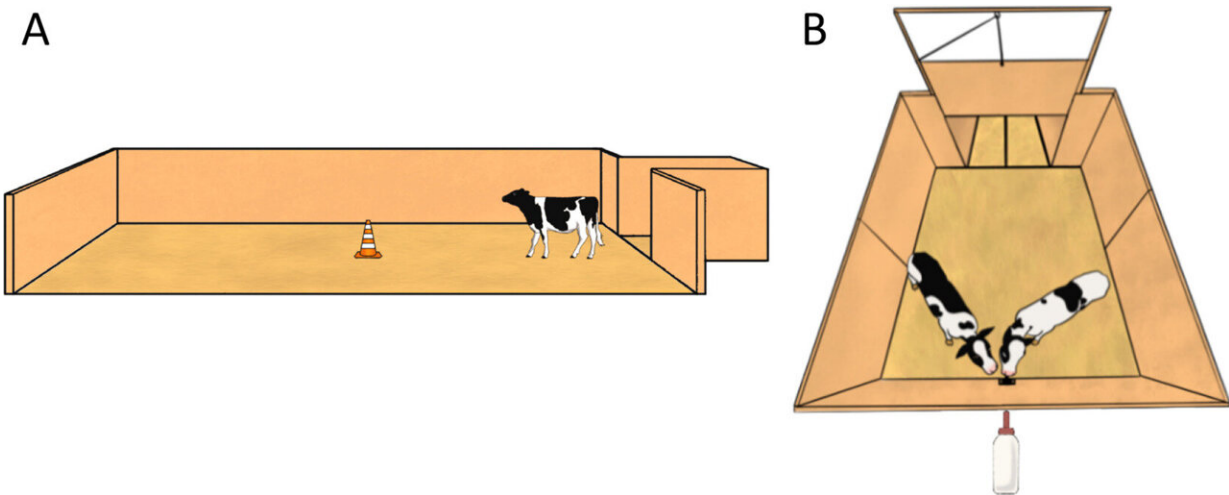


# Two recent studies expand understanding of how early social housing helps dairy calves thrive

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Experimental arenas for (A) personality tests and (B) competition tests. Focal calves ( $n = 9$  individually and  $n = 9$  pair housed) were individually subjected to 2 personality tests to assess their behavioral reactivity to novelty. Each personality test consisted of 3 different sessions: open field, novel object, and novel human. Competition dyads ( $n = 18$ ; i.e., a focal calf and its assigned competitor) were subjected to a competition test composed of 2 test sessions per day for 5 consecutive days. In the arena, a single bottle filled with 0.5 L of whole milk was accessible. Credit: *JDS Communications* (2023). DOI: 10.3168/jdsc.2023-0378

Dairy industry professionals continuously work to ensure the highest possible welfare for dairy calves, including fine-tuning their housing to

improve overall health, well-being, and performance. Two new studies in *JDS Communications* are illuminating our understanding of paired housing in the critical newborn and pre-weaned stages of dairy lives by showing that housing designed to facilitate early socialization can build behavior skills, shape calf personalities, and ultimately, set up animals for success in the herd.

Dairy cows are [social creatures](#)—they seek contact with fellow calves after birth, and their eventual social status within herds can play a role in their access to water and food.

Competitive access to resources was the focus of a [new study](#) from Marina A.G. von Keyserlingk, Ph.D., of the University of British Columbia in Vancouver, Canada, and her team. During this first-of-its-kind competition study for this age group, the team focused on how paired [housing](#) might particularly impact the social competition skills of preweaning dairy calves.

Dr. von Keyserlingk explained, "We know from previous research that adoption of social housing—or pairing two or more calves together—can positively impact future resilience and behavior. We wanted to understand the effect of early social housing on dairy calves' competitive skills, meaning their willingness and speed to take action toward consuming milk when another calf is in contention for the same bottle."

To do so, the research team observed a group of 18 three-week-old bull and heifer calves who had been divided equally into either individual or pair housing at 11 days old. At the start of the study, the calves were personality tested to control for the influence of naturally bold personalities on their competitive abilities. Once the team identified their personalities, calves from each housing group were paired together for a competition over a single milk bottle.

Over five days of testing, the results showed that pair-housed calves spent, on average, more time drinking from the bottle and were faster to approach the milk than individually housed calves.

Dr. von Keyserlingk said, "Our findings add to the growing evidence that early social housing is beneficial for dairy calves and boosts the behavioral development—such as competition skills—that builds toward future success."

Similarly, a [new study](#) from the Department of Animal Sciences at the University of Florida led by Emily Miller-Cushon, Ph.D., examined how group housing impacts dairy calf personality traits.

Dr. Miller-Cushon noted, "There is growing adoption of social housing for calves in the [dairy industry](#), yet the age of introduction can vary widely, despite evidence across species that indicates social isolation early in life can result in long-term adverse consequences to the calf's development."

Dr. Miller-Cushon and her team set out to understand how social housing can influence a calf's eventual personality traits after birth and during the early preweaning period.

Dr. Miller-Cushon said, "Personality is of growing interest in dairy cattle as it may be associated with outcomes related to an animal's performance and welfare, including feeding behavior and weight gain for calves and milk production in adult cows."

In order to fill in research gaps in the understanding of how early socialization influences personality traits, the team studied 32 heifer and bull calves for four weeks, starting at birth. For the first two weeks, the calves were split into two groups (either individually housed or housed in pairs) before they all moved to group housing at four weeks old. The

team then tested the calves' reactions to standardized tests for assessing personality traits: an open field, a novel object, an unfamiliar calf, and an unfamiliar human test.

Dr. Miller-Cushon explained, "We found that calves housed in pairs were bolder compared with calves housed individually before grouping when it came to novel objects and unfamiliar calves, which suggests that early-life social contact does have the potential to influence [personality](#) traits in group-housed calves."

While both research teams were quick to advocate for further research into social housing better to understand its benefits over time and implications for management, their combined work provides essential guidance on the positive impacts of socialization for [dairy calves](#) early in life.

**More information:** Malina Suchon et al, Social housing improves dairy calves' performance in a competition test, *JDS Communications* (2023). [DOI: 10.3168/jdsc.2023-0378](https://doi.org/10.3168/jdsc.2023-0378) K.N.

Gingerich et al, Social contact from birth influences personality traits of group-housed dairy calves, *JDS Communications* (2023). [DOI: 10.3168/jdsc.2023-0383](https://doi.org/10.3168/jdsc.2023-0383)

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