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Contact: Brittany Morstatter
ARPAS@assoehq.org

Group Maternity Housing of Dairy Cows Creates Benefits and Challenges

A new invited review in *Applied Animal Science* examines the housing and management of dairy cows in group maternity areas.

Philadelphia, PA, January 27, 2020—Designing a maternity area for dairy cows requires knowledge of cows’ natural calving behaviors, as well as risk factors for poor health of cows and calves after parturition. Scientists from The Ohio State University analyzed the literature to describe the published research on the housing and management of dairy cows in group maternity areas. “Maternity area design and management is highly variable throughout the world, and recommendations for maternity areas vary by country,” said lead author Katherine Creutzinger. Individual maternity areas allow one cow to give birth in a separated area; whereas group maternity areas provide an area for more than one cow to give birth. Housing cows in group maternity areas creates unique challenges compared with housing cows in individual pens.

Advantages of keeping cows in group maternity areas include limited pen moves, reduced risk of calving in freestalls, and potentially improved farm labor efficiency. Individual maternity areas also have advantages, but the cow must be moved either before or during labor, which may interfere with the normal progression of labor and may result in the cow giving birth in an undesirable area. However, moving cows into or out of the group maternity area results in social instability. Up to 5 pen moves may occur in some farms during the period around calving, with an increase in agonistic interactions among cows after each regrouping.

Other disadvantages of group maternity areas might include high stocking density, limited opportunity to seek isolation before calving, and ensuring pen cleanliness. Group maternity pens should be designed to provide sufficient space during periods of high calving frequency and to provide opportunities for seclusion during calving. Practices that ensure maternity area cleanliness promote cow comfort in addition to reducing disease risk.

“Research using cows kept in individual pens may be extrapolated to those in group settings; however, there are likely unique stressors that cows encounter as they undergo labor in a group that require additional research. For example, effects of problems that may arise from limited space, high stocking densities, regrouping, and other social interactions on the success of a cow’s transition period are not well understood,” coauthor Dr. Kathryn Proudfoot said. “We encourage more work aimed at developing group-housing systems that allow cows to express their natural behaviors, while maintaining good hygiene and health for the dam and calf after calving.”

*Applied Animal Science* Editor-in-Chief David K. Beede said this review “addresses management and housing with multiple dairy cows in group maternity areas. At calving, cows in group pens are motivated to seek isolation, but their ability to do so can be limited. The review also addresses ways to solve this challenge for the welfare of transition cows and their calves.”
The authors identified opportunities for additional research. The majority of research on group maternity areas has focused on creating opportunities for isolation-seeking behavior for dairy cows to facilitate the expression of natural calving behaviors. Overstocking is associated with increased risk of injury or lameness, reduced milk production, and changes in social behavior, but there has been little research on the effects of reduced space allowance on cow and calf behavior and health after calving in group maternity areas. More research is also needed to determine the effect of regrouping on the behavior of dairy cows kept in group maternity areas.

The article appears in the February issue of *Applied Animal Science*.

NOTES FOR EDITORS


Full text of the article is available to credentialed journalists upon request; contact Brittany Morstatter at +1-217-356-3182 ext. 143 or arpas@assochq.org to obtain copies. To schedule an interview with the authors, please contact Dr. Kathryn Proudfoot at or kproudfoot@upei.ca.

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