

The Effects of Feeding a High- or Low-plane of Nutrition Pre-weaning on Growth and Starter Intake in Group-housed Calves.

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Current dairy calf research is focused on feeding calves a high-plane of nutrition pre-weaning (> 8L milk/d) compared to conventional feeding (~4L milk/d). While positive effects on growth have been shown when calves are fed more milk, there is little information on the impact of this feeding strategy on starter intake of group-housed calves fed from an automated calf feeder. Twenty-six female Holstein calves were fed four 2-L feedings of colostrum in the first 2 d after birth before being offered pasteurized whole milk and randomly assigned to either a HIGH (10L/d; n=12) or LOW (5L/d; n=14) plane of nutrition. All calves were allowed 2.5L of milk per meal until d 48 when a 10-d weaning transition began, where milk was reduced by 10% per day, resulting in all calves being weaned at d 58. Calf starter and water were provided *ad libitum* starting on d 3 to d 70. Calves were housed in individual pens for the first 21 ± 3 d and fed using the Calf Rail system before moving to a group pen where they were fed through an automated calf feeder. Individual starter intake was measured on a daily basis from d 25 to 70, and weekly body weights (BW) were taken from birth to d 70. Weekly BW and ADG of HIGH calves were greater than LOW calves ($P < 0.05$). Prior to the weaning transition (d 42-48) starter intake was less in calves in the HIGH than LOW plane of nutrition (569 vs. 1083 g/d, $P < 0.01$, respectively). However, average starter intake over the 10-d weaning transition period was similar between both groups ($P = 0.27$). From d 59 to 70 (post-weaning), starter intake tended to be greater for calves in the HIGH than LOW plane of nutrition (3323 vs. 2771 g/d; $P = 0.08$).

Implications: Our preliminary data show that despite a reduction in starter intake during the pre-weaning period, there is a positive response in starter intake post-weaning when calves are fed a high level of milk and housed in groups.