## Maximizing Profit from Cull Cows

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Beef cows are culled for a variety of reasons including reproductive failure, age and unsatisfactory performance, among other reasons. Receipts from the sale of cull cows generally account for 15-30% of the annual income for an operation. Unfortunately, producers commonly market cows at the time of culling, forgoing opportunities to add value.

In the Northern Great Plains, the cull cow market exhibits very strong seasonal price trends with highs occurring in late-spring and early-summer and lows in the late-fall and early-winter. However, management strategies can be implemented to market cull cows at more favorable times. For example, spring-calving cows destined for market should be sold if they lose their calves early or have their calves weaned early to capitalize on high seasonal prices. Cows can also be fed for a period of time to delay marketing until a more favorable period. Along with delaying marketing, feeding cull cows for a period of time can increase their final weight and grade and improve their dressing percentage.

At the beginning of the feeding period, cows should be slowly adapted to a finishing diet, much like yearling cattle. Cull cows are generally coming from a forage-based diet and will need some time for their rumen microbes to adapt to a concentrate-based finishing diet. Generally, it is best to start with a diet containing ~50 Mcal NEg/cwt and gradually step up over a period of 2-3 weeks to a diet containing 60-63 Mcal NEg/cwt and 11.5% crude protein. Diets do not need to be exotic to accomplish this. Cull cows are usually mature, non-gestating and non-lactating, so their nutrient requirements are quite low.

Grazing may also be a viable option for producers to feed cull cows. In regions where winter range is available, cull cows could be grazed and supplemented to support reasonable rates of gain. Grazing is even more appealing if crop residues, especially corn stalks, are available. The general rule of thumb for cows is one acre per cow per month. However, when feeding cull cows, it may be desirable to allow more acreage per cow to provide more corn for a longer period of time. Under these conditions, it is not unreasonable to expect a cow grazing corn stalks to gain 1.5 lbs or more per day. Over two months, a cow could conceivably gain 90 pounds, or approximately one body condition score, or more. As the grazing period progresses, cows should be supplemented with a natural protein source to support forage digestion.

A common question when feeding cull cows is how long should they be fed. One of the primary concerns associated with time on feed is fat color. White fat is more desirable than yellow fat. Yellow fat is a result of cows consuming high amounts of carotene from forages. High-grain diets, which are inherently low in carotene, will help convert yellow fat to white fat. Some research suggests that feeding a high-grain diet for as few as 56 days will result in a significant change from yellow to white. However, other research has not documented a change in the amount of yellow fat in cows on feed for as long as 105 days. The decision on how long to feed cows should also be based upon the condition of the cows, expected feedlot performance, feed cost and market timing. To avoid discounts, cows that begin the feeding period in moderate (body condition score of 5) or better body condition should be fed for shorter durations. Cows that are thinner, can be fed for longer periods of time; however, it is important to remember that as the duration of the feeding period increases, it is possible that feed efficiency may decrease.

Cull cows can gain tremendous amounts of weight in relatively short time periods on high-grain diets. Research has demonstrated average daily gains ranging from <3 lbs/day to well over 4 lbs/day. Cows fed for shorter durations will likely experience more rapid gains. Unfortunately, cull cows are not very efficient. In comparison to a young feedlot animal that would likely consume 5.5-6.5 lbs feed/lb of gain, a cull cow is likely to require 7.5-9.5 lbs feed depending on how long she is fed. To help improve feed efficiency, all cull cows should be fed an ionophore and melengesterol acetate (MGA) at recommended levels.

Cull cows represent a substantial portion of the annual income on a cow-calf operation and should not be overlooked when it comes to marketing. Cull cow prices are very seasonal and producers need to be cognizant of where their marketing strategy fits within the seasonal price trends. Feeding cull cows is a viable option to add weight, improve grade and delay marketing. However, careful consideration should be paid to the cost associated with feeding cows and when the cows will be marketed. Cull cows are not efficient in a feedlot and need to have every possible management strategy implemented to maximize feed conversion.