



The University of Georgia

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Cooperative Extension

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Livestock Newsletter

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Ronnie Silcox,
Extension Animal Scientist

Horse Hays and Hay Quality: Part 1

Gary Heusner,
Extension Horse Specialist

What is the ideal hay for horses? Ask this question to ten different horse owners you will get eight to ten different answers. My answer is it depends on the age and the current use and/or physiological state of the horse. For example a twelve year old mare that is only being ridden lightly versus a twelve year old mare that is nursing a foal have very different nutrient requirements as does a six month weanling versus an eighteen month growing horse.

My answer also depends on the usual physical characteristics considered such as:

- 1) Freedom from mold and dust
- 2) Little or no weed content
- 3) Texture of the hay and leaf to stem ratio which are indicative of maturity
- 4) Color and odor

My answer also depends on the type of hay. Is the hay a warm or cool season grass hay, legume hay, or a mixture of grass and legume hay? Most importantly what is the nutritive value of the hay which can only be obtained by having a *FORAGE ANALYSIS* of the hay or hays being compared? Will the horse eat the hay?

First I will discuss hay quality as it relates to a *FORAGE ANALYSIS*. In the next newsletter I will discuss some of the hays commonly fed to horses and give an example of pricing based on nutritive value.

True hay quality can only be determined by feeding a hay ad libitum to horses and measuring the horses' performance in some manner. Hay quality is a function of nutrient concentration in the hay including digestible energy, intake potential, nutrient availability, and partitioning of metabolized products within the horse and is estimated by chemical analysis of the hay. To determine the digestible energy of a hay in experimental trials the gross energy of the hay being fed is measured, feces collected, and feces energy content measured. The difference between the energy supplied by the hay and the energy measured in the feces is digestible energy. For example an average quality Bermudagrass hay may contain 0.8 megacalories (Mcal) of digestible per pound. If a horse required 16 megacalories digestible energy per day 20 pounds of the Bermudagrass hay meet the requirement ($16 \text{ megacalories} / 0.8 \text{ megacalories per pound} = 20 \text{ pounds}$). Intake of available energy is primarily a function of plant cell wall concentration because plant cell walls limit intake and digestibility. Much of the complex carbohydrates in forages is contained in cell walls, which cannot be degraded by mammalian enzymes. Thus the horse must depend on microbial fermentation in the hind gut to obtain the energy in cell walls. Neutral Detergent Fiber (NDF) is a measure of cell wall content of a plant. The higher the NDF value the lower the digestibility of energy. As a plant matures the cell wall becomes a higher percent of the total plant content, thus a negative correlation exists between plant maturity and digestible energy. In other words the more mature a plant the higher the NDF and the lower the digestible energy. This is also true for crude protein as illustrated in figure 1.

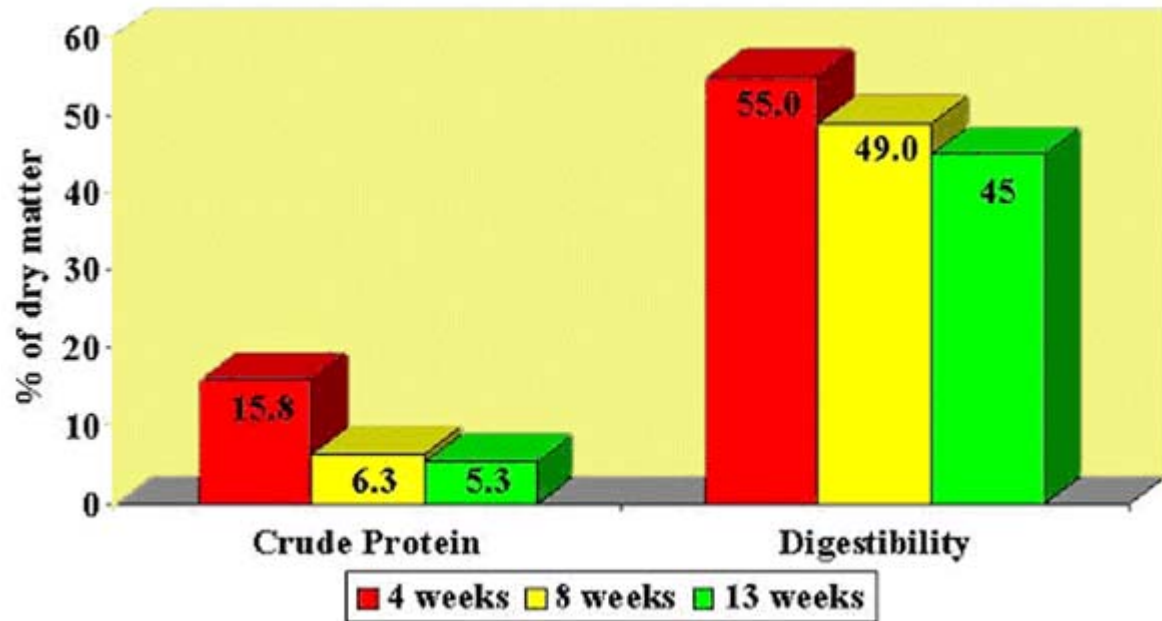


Figure 1. Effect of Bermudagrass age on hay quality. For quality hay and good yields, Bermudagrass should be harvested at 4 to 5 week intervals. Data from McCollough and Burton (1962).

When a *FORAGE ANALYSIS* is done the minimum analysis should include moisture, crude protein, neutral detergent fiber, calcium, and phosphorus. Figure 2 is an example of a *Forage Analysis Report* from the University of Georgia Cooperative Extension Feed Laboratory. The Digestible Energy content is calculated based on the Neutral Detergent Fiber and Crude Protein contents and is given in kilocalories (KC/LB) per pound. To convert to megacalories divide by 1000 or 800 kilocalories equal 0.8 megacalories. The report also includes a *RELATIVE FORAGE QUALITY (RFQ)*. Relative Forage Quality is an index to compare digestibility of different types of forages such as legumes, cool season grasses, and warm season grasses. The standard RFQ of 100 is an alfalfa hay that was harvested at full bloom.

For horses full bloom alfalfa hay would contain approximately 900 KC/LB or 0.9 Mcal/LB and 17 to 18 % crude protein on a 100% dry matter basis. RFQ thus is a simple method to define and compare hay quality. The system was developed to be able to compare hay qualities across harvest maturity, fertilization regimes, and plant species. In the next Newsletter I will discuss the types of hays that can be fed to horses and explain differences in digestibility of legumes, cool season grasses and warm season grasses.

As a first step in answering the question “what is the ideal hay for horses” we have looked at what *Hay or Forage Quality* is and how it can be assessed by explaining digestible energy, neutral detergent fiber, and relative forage quality. In addition physical characteristic criteria were listed. The bottom line is we want a hay that provides the most nutrients at the levels required for that particular horse at the lowest cost that the horse will eat.

Feed and Forage Analysis Report

(CEC/CEA Signature)

Client Information Dr. Gary Heusner Rhodes Center Athens, GA 30602 Sample: 2 Agent:	Lab Information Lab #8244 Completed: Jun 5, 2008 Printed: Jun 5, 2008	Contact Feed and Environmental Water Lab 2300 College Station Road Athens, GA 30602 ph: 706-542-7690 e-mail: soiltest@uga.edu
Crop: BERMUDAGRASS Use: Hay Species: HORSES Class/Weight: WEANLINGS		Variety: Russell Relative Forage Quality (RFQ): 126.2 Ration Formulation: No
Near Infrared Reflectance (NIR) Analysis		
	As-Sampled	Dry-Matter
Crude Protein	15.3 %	17.4 %
Crude Fiber (Estimated)	22.9 %	26.1 %
Neutral Detergent Fiber	49.1 %	55.9 %
Acid Detergent Fiber	29.24 %	33.30 %
Lignin	3.25 %	3.70 %
Total Digestible Nutrients	32.7 %	37.2 %
Digestible Energy	489 KC/LB 965	558 KC/LB 1100
Moisture	12.2 %	0 %
Dry Matter	87.8 %	100 %
Mineral Analysis (by wet chemistry)		Other Analyses
	As-Sampled	Dry-Matter
Phosphorus	.26 %	.30 %
Potassium	1.81 %	2.06 %
Calcium	.53 %	.60 %
Magnesium	.20 %	.23 %
Manganese	186 PPM	213 PPM
Iron	96 PPM	110 PPM
Aluminum	69 PPM	79 PPM
Copper	9 PPM	11 PPM
Zinc	24 PPM	28 PPM
Sodium	341 PPM	389 PPM
Total Fat	%	%
Nitrates	2719 PPM	3097 PPM
Ash	%	%
Sulfur	%	%
Bound Protein (NIR)	%	%
pH		
Total Aflatoxin	ppb	
Calcium:Phosphorus Ratio 2.01		

Learning for Life

The University of Georgia and Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating.
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Figure 2. Forage Analysis Report.

Horse Fencing Options

By Kylee Jo Duberstein
Extension Horse Specialist

There are many options available to horse owners to provide secure containment of their animals. Important issues to consider when choosing a fencing design are safety, durability, feasibility, and cost. Fencing materials for horses include wire mesh, board, PVC, and plain wire as well as electric fences of various designs. We will discuss advantages and disadvantages to each as well as a rough cost analysis.

When determining what material to use for fence, cost, safety and eye appeal are all factors that are often considered. Board fence is appealing and often thought of as a typical "horse fence" but can be too pricey and problematic for many. It tends to be a safe but high maintenance fence. Horses often chew, kick, and strike boards meaning sections of fence may need to be replaced. One of the benefits to using board fence is that it is very easy to replace short segments of fence since the length of each board is usually 16' with posts set on 8' center. Wire fence, on the other hand, can be stretched for 100+' in each section and therefore is harder to replace in small sections. A lower maintenance version of a board fence uses boards placed inside a PVC cover. This provides a safe, low maintenance, durable fence that is usually eye appealing but is typically too expensive for many people to consider. A cheaper version of this fence is simply PVC or vinyl sections which do not have boards inside. However, the vinyl is often light weight and prone to shattering. It needs to be enhanced with electric wire to keep horses from pushing through or breaking it.

Wire fences are popular options, and two of the most commonly seen types of wire are 2X4" non-climb ("horse wire") and field fence ("hog wire"). These are both a type of mesh fence but differ in the size of the squares that compose the mesh. Non-climb has much smaller squares (2" X 4") whereas field fence has larger squares that may graduate in size from bottom to top (6"x3" to 6"x8") or may be the same size (approximately 6"x6"). The smaller squares of the non-climb make it somewhat safer in that horses are not as prone to stick their feet through gaps in the wire. The smaller squares also make the non-climb stronger and more durable than field fence. However, downsides to using this wire are: (1) the cost is higher as compared to field fence (\$140-\$230 per 330' of field fence as compared to \$140-\$200 for 100' of non-climb), and (2) it is less flexible as compared to field fence and therefore harder to stretch over uneven ground, especially when extreme changes in grade of land are prevalent. One of the final things to consider when choosing wire fencing is the gauge of wire. The number of the gauge of the wire is inversely proportional to its thickness or strength. Wire comes in gauges ranging from 12.5 to 14 with 12.5 being the strongest grade of wire typically found in local stores. Wire mesh fences are sold as either 4' or 5' heights. Typically, wire horse fences are 4' tall with an additional top strand of wire or top board placed over the mesh wire for additional height, visibility, and to keep horses from leaning on of the wire fence.

Another option for wire fencing is the use single strands of wire such as high tensile or barbed wire. In this system, 4-5 strands of wire are stretched above each other roughly 1-1.5' apart in height. This is a cheaper option of fencing as barbed wire is approximately \$50 per 1320' of wire and barbless wire is around \$75 per 1320' of wire. However, barbed wire is not typically used for horse fence due to injuries associated with horses rolling and getting hung up in a fence or striking through a fence and injuring their legs and heel bulbs. High tensile wire is sometimes used instead but can also cause serious injury to horses that get their legs through it. This can be mediated somewhat by electrifying the fence so that horses are not as inclined to be close to the fence. These types of fences work better in places where the horse has access to large areas of space rather than being confined to a small area where it is more likely to come in contact with the fence. A modified version of high tensile and barbed wire fencing is the use of rope/synthetic materials that can be electrified. These are marketed as safer versions of barbed wire/high tensile fencing due to their lack of sharp points and their resistance to breaking. A popular example of this type of fence is Electrobraid™ which costs approximately \$200 for a 1200 foot reel.

It is important to recognize that when building a fence of any kind, the expense is not just in the chosen fencing material. Line posts must be used in all fencing to support fencing material. Line posts are set approximately 8-10 feet apart and are typically 4-5" in diameter by 6.5' in length. Currently these cost \$5-\$6 per post. Additionally, it is critical to provide proper stability by building solid corners and braces, particularly when using any type of wire fence as wire must be stretched and therefore puts tension on fence corners. If corners are not sturdy when wire is stretched, over time the fence will sag as the posts loosen in the ground and tilt. Therefore, braces for corners and lines are a critical cost when choosing to use any type of wire fence. Corner posts should be longer than posts used on the rest of the fence line. Ideal size would be around 8 feet in length with a larger diameter (6-8" diameter if possible). Use of larger posts in corners is costly (\$15-\$20/post) but is money well spent as these posts serve as anchors. To provide support to these corner posts, brace posts should be placed approximately 8 feet away from the corner on each line. Ideally, these posts are also longer in length (8') and larger in diameter (5-7") than the rest of the line posts. Again, the price of these posts is significant (\$12-\$18/post) but they function to stabilize the corner and strengthen the fence line.

In summary, there are numerous options available for building horse fencing. A careful cost analysis should be done prior to starting any fencing project, and feasibility of the desired fence should be carefully considered.

Junior Horse Update

Kari Turner

Extension Animal Scientist

Southern Regionals

The Southern Regional 4-H Horse Championship was held in beautiful Lexington, VA July 30-August 3. Southern Regionals is a time for 13 southern States to send their best 4-Hers to Regional competition, and in 2008 there were 386 rider and horse pairs in attendance. Thirty-three rider and horse pairs from Georgia were selected to attend Regionals based on their performance at the 4-H State Horse Show. As usual, the Georgia 4-H delegation (dubbed "Team Georgia") made the state very proud. Out of 162 riders in the hunt seat division, Kaylee Sheppard (Bulloch County) placed 3rd overall while Kathryn Leigh Buford (Crisp County) was 7th. Ashton Shelnutt (Spalding County) came in 7th overall out of 70 riders in the Speed Events division, and Jeffrey Harden (Wilcox County) came home in 11th overall. Apart from excellent riding, Team Georgia displayed wonderful sportsmanship, camaraderie, and character. Georgia was also well-represented in the educational contests. The Horse Bowl team from Douglas County, whose team members were Nichole Prince, Andrea Smith, Sara Hopkins, and Caitlyn Cliff, took home 7th place. The same girls also competed in Hippology, a contest which Georgia does not offer (see section below) and one in which they had never participated in. They placed a very respectable 5th in the judging portion and 10th in the written test section. Not bad for the first time ever! Out of 16 teams, the Horse Judging Team from Oconee County (Amy McCoy, Blake Kennedy, and Samantha Kickbush) came in 10th in the halter placings, 9th in the performance placings, and 9th in reasons for an overall team placing of 9th. Congratulations to all of the Georgia representatives! Go Team Georgia!

Hippology Clinic

Hippology has now been added to the 4-H Horse Program! So, what is Hippology? A contest about hippos? Although that may be fun, the youth have just as much fun in this contest about horses! Hippology consists of four sections: a written test, stations, judging, and team problems. Teams of three to four are tested on their knowledge of horse topics including, but definitely not limited to, nutrition, reproduction, veterinary care, colors, breeds, management and equipment. In May 2009, the Hippology contest will be piloted only for senior teams in conjunction with the annual 4-H State Horse Judging Contest. In subsequent years the contest will be open to both junior and senior teams. In order to introduce the teams to the contest, a Hippology clinic will be offered to teams of senior (and rising senior) team members and their coaches, leaders, and agents. The clinic will be held at the UGA Livestock Instructional Arena on November 15th. Registration fees are \$5 per team member and \$7 per adult, which includes lunch and a rulebook (for adults). Registration is due November 1, 2008. Please contact Kari Turner (kturner@uga.edu) for more information.

Foot Rot in Cattle

Ted G. Dyer
Extension Animal Scientist

Foot rot in cattle is normally a common fall-winter disease, however, it can show up at other times of the year if the conditions are suitable. When conditions are favorable for this disease you should check cattle closely. This disease affects nearly all groups of cattle and can be a very annoying problem. Once started in a herd and “seeded” in the soil, it may persist for quite a long time. Although the incidence of foot rot may not be high at any one time, it requires constant observation to prevent serious economic loss.

A specific bacterium invades the foot to cause this disease. Cuts, bruises, puncture wounds, or severe abrasions permit these bacteria to enter the tissue of the foot where they start an infection. Foot rot can be a seasonal disease, occurring during periods of extreme moisture, sudden freezing of muddy yards, or severe drought.

The first observed sign of foot rot is lameness, which may vary from scarcely noticeable to severe in one or more feet. Foot rot may affect only one animal or a high percentage of animals in a pen or herd. Lameness caused by acute foot rot will abscess above the hoof with a discharge that has a characteristic foul odor. If the infection is not stopped, it will invade the deeper tissues of the foot and may invade one or more joints, causing chronic arthritis.

Management practices that help reduce hoof damage or avoid bruising will help decrease the incidence of foot rot. Maintaining maximum drainage of lots and around water tanks to prevent mud helps reduce the incidence of foot rot. In winter when rough ground freezes around water tanks, the feet become bruised and this may lead to a higher incidence of foot rot.

Good nutrition may be helpful in preventing foot rot. Be sure that all cattle receive adequate calcium, phosphorus, and vitamin A for good bone and tissue health.

Some effective control methods for foot rot to consider are: penicillin, oxytetracyclines (including the long-acting products such as Liquamycin LA 200, a number of sulfa drugs, and Florfenicol (Nuflor). When foot rot fails to respond to medication, thoroughly check the foot for foreign objects. If infection proceeds and infects the joints, arthritis may develop and claw amputation may be needed to correct the condition until the animal can be salvaged at slaughter.

In most operations foot rot is an occasional disease that does not reach a level to stimulate great concern. However, the accumulated effects can have significant economic impact. Employing preventive measures and appropriate treatment will minimize these economic losses.

Preparing for a Successful Calving Season

Carole H. Brannen

Extension Animal Scientist – Beef Cattle

Proper planning prior to calving season can mean more live calves. Excessive losses can mean the difference between a year's profit or loss for a beef producer. Before the calving season, it is a good time to put together the supplies and equipment that will be needed to assist heifers and cows that need help at calving time. Before the 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 a cold dark night when you need them.

It is also essential to 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 your local veterinarian about your protocol and incorporate his/her suggestions.

A "calving kit" can be assembled to have on hand in case of emergencies. Some useful things to have on hand include disposable obstetrical sleeves, non-irritant antiseptic, obstetrical chains (60 inch and/or two 30 inch chains), two obstetrical handles, mechanical calf pullers, injectable antibiotics, and lubricant. Many lubricants have been used and one of the best lubricants is probably the simplest: non-detergent soap and warm water. Don't forget the simple things like a good flashlight and 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 gallon bucket so you can grab everything at once.

There are other sound management practices that are important when preparing for a successful calving season. Some specific things a producer can do to limit calf loss include:

- Separate first-calf heifers from mature cows. Calving difficulty can run as high as 30 to 40 percent for 2-year-old heifers compared to just 3 percent for mature cows. Place them in a small, accessible pasture near a corral where assistance can be given if needed.
- Provide a clean area for calving. The calving area should be a well-sodded pasture or clean, dry maternity pen, not a wet, muddy lot.
- Be familiar with the signs of calving. Within a few hours of calving, cows generally become nervous and uneasy. As contractions increase, a cow will likely wander away from the rest of the herd.
- Check cows frequently. Observing cows and providing assistance when necessary results in more live calves. However, cows should be disturbed as little as possible during labor.
- Know when a cow needs assistance. Intervention is justified when two or three hours have passed without progress or if delivery has not occurred within 90 minutes after the water sac appears. In a normal delivery, the calf's front legs and head will appear first.

Proper planning before hand can make calving season go a lot smoother and can mean more live calves and therefore more profit potential.

Are You a Fan of the BCS?

Lawton Stewart,
Extension Animal Scientist

In the fall, with college football in its prime, if you ask someone what they think of BCS, you'll spark an hour long discussion of bowl games versus playoffs. However, for those of us in the cattle business, BCS has another meaning, **B**ody **C**ondition **S**coring. Body condition scoring is an excellent tool for producers who are trying to maintain a 365 day calving season and minimize feed cost. I was at a meeting last month and asked how many producers used this management practice. I was amazed that no one raised their hand. As we are getting close to weaning this fall I thought this would be a good time to go over the *What, Why* and *When* of BCS.

What is it? Body Condition Scoring is a relatively simple exercise assessing the body energy reserves of a cow by assigning a score from one (emaciated) to nine (obese) based on visual appraisal.

Why is it important? The ability of a cow to rebreed is highly dependent on her energy status. Data compiled from Texas, Oklahoma and Florida show that when cows increase from a BCS 4 to 5, pregnancy rates increase from 60% to 90%. This can greatly influence the profitability of a cattle operation.

When should it be used? Under good management, the condition of you herd should be monitored throughout the year. However, as we enter fall, most producers are getting ready to wean and this serves as an excellent time to utilized BCS. At this time, all cows should already be bred and within 80-100 days of calving. The nutrient requirements of the cow are at the lowest point of the year once the calf is weaned. At this point all cows should be scored and sort out any cows below a BCS 5 for additional feeding. Calving is also an appropriate time to BCS, however if you wait until now you only have 80-100 days to improve body condition. At this time the cow is entering the peak of her nutritional needs and adding condition will be challenging.

So whether you're a football fan or a cattle producer, BCS should be three important letters to you. This fall, take the time to evaluate you herd; it may pay off tremendously this winter and spring. For more information on Body Condition Scoring and illustrations of the scoring system, please visit:

<http://pubs.caes.uga.edu/caespubs/pubcd/B1308.htm#When>.

Planning Your Winter Feeding Program

Lawton Stewart,
Extension Animal Scientist

As we move into fall, producers are looking forward to their winter feeding program. With the drought and soaring feed prices, I have had a range of calls asking about potential feeds and what can and can't be fed to a cow. The truth of the matter is there is no silver bullet, and although the feed prices are a pain in the wallet, it is forcing us to take a look at our nutrition programs and improve our overall efficiency. Our best strategy to reduce feed costs is to emphasize our forage program and put the rumen back in ruminants. We can basically break down our nutrition program in three steps:

1. **Understand your production system.** The nutrient demands of a brood cow change significantly throughout a 365 d production cycle. If we can understand where exactly we are in the cycle, we can better fit our nutrients
2. **Understand your forage program.** In Georgia, we have the potential to grow forages throughout most of the year with proper management. With testing of our pastures and hay, we can form the backbone of our nutrition program. In some cases we will be able to provide the majority or all of the nutrients needed.
3. **Develop an economically supplement.** When forages are limiting, supplementation is needed to meet the requirements of the herd and should be expected from time to time. The key here is to identify feeds that supply the nutrients needed and evaluate these feeds on a price per nutrient basis. Table 1 shows a few common byproduct feeds compared to corn and soybean meal on a price per pound of TDN and CP. Please note that with the volatility of today's market, these prices change on a daily basis. Given these prices, it is logical to supplement with corn gluten feed or distillers grain when protein is limiting and a blend of one of the former with soyhulls if energy is limiting.

Now that we have a plan of how to address our nutritional needs it is important to look at these three concepts together. Table 2 illustrates supplementation needed based on the quality of available forage (pasture or hay) and stage of production. As you can see, supplementation cost can be up to \$0.75/cow/day greater on poor versus excellent forages.

In conclusion, as we're in the midst of soaring commodity prices, it's obvious feed is one of the highest input costs for cattle producers. This reemphasizes the need for considering all aspects of management including forage management to minimize feed cost. Putting it all together may help us keep our head above water until we see some relief

Table 1. Price per pound of CP and TDN calculated based on current feed prices.

Ingredient	\$/ton	% DM	% CP	% TDN	\$/lb CP	\$/lb TDN
Soybean Meal	\$ 430	88	48	87	\$ 0.51	\$ 0.28
Corn	\$ 260	90	10	90	\$ 1.44	\$ 0.16
Corn Gluten Feed	\$ 175	90	25	83	\$ 0.38	\$ 0.12
Distillers Grain	\$ 195	90	30	90	\$ 0.36	\$ 0.12
Soyhulls	\$ 180	91	12	77	\$ 0.82	\$ 0.13
Whole Cottonseed	\$ 320	90	23	90	\$ 0.77	\$ 0.20

Table 2. Supplement needed (Corn Gluten Feed:Soyhulls, 50:50) to meet requirements of a 1200 lb cow with different forage values.

Stage of Production/ Requirement	Poor Forage, 7% CP, 45% TDN	Average Forage, 10% CP, 50% TDN	Excellent Forage, 13% CP, 56% TDN
	-----lb supplement-----		
Dry Cow 6% CP, 45% TDN	0	0	0
Late Gestation 9% CP, 56% TDN	9	5.5	0
Early Lactation 11% CP, 60% TDN	13.5	10.5	5
Late Lactation 8.5% CP, 55% TDN	8.5	5	0

Improving the Value of Feeder Cattle

Ronnie Silcox,
Extension Animal Scientist

There have been studies over the years where people have sat in auction markets and recorded type and price on every sale over several months to determine the factors that affect price. One of those was done in Kansas in 1986, Oklahoma followed up with a similar study in 1997 and Arkansas has done the same thing in 2005. Prices have gone up over the years, but a few simple management practices have been shown over and over to improve the value of feeder cattle.

Castration - In all three studies, feeder steers brought more than bulls. In the most recent study in Arkansas, the average price of bulls was \$6.27 per cwt lower than the price of feeder steers. Bulls are harder to manage in feedlots due to disposition and when bulls are shipped they tend to fight more causing more bruising and dark cutting carcasses. Castrating bulls at heavier weights causes more stress and it takes a longer time for them to recover. In the Kansas study, done 20 years ago when prices were lower, the discount on 300-pound bull calves was -\$1.62. This discount went up as weight increased to -\$5.55 for 800-pound bulls. Castration of bull calves pays and should be done as early as possible.

Dehorning - Horned cattle require more bunk space than dehorned or polled cattle. Horns can cause bruising in shipping and handling. In all three studies horned cattle were discounted. In the most recent study in Arkansas, horned cattle made up only 14% of the total and they were discounted \$4.00 per cwt compared to polled or dehorned cattle. That would amount to a \$20 per head discount on 500-pound calves. If polled cattle are not being used, dehorning at the earliest age possible pays.

Body Condition - Body condition, or how fat feeder cattle are, affects price. In all three studies over the past 20 years, average or "pasture" condition was a good place for cattle to be in feeder calf markets. In the Arkansas study, very thin cattle were \$1.41 per cwt higher than average condition cattle, but they would have given up a lot of weight for that little bit of gain in price. Thin cattle were discounted \$1.34, fleshy cattle were discounted \$5.86 and fat feeders were discounted \$16.16 per cwt.

Fat feeder calves can lose weight if they go into a stockering program or gain slower if they go onto full feed. Buyers discount for this. With the high price of grains and the discounts on fat feeders, it is not a good idea to over feed young calves. It is a good idea to keep them growing and in good pasture condition. With high grain prices, the difference in price per cwt between lighter and heavier feeders has decreased. Heavier feeder cattle are in demand, but fat feeder cattle are still discounted.

Shrink - When you work and move cattle, they shrink or lose weight. Shrink is due to a loss of gut fill and a loss of tissue. When you work cattle and move them from pasture to holding pens, they will shrink at a rate of about 1% per hour for the first 3-4 hours. Most of this is just due to the fact that they are not eating and are losing gut fill. As they

are held longer they will continue to lose ¼ % per hour for the next 10-12 hours. Just loading cattle and hauling them to the auction market will easily result in a 3% shrink. That is the reason that people who buy cattle direct off the farm sometimes take a “pencil shrink” of 2-3% to account for this difference.

It is to the seller’s advantage to get cattle through markets as “pasture fresh” as possible. It is to the buyer’s advantage to buy cattle that are not too shrunk. Cattle with excessive weight loss through shipping and handling are more susceptible to disease. Cattle handling needs to be as easy on the cattle as possible. Hauling needs to be as direct and short as possible. Penning cattle the night before a sale, results in more shrink before the cattle hit the scales. Minimizing shrink through proper handling pays for the seller by keeping more weight on the cattle and delivers a better calf to the buyer.

Health - Healthy feeder cattle bring more than unhealthy cattle and this was shown in all three of the studies. Some of the discounts from the more recent Arkansas study were:

Description of Problem	Discount from Healthy \$ per cwt
Sick	-\$37.99
Lame	-\$33.47
Bad Eye(s)	-\$13.82
Dead Hair	-\$12.66
Stale	-\$18.20

Calves sold as “preconditioned” in Arkansas received a \$4.15 per cwt premium.

High corn, fertilizer and fuel prices are causing us to reevaluate lots of things in the cattle industry, but castration, dehorning, proper calf nutrition, proper handling to avoid unnecessary shrink, and a good herd health program are as important as ever.

Fall Update on 2008 Calhoun Bull Test Evaluation

Ted G. Dyer
Extension Animal Scientist

The 2008 Calhoun Bull Test Evaluation is off to a good start. The bulls started the 114 day evaluation on July 22. This year there are 130 bulls on test with 9 different breeds represented: Angus, Charolais, Gelbvieh, Gelbvieh %, Hereford, Red Angus, Santa Gertrudis NU-GEN, Simangus, and Simmental. The feeding program this year was evaluated and changes were made to help reduce escalating feed cost. The new feeding program for 2008 consist of commodity by-products (corn gluten and soyhull pellets) plus whole corn. The results from the first weight period have been very favorable with the first 28 day average daily gain at 3.35 lbs/day. This is very close to last year's first 28 day weigh period where the bulls gained 3.65lbs./day on much hotter commercial feed ration. Hopefully with fall approaching and cooler temperatures the bulls will continue to perform favorably.

Reminder: the deadline for entering heifers in the Calhoun HERD (Heifer Evaluation and Reproductive Development) Program is November 4, 2008. More information and current reports on the Calhoun Bull Evaluation Program, the Calhoun HERD Program, the Tifton Bull Evaluation Program, and the Tifton HERD Program can be found at: <http://www.tifton.uga.edu/pc-web>