

contrast, a three or six-row barn would offer one-third less bunk space, or 16 inches per animal at one cow per stall.

Preventing overcrowding in the close-up group at all times of the year is not easy, even in a well-designed facility. This group consists of a small number of cows, relative to the milking herd, grouped together for a short period of time under a constant state of flux. One factor influencing the size of this flux is the affect of summertime heat. It is common for fertility to be very depressed through July and August, with a rebound in reproductive performance following return to cooler conditions in the fall. This has a major impact on throughput in the transition cow facility where the barn is under-stocked during April and May and extremely overcrowded during July and August, just at the time when these cows will face the next round of heat stress. Making improvements in barn ventilation and heat abatement measures for both lactating cows during the breeding period and transition cows are therefore vital for maintaining a more consistent number of transition animals in the transition groups.

The number of pen changes a cow undergoes during the transition period and the timing of these changes can have a big affect on precalving intakes. Using a one-group dry cow group or skipping the move to the bedded pack for a calving that may not occur for a week, can reduce the number of turmoil events that cows have to deal with every time they see a new group of cows. Moves occurring between 3 and 5 days before calving appear to have an adverse effect on cow health, NEFA concentrations, and associated risk for ketosis and DA.

Cows which are not moved or that have short stays in the maternity pen of less than 1-3 days appear to fair better than herd mates that undergo a longer duration stay. If labor supply is good, it might be best to leave cows due to calve in the close-up group until “feet are showing”. Move these animals to the calving pen until calved, then onto the fresh cow group. Time spent in the calving pen is then measured in hours, rather than days.

I would like to make an attempt at tying all of this together with some research from the University of Illinois. We all know that a cow’s dry matter intake (DMI) goes down prior to calving and that many nutritionists (and vets) preach that we want to have the prefresh animals eating as much as they can. These animal scientists wanted to know whether the amount of this precalving DMI drop was more important than the actual precalving DMI on the effects of postcalving intakes and liver fat accumulation. It was concluded that early postpartum DMI and liver fat content are more highly correlated to **CHANGES** in dry matter intake during each of the three weeks prior to calving than the actual dry matter intake pre-calving. From a practical standpoint, this means that a lower, more consistent intake during the prefresh period is more important than an inconsistent, higher intake. Bottom Line: Good intakes are important in the prefresh period, but most important is maintaining a consistent intake and preventing a severe, precalving intake drop. This can best be accomplished by combining a well-balanced close-up diet with the management factors that I have just discussed.