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Philosophical Thoughts on Growing Dairy Heifers

The environmental stressors in the Midwest coupled with increased feed costs has created a new industry in the southwest. Many large dairy farmers are shipping weaned calves to states with open land and water to grow the heifers to return to the dairy. Some beef feedlot owners have converted their beef yard to heifer grow yards to take advantage of a need and decrease risk. Most grow yards are on a cost plus basis so the yard owner knows his/her income as soon as the heifers enter the yard. We are privileged to have the opportunity to feed some large grow yards and have been able to compile a significant amount of data and observations along the way.

Grow yards can vary by when and at what weight the calves arrive. Some have a corresponding calf ranch that receives the calves shortly after birth and keeps them until they go home as springers. Others receive weaned calves and send them home at a specified gestational age. The primary area of health risk is the new arrivals whether they are newborn calves or freshly weaned. The opportunities for illness due to travel induced stress is significant. For the sake of this discussion, we will begin with weaned calves and nutritional and health management. We have found that if a calf must be treated for any illness more than twice during the early phases, it is unlikely that they will be able to sustain the same growth and weight gain as their peers. Because of the decreased weight per day of age, pubertal onset is delayed and therefore they fall behind moving through the yard and often never become pregnant even after multiple attempts. We have developed tracking methods for these treated heifers and suggest to owners that these calves be culled from breeding and fed for beef production. When we change the objective from becoming pregnant to just gaining weight, these heifers have an increased likelihood of returning some of the investment cost.

We have always worked diligently for clients to be able to grow heifers at the lowest cost possible without sacrificing performance. The key is to be able to accurately monitor body condition score throughout the process. If we feel the pre-breeding group has dropped some condition then we will make a ration adjustment to compensate. The problem is that by the time a body condition change is significant enough to be observed, it is likely too late and that group of heifers will fall behind our gain goals. The other problem with animals where we would like to push puberty to an earlier age is that if they are too thin, then they are partitioning all of the nutrition to growth and therefore there is no nutrition remaining for reproduction. If the animal cannot meet growth and maintenance needs then they will not achieve pubertal onset.

One strategy we have implemented is a counterintuitive approach. We will allow these younger heifers to add some condition so if nutrition becomes limited, they have some body reserves to draw from to compensate for the slight deficiency in the ration. I can hear the reader suggesting that I should have adequate energy for both in the ration in the first place. That statement is correct and we do have adequate energy for a specified range in weight. The problem arises when these heifers hit a growth spurt and redirect nutrition to rapid growth. This happens

much the same is small children. How often have you seen kids look a little pudgy and then the next time you see them they are six inches taller and thin? I have watched heifers do the same thing.

We have found that if we carry a slight amount of condition in these heifers that they can utilize when they hit these growth spurts, then they do not sacrifice reproductive performance. If they do not have this excess condition to use as a back up, then they will shut down reproduction until which time there is an overage of nutrition to meet growth and reproduction.

Before applying this strategy, we would see ebbs and flows in reproductive performance. Repro would be going very well until a group of heifers went through a period of growth then repro would drop off. This would always set in motion a flurry of activity from the other players in heifer development. The manager would panic because he/she did not want to report to the owners that there was a slump. The manager would then call breeders, veterinarians and nutritionists to find out what was wrong and get it fixed. Veterinarians would double check vaccination protocols. Individual breeders would be compared to others on the crew to see if there was a weak link. Then the nutritionist would be sending forage samples to labs for mycotoxin evaluation. All of this activity would be ongoing and then a few weeks later the preg checks were better because the heifers had passed the growth spurt and now had nutrition remaining for reproduction so reproductive rates improved. This would lead everyone on the team to breath a sigh of relief and work would return to normal.

It is counterintuitive to let these younger animals accumulate some condition but think of it as a savings account that the heifer can use to spend on reproduction when they are growing. Having a high percentage of pregnant heifers at an early age will always have a positive effect on the bottom line.