowance of 1.5L per day. Throughout the study, the calves' body weight did not differ between the two groups (interaction age x treatment:  $P = 0.78$ ). We found no correlation between the number of AMF visits and the number of vocalizations in either treatment group ( $r = 0.14$ ;  $P = 0.20$  vs  $r = 0.04$ ;  $P = 0.72$ ).

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