Do Your Dairy Calves Need a Buddy?

Cooperative Extension Service

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As with all aspects of dairy husbandry, how we raise dairy calves has evolved over time as we learn more about the biology behind common management practices. These changes/modifications have included the amount of milk fed, composition of calf starter mixes, weaning age and method, and health procedures. How we house and manage dairy calves has also changed over time. Housing calves in small groups, known as group housing, is becoming more commonplace. Group housing can occur when as few as 2 calves are paired together in 2 hutches with a common "yard" or in barns with pens holding small groups of 10 to 30 calves. Group housing of dairy calves does not fit everyone's management style, but can be one option for many farms.

Benefits of a Buddy

Studies have demonstrated that calves raised in pairs or small groups learn from each other. They may be better able to deal with socialization and novel situations at an earlier age. Pair-fed calves have been shown to have higher solid feed intakes (starter) than individually raised calves. Essentially, paired calves have a "buddy" to explore their surroundings, try novel feeds, i.e. calf starter, deal with the stresses associated with changes, and are more accustomed to interacting with others in a grouping situation.

To make "group" raising of calves work well, certain principles and management practices are needed to avoid disasters. Grouping of calves can occur when calves are housed together in pairs or as small groups being fed through a mob or automatic milk-feeder. This article summarizes some key components when raising calves, irrespective of how calves are housed.

Place to Start

Before transitioning to group housing, one should evaluate how well your calf feeding program is working and fix any weak links before moving to a group housing system. Sound colostrum feeding practices need to be in place where 4 quarts (not 2—or a small bottle) of clean, high quality colostrum is fed to calves (Jerseys- 3 quarts) within 4 hours of birth. Disease issues should be at a minimum before undertaking group feeding and housing. Calf starter and free choice water must be available starting by 3 days of age and fresh feed and water provided daily.

Managing calves in a group setting does take a different skill set and you will have a learning curve. Those in charge of managing these calves must have excellent observational skills and be able to detect calves getting sick early in the disease process. One possible misconception when using an automatic calf feeder is that the software in the feeder will detect all calves that are sick and alert the user. Yes, this is a

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positive management tool, but one must still observe calves to see which calves need attention. Calf managers should walk the calf pens first, before checking the output from the automatic calf feeder. Changing the order forces one to check all the calves in the pen, not just those identified by the computer software as needing attention.

One fear is that calves fed and housed in a group will result in more cross-sucking and its possible associated problems. Feeding and management practices can increase or decrease the chances of calves sucking one another. To prevent cross-sucking with group housed calves, more milk needs to be fed with at least 8 quarts fed daily to keep calves satisfied. Calves fed lower quantities of milk are more inclined to suck one another. In addition, more cross sucking is seen in large groups of calves and when calves are weaned at 6 weeks (early weaning) versus weaning at 8 to 10 weeks of age.

Group Housing

***Pair-housing systems**:* For smaller sized herds (less than 5 to 10 calves monthly), the benefits of group housing can be realized by pair (2 calves per pair) feeding and housing calves. Facilities for these calves could be as simple as 2 hutches placed side by side with a common outside area enclosed with fencing. At least 8 quarts (2 large bottles per day) of milk needs to be supplied to prevent cross sucking. Group hutches are also available or can be constructed where small groups of heifers are raised together. Milk can be supplied through buckets with multiple nipples. The key is sanitation of these milk feeding stations. Attention to detail is critical when washing these feeders after each feeding to prevent disease issues.

Calf Barns with calves grouped in pens: Most people associate group housing for calves with specially designed calf barns, which contain group pens and milk is fed through computer-controlled feeding stations. These "automatic" feeding stations provide milk to calves 24/7 and can provide higher amounts of milk daily. Calves allowed ad lib access to milk can drink on average 10 to 12 quarts of milk daily at peak consumption with some calves consuming 16 to 17 quarts (15-16 liters) and others as little as 7 quarts. Sanitation in these milk feeding stations is critical to prevent disease.

Calves are housed in small, STABLE groups (maximum of 12 to 15 calves per nipple) with no more than 3 to 4 weeks difference in age. Pens are sized such that 40 square feet of resting space per calf is provided. Space needed for the feeding station, waterer and calf starter feeder is in addition to the resting space needs. Adequate dry bedding needs to be provided to keep calves clean and dry.

To break a potential disease cycle, facilities should be designed such that a pen is left vacant for 15 to 20 days after being emptied and cleaned out. This concept is referred to as "all in and all out". Thus, facilities are designed with at least 3 pens. One pen houses the youngest calves for the first 3 to 4 weeks of life, and calves are not older than 4 to 5 weeks of age. Ideally, calves should have no more than a 2 to 3 week spread in age within a pen. A second pen would house calves 4 weeks of age thru weaning. Calves are weaned at 8 to 10 weeks of age in pairs or as a group (Calves need a buddy!). A vacant pen (vacant for 15-20 days) allows one to break a potential disease cycle. Building a facility which contains this vacant pen does increase barn costs, but does provide insurance if problems do arise or times when more cows are calving than normal.

Ventilation in these facilities is CRITICAL to decrease the concentration of ammonia and prevent disease, especially respiratory issues. As calves are fed more milk, they produce more urine, which increases the amount of ammonia that needs to be ventilated. Ventilation in calf barns presents new challenges especially during the wintertime and during still days. Calves do not produce enough heat to move air through a naturally ventilated barn. In a barn for mature cows, the heat produced generates a chimney effect for air movement up through the ridge vent. Thus, different ventilation systems must be utilized. Often times, retrofitting existing barns does not work, especially if adequate ventilation for younger calves cannot be achieved.

Bottom Line

Raising dairy calves in groups, as pairs or in small stable groups, can be very effective in improving social skills and performance. However, managers of these systems need to realize they are no longer just calf feeders, but calf managers. Attention to details and keen observational skills are critical to their success. Collecting and reviewing hip height and weight gains can help further evaluate whether this system is working and point to changes that may be needed. As with any system, the key is whether this system of feeding and managing dairy calves fits your resources, management skills, and business goals.

* Source: ADSA Informal Calf Discussion Roundtable