

Group Housing and Calf Feeders



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With recent consumer concerns regarding the welfare of dairy cattle, calf management practices are being reviewed. Consumers are wanting calves to be raised in a more “natural” environment, allowing them to have the ability to express behaviors similar to those in a wild setting. Individually-housing calves in hutches has long been accepted as a housing system which reduces the spread of disease and allows for individual feeding and monitoring of the calf’s health. Recently, the social aspects of a calf’s life have become a factor consumers want to see improved, as individually housed calves do not receive direct contact with other calves during early stages of life. Group housing systems may offer calves the opportunity to interact socially and address consumer’s concerns. While social contact has been shown to increase milk intake, resulting in increased weight gain, the competition for feed may result in the opposite effect.

The use of automatic calf feeders offers the opportunity to manage calves individually while in a group setting. Yet hesitance to switch from individual housed systems has stunted the adoption of automated calf feeders. Data from the 2014 National Animal Health Monitoring System’s survey focusing on heifer welfare found that from the 104 dairy farms they surveyed, only 13% used group housing systems. Studies presented at American Dairy Science Association Annual meeting in Salt Lake City, Utah looked at the reasoning behind investing in an automated calf feeding systems and other aspects of dairy calf welfare associated with group housing systems.

To improve the knowledge about producer investment and use of automated systems, researchers from the University of Guelph surveyed Canadian producers regarding automated calf feeding systems. Of the 670 farms surveyed, 16% used automated calf feeders. Producers prior to the investment indicated the following as their **top 4 reasons for considering an investment in an automated calf feeder**:

- To raise higher quality calves
- To increase amount of milk fed daily in small meals
- To reduce labor
- To improve working conditions

After making the investment, these producers were then surveyed again, at least one month after using the system, about their currently perceived benefits from the system. The **top 4 realized reasons**, indicated by the producers, were as follows:

- Calves had more ability to exhibit their natural behaviors
- Increased milk given to the calves without increasing labor

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- Improved working conditions
- Ability to record milk consumption

Producers who chose to stay with a conventional system opposed to a group housing system with an automated calf feeder were asked what they saw as disadvantages of the group housing system. Below are **producers top 4 reasons viewed as disadvantages to group housing:**

- Decreased disease detection
- Less individual contact
- Increased disease spread
- Increased feeding disease spread

While group housing can provide mental stimulation for calves and allow them to develop social abilities, it creates issues in disease prevention, feeding, and individual care. While studies have compared disease incidence between housing systems, results have varied between housing systems. Technologies associated with automated feeders allow producers to give individual attention to the calves while raising them in a group housed setting. Data received from the automated feeder, such as drinking speed, drinking volume, drinking time, and drinking sessions, can provide the producer with individual calf data, increasing the amount of information than a typical individual calf feeding system could provide.

A study, including 23 farms, found that on average, calves raised in groups with automated feeders were provided the opportunity for greater milk consumption than those individually housed. This study found that producers who used drinking speed, data offered from the calf feeder, in their management had a significantly lower mortality rate, 2%, compared to those who did not use drinking speed, with a mortality rate of 7%. Producers who disinfected their pens between groups had a significantly lower mortality rate, 3%, compared to those who did not, with a rate of 6%. This study also found trends in the association between age ranges in the pens and mortality rate, with an increased age range of calves in the same group resulting in an increased rate of mortality.

As with other housing types, group housing must be properly managed to raise healthy calves. Additionally, proper ventilation is essential in constructing well managed calf barns for group housing systems. Appropriate air flow is crucial to the health and wellbeing of the calves. By using the data offered by automated systems and providing calves with clean, ventilated, comfortable housing, group housing can be an alternative to hutches. Group housing with automatic calf feeding systems have the potential to improve the welfare of both the calves and producers by still providing the calves with individual attention through data management and removing calf feeding as a task for the producer.

Take Home Message: Group housing calves provides calves the opportunity to interact early in age, that individual housing systems could not provide. Using an automated feeder allows the calves to still receive individual care and attention through data provided by the feeder. Group housed calves can stay healthy if the proper management is taken by reviewing the data and ensuring clean housing and proper ventilation.