

# Vet Call

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## The effects of early weaning

Calves traditionally are weaned after 200 days of age. However, a number of factors may cause producers to consider weaning at a younger age, with weaning ages of 90-150 days being common.

Usually, decreased forage availability due to drought, lost pasture leases or poor forage quality provides the incentive to wean calves early. Reports that early weaning can decrease age at slaughter, improve feed efficiency in the feedlot and increase the percentage of carcasses that grade Choice or higher also may stimulate producers to use an early-weaning strategy.

Early weaning typically is applied when the calf is at least 60 days of age. The rumen of such an animal is nearly fully developed, and dry-feed consumption can be facilitated with proper management.

### Phase 1

The first phase of early-weaning nutrition concerns the 7-14 days immediately postweaning, when specialized diets and management are required to adapt the calf slowly to a dry diet. It is important to keep in mind that microbial populations in the rumen can require up to 14 days to completely adapt to a new diet.

Premium, quality grass hays are an essential part of the postweaning phase of nutrition. These forages should be offered free-choice and in the long-stem form. The long particles stimulate ruminal motility and encourage rumination. These factors are vital to achieving a smooth transition from an immature rumen to a fully functional one.

It also is important that calves be introduced to concentrate feeds at this time. During the postweaning phase, calves are predisposed to low intake; therefore, the energy density of the diet should be increased. Concentrate feeds that complement the basal forage should be selected. That is, they should be low in starch, high in fiber and moderate in protein.

Some feeds that fit into this category are soybean hulls, corn-gluten feed, distiller's

dried grains and rice meal. Corn and other high-starch feeds also can be fed to newly weaned calves; however, care should be taken to limit the amount. In general, corn should be fed at 0.5% of body weight or less during the 1-2 weeks postweaning.

Avoid high-moisture feeds in the early-postweaning ration. These feeds are unfamiliar to the calf, and intake often is too low to sustain the calf's high nutrient demands. Examples of feeds that fit into this category are silage, wet distiller's grains and ensiled grains. Feeds extremely high in moisture, such as lush pasture, can have adverse effects on the calf during the postweaning phase if the calf is unable to consume enough dry matter to meet nutrient requirements.

### Phase 2

The second phase of early-weaning nutrition begins once stable intake levels have been reached on the postweaning diet. As calves enter this feeding phase, they should be adapted slowly to a ration containing 50%-80% concentrate over a period of 10-14 days.

Rations containing large proportions of high-fiber byproduct feeds are the easiest to manage in this circumstance. Conversion efficiencies are extremely good at this stage of the calf's life, ranging from 4.3 pounds (lb.) to 5 lb. of dry matter consumed per pound of gain.

This is the time to adapt calves to high-moisture feeds like silage by providing them with the opportunity to select these feeds in addition to their normal diet. Once consumption has reached a significant level (0.5% of body weight), high-moisture feeds can be substituted into the diet in favor of other feeds.

This also is the time to consider implants and ionophores for the calves. A growth-promoting implant is an excellent investment in the calf's growth rate, and ionophores will promote improved feed efficiency and gain. Implants do, however, negatively affect marbling and could reduce the number of cattle qualifying for *Certified*

*Angus Beef*<sup>™</sup> product and other quality-based premiums.

### Study the results

A trial done in Nebraska reports that total feed costs were lower for the cow herd when calves were weaned at 150 days vs. 270 days, and most of the total feed-cost difference was attributed to the greater amount of harvested forages fed to the late-weaned cows in order to have all the cows calve in a similar body condition.

The early-weaned calves were placed in a feedlot at a younger age and a lighter weight; therefore, they had more days on feed and less average daily feed intake than later-weaned calves. Feedlot average daily gain (ADG) and feed efficiency (FE) were not different between weaning ages. The percentage of cattle that graded Choice or higher in the Nebraska study was greater for early-weaned calves.

Work done in Illinois showed that a random set of calves weaned 55 days earlier than other calves in the herd had lower daily feed intake in the feedlot, better feed conversion, improved marbling score, and an increased percentage of calves grading Choice or better.

Before committing to a management system using early weaning, all the benefits and costs must be weighed. The Nebraska researchers looked at the economic effects of early weaning and found that, although cow costs were reduced, heifer-development costs were increased, and feed and yardage costs were increased during the feedlot phase of production.

The decision to move to early-weaning management will shift costs from one enterprise to another. Producers must consider cow costs, heifer-development costs, and the time of year and method of pricing when marketing finished cattle and cull females.

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