

Guidelines for Successful Creep Feeding

by Daniel Herold, Ph.D., Beef Technical Consultant Hubbard Feeds Inc.

Heavier weaning weights sure help when it comes to paying the annual costs of maintaining a cow herd. Several management options, such as careful sire selection and a solid health program, give good results when the main objective is producing more pounds. Creep feeding is another well-established management tool that will not only enhance weaning weight but also can produce additive gain to sound genetic and health programs. By filling the nutritional gap created when milk and forage can no longer meet calf dietary needs, creep feed helps calves attain their genetic growth potential. However, just like any other nutrition-management tool, creep feeding must be handled properly to yield successful results.

Traditional creep feeds made of home-raised grain such as corn and oats appear to have a cost advantage when compared with high-fiber commercial formulations. However, this advantage is certainly not apparent when we consider proper nutrition of the calf from birth to weaning. We are already familiar with the negative associative effect starch can have on forage fiber digestion and how feeding too much grain to grazing cattle will reduce energy they obtain from grass. Therefore, let's consider the reasoning behind creep feed ingredients based on animal requirements. The advantage in providing high-fiber creep as opposed to grain is centered on both energy and protein requirements of the nursing calf, and keeping these nutrients in proper balance. Growing animals need more dietary protein than mature cattle due to their relatively high rate of muscle, bone, and organ development at a young age. The busy calf also requires energy, which maintains activity and body heat, and fuels the metabolic systems that contribute to growth. Keep in mind that any energy the calf consumes in excess of these basic needs will be stored, and since energy is stored as fat, excess intake will result in an overly conditioned calf at a young age.

Now let's consider fiber versus grain creep feeds and how each relates to calf requirements. The calf with free choice access to grain creep is unable to burn up the high amount of energy he consumes. In addition, the protein content of grain is below the calf's requirement for growth, which leads to a deficiency for muscle synthesis, and a loss of potential lean gain. Both of these factors can contribute to a greasy calf that lacks frame development because protein and energy are not in balance with calf requirements. Greater protein concentration in high-fiber creep more closely meets the calf's needs for growth and muscle development, and since digestible fiber has less energy density than starch, high-fiber creep is less prone to exceed energy needs than grain at the same level of intake. Therefore high-protein, high-fiber creep feed gives the better balance of protein and energy, and along with the correct amount of minerals and vitamins, actually provides the greatest cost advantage.

Feed intake, requirements for growth, and sources of nutrients undergo a cycle of change from birth and weaning. This change is important when evaluating creep feed economics. Consumption of creep is minimal when calves are young and milk production is high, but it can exceed expectations when milk and grass are unable to meet requirements late in the grazing season. Calves will convert creep feed to gain most efficiently when eating 2 to 4 lbs. daily early in the season, and will be less efficient as age and size increase, and intakes exceed 10 lbs. This is a very important factor to consider as calves approach their weaning date. Calves that are heavily creep fed when they should be weaned will over-consume and exhibit diminished feed efficiency. At this point calves need to be weaned off both the cow and creep feed and should be provided with a good quality starting ration. Weaning calves off the cow and onto only creep feed is not a long-term solution and should only be done as a transition step onto the starter ration. Keep in mind that creep feed was formulated to supplement milk and forage intake and was not meant to be a complete feed.

Milk production and forage quality decrease late in the season, which coincides with calves developing their greatest need and capacity for feed. If these older calves are allowed to consume creep as the only source

of feed for long periods of time, the high volume of energy they can consume can exceed their requirements and lead to excess condition. This is another case of an imbalance between protein and energy.

More mature nursing calves have a lower rate of gain per pound of body weight and therefore have lower nutrient requirements than when they were younger. Obviously, the benefit of weaning a heavier calf is lost if extra weight is discounted. Proper and timely weaning management is the key to avoiding excessive creep consumption. Consider the old rule of thumb that applies to growing and finishing animals. Never step backward in energy level or plane of nutrition. The correct intake of high-fiber creep feed will set calves up for a smooth transition to the growing phase.

The benefits of creep feeding can be especially valuable in times of drought. However, it is important to keep in mind its main advantage remains to enhance weaning weight. Simply providing creep feed does not substantially reduce pressure on the cow by diminishing demand for milk, nor does it provide the means to greatly extend pasture. Calves will select the most digestible, highest quality diet available to them as their first choice. This means they prefer milk first, and tender new grass second, followed by creep feed as grass matures. In times of drought the demand for milk will still be there whether creep feed is or not, but new grass will be virtually nonexistent. Therefore calves will gain much better in the absence of good grass when creep feed is available. Creep feed also helps to make early weaning the calves much easier in dry years. The rumen develops due to the stimulus of dry feed intake and by 70 days of age calves are getting about 75% of organic matter intake from milk and 25% from forage. This ratio of milk to forage intake will switch to 75% organic matter from forage and 25% from milk as the calf nears 160 days old (Western Beef Producer, July 1998). Getting calves off the cow and onto solid feed is the best way to ensure cows will get back in condition before winter with the least amount of stress and cost.

Finally, consider management of the creep feeder no different than if starting calves in the feedlot or growing replacement heifers. Keeping fresh, palatable feed in front of the calves is the best way to promote level, consistent intakes, and avoid digestive upsets caused by over-eating. Never let the feeder go empty and be aware as intakes increase closer to weaning time. Even though high-fiber creep is safe to feed, if feeders run empty, calves may bloat or founder when they are again allowed access to feed. Check for and clean out wet and inedible feed twice weekly and after every rain. Minimize the amount of feed that accumulates in the trough by allowing only 1.5 inches for the opening. Calves will learn to work to get pellets out and will keep the trough cleaner making your job easier. The challenge of creep feeding from early to late season has been made easier with Hubbard's new line of creep feeds introduced in 2002. Three products, ClassiCalf 14, ClassiCalf Midway and ClassiCalf Final Run were specifically formulated as a three-step program to meet calf needs as their intakes change from predominantly milk to dry feed. ClassiCalf Midway and Final Run contain high salt levels and Rumensin® to control intakes and reduce digestive upsets when calves develop more aggressive eating behavior late in the grazing season. Check with your local Hubbard representative on availability of these products in your area.

There is obviously more than one key to successful creep feeding. Hubbard has the right products to get calves off to a good start and keep them growing fast and lean, but most important is a solid approach to feeding and weaning management. When we put the two together, along with good health and genetic programs, we have all the inputs needed to wean more pounds. When you consider paying annual costs of maintaining the cow herd, a properly managed creep feed program helps optimize weaning weight, and this balance between input costs and returns is after all the bottom line.