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Social Dynamics of Cows – Why Pen Moves Matter

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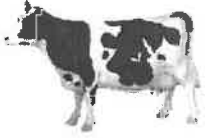
Cows are herd animals – a simple fact that dictates much of their behavior. When grouped together, they will develop distinct hierarchies and also preferred partners – buddies that always hang out together. One study showed cows within a group will socialize more with similar breed, lactation number and/or production level. It's like high school all over again! Except that these social relationships provide stability and comfort to the herd as a whole. Everyone knows where they stand and the herd benefits – in the wild, by not being eaten by coyotes; in our modern production settings, by improved health and production.

While cows naturally will group themselves with their preferred partners, usually in groups of about 30 animals, we group animals based on convenience and management of their production. Be it diet, level of production, size of the holding area or parlor, we manage group size and type to fit our management purposes. While very logical, sometimes, this can have detrimental impacts on animal health and productivity. If groups are too large, you will see decreased space for appropriate social interaction and increased competition for resources (feed bunk and beds for example) both of which will increase the number and frequency of negative social interactions. The ones that suffer the most are the early lactation, low production, younger cows in the group.

In addition, when animals are moved from group to group, as we often do, it takes 2-7 days (depending on the study) for that group to “normalize” after the new addition. And it's the whole group that is affected, not just the new animals that join it. Regrouping has been shown to decrease feed intake, temporarily decrease milk production and decrease rumination and lying time. The health implications of this include increased risk of ketosis, DA, and lameness. These effects are even more so, the more often cows are cycled through a pen. Think about your close up dry and maternity pens. They are in constant regrouping turmoil right at the peak of impact on health. In one study, cows spending less than 7 days in a close up pen had increased risk of milk fever, retained placenta and uterine infection compared to those spending at least 7-14 days in the close up group. This short duration of stay also resulted in less milk over the entire lactation – 3,300 lbs in first calf heifers in one study!

So, what can you do? As managers of cows, you still need to group in ways that make sense for your facilities. But there are some simple changes you can make to decrease the effects of regrouping.

- **Minimize the number of pen moves during the transition period as much as possible and monitor the time spent in each group.** Cows ideally should remain in a group at least 2 weeks to minimize the turbulence in group changes. Alternatively, in maternity pens, where animals must constantly be moved, try to move cows as close to calving and move them out to a stable group as soon as possible after calving. One study shows that ketosis, DA and rates of culling in the first 60 days of milk are doubled for cows that spend 3 or more days in a maternity pen, compared to those that calve within 2 days on the pack.



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- **Try not to put sick fresh cows in your “sick” pens.** Your fresh cows are the most sensitive to disease as their immune system is the lowest right after calving. Studies show that the risk of contracting contagious mastitis or salmonella is highest in the sick pen.
- **Movement from pens in close proximity to each other** or with similar fixtures (stalls, headlocks, waterers, ect), will minimize stress on regrouping.
- **Consider grouping first lactation animals in one pen,** or if you cannot, move these animals into a new group in pairs, rather than alone to decrease stress of social change.
- **Move animals later in the day and away from feeding time.** Cows are crepuscular – meaning that they are most active during dawn and dusk and most aggressive at the feedbunk during feeding time or feed push up. Moving animals into a new group away from this time will decrease the number of negative social interactions and decrease impacts on dry matter intake for the resident cows in the pen.
- **Beware of overcrowding.** The other natural behavior of cows is that they are alleomimetic – they all like to do the same thing at the same time. Three-row pens at 100% bed capacity are already overcrowded at the feedbunk. With the dominant cow behavior of “spreading out” at the feedbunk, combined with the herd’s desire to all eat at the same time, studies show that cows do not fill more than 80% of 24-inch headlocks unless forced to by us, further worsening the overcrowding at the bunk. The losers in this case are your younger, lower producing cows and it is exactly these girls that need to eat! If you can only pick one pen to not overstock – chose your pre-fresh heifer groups.

Simple attention to some basic cow behavior can help your herd health and production over all.

NORTHWEST VETERINARY ASSOCIATES WISHES YOU ALL A HEALTHY AND HAPPY HOLIDAY AND NEW YEAR!

As a reminder, our office will be closed on Christmas and New Year’s Day.

