

FEEDING CULL COWS

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Approximately 10 to 20 percent of the returns to a cow-calf operation are from selling cull cows in the fall. There are four factors that need to be considered to obtain profit from feeding cull cows. First, the cows have to be thin but healthy. Second, the buy/sell margin should be positive. Third, cost of gain should be relatively cheap. The odds of a profit are increased whenever these three conditions are present. The final requirement needed involves financial solvency. Only producers that can absorb financial risk should feed cull cows for short time periods.

Factor 1: Cows Should Be Thin But Healthy

Cows often lose up to 20 percent of their weight during periods of under-nutrition. Cows culled during a drought may have even greater weight losses. Thin cows offer an opportunity to add weight rapidly through compensatory gain. Healthy, thin cows gain weight faster than normal condition cows. Compensatory gain from thin cows should result in the highest conversion rate and gain, thus reducing the cost of gain.

Some thin cull cows are young and still growing. Most have weaned a calf and are thin due to the demands of lactation. However, some thin cows may not be able to return to slaughter cow composition for several reasons. Cows that have lung damage may appear thin and unthrifty. Cows with heavy parasite loads will be less efficient unless treated. Cows with infectious conditions such as lumpy jaw should be avoided. Older cows (greater than 4 year old) can be fed but expect the rate of gain to be less than that of younger cows. Information on the use of ionophores and implants in cull cows is limited.

Weight loss of animals is normally a composite of fat and protein with protein normally regained at a slower rate than fat. Cows that are in normal or higher condition will tend to add more fat as weight gain, resulting in lowered feed conversions. Economy of weight gains will vary inversely with initial cow condition. As cows improve in body condition, economy of gains will decline. Once cows have regained a "normal" body condition, further feeding and weight gains become increasingly less efficient because of the increasing proportion of fat deposited.

Knowing when to quit feeding cull beef cows is important because of the dramatic changes occurring in the economy of gains. Outlets for excessively fat cow carcasses is and has always been very limited. Based on Kansas research, most beef cows are fat enough for slaughter once they attain a body weight of 22 pounds per inch height at the cow's withers. While this simple formula may not precisely describe the most optimum end point for feeding and slaughter for every type of genetic combination of cow, it is reasonably appropriate for the great majority of cull beef cows being fed to slaughter. Monitoring the weight-to-height ratio of a random sample of cows during the feeding period and periodically body condition scoring the group will prevent excessively fat cows from becoming a problem.

Sometimes the cattle feeder who has not seen the market rise sufficiently, by the time the cows are ready to sell will hold onto the cows, awaiting a market improvement. Rarely, however, is such an upswing adequate to recover the extremely high cost of gain for the over-finished cows.

Factor 2: The Buy/Sell Margin

Most cows are culled in the fall of the year at weaning time, so they usually are worth less per pound than at other times of the year. Prices usually rise from the fall selling period of October-December into the winter and spring periods. Prices peak in March-May and decrease throughout the summer. This price pattern is based on historical averages. Feeders, however, need to evaluate profit potentials every year that cull cow feeding is being considered.

Approximately half of the profit potential will be determined the day cull cows are bought or started on feed and will be based on the purchase price, body condition, and health of the cows. Cow feeding experience dictates that a neutral buy/sell margin (purchase price=selling price) or a positive feeding margin (sell cows for more than was paid for them) is essential to show a profit from feeding purchased thin cows.

The ideal situation for feeding cull cows is if Utility cow prices are relatively high and feed prices are relatively low. This offers the potential of costs of gain being lower than selling price. Normally, costs of gain are higher than selling price and a positive buy/sell margin is needed to make a profit. If costs of gain are less than selling price, you can have a negative buy/sell margin and possibly still make a profit.

Other livestock costs such as veterinary and medical expenses farm utilities, power and fuel and marketing expenses can be around 10 cents per pound of gain. Interest cost on the purchase price of the cows can add another 6 cents per pound of gain. Excluding labor, management and facility, costs per pound of gain can run in the 45 to 50 cent range.

Another method of feeding cull cows is to initially feed high roughage rations through the winter. Gain per day is lower than if started on a grain-based diet. However, cost of gain can be relatively low if hay or grazing resources do not otherwise have a ready market value.

Slaughter cow prices vary not only over time but also with quality grades. The best prices are normally attained for Commercial grade. Since mature cows may come off pasture in poor condition, they may sell as Cannery or Cutters at substantial price discounts to Utility grade. Cows in thin condition are capable of higher gains, which can also raise quality grade. The producer must calculate the difference between any expected increase in value and cost of feeding to determine profitability. If cows come off pasture in good condition, no quality enhancement is expected, cost of maintenance may be high and revenue comes only from price increase.

Factor 3: Feed To Gain Cheaply

Feeding cull cows grain-based diets for only 30 days will result in the most rapid and efficient gains. However, the producer is subject to very short-term price changes. If the price situation is

unfavorable, thin cull cows can be fed for a longer period of time. Feeding for approximately two months should also reduce the number of Cutter grade carcasses and increase the number of Utility grade carcasses. Increasing the gain within this 2 month time period will further improve carcass quality and reduce cost of gain. Longer feeding of grain-based diets should further reduce the incidence of yellow fat. There is a hypothesis that feeding barley (lower carotene content) instead of corn (higher carotene content) will further "whiten" the carcass fat.

Feeding cull cows grain-based diets much longer than 2 months will significantly increase feed cost per pound of gain. Also, marbling score and quality grade may not significantly improve after 2 months on feed. However, this must be balanced against the historical increase in cow prices that occurs over the period from October-November to March-April. The length of time that cull cows can be efficiently fed grain-based diets at an economical cost of gain will vary depending upon their initial body condition. Assuming the cows are healthy and not debilitated, thin cows can be fed longer than fleshier cows. In one study, cull cows were fed for 108 days with no significant drop in feedlot performance. Based upon previous research, it would appear that this time period may range from 2 to 4 months.

The most profitable feeding management scheme is affected by the cost of feed inputs. Slower gains over the winter may be profitable if the cost of hay or grazing resources are relatively cheap. Expect the dry matter intake of cows fed grain-based diets to be approximately 2.5 to 3.0 percent of body weight. Normally, there should be at least 60 to 80 percent concentrate in a grain-based diet. One can expect gains of 3 pounds or better if the diet contains 80 percent grain and compensatory gain is expected. The feed to gain ratio will be under or near 10 when shorter days on feed and higher grain diets are utilized.

The protein requirement of cull cows does not appear to be particularly high. Crude protein levels of 9.5 to 11 percent are probably adequate. Keep in mind that the mineral supplementation program for grain-based diets and roughage-based diets are not the same. Calcium supplementation will be higher than phosphorus supplementation if feeding a high grain ration.

Factor 4: Financial Solvency

Cow-calf producers might consider feeding their cull cows through the winter to produce a "value added product". A common practice is to feed roughage-based diets through the winter and then feed grain 30 to 50 days in the spring. This scheme is a viable option if hay or grazing resources are sufficiently cheap and the extended time of ownership can be justified. The alternative is short-term feeding of grain-based diets to cows after being culled from the herd.

In economic terms, short-term cow feeding is a high risk enterprise. A feeder is typically in and out of the market within 50-90 days. There is virtually no way to pass the financial risk to anyone else. The advice to any potential cull cow feeder is that if financial risk can be absorbed, feed cull cows.

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