STRATEGIES FOR WEANING & PRECONDITIONING MANAGEMENT OF BEEF CALVES

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Abstract

Often times when we begin the process of preparing calves for the feedlot, producers think only in terms of the weaning and preconditioning parts of the process. The reality is that feedlot performance can be affected by any negative health event that occurs during the suckling period. This is especially true for any event that interferes with the intake and absorption of colostrum. This is not to imply that weaning and preconditioning management is not important, because it absolutely is. However, we must be mindful that proper management is needed during the entire suckling phase in order to set the calves up for a successful transition to the feedlot. The objective of this presentation is to discuss factors that impact weaning and preconditioning programs and calf health and performance.

Key Words: Weaning, Preconditioning, Vaccination, Feedlot

Setting the Stage for Successful Weaning

The vast majority of suckling calf morbidity and mortality occurs during the first 30 days of life. Factors such as dystocia, newborn calf vigor, the management of the calving area, and the nutritional management of the cow herd, can all impact the health and lifetime productivity of the calf crop.[1] This can certainly be driven by the intake and absorption of colostrum in the first 24 hours of life. When taking all this into consideration, one could argue that successful weaning begins in the last trimester of the pregnancy that produces the calf.

The effects of dystocia on calf health and colostral intake have been well documented over the years. Colostral intake can be decreased due to metabolic acidosis and depression, an overall lack of

vigor, or musculoskeletal injury due to rib fractures or swelling of the tongue and face. These calves take typically longer to nurse and have lowered serum immunoglobulin levels. Partial or total failure of passive transfer (FPT) leads to poorer health performance during the suckling phase and decreased feeding performance in the feedlot.

Calf scours is a common management disease in beef herds that can have a devastating effect on profitability and future feeding performance. Factors such as FPT, “weak calf syndrome”, poorly maintained calving areas, and too many females in too small an area are all risk factors for this syndrome. It has been said that the process of carcass marbling is a straight line, “lifetime” event. This means that any negative impact on health or growth can decrease the calf’s ability to meet its genetic potential for this important trait. It would be logical to assume that the weight loss and burning of fat reserves during a scours event would have a negative impact on the expression of marbling.

Nutritional management of the beef breeding herd can have a significant impact on calf health, response to vaccination, and growth. This component of ranch management can make or break response to vaccination, overall calf health, and the weaning program in general. Proper body condition score at critical times is paramount for successful calf health. Energy supplementation needs to be adjusted to fit times of metabolic need and critical periods of protein deficiency must be avoided. Recent research from western Nebraska has shown the impact of fetal programming on future productivity of the cow’s offspring. While these studies have looked primarily at future reproductive performance there are also negative ramifications to protein deficiency when these steers get to the feedlot.

Weaning and Preconditioning

Weaning management involves more than just a health program. The weaning environment can have a huge impact on the successful transition of the calf to independence. Weaning pens need to be well maintained to minimize the stress of weaning, decrease the incidence of musculoskeletal injuries,

and ensure the proper introduction of feed and water. A “Goldilocks” approach needs to be taken to pen maintenance to avoid extremes in mud or dust. Bedding should be applied to these pens as needed. Extreme care should be taken when handling these young calves.

The method by which calves are introduced to the weaning environment can have a dramatic effect on performance. Research has shown that calves are less stressed and gain better when allowed to have “fenceline” contact with the cows for several days after weaning.[2] When compared to calves weaned with traditional methods (immediate separation followed by no contact), fenceline weaned calves walked the pen perimeter less, vocalized less, and spent more time eating and laying down. This resulted in a 28 pound advantage in weight at 10 weeks after weaning.

There are multiple ways to institute a health program prior to weaning. Since ranch management factors will vary there is no one size to fit every operation. The following are some basic considerations that should be reviewed with the owner in respect to weaning:

- Make sure that the vaccination closest to weaning is a booster. The primary vaccination can occur anywhere from grass turnout to 2-4 week prior.
- We try to use MLV vaccines in our herd health programs whenever possible.[3]
- Parasite control prior to vaccination in calves will help drive immune response in a positive direction. Parasite control should be planned based on the species present and the level of infestation at the time of treatment.
- Coccidiosis control is a must for the weaning program. There are advantages to introducing a coccidiostat to the calves prior to weaning if possible.
- Castration and dehorning need to be done as early as possible. Pain mitigation strategies need to be implemented as needed.
- Utilize diagnostics and evaluate risk factors when planning a preweaning / weaning health program.
- Marketing opportunities need to be evaluated when making herd health decisions. Make sure that the vaccination schedule will cover the needed pathogens if calves are to be marketed via a specific program.[4]

Preconditioning builds upon proper suckling calf management, a solid health program, and an uneventful weaning. Over the next 45 days the calf learns to eat from a bunk, drink out of a waterer, and figure out the social order in the pen. Hopefully health issues are minimal along the way, but there can be BRD breaks three to four weeks after weaning. It is critical that these calves be preconditioned at least 30 days as research has shown little health benefit during the subsequent feeding phase if calves are weaned a shorter time.[5] This is also true for calves coming from a backgrounding yard to the feedlot.

Summary

Calf health management prior to feedlot arrival will have a major impact on animal performance during the feeding phase. This process begins in the last trimester of pregnancy so that we ensure that calves are born with a minimum of dystocia and adequate vigor to ensure colostral intake. A well designed calf health program that utilizes diagnostics and evaluates disease risk factors is critical to prepare this calf for weaning. Once weaning arrives it is imperative that we handle that calf in a low stress manner to ensure its ability to respond to our booster vaccinations and make the transition to its new environment. This continuum from pregnancy through the end of preconditioning will help to ensure that these calves perform adequately all the way through the feeding phase.

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