

The Buddy System: Easy, Inexpensive, Beneficial

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Almost every farm has at least one heifer at the bottom of the pecking order and last to eat at the feed bunk. The sub-par performance of these heifers results in a delay to achieving breeding weight, and in turn, an increase in age at first calving.

Recent research has shown that changes in calf management may help improve feeding and social behaviors. You may have heard of this system before – it's the “buddy system,” and it works for calves!

An experiment was performed by Miller-Cushon and DeVries at the University of Guelph to investigate the differences in feed intake, average daily gain, feeding behaviors, and social behaviors between individual and social calf housing.

Twenty calves were housed either individually or in pairs for the first seven weeks of life. Calves were fed an acidified milk replacer and a calf starter for the first 39 days (pre-weaning period), and then gradually weaned over a period of 10 days (weaning period).

At 50 days of age (post-weaning period), calves that originally were housed individually then were paired with another calf that also previously was housed individually. At this stage of the experiment, a preference test was performed after weaning to determine if housing type during the pre-weaning period would alter feeding and social behaviors when calves were older.

Two heads better than one!

Calves housed in pairs consumed significantly more grain at the end of pre-weaning period, and during the 10-day weaning period than calves housed individually. This resulted in an increase in average daily gain during the weaning period, suggesting that calves housed in pairs had a smoother transition from a milk-based diet to a grain-based diet when compared to calves housed individually (see Figure 1).

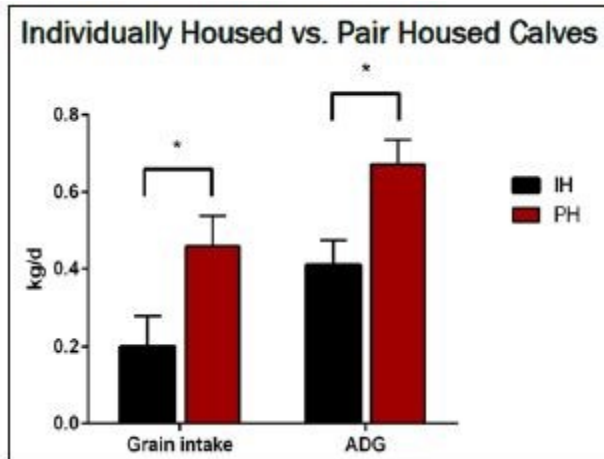


Figure 1. Grain intake and average daily gain (ADG) during the 10 day weaning period for individually housed (IH) and pair housed (PH) calves. Courtesy of Virginia Tech University.

During the post-weaning period, both pair-housed and individually housed calves consumed the same amount of grain. However, pair-housed calves consumed more meals of grain per day than individually housed calves. Also, displacements (when a calf pushed another calf away from the grain) rarely occurred during this experiment. From these two findings, it could be speculated that calves housed individually found social feeding more stressful than calves housed in pairs, even though the calves were not being pressured.

But what did the calves learn?

After calves were weaned, a preference test was performed to determine if calves favored eating grain socially or individually, by giving the calf the option of eating grain with another calf or alone. Calves that originally were housed in pairs were more competitive, and preferred to eat grain socially than calves that originally were housed individually.

Because this change in behavior continued weeks after the calves were weaned, the authors speculated that these changes in social and feeding behaviors may persist throughout the calves' lives. By preventing the development of submissive behavior during the pre-weaning period, dairy producers can expect to see fewer passive heifers and cows.

With the current milk price depression, everyone is looking for ways to improve efficiency and reduce the number of inferior heifers and cows on their farms. Pair-housing calves may improve social and feeding behaviors that could potentially persist throughout adulthood.

Improving social and feeding behaviors in calves may help herds reduce the number of inferior cows with little to no additional investment.

Reference: Miller-Cushon, E. K., and T. J. DeVries. 2016. Effect of social housing on the development of feeding behavior and social feeding preferences of dairy calves. J. Dairy Sci. 99:1–12.