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Minimizing Hay Feeding Losses

By Steve Morgan
Harris, Meriwether and Talbot Counties CEC

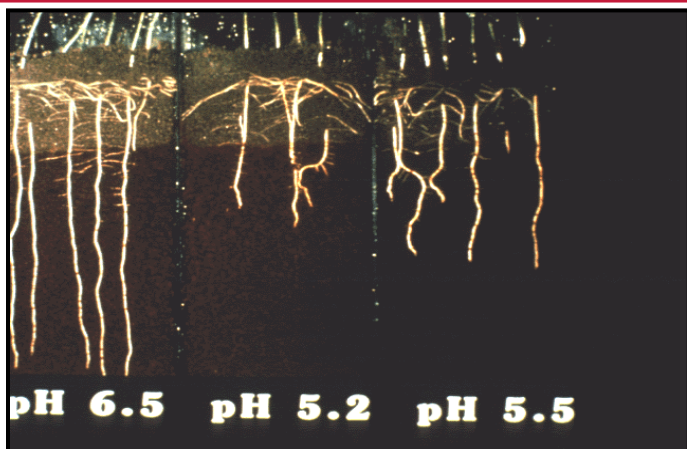
Hay is the most common winter feed option, and while it is less risky than the other available options and requires the least amount of planning, it can also be the most expensive. By the time hay is fed, losses from handling and feeding can essentially increase the amount of production needed from the original standing crop by 35 percent. Production costs can be reduced and hay making can be more profitable when the amount of hay lost and wasted during harvest, storage, and feeding is controlled.

Beef cattle consume approximately 2.5 pounds of hay per day per 100 pounds of body weight. Therefore, a 1,200-pound cow will consume approximately 30 pounds of hay each day. This means, during a four-month hay feeding season, each cow will require between three and four round bales weighing at least 1,100 pounds. Much expense and many long hours go into harvesting and storing good quality hay for winter feeding. You wouldn't dream of throwing away one-third of this hay but that is what happens when livestock are allowed unlimited access to hay.

Livestock trample, over-consume, contaminate, and use for bedding 25 - 45 percent of the hay when it is fed with no restrictions. Cattle will waste less hay when the amount fed is limited. One-fourth more hay is needed when a four-day supply of hay is fed with free access than when a one-day supply is fed. Daily feeding is more efficient and waste can be reduced by feeding hay daily according to diet needs. Daily feeding will force livestock to eat hay they might otherwise refuse, over consume, trample, or waste. Efforts that limit the amount of hay accessible to trampling will save feed. Excessive hay consumption can be a major problem when large hay packages are fed without restriction. A dry, pregnant cow may eat 20 - 30 percent more hay than she needs when allowed free access. This can amount to over 700 pounds per cow over a four-month feeding period. A 50 cow herd may over consume 17,-18 tons of hay if the cows have free access to hay. This is in addition to the extra hay needed to replace that wasted during free-access feeding.

Feed hay on a well-drained site or on concrete when possible. Hay should not be fed in the same location all winter. Periodically, changing feeding areas will help minimize problems with mud. Feed bunks are excellent for feeding small square bales. Round bales should be fed in specially designed racks. Hay racks with solid barriers at the bottom prevent hay from falling out or being pulled out by livestock and getting stepped on. Producers should have enough hay rings so each cow can feed when she wants to and is not pushed away by the most aggressive cows. When feeding square bales on the ground, unrolling round bales, or using other feeding methods that place a large percentage of the hay in an easily trampled

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*Maintaining proper soil pH is vital to health of our forage crops.
Photo courtesy of Auburn University*

Don't Underestimate the Importance of Soil Fertility on Your Forage Crops

By Norman Edwards
Walker County CEC

Most forage producers realize there are benefits of providing plant nutrients to their pastures, hayfields, and other cropland on an annual basis. But, many individuals make this fertilizer application without knowing the nutrient levels that currently exists in the soil. All of us will also agree that fertilizer is not cheap, so having a good understanding of the benefits of applying the needed nutrients and soil testing to determine the exact needs will help you make the most out of the money you spend in this area.

It is normally easy for us to see an increase in the amount of lush, dark green growth following a fertilizer application, but it is more difficult to see some of the other benefits. If we tested the quality of the forage from these fertilized fields we would also see the nutritional levels of the forage increasing along with the quantity that is produced. One area that is commonly overlooked is the impact that soil fertility has on the persistence of our forages. Numerous forage publications stress the correlation between adequate soil fertility and crop persistence. This is especially true of maintaining appropriate potassium and pH levels. Many of our forage crops utilize as much potassium as they do nitrogen and if we don't supply the sufficient amounts of potassium, levels can quickly become deficient.

On the other hand, if we let our pH level drop out of the desirable range, we are limiting the plants ability to utilize nutrients that may be present in the soil. Understanding this concept should make us think twice about the dollars we spend applying fertilizer to fields with inadequate pH levels. Forage crops can vary in their optimal pH level but most grasses do well with pH levels between 6.0—6.5, while most legume crops prefer slightly higher levels. Go to [Soil and Fertilizer Management Considerations for Forage Systems in Georgia](#) for more in depth details on fertilizer management in forage crops.

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Minimizing Hay Feeding Losses (cont.)

position, spread hay so that all animals have access. In addition, limit feeding to an amount that will be cleaned up within a few hours, otherwise, cows will use the hay for bedding after meeting their immediate intake needs. Since hay stored outside usually has more spoilage during storage and lower palatability than hay stored inside, producers should feed that hay first.

"Cattle will waste a greater percentage of poor-quality hay than they will of good-quality hay. Animals fed high-quality hay early in the season will often refuse poor-quality hay when it is offered later," he said.

No matter what type of storage and feeding methods are used, some loss is always seen, but by following recommended methods, these losses can be minimized thus saving livestock producers time and money.

Upcoming Events

Southeast Georgia Beef Cattle Short Course
March 4, 2014 | Irwinville, GA | Bull Test Station
More Info, call 229-386-3683

Southeast Hay Convention
March 11-12, 2014 | Watkinsville, GA

Winter Annual Forage Crops: Cash, Cover, and Carbon (Field Day)
March 17, 2014 | Odum, GA

Georgia Forages Conference @ GCA
April 2, 2014 | Perry, GA

Corn Silage and Conserved Forage Field Day
May 24, 2014 | Citra, FL

Importance of Soil Fertility cont.

The best way to determine the soil nutrient and pH level is through soil testing. Soil samples can be sent to the University of Georgia Soil Testing Lab by dropping off samples at your local Extension Office. The turn-around time for soil samples is normally less than two weeks, so there is still plenty of time to get them completed for the upcoming growing season. If you are not familiar with soil testing, visit [Soil Testing for Home Lawns, Gardens and Wildlife Food Plots](#) to review the lab's brochure which explains the process. Although, it is geared towards the homeowner client, the sampling procedures are the same for pastures and hayfields.

Just keep in mind that the results are only as good as the sample submitted, so be sure to collect numerous sub-samples from the area being tested, mix the sub-samples together thoroughly, and then take the sample to be sent to the lab from that mixture. There is a small fee to have the sample tested but it is well worth the information you receive. The report will give you the plant nutrient and pH levels of the sample and make recommendations for fertilizing and liming based on the crop you have planned for the area.

In summary, forage growth, nutritional levels, and persistence are all impacted by the nutrients we provide through fertilizer. Although pH is not a plant nutrient (like nitrogen, phosphorus, and potassium), it greatly affects how plants utilize those nutrients. And, last but not least, we are spending money blindly if we don't test the soil to determine its nutrient needs.

As you travel across our State, fertilizer types, soil types, and forage species vary considerably. For more detailed information for your specific production needs, contact your local County Extension Office or call 1-800-ASK-UGA1.

Grazing Methods for Georgia Livestock Producers

By Clay Talton
Elbert County CEC

Over the last several years, the drought that preceded our downpours of late, led many livestock producers to pay closer attention to the forage availability on their operation. Producers began to look at various grazing systems and methods to implement on their farm. Within a grazing system lie many different types of grazing methods that producers can utilize. Producers must consider many things on the farm before implementing the system and the method; such as: soil fertility, animal class or needs, forage type and availability, infrastructure, and their time.

Continuous stocking – Continuous stocking is a term that most cattlemen are familiar with. This is the simplest grazing method and is almost certainly the most commonly practiced in Georgia. Livestock are stocked on a single pasture for the entire grazing season. Forage utilization in this system is typically low, unless the pasture is overstocked. When pastures using this method are understocked or during times of rapid forage growth, we will see problems with spot grazing. The animals have the ability to select high quality diets, but forage utilization and gain per acre can suffer under these circumstances.

Rotational stocking – Commonly referred to “rotational grazing”, rotational stocking divides the pasture(s) into several small “paddocks”. The ultimate goal in this method is grazing uniformity and efficient utilization of forage species so the animals are concentrated on these paddocks for relatively short periods of time. The number of paddocks can vary greatly, but large numbers of paddocks improve control of grazing and animals. However, more paddocks equals higher input costs and labor. Generally, 8 to 12 paddocks will provide adequate rest periods and sufficient utilization efficiency for most forage and animal systems. Once animals are moved to their next paddock, the previous paddock is allowed to rest and regrow. Individual animal performance and diet selection are sacrificed, but the improved forage utilization normally allows increased stocking rates and animal gain per acre.

Deferred grazing or "stockpiling" - This is a largely underutilized grazing method where forage production is deferred from grazing until later in the season. Stockpiling is typically performed in the fall months to reduce hay needs in late autumn and early winter. This practice is particularly useful in tall fescue based systems where fall growth rates are good and forage maintains quality well into the winter. This practice can also be utilized in bermudagrass systems, but diet quality rapidly declines after frost and protein supplementation may be necessary.

Creep grazing - Creep grazing is very similar to creep feeding young animals. However, we replace grain feeding with grazing forages. The young animals are allowed to access high quality forages like winter or summer annuals to meet their higher nutrient requirements. Access to these high quality forages can be provided through creep openings.

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*Strip grazing is a popular grazing method that helps maximize forage utilization.
 Photo courtesy of Georgia Grazing Lands Conservation Coalition*

Grazing Methods cont.

Strip grazing - In strip grazing, the animals are held in small areas by a movable electric fence and can graze a forage supply. Once the 'strip' is utilized, the front fence is moved forward in the pasture. A back fence may or may not be used depending on the preferences of the producer. Forage utilization is high for this method, but labor requirements can be high and performance of animals with high nutrient requirements can be depressed due to lack of forage selectivity.

Limit grazing - This method is typically practiced when animals are grazing a base paddock containing low quality forages and are allowed periodic access to high quality and high cost pastures. This is an extremely effective practice where animals limit graze a pasture for a few hours per day or on an alternate day basis. This method can be used with summer annuals to improve cow condition in mid-summer.

Forward grazing - In this system the herd is sorted into multiple (normally two) nutrient requirement groups. The high nutrient requirement (leader) group is rotated through paddocks before the low nutrient requirement (follower) group. Paddocks are lightly grazed by the leader group which allows these animals to select a high quality diet to meet growth or production needs. The follower group then grazes the paddock to utilize lower quality forage and allow high quality regrowth. This method is used in stocker operations where growing calves graze in front of cow-calf pairs.

One must carefully think through individual farm operation goals and needs. None of these methods are necessarily set in stone. Be sure to match grazing methods with animal, plant and producer needs as these are key to implementing a successful grazing system. One thing to keep in mind is that with any system, pasture growth rate needs to be monitored frequently with forage and cattle managed in timely manner. Visit the management intensive grazing website at

<http://www.caes.uga.edu/topics/sustainag/grazing/> or contact your local County Extension Agent for more information.