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Early Weaning – When is it Appropriate?

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Weaning is a major event in cow-calf management. Producers have a variety of options when it comes to deciding when to wean their calves. Early weaning has gained some attention in the popular press as well as in the research community. The research results to date on early weaning provide some useful information on performance impacts and implications for profitability.

Traditional Weaning Ages

The first question that comes to mind when looking at early weaning is, “What is considered early weaning?” The USDA’s National Animal Health Monitoring System (NAHMS) reported in a 1996 survey that the average weaning age of beef calves in the U.S. was 221 days of age or a little over seven months of age. Less than 9% of the operations surveyed reported that they weaned calves at 170 days of age or less. Over three-quarters of these producers reported weaning calves between 170 and 259 days of age or roughly between five and one-half to eight and one-half months of age. Calves weaned at five months of age or less may be considered early weaned, and there are notable advantages to using early weaning strategies in cow-calf operations. The striking part of the NAHMS survey is that when producers were asked to identify the most important factor in determining when to wean calves, a lack of flexibility in selection of weaning time to address environmental or market conditions was revealed. Relatively few producers indicated that cow condition, forage availability, or market price drove the decision of when to wean calves, all of which are important considerations in deciding to early wean calves.

A well-recognized weaning target in many operations is 205 days of age (seven months of age). Weaning weights are typically adjusted to 205 days of age in cattle performance testing and evaluation programs to compare calf preweaning growth performance adjusted to a common endpoint. Many breed associations have defined weaning age windows for calves to be eligible to have adjusted weaning weight calculated and recorded with the breed association. These acceptable weaning age windows vary from one breed to another. For example, the American Angus Association currently allows adjusted weaning records on calves weaned from 120 and 280 days of age, while the American International Charolais Association requires calf ages to fall from 140 to 270 days for adjusted 205-day weights to be calculated and accepted. These weaning age windows extend well beyond the traditional five and one-half to eight and one-half month weaning age window, and thus early weaning is possible even in seedstock herds. It is important to keep up with current weaning age guidelines if participating in breed association registries and record programs.

Production Implications

Early weaning is often used to improve cow condition for rebreeding, particularly when forage is limiting. Research shows that when the stress of lactation is removed by early weaning, cows gain body weight and condition. A Florida study reported that early weaning thin cows resulted in a significant reduction in the amount of total digestible nutrients (an indicator of dietary energy often referred to as TDN) needed to support cow body weight gain. Early weaning also effectively initiated postpartum estrus in these cows. Improved pregnancy rates in cows with early-weaned calves have been documented by numerous researchers. Early weaning may be most beneficial in years when pasture production is inadequate to support herd nutritional needs.

By feeding early-weaned calves a concentrate-based diet from weaning time until the time they would be conventionally weaned, research consistently shows that their body weights will be equal to or greater than the body weights of calves nursing their dams up to conventional weaning age. Operations developing heifers for replacements may want to consider less aggressive preweaning nutritional management strategies to prevent negative impacts on long-term productivity. Choosing the most appropriate early weaning diet should take into account whether or not calf ownership will be retained through the feeding period and feed cost and availability. Steers weaned at approximately five months of age versus seven months of age have been shown to have lower feedlot feed intake and better feed conversion. Research indicates that early-weaned calves tend to gain less in the feedlots, have lower carcass weights, and have similar yield grades compared to calves weaned at traditional ages.

Early-weaned calves placed on finishing diets exhibit accelerated growth rate and fat deposition early in the feeding period. Early-weaned steers fed a high concentrate diet are very efficient in converting feed to gain early in the feeding period. Early weaning has resulted in improvements in both feedlot feed efficiency and steer quality grade. One research trial showed an increase in the percentage of steers grading Average Choice or higher by 40% with early weaning at five months of age versus conventional weaning at seven months of age. Early weaning can be a means to produce high quality cattle at a young age by directing young calves to a high quality grade market more quickly than traditional weaning strategies. An evaluation of calf genetics may be useful to identify calf frame sizes, growth potential, and maturity rates that are best suited to early weaning on high concentrate diets.

Management Requirements for Early Weaning

Most early weaning strategies investigated by researchers have involved weaning calves that were at least 90 days old because of additional labor and management required with weaning at younger ages. One of the challenges with early weaning is getting calves started eating and drinking. In situations where calves are weaned at a very young age (less than three months), intensive management may be necessary. These extremely young, lightweight calves are highly stressed from weaning and may display a wide variation of eating and drinking behavior. It is critical to get these young calves trained to a feed bunk and water trough as quickly as possible to reduce the risk

of illness. To both lower the risk of health problems and promote calf growth, implementing proper vaccination programs in consultation with a veterinarian and getting calves accustomed to concentrate feeds is essential prior to weaning. Furthermore, low-stress weaning techniques such as fenceline weaning or fitting calves with anti-nursing devices may be valuable in early weaning programs.

Early Weaning Economics

Mixed results on the economics of early weaning have been reported. In general, increased labor and feed costs are associated with early calf weaning and subsequent backgrounding. These increased costs may be easily justified during drought conditions or when herd females are thin and run the risk of low rebreeding rates. The production efficiency benefits from early weaning must lead to economic rewards for the individual operation for early weaning to be profitable. The success of early weaning programs will depend upon forage and feeding programs, when calves are marketed, and individual management. For more information on early weaning or related topics, contact your local county Extension office.