



CATTLEMAN'S CORNER



Division of Agriculture Sciences and Natural Resources * Oklahoma State University

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How Much Hay Will a Cow Consume?

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Estimating forage usage by cows is an important part of the task of calculating winter feed needs. Hay or standing forage intake must be estimated in order to make the calculations. Forage quality will be a determining factor in the amount of forage consumed. Higher quality forages contain larger concentrations of important nutrients so animals consuming these forages should be more likely to meet their nutrient needs from the forages. Also **cows can consume a larger quantity of higher quality forages.**

Higher quality forages are fermented more rapidly in the rumen leaving a void that the animal can re-fill with additional forage. Consequently, forage intake increases. For example, low quality forages (below about 6% crude protein) will be consumed at about 1.5% of body weight (on a dry matter basis) per day. Higher quality grass hays (above 8% crude protein) may be consumed at about 2.0% of body weight. Excellent forages, such as good alfalfa, silages, or green pasture may be consumed at the rate of 2.5% dry matter of body weight per day. The combination of increased nutrient content AND increased forage intake makes high quality forage very valuable to the animal and the producer. With these intake estimates, now producers can calculate the estimated amounts of hay that need to be available.

Using an example of 1200 pound pregnant spring-calving cows, lets assume that the grass hay quality is good and tested 8% crude protein. Cows will voluntarily consume 2.0% of body weight or 24 pounds per day. The 24 pounds is based on 100% dry matter. Grass hays will often be 7 to 10% moisture. If we assume that the hay is 92% dry matter or 8% moisture, then the cows will consume about 26 pounds per day on an "as-fed basis". Unfortunately we also have to consider hay wastage when feeding big round bales. Hay wastage is difficult to estimate, but generally has been found to be from 6% to 20% (or more). For this example, lets assume 15% hay wastage. This means that approximately 30 pounds of grass hay must be hauled to the pasture for each cow each day that hay is expected to be the primary ingredient in the diet.

Current Cattle Markets Foretell 2014 Market Expectations

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

The counter-seasonal behavior of cattle markets this fall indicates the transition that is occurring in beef and cattle markets. The fourth quarter of 2013 provides insight into the general expectations for markets in 2014. Cattle slaughter for the year to date is down 1.7 percent but is down an average of 3.6 percent in the last four weeks. Though beef production is down only 1.1 percent for the year to date, it is down an average of 2.9 percent the last four weeks. Both cattle slaughter and beef production are expected to decline for the remainder of the year bringing fourth quarter cattle slaughter down over 5.5 percent, year over year, and beef production down over 5 percent. For 2014, cattle slaughter is expected to decrease roughly 7 percent year over year leading to decreased beef production of over 6.5 percent for the year.

Choice boxed beef prices have averaged above \$200/cwt for the last four weeks and fed cattle prices have averaged above \$130/cwt for the same period. Both of these prices could average at or above these levels for the entire year of 2014, with spring peaks of \$215/cwt or higher for Choice boxed beef and fed cattle prices approaching \$140/cwt for a spring top. All eyes will be on the demand side as the supply side of these markets will certainly support even higher prices than these if demand is sufficient.

Feeder cattle prices have strengthened this fall to the highest levels of the year. Heavy feeder prices are at record levels and, while calf prices have not quite exceeded the spring 2012 record price levels, they surely will in the spring of 2013, barring something unforeseen. Feeder supplies are no doubt tightening this fall with a smaller 2013 calf crop, fewer feeder cattle imports in 2013 and accelerating replacement heifer demand this fall. The 2014 calf crop will be as small, or smaller, than this year; feeder imports are likely to remain low; and replacement heifer demand will remain very strong as long as forage conditions are favorable.

Breeding female and replacement heifer demand is very strong this fall. Replacement heifer demand that emerged about a month ago in the Northern Plains, has now spread to much of the central part of the country with numerous reports of lightweight heifers selling at prices well above steer prices. Last week in El Reno, Oklahoma, several sets of heifers sold in the weekly feeder auction as replacements; including a market-topping set of 668 pound heifers at \$208.55/cwt. (\$1393/head) and another set of 560 pound heifers at \$240/cwt. (\$1344/head). Two sets of four-weight heifers sold for over \$220/cwt. At the Northwest Cattlemen's Association fall replacement sale last week in Woodward, Oklahoma, bred heifers ranged from \$1675-\$2250/head; young to middle-age bred cows

ranged from \$1350-\$2500/head; and cow-calf pairs from \$1950-\$3000/pair. Female demand will certainly be as strong, if not stronger, in the spring, once again, assuming that forage conditions continue to look favorable.

Prepare for a Successful Spring Calving Season

Dave Sparks, DVM, Oklahoma State University Area Extension Veterinarian and Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Someone once said “that Success occurs when Opportunity meets with Preparation”. Planning and preparing ahead for next spring’s calving season can help increase the chances of success. There are several key preparation steps that would be good to conduct in November or December to insure success in February, March, and April.

Equipment: Before calving season starts do a walk-through of pens, chutes, and calving stalls. Make sure that all are clean, dry, strong, safe, and functioning correctly. *This is a lot easier to do on a sunny afternoon than on a cold dark night when you need them.*

Protocol: Before calving season starts develop a plan of what to do, when to do it, who to call for help (along with phone numbers), and how to know when you need help. Make sure all family members or helpers are familiar with the plan. It may help to write it out and post copies in convenient places. Talk to the local veterinarian about the protocol and incorporate his/her suggestions. Your veterinarian will be a lot more helpful when you have an emergency during the kids’ school program if you have talked a few times during regular hours.

Supplies: The stockman should always have in his medicine chest the following: disposable obstetrical sleeves, non-irritant antiseptic, lubricant, obstetrical chains (60 inch and/or two 30 inch chains), two obstetrical handles, mechanical calf pullers, and injectable antibiotics. Many lubricants have been used and one of the best lubricants is probably the simplest – non-detergent soap and warm water. Do not forget the simple things like a good flashlight with extra batteries and some old towels or a roll of paper towels. It may be helpful for you to have all these things and other items you may want to include packed into a 5 or 10 gallon bucket to make up an obstetrical kit so you can grab everything at once.

Read and Learn: Study your lesson about preparing for the calving season by downloading and reading the Oklahoma State University Extension Circular called ["Calving Time Management for Beef Cows and Heifers"](http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-5171/E-1006web.pdf) <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-5171/E-1006web.pdf>

Beef Quality Assurance for Cow Operators

Dave Sparks, DVM, Oklahoma State University Area Extension Veterinarian

Much has been said about Beef Quality Assurance in recent years, but how many of us really know what it is and why it is important to all beef producers? Simply put, BQA is the effort to instruct beef producers, and their workers, as to ways that they can produce a high quality and wholesome product that keeps the consumer coming back for more.

While great strides have been made with fed cattle, cow operators have a ways to go. In feedlots a few people are handling large numbers of cattle, and feedback from the processor is fairly simple. In cow country, many more people are handling smaller numbers of cattle, and the feedback, while real, is not so obvious. Injection site lesions in the sirloin are one measure of the care with which cattle are processed and medicated. From 1995 to 1999 the feedlot industry reduced these lesions from 12% of fed carcasses to less than 2%. At the end of this time period, however, over 40% of all cow and bull carcasses had lesions in the sirloin. Too often cow operators see the cow as a calf production unit rather than a part of the food chain. The fact is, about ¼ of the beef consumed in our country comes from cull cows and bulls and it is not all hamburger. Today, the better cuts such as the round, sirloin, loin, and rib-eye allow the packers to pay better cow prices than we have seen in years past. Cull cows represent about ¼ of the gross income for most cow operators. If we, as an industry, could reduce the annual carcass losses due to bruising, injection lesions, excess fat trim, and condemnation due to drug residues, what would be your part of the extra ½ billion dollars on the table? Cow buyers are aware of what this waste costs, and they know which herds, areas, and sales most of the problems come from. When your culls come through the ring you need as many hands in the air as possible.

Proper techniques when handling and processing cattle can go a long way. Use the smallest needle that will do the job and change it at least every 10 head. Dull needles cause more lesions, and a needle that fatigues and breaks off is a serious problem. While injection site lesions are trimmed away when found, they make the whole cut of meat tougher due to extra connective tissue deposited in the muscle. Be sure to give all injections in front of the shoulder, and when you have a choice, give injections subcutaneously. Reduce bruising by eliminating overcrowding and make sure loading facilities are safe and cattle flow through them easily. Market cull cows before lameness and eye problems get severe, or barren cows get overly fat.

Proper drug and vaccine usage can be summed up with 5 words, “Read the label,” and “Keep records.” Drug residue problems result when dosage, course of treatment, or route of administration are not according to the label, or specified withdrawal time before slaughter is not adhered to. According to law, all violations are the responsibility of the producer, so if you have a problem not only are the future prices you receive affected, but you will be subject to possible fines and/or quarantine. If you do have a violation and you can produce proper treatment records, officials are likely to work with you to help identify and solve the problem. Without records, they may well resort to sterner measures.

As Americans we have the safest and most wholesome meat in the world, but we need to constantly work to keep it that way. Beef is still “What’s for Dinner” today, but we need to make sure it’s on the menu tomorrow too.

Observe Bulls Closely as the Fall Breeding Season Begins

By Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

The week of Thanksgiving is traditionally a time of thanks and turning in the bulls. Cow calf operations with fall-calving herds that target a late August, early September beginning to the calving season will put the bulls with the fall-calving cows now.

A good manager keeps an eye on his bulls during the breeding season to make sure that they are getting the cows bred. Occasionally a bull that has passed a breeding soundness exam may have difficulty serving cows in heat, especially after heavy service. Bulls that cannot physically inseminate cows or bulls with very low libido (desire to mate) can be detected if observed closely. Such problems can best be detected by observing bulls while they work. **Therefore producers should (if at all possible) watch bulls breed cows during the first part of each breeding season.** If problems are apparent, the bull can be replaced while salvaging the remainder of the breeding season and next year’s calf crop. Likewise a small proportion of bulls can wear out from heavy service and lose interest. These, too, will need to be replaced. The greater the number of cows allotted to each bull in the breeding pasture the more critical it is that every bull be ready to work every day of the breeding season.

Injuries to bulls during the breeding season are relatively common. When a bull becomes lame or incapable of breeding, because of an injury to his reproductive tract, he needs to be removed from the breeding pasture and replaced with another bull.

The More Things Change, the More They Stay the Same

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

For at least three decades, beef cattle scientists have studied body condition of cows and its impact on productivity. Cows in better body condition at calving time and breeding nearly always seem to out-perform counter parts that are in thinner body condition. However, some things do change. Some examples include cattle type changes, selection methods change, drought impacts on feed availability and prices. We therefore question whether the research would give the same answers in more modern times.

Research published in a recent issue of the Journal of Animal Science (Bohnert, et al. J. Anim. Sci. 2013, 91: 5485-5491) provides some insight into this discussion. Oregon State University, University of Nebraska, and USDA-ARS scientists combined on a two year study utilizing 120 mature, crossbred (Angus X Hereford) cows/year. The cows were fed in such a manner to expect half of the cows to be in a body condition score of 6 entering the last trimester, whereas the other half of the cows were fed to be in a body condition score of 4 at the same time. The actual outcome of their management schemes resulted in the high condition cows averaging a 5.7 body condition score (1243 lbs) and the low cows averaged 4.4 (1106 lbs.) They also subdivided each of these groups and fed half of each group the equivalent of 2 pounds/day of dried distillers grains with solubles (DDGS). The supplement was fed in appropriate amounts 3 times per week. All cows received access to 28 lb/day of the hay (6.4% crude protein) during the last trimester and then after calving the cows were placed together in a common pasture and exposed to a 60 day natural breeding season.

The small amount of DDGS had only a small effect on the productivity of the cows by increasing fall weaning weights in calves nursing supplemented cows. Body condition in the last trimester however had a more dramatic impact. High body condition cows had 10% more live calves at birth and weaning than did the low body condition cows. Birth weights of the calves were higher in the high body condition cows but certainly did not increase losses due to dystocia. The total weaned calf weight per cow in the herd was 57 lb greater for the cows in better body condition prior to calving. At today’s calf prices this represents a sizeable dollar difference in productivity and should more than pay for the additional nutrition that the cows received. The story does not stop at this point. The rebreeding percentage of the cows in better body condition (92%) was significantly greater than the percentage of the thin cows (79%). Cull cow weights were also greater at weaning time for the cows that were adequately fed the previous fall.

These scientists concluded ...”our research further substantiates historical data that stresses the importance of maintaining cows in acceptable BCS (body condition score) entering the last third of gestation.”

Cattle Producers Prepare for 2014

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

Cattle markets are heading into the final holiday period of 2013 at record or near record price levels across the board. Cattle slaughter and beef production are falling as the market transitions into a much tighter supply situation in 2014. Cattle and beef prices are expected to push to even higher record levels in 2014. Tight feeder cattle supply will be the major market driver in the coming year with the smallest calf crop since the 1940s squeezed ever tighter with fewer feeder cattle imports and the prospect of increased heifer retention. This cattle and beef market forecast depends on continued moderation of drought conditions. While overall drought conditions in the country are the best since 2010, there remain widespread areas of marginal to exceptional drought that could quickly regress into more severe drought. It is important to monitor conditions through the winter and especially into the spring to determine market expectations and management plans for the year.

For most producers, 2014 plans should begin with a forage production and management plan. In many cases, forages are in a state of reduced productivity due to drought conditions and must be managed for recovery. This will determine the overall carrying capacity of the ranch as well as the needed rest and recovery periods for forage. Obviously, the potential for continued or redeveloping drought must also be considered, especially early in the year.

The forage management plan will dictate the level and type of cattle production that is possible. Many producers have reduced cow numbers in recent years and need to develop a herd rebuilding plan. There are indications that herd rebuilding has begun in late 2013 with increased heifer retention implied by lower heifer inventories in feedlots and very strong heifer market prices combined with sharply reduced beef cow slaughter in the second half of the year. Individually, producers need to determine how much and how fast herd recovery is prudent given forage conditions, drought potential, financial considerations and other management factors. Cow-calf producers should not overlook the potential for stocker/backgrounding programs using retained raised calves and/or purchased stockers to compliment cow-calf production in terms of optimal forage use seasonally while facilitating forage recovery. Stockers can provide income potential or heifer development opportunities for herd growth while minimizing the year-round forage demands of cows.

While profit/return potential is high in 2014, given expectations for record cattle prices, producers can do the most to capitalize on these market opportunities by managing cost of production. Perhaps the biggest challenge will be the cost of replacement females. Many producers (and lenders) are concerned about the financial feasibility of replacement heifer and cow costs. One of the factors that determines what a heifer or cow is worth is the annual cost of production which directly affects net returns. Now is the time for producers to assess production and management practices to see if there are potential adjustments to implement in 2014. Feed costs are the largest component of annual cow costs with harvested forage and supplemental feed making up the largest part of feed costs. In many instances, better grazing management is the easiest and most feasible way to reduce harvested forage and supplemental feed needs by increasing the production, quality and timing of forage for grazing.

It is Time to Begin the Early Evening Feeding

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

It is generally accepted that adequate supervision at calving has a significant impact on reducing calf mortality. Adequate supervision has been of increasing importance with the use of larger beef breeds and cattle with larger birth weights. On most ranching operations, supervision of the first calf heifers will be best accomplished in daylight hours and the poorest observation takes place in the middle of the night.

The easiest and most practical method of inhibiting nighttime calving at present is by feeding cows at night; the physiological mechanism is unknown, but some hormonal effect may be involved. Rumen motility studies indicate the frequency of rumen contractions falls a few hours before parturition. Intraruminal pressure begins to fall in the last 2 weeks of gestation, with a more rapid decline during calving. It has been suggested that night feeding causes intraruminal pressures to rise at night and decline in the daytime.

In a Canadian study of 104 Hereford cows 38.4% of a group fed at 8:00 am and again at 3:00 pm delivered calves during the day, 79.6% of a group fed at 11:00 am and 9:00 pm. A British study utilizing 162 cattle on 4 farms compared the percentages of calves born from 5:00 am to 10:00 pm to cows fed at different times. When cattle were fed at 9:00 am, 57% of the calves were born during the day, versus 79% with feeding at 10:00 pm. In field trials by cattlemen utilizing night feeding when 35 cows and heifers were fed once daily between 5:00 pm and 7:00 pm, 74.5% of the calves were born between 5:00 am and 5:00 pm. In the most convincing study to date, 1331 cows on 15 farms in Iowa were fed once daily at dusk, 85% of the calves were born between 6:00 am and 6:00 pm. Whether cows were started on the night feeding the week before calving started in the herd or 2 to 3 weeks earlier made no apparent difference in calving time.

On many large ranches, it is physically impossible to feed all of the cows after 5:00 pm. In those instances, the ranch manager should plan to feed the mature cows earlier in the day, then feed the first calf heifers at dusk. The heifers, of course, are the group of females that are of greatest need of observation during the calving season.

Various means have been employed to effectively reduce animal loss at calving time. Skilled personnel should be available to render obstetric assistance and neonatal care to maximize percentage calf crop weaned in the cattle operation. Currently, evening feeding of cattle seems to be the most effective method of scheduling parturition so assistance can be available during daylight hours.

Supplement or Replacer - What's the Difference?

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Although February and March are still several months away, looking ahead to the spring calving season requires that producers be prepared for those situations where mother-nature needs a little boost. Beef cow calf producers occasionally will need to provide commercial colostrum to baby calves that are born to two-year old heifers with very little milk, or to calves after a difficult birth. Some of these calves are very sluggish and slow to get up and find the teat. Therefore, they may not get the colostrum that they need to achieve successful passive transfer unless colostrum is provided by the cattle manager. Knowing which products to use in different situations can be very helpful. Colostrum supplements are less expensive to purchase than colostrum replacers, but they may not be the best choice for the situation at hand.

The following excerpt from a Pennsylvania State University publication that is published on the E-Extension website helps to sort out the differences:

“Colostrum products that contain Immunoglobulin G (IgG) are regulated by the USDA Center for Veterinary Biologics. Supplement products are unable to raise the blood concentration of IgG above the species standard, which is 10 mg/ml. Any product that is able to raise serum IgG concentration above 10 mg/ml may be called a colostrum replacer.

Typically, colostrum supplements contain less than 100 g of IgG per dose and are composed of bovine colostrum, other milk products, or bovine serum. Colostrum supplements can be used to increase the amount of IgG fed to calves when only low or medium quality colostrum is available. However, supplements cannot replace high quality colostrum. Even when a supplement is added to low quality colostrum, the IgG is often absorbed poorly, and antibody absorption is reduced compared to high quality maternal colostrum.

A limited number of products designed to replace colostrum are now on the market. These are bovine serum-based products and contain at least 100 g of IgG per liter plus fat, protein, vitamins, and minerals needed by the newborn calf. Colostrum replacer contains more immunoglobulin than supplement products and provides more antibodies than poor or moderate quality colostrum. In research trials, calves fed colostrum replacer have performed as well as calves fed maternal colostrum with no differences in IgG levels, efficiency of IgG absorption, incidence of scours, or growth rates.”

Source: E-Extension website “Colostrum Supplements and Replacer”, Authors: Sylvia Kehoe, Coleen Jones, Jud Heinrichs, The Pennsylvania State University, Department of Dairy and Animal Science).

Herd Rebuilding Considerations for Oklahoma Cattle Producers

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

According to the latest Drought Monitor, 51 percent of Oklahoma has no drought, 30 percent of the state has slight to moderate (D0-D1) drought conditions, and 19 percent of the state is in severe to exceptional (D2-D4) drought. One year ago, 100 percent of the state was in severe to exceptional drought (D2-D4). Just three months ago, less than 8 percent of the state had no drought while 71 percent of the state had slight to moderate (D0-D1) drought and 21 percent had severe to exceptional (D2-D4) drought. This means that drought conditions have continued to moderate in much of the state but there has been relatively little improvement in the worst drought areas in the southwest, northwest and Panhandle. The state is currently divided with most of the eastern half devoid of drought conditions and most of the western half still experiencing some level of drought.

At this point it is impossible to tell what conditions will be in 2014. While conditions are the best they have been in more than two years in some regions, drought conditions could redevelop. Regions that are still experiencing drought after more than three years, may see improvement or continued drought in 2014. In those areas where drought is eliminated or significantly moderated, producers face a mix of production and management considerations. Many producers have a financial need to increase production after two or more years of drought reductions. However, in many cases, forage resources need more time to recover which means that grazing must be carefully managed to promote recovery while efficiently utilizing available forage. For cow-calf producers, questions of how and when to rebuild the cow herd are tricky and require careful consideration. Fortunately, producers have several alternatives and considerable flexibility to devise a herd rebuilding plan.

The usual temptation post-drought is to quickly rebuild by buying bred cows/heifers or pairs to restore full production. This strategy may not be feasible or advisable for several reasons. First, it may not be consistent with managing forage for recovery and improved productivity. While more forage may be available seasonally, it may not be possible to immediately increase year-round forage demands. Secondly, market prices for females have already shown signs of reaching exceptionally high levels and may be financially infeasible, especially if many producers are simultaneously trying to rebuild. The reality is that there is likely not enough cows and heifers available across the country to support massive rebuilding in one year. The U.S. beef cow herd has decreased an estimated 1.85 million head since January, 2011. Recovery to pre-drought levels will likely take 3-4 years at least.

Calf prices are at record levels and the expectation of several years of strong calf prices is the principal incentive for herd rebuilding. However, the feeder cattle price structure also provides other incentives and possibilities for forage-based cattle production. The combination of higher feeder cattle prices and changes in feedlot incentives translates into market signals for more forage-based weight gain of feeder cattle. Thus, producers operating with a reduced cow herd should evaluate opportunities to retain calves for post-weaning stocker or backgrounding gain or to supplement cow-calf production with additional stockers. This may be the quickest way to increase ranch income and provide flexibility for optimal forage management.

The heifer market, in particular, may provide considerable income opportunity. While producers may desire to rebuild their own herds, they should not overlook the opportunities presented by the heifer market. Retained or purchased stocker heifers can be sold as needed due to forage and/or market conditions or retained for breeding with more market opportunities as bred heifers. The heifers may be calved and enter the herd or sold. The key is to focus on efficient production with available forage along with market conditions and not be preoccupied just with herd rebuilding. If the market suggests that someone wants heifers or cows much more than you do, it may be a good idea to let them have 'em!

One final rebuilding consideration is to consider just what the production target should be on your ranch. The fact is that many ranches were overstocked prior to the drought. In some cases it was just a matter of too many animals and in other cases it was due to increasing cow size over time. Producers should consider realistically how many and what size cows best fit their production resources and environment. Rebuilding might be a good time to change genetics and moderate cow size. The long term climate indications suggest that Oklahoma is more vulnerable to intermittent droughts in the next decade or two compared to the past 30 years. A more conservative stocking approach will enhance the ability to adjust to variable forage conditions with less financial impact. Combined cow-calf and yearling enterprises can provide enhanced production flexibility and income potential for many situations. Producers should be developing plans, not only for 2014, but also thinking strategically for the next several years.

March 3, 2014 @ 6:30 pm

Oklahoma Cattlemen's Association will be conducting a SE District Meeting at the SE Expo Center in McAlester, OK 74501. Meeting participants will enjoy legislative update, OCA staff reports and an Animal Health presentation.

We invite you to join us and bring a friend or neighbor to attend an OCA District meeting. RSVP to tpruitt@okcattlemen.org call Tiffany at 405-235-4391.

April 4, 2014 @ 8:30 am

Beef Cattle Summit will be held at the SE Expo Center in McAlester, OK 74501. Please call Pittsburg County Extension for more information at 918-423-4120 or contact david.cantrell@okstate.edu.

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