

The Latest Across the Plains

Timely Reminders

- ◆ Test Forages.
- ◆ Inoculate and cover silage/earlage piles.
- ◆ Scrape pens and pile manure.
- ◆ Make sure waterers are clean and in good working order.
- ◆ Visit with your veterinarian on a vaccination program and your nutritionist on an implant and receiving/weaning program.
- ◆ Start evaluating fall ingredient and pricing for new diet formulations now. Feed prices have dropped significantly.
- ◆ Consider the use of energy supplements and diets on cool season pasture grazing this fall to help boost gains since the value of gain is very high.
- ◆ With expensive feeder calf prices, consider some form of price protection by forward contracting or utilizing a put.

Unused Feed

“Progress is impossible without change, and those who cannot change their minds cannot change anything.” — George Bernard Shaw

Save Money \$\$\$ Test Your Feeds

Tests are relatively inexpensive, usually costing less than \$18, for the information derived. Contact our office to set up an appointment to have us pull feed samples if we have not done so yet.

What's New in the Industry

Cattle prices are high and the difference between poor quality and good quality calves is relatively low. Don't increase your risk by buying poor quality calves!

We want to hear from you...

Do you have a question you would like one of the nutritionists to address in depth in our newsletter? Just submit your question through our website www.GPLC-inc.com and we will get to work on it.

Calendar of Events

- **Sep 10 - 20** Utah State Fair, Salt Lake City, UT
- **Sep 10 - 20** New Mexico State Fair, Albuquerque, NM
- **Sep 11 - 20** Kansas State Fair, Hutchinson, KS
- **Sep 11 - 20** Tennessee State Fair, Nashville, TN
- **Sep 11 - 27** Washington State Fair, Puyallup, WA
- **Sep 17 - 27** Oklahoma State Fair, Oklahoma City, OK
- **Sep 18 - Oct 4** Massachusetts State Fair, West Springfield, MA
- **Sep 22 - 24** Farm Science Review, London, OH
- **Sep 24 - 26** Heart of America Farm Show, Beggs, OK
- **Sep 25 - 27** World Beef Expo, West Allis, WI
- **Sep 25 - Oct 18** Texas State Fair, Dallas, TX
- **Sep 25 - Oct 4** Virginia State Fair, Doswell, VA
- **Sep 29 - Oct 3** World Dairy Expo, Madison, WI
- **Oct 2 - 4** Ozark Fall Farmfest, Springfield, MO
- **Oct 2 - 11** Georgia - Carolina State Fair, Hampton, GA
- **Oct 7 - Oct 18** Mississippi State Fair, Jackson, MS
- **Oct 14 - 25** South Carolina State Fair, Columbia, SC
- **Oct 15 - 25** North Carolina State Fair, Raleigh, NC
- **Oct 16 - Nov 8** Arizona State Fair, Phoenix, AZ
- **October 20 - 22** Sunbelt Ag Expo, Moultrie, GA
- **Oct 21 - Nov 1** American Royal Livestock Show, Kansas City, KS
- **Oct 22 - Nov 8** Louisiana State Fair, Shreveport, LA
- **Oct 30 - Nov 8** Alabama National Fair, Montgomery, AL
- **Oct 31** Happy Halloween



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Culling Cows That Aren't Profitable

By Zeb Prawl, M.S., Nutritionist

It is estimated that cull cows represent approximately 20% of the gross income of any commercial beef cow operation. Because of this, ranchers need to make certain that cow culling is done properly and profitably. Selling cull cows when they will return the most income to the rancher requires knowledge about cull cow health and body condition. It is important to sell a cow when she is no longer profitable to the ranch. But also be sure that you don't get rid of a cow too soon, just because she is "old".

Get rid of the open cows. There is seldom a need to feed an open cow through the winter that is not going to have a calf next spring. It should be a standard practice on your ranch to schedule a time with a veterinarian to preg check all of your cows. Doing so in a timely manner in the fall will allow you to cull them while they are in good body condition and before you spend \$200 or more on their winter feed bill. And as a result, it will also allow you to purchase new females that are bred to replace the open cows so you don't miss the potential calves.

Take a look at their eyes. One of the leading causes of condemned beef carcasses is still "cancer-eye" cows. Although producers have been doing a much better job in recent years of culling cows before "cancer-eye" takes its toll, every cow manager should watch the cows closely for potentially dangerous eye tumors. Watch for small pinkish growths on the upper, lower, or corner eye lids. Culling these cows while the growth is still small, will allow the cow carcass to be utilized normally. If, however, cancer engulfs the eyeball and gets into the lymph nodes around the head, the entire carcass will likely be condemned as not fit for human consumption.

Bad udders should be culled. A very important criteria that should be examined in cows is udder quality. Beef cattle producers are not as likely to think about udder health and shape as dairy producers are, but this attribute affects cow and calf productivity and overall profitability. Research has shown that cows with one or two dry quarters have calves with severely reduced weaning weights (50 - 60 pounds) compared to cows with no dry quarters. Two key types of "bad" udders to cull include: 1) the large funnel-shaped teats and weak udder suspension. The large funnel-shaped teats may be indicative of a previous case of mastitis and cause the quarter to be incapable of producing milk. In addition, large teats may be difficult for the newborn calf to get its mouth around and receive nourishment and colostrum very early in life. 2) Udders that hang very low to the ground are quite difficult for calves of various ages to grab and should also be culled. Culling these types of udders from the herd will provide short term improvements in performance of calves,

but will also provide long term benefits as well since udder quality is a highly heritable trait. Selecting heifers from cows that have good udder health over their lifetime will also be carried on through the herd.

Feet and leg soundness. Obviously, beef cows must travel over pastures and fields to consume forages and reach water sources on a daily basis. Cows with bad joints, severe foot rot infections, or hips knocked down may be subject to substantial carcass trimming when they reach the packing plant if that condition was a long term problem while still in the herd. They will also be poor producers if allowed to stay on the ranch while severely lame. They most likely will lose body condition and weigh less at market. And they certainly will be discounted by the packer buyers. Culling them soon after their injury will help reduce the loss of sale price that may be suffered later.

Cull any really wild cattle. This trait really should be higher on my list, because I severely dislike wild cows. There is nothing that ruins a good day while working cows more than a wild cow that runs off while you are gathering them, tears the corral down once captured, and hurts you and anything around you in the process. Furthermore, wild cows raise wild calves that tend to be underperforming animals their entire lives. Life is short, so don't waste it, or your money, in keeping a bunch of underperforming, hard to get along with cows on the place.

And finally, we should ask ourselves:

Is she good for another year? At cow culling time, producers will face some tough decisions. Questions that producers need to ask themselves at this time include: "Will she keep enough body condition through the winter to rebreed next year?" "How old is the cow?" "Does she have any teeth left and will she be able to continue to eat in an efficient manner?" "If she is bred, what stage is she in and is she keeping up with a consistent, yearly calving interval?" If your answers to most of these questions are positive, then maybe she does need to stay for another year, despite her age.

There is great variability in the longevity of beef cows. Typically, the most consistent decline in reproductive performance is noted after cows are 10 years of age. A steeper decline in reproductive performance is found as they become 12 years of age. So it is essential to start watching for reasons to cull a cow at about age 10. By the time she is 10, look at her very closely and consider several factors before culling. Sometimes it is easy to just say we will get rid of a cow when she turns 10 or 12. But if a cow is still getting bred back to maintain a consistent yearly calving cycle, and her calves still fit the herd upon weaning, there is considerable reason to keep her in the herd. As shown in the table below, once a cow completely pays for herself at 6-7 years of age, being able to continually get a healthy calf from her on a consistent basis will help you build equity in your cow herd on an exponential basis after 8 years of age.

Table 1 illustrates the flow of money from initial purchase of a fe-

Table 1.	Bred Hfr	3 Yr Old	4 Yr Old	5 Yr Old	6 Yr Old	7 Yr Old	8 Yr Old
Principal \$ from prior year	\$2,800.00	\$2,326.00	\$1,780.67	\$1,210.80	\$671.34	\$104.91	-\$489.85
Annual Interest rate	4.50%	4.50%	4.50%	5.00%	5.00%	5.00%	5.00%
Accrued interest per year	\$126.00	\$104.67	\$80.13	\$60.54	\$33.57	\$5.25	\$0.00
Cash cost to run one cow	\$550.00	\$550.00	\$550.00	\$600.00	\$600.00	\$600.00	\$650.00
Cow cost/year	\$676.00	\$654.67	\$630.13	\$660.54	\$633.57	\$605.25	\$650.00
Calf Income	\$1,150.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00
Principal balance	\$2,326.00	\$1,780.67	\$1,210.80	\$671.34	\$104.91	-\$489.85	-\$1,039.85

Open Cull Value
as 3 Year Old: \$1,300.00
Total Profit after
all costs: **-\$480.67**

Open Cull Value
as 8 Year Old: \$1,200.00
Total Profit after
all costs: **\$2,239.85**



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male through several years of production, taking into account feed and interest costs.

Cull cows when in moderate body condition. If the decision is made to cull a certain number of cows from your herd, then make sure to send older cows to market before they become too thin. Generally, severely emaciated cattle have lightly muscled carcasses with very small ribeyes and poor red-meat yield. This greatly decreases the salvage value of such animals. Just as importantly, emaciated cattle are most often those which "go down" in transit, as they lack sufficient energy to remain standing for long periods of time. Severe bruising, excessive carcass trim, increased condemnations, and even death are the net results of emaciation. Very thin cows have a low dressing percentage (weight of the carcass divided by the live weight). Because of these factors, cow buyers will pay less per pound for very thin, shelly, cull cows. In addition, thin cows obviously weigh less. As you combine these two factors (weight and price per pound), thin cull cows return substantially less dollars at sale time than if the cows were sold when in moderate body condition. If they are already too thin, consider feeding the cows for a short time (45 to 60 days) in a drylot with a high concentrate feed which will put condition back on the cows very efficiently. There is no need to put excess flesh or fat on cows. But getting them back in decent condition will pay for itself when it is time to sell them as salvage animals. 

necessary to reduce the particle size of the grind. When corn drops below 23-24% moisture it is very difficult in most systems to reconstitute the corn to 30% moisture, and therefore we recommend a cutoff of 24% moisture for corn that is to be ensiled.

Particle size is the next critical point of HMC management. The correct particle size is very feedlot dependent, and is influenced by infrastructure, bunk management, and other available feedstuffs. Infrastructure is important, as it can limit the amount of HMC a feedlot can process in the ideal moisture window, and because the type of equipment present determines the best way to process corn. The ideal particle size at an operation will strike a balance between harvest efficiency, energy density, and the risk of digestive disturbances.

Feedlots that grind HMC with a hammer mill (tub grinder) generally create a finer grind that packs tighter, but ferments more quickly in the rumen resulting in greater risk of acidosis and bloat. Dry matter conversion of cattle fed hammer-milled HMC is usually better than those fed roller-milled HMC but dry matter intake and gain are usually lower. Monitoring particle size is important, with an achievable goal being no more than 3- 4% whole kernels and not more than 20% fines (<1mm). Commercially available sieve shakers work well for determining particle size distribution, and should be used at least twice daily to determine if adjustments are needed.

Roller-milled HMC creates fewer fines, which result in lower risk of digestive deads along with increased dry matter intake and gain compared with hammer-milled corn. On the other hand, fewer fines mean roller-milled corn is more challenging to pack. Some manufacturers offer roller mills with differential drives on at least one set of rolls in order to create enough fine particles to assist in packing HMC. If milling HMC with a roller mill, strive for essentially no whole kernels and you should still be able to keep fines (<1mm) under 10%. In a perfect world, each kernel would be split into roughly 6 equal pieces. However, corn processed in such a manner does take more time to pack, so there is a time-saving advantage to creating more fines.

After moisture and processing, correctly packing HMC is next on the list. In general, adequate packing requires a pack tractor for each 4-5,000 bushels per hour of grinding capacity. Pack tractors should not be sitting between loads, but constantly on the move. There is a fallacy that pushing corn up is enough during the day if you pack it well at the end of the day. The truth is, only the uppermost 6 inches of corn in the pile gets packed, so each load should be packed as it comes in. A well-packed HMC bunker will contain at least 45 lb of dry matter per cubic foot. Once packed, HMC should be covered immediately after completion of the pile to achieve the highest quality.

Another consideration for HMC production includes inoculants, which is a decision you should make in conjunction with your nutritionist, based on the cost of inoculation relative to the value of corn – and your ability to correctly apply inoculant. Also try to feed at least 6" off the face of the pile daily and maintain a vertical, flat face with no loose corn at the base of the pile to minimize shrink during feedout.

With some planning and quality control, and some help from Mother Nature, you can put up a tremendous volume of HMC in a short period of time. Because the process needs to occur quickly, it is tempting to rush through processing and not focus on quality. This year, take the time to manage the process for a short period of time so you can enjoy the results throughout the rest of the year. 

High Moisture Corn (HMC) Management

By Jeremy Martin, Ph.D., Nutritionist

As harvest approaches and cattle feeding margins remain negative, take the opportunity this harvest to get the most out of your corn crop. If putting up HMC is part of your repertoire, I am going to challenge you to manage the entire process in order to achieve success. From an agronomic standpoint, HMC expands the harvest season and reduces in-field grain loss by 3-6%. From a feeding standpoint, HMC improves both gain and conversion while typically resulting in less shrink than dry corn. While the benefits of HMC are apparent for both farming and feeding operations, success is in the details.

Most importantly, HMC must be stored at the right moisture level to maximize cattle performance. The ideal moisture range for harvesting HMC is 28-32% moisture, with maximum energy density and cattle performance between 30-31% moisture. Once the kernel reaches black layer, HMC harvest can and should begin in order to realize the most value. Timing is critical because by the time corn dries down to 23% moisture, it will feed with essentially the same energy as dry corn, but average energy value increases approximately 0.3% per point of moisture between 23 and 31%. Additionally, corn that is stored above 30% moisture becomes more digestible over time compared to corn stored at 24% moisture or less. In summary, ideal HMC harvest should start once black layer is achieved and be completed by the time corn has dried down to 28% moisture, resulting in an average moisture in the pile of 30-31%.

Almost every year, some corn is going to get harvested for HMC below 26% moisture. When you expect that to happen, your process should be adjusted to gain more value out of the drier corn. Our recommendation is to begin adding water when corn moisture drops below 27%, and focus on adding enough volume to bring the corn back to 30% moisture. In order to allow the corn to take in more moisture, it may be



GREAT PLAINS Livestock Consulting, Inc.

500 S. 4th St.
P.O. Box 377
Eagle, NE 68347

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Staff

Ki Fanning, Ph.D., PAS

Ruminant Nutritionist
Cell: (402) 890-5505
Ki.Fanning@GPLC-Inc.com

Jeremy Martin, Ph.D.

Ruminant Nutritionist
Cell: (402) 890-5507
Jeremy.Martin@GPLC-Inc.com

Dan Larson, Ph.D.

Ruminant Nutritionist
Cell: (402) 560-4052
Dan.Larson@GPLC-Inc.com

Zeb Prawl, M.S.

Ruminant Nutritionist
Cell: (620) 243-3846
Zeb.Prawl@GPLC-Inc.com

Luke Miller, M.S.

Ruminant Nutritionist
Cell: (660) 299-0798
Luke.Miller@GPLC-Inc.com

Jon Snoke

Field Representative
Cell: (402) 862-5485
Jon.Snoke@GPLC-Inc.com

Brent Nelms

Feedlot Tracking—ProfiTrac™
Brent.Nelms@GPLC-Inc.com



Phone: (402) 781-9378

Fax: (402) 781-9379

www.GPLC-Inc.com

September/October
2015