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If two work twice as well, then three...

Since the 1980s, calves on Quebec dairy farms have typically been raised individually.

Now recent studies are leading us to consider group housing for our calves, a practice that is not only beneficial to the calf but is also convenient for the producer.

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Have you ever taken a few moments to observe the behaviour of cows or heifers in group housing? If so, you know that it isn't unusual to see them all eating or resting at the same time. Indeed, cattle are naturally social animals, preferring to go about their business as a group. Isolation can actually create anxiety in cattle and increase their stress level, which in turn makes them more vulnerable to disease.

And yet, it was mainly in an effort to limit the spread of disease that we have been housing our young calves individually on our farms. During the first weeks of life, a calf's immune system is still very immature. Isolation is hence an obvious solution to the problem of contamination among calves.

Nonetheless, recent studies lead us to believe that it is possible to raise young calves in pairs, or in groups, without compromising their health. Likewise, the advent of automated feeding systems has made group rearing more advantageous, particularly in large herds.

Advantages of group housing

Group housing may help to reduce the work load related to cleaning calf pens and feeding. These operations are easily mechanized and so the tasks need not be repeated for each individual calf.

In operations where calves are housed in groups after weaning, adapting to the new group is easier and less traumatic when the calves have already been introduced to group housing prior to weaning. Hence, in small-sized herds with group housing after weaning, pair housing prior to weaning may be a simple way to reduce stress at mixing.

Another advantage to open housing, say some observers, is that calves housed individually prior to weaning tend to become subordinate cows when compared to those reared in pairs or group housing at an early age.

Finally, group-housed heifers are generally more energetic and lively because they have access to more space. A heifer that

plays, jumps and runs is a healthy animal.

Conditions for group housing

Some specific conditions must be respected if group housing is to be successful for young calves:

1-Ensure impeccable colostrum management and administration.

Calves should always receive a minimum of two to three litres of high-quality colostrum within the first two hours after birth. Moreover, calves must consume a minimum of four litres of colostrum during the first 12 hours of life. Bottle feeding is the recommended method for colostrum delivery, but tube feeding may be useful, if carried out correctly, when a calf is having difficulty feeding.

2-Limit group size.

Ideally, groups should be limited to three or four individuals. More competitive behaviour is observed when there are more than five or six heifers to a group, and some animals will struggle to hold their own. The incidence of pneumonia is also reduced with smaller groups.

3- Use teats for milk feeding.

Bucket-fed calves have a tendency to suck on one another because milk intake is too rapid to satisfy the suckling reflex. To avoid unwanted cross-sucking, calves should be fed from a bucket equipped with a teat.

Automated milk feeders are a good option for feeding young group-housed calves, and they have already proved their worth in terms of efficiency. In large herds, there are often 20 to 30 calves for one teat. Less competition is observed however when there are fewer than 12 calves per teat.

4-Implement good bio-security procedures.

Teat hygiene is crucial to preventing the spread of diseases. Ideally, there should be a place where sick calves can be isolated to reduce the risk of spreading contagious diseases among calves.

5-Provide dry, spacious housing with ample bedding and good air quality.

In group housing, a space allowance of 24 sq. ft. per calf is recommended. The more limited the space, the more competition there is among calves, and it becomes difficult to maintain dry conditions. For young calves, bedding is vital in limiting heat loss through contact with the floor.



PHOTO: BEATRIZ SALASTRON

Results of a Canadian study Pair housing: beneficial to the calf

Researchers in British Columbia studied the behaviour of calves housed individually and in pairs. All the calves were housed in individual pens at birth. When the calves were four days old, the partitions between some of the pens were removed so that half of the calves were grouped in pairs.

During the milk-feeding period, no significant difference in milk intake was observed between individually-housed calves and pair-housed calves. However, pair-housed calves consumed 1.5 times more starter than individually-housed calves (93 g/d vs 59 g/d per calf), although weight gains were similar. In other studies, higher weight gains at weaning were observed for the calves reared in groups.

When the teat was withdrawn at weaning, less than half as many vocalizations were noted in the pair-housed calves, suggesting that these calves experienced less distress during weaning.

After weaning, all of the calves were grouped together in one pen. Automated feeders were used to dispense starter, hay and water.

Once in group housing, the calves that had been housed individually prior to weaning waited an average of 49 hours before consuming feed. In contrast, the calves that had been pair-housed in the pre-weaning period waited only nine hours on average before being tempted (Figure 2). As well, the frequency of daily visits at the feeder was twice as high for the calves that had been reared in pairs.

During the first two weeks in the post-weaning group, the calves that had been housed in pairs consumed more starter (Figure 1). The calves that had been housed individually at an early age lost weight during the first three days after mixing and their weight gain varied greatly from one day to the next (Figure 3).

In light of these results, it appears that calves that are already used to physical contact with a congener adapt better to mixing after weaning.

Figure 1: Feed intake following post-weaning mixing

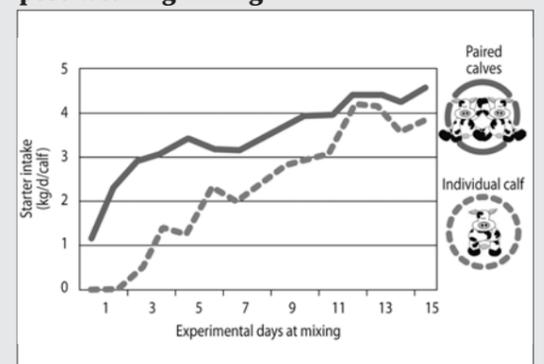


Figure 2: Visits at the feeder following post-weaning mixing

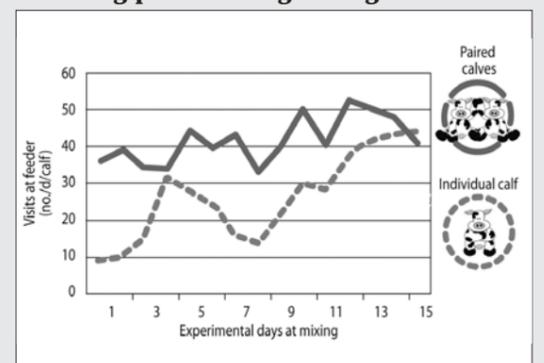


Figure 3: Daily weight gain following post-weaning mixing

