Management for Dairy Calves in Automatic Feeding Group Housing Systems

Proper management is key to the success of group calf housing systems. This article will discuss management practices unique to group housing systems that are key to successful calf rearing.

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Individually housing and feeding pre-weaned calves is the most common calf management system on US dairy farms. This system decreases calf-to-calf contact, reducing the risk of disease transmission between animals, a practice that has been shown to decrease incidences of calf mortality and morbidity.

In recent years there has been growing interest in group calf housing facilities, often in combination with automatic feeding systems. Interest in these group housing – automatic

feeding systems is being driven by a combination of labor cost and availability and animal welfare concerns (greater freedom of movement and social interaction for calves in group housing). An additional benefit of some of the automatic feeding systems is that they can provide the dairy producer with information on individual calf milk intake, drinking speed, number of feeding bouts, and weight gain, to help better monitor and manage calf health.

As with individual calf housing systems, group calf housing systems do not come without challenges and proper management is key to their success. Best management practices that apply to individually housed calves (4 to 6 quarts of good quality colostrum in the first 24 hours of life, clean dry bedding, monitoring calves for scours and other health problems, etc.) still apply to calves managed in group housing systems. This article will discuss management practices unique to group housing systems that are key to successful calf rearing.

When should calves be placed in a group pen?

Some dairy producers may be interested in automatic feeding systems with the idea that they will never need to individually feed calves again. In a study of 38 dairy farms in the Upper Midwest US using automatic calf feeding systems only a quarter of farms introduced calves to the automatic feeder on day one. On average for these farms, calves were 5 days old when introduced to the group housing - automatic feeding system, with some farms not placing calves into group pens until 14 days of age. A Canadian study also found 5 days as the average age for calves to enter the group housing system. Five days of age may or may not be the correct age to place calves into a group housing system on every farm. Farm staff should observe calves to ensure that they are actively sucking and healthy prior to entering the group calf pen. Therefore, even if a farm is considering implementing groups pens, farms should be sure to include space for individually housing calves for the first several days of life.

How should calves be added to a group pen?

Once you have an idea of when you want calves to enter the group calf pen, the next step is to decide how calves will be placed into the pen. Options include all-in, all-out systems and continuous entry systems. All-in, all-out provide an opportunity for pens to be cleaned prior to new calves entering the pen. This system works well for larger dairy farms with enough calves being born over a relatively short time period to fill a pen with a uniform

group of animals. Continuous entry systems may work better for smaller herds that do not have enough calves to form a group being born in a short time period. With continuous entry systems there is not a clear time to clean and disinfect calf pens, creating a possible calf health risk factor. In a Danish study, calves raised in all-in all-out pens had higher average daily gain and lower incidence of diarrhea and respiratory disease than calves in continuous entry systems.

What is the appropriate number of calves to house in a pen?

Calf feeders can easily feed 25 to 30 calves per nipple with the option of multiple nipples per feeder. The previously mentioned Midwest study found average calves per pen to be 18 calves with a range of 6 to 60 calves per pen. A Swedish study found that calves housed in pens of 12 to 18 calves had greater incidence of respiratory disease and slower average daily gain than did calves housed in groups of 6 to 9 calves.

How much space does each calf need?

In the previously mentioned Midwest study, average space per calf in group pens was 50 square feet with a range of 17 to 128 square foot per calf. Recommendations range from 40 to 50 square foot of space per calf. Pens with less area per calf will require more frequent cleaning and addition of bedding to keep pens comfortable and clean and reduce risk of disease.

What else needs to be considered?

Automatic feeding systems does not mean no management is required. In some cases, the time saved on feeding calves may be taken up on other management (pen cleaning, adding bedding, reviewing calf data, cleaning feeders, etc.) that is required to make these systems work effectively.

For more information on managing group calf housing facilities the reader is directed to the recorded Group Calf Update webinar recording on the Penn State Extension web site.

References

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