

# Goat Producer's Newsletter

Terry Hutchens, MS, Animal and Food Sciences, UK  
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## Dealing with Hay Shortages and High Corn Prices

Terry Hutchens, Extension Specialist  
University of Kentucky

There are times when you may very well wish you were out of the goat business and on vacation in January and February. The fall and winter of 2007 and 2008 will be remembered as the year of short hay supply in combination with high feed costs. The increase in feed cost has been brought about by the rapid increase in corn prices. The direct value of corn will continue to increase as more and more corn is diverted from the livestock sector to energy or fuel sector. This trend will likely continue for at least the next four years. Secondly, hay prices have increased by at least 50% due to the late seasonal freeze in combination with high temperatures and low rain fall. Furthermore, UK agricultural economists believe that corn prices may reach \$171/ ton (\$4.80/ bu) during the 2008 winter feeding season. Likewise, grass hay prices will likely reach \$100/ton. Farmers involved in animal agriculture must act now and find ways to reduce the cost of feeding animals. The following articles are an attempt to assist producers' with winter feeding challenges.

## Jackson selected as Extension Associate for Goat/Forage Production

Agricultural Communications  
University of Kentucky, College of Agriculture

Kentucky is a great place for goats according to Shaun Jackson, newly hired Extension Associate for Goat/Forage Production. "There are many opportunities for goat producers in Kentucky," says Jackson, a Knox County native who is stationed at UK Robinson Station in Quicksand.

"It is indeed an honor to have been selected as the Extension Associate for Goat/Forage Production. I have always had a strong interest in agriculture and small ruminants in particular. My family and my wife's family have always raised goats. This position will give me the opportunity to help other goat producers, and I am really excited about that. My appointment to this position will allow me to use my talents and interests to serve the goat producers of Kentucky," said Jackson.

He added, "The future is bright for goat production. Currently, there is more demand for our meat products than we can supply and the outlook for the future indicates that demand will continue to increase. It is important that producers cooperate with one another and work together to meet the market demand. Producers need good information to keep their herds healthy and productive and education is the key."



Jackson completed a Bachelor of Science in Agriculture at Berea College in 1998 and his Masters of Science in Agricultural Operations Management in May 2007. Prior to his appointment to this position, he worked as a county Extension Agent in Tennessee for eight years. In this capacity he served both 4-H youth as well as adult clientele. Additionally, he served as co-chairperson for three youth goat shows in Tennessee and is a member of the Tennessee Master Meat Goat Producer Committee. He currently raises goats with his wife Karen and son Samuel.

## 8 Tips for

## S - T - R - E - T - C - H - I - N - G Your Goat Feed Supply

Shaun Jackson, Extension Associate  
University of Kentucky

This spring we had an unexpected cold snap followed by drought. As a result, the goat forage supply is expected to be very low. Even with low hay supplies, there are some things that you can do to stretch your goat feed over the winter months. Here are 8 tips that may help you through. These tips are also useful in good forage production years.

1. Cull. Identify unproductive or unthrifty goats in your herd and sell them. You may have animals that don't always breed or have chronic health problems. It doesn't make good business sense to put your resources into low-producing animals (Page 2).

2. Practice rotational grazing. Rotational grazing involves dividing available pastures into smaller paddocks for grazing purposes. The animals are then rotated through the paddocks (moved from one paddock to another) based on available forage. It is recommended to not allow goats to graze paddocks shorter than 4-6 inches. This management technique not only allows for more efficient utilization of forages, but it also helps to keep internal parasites (worms) at bay. Basic information on rotational grazing may be found in the UK Extension publication *Rotational Grazing (ID-143)* [www.ca.uky.edu/agc/pubs/id/id143/id143.pdf](http://www.ca.uky.edu/agc/pubs/id/id143/id143.pdf) , . Copies may be obtained at your local county Extension office.

3. Browse your goats. Do you have a portion of your farm that is grown up with forbs (weeds) or browse (shrubs and small trees)? If so, browsing your goats may be an option. Goats can utilize plants that other livestock cannot. Properly installed temporary or portable fencing works well for browsing goats. Getting your goats onto other paddocks will allow you permanent pastures to grow back.

4. Ask your neighbor. Do you have neighbors who may be willing to let you browse your goats on their property in exchange for the goats clearing out weeds or brush? Again, this will allow you permanent pastures to grow back. Caution: Make sure this type of arrangement will not cause problems between neighbors!

5. Stockpile. This management technique has been used successfully in cattle operations for years, and it can be used for goats. Stockpiling involves applying fertilizer (according to soil test results) to cool season grasses such as fescue in late July-early August. The pastures are then not grazed until late fall or early winter. This will allow you to extend the grazing season and reduce the amount of hay that must be fed. UK Extension has an excellent publication entitled *Stockpiling for Fall and Winter Pasture (AGR-162)*. Copies may be obtained at your local county Extension office.

6. Plant winter hardy small grains for fall and spring grazing. Small grains such as winter wheat and rye may be planted for late fall or early spring grazing. Although the success of using winter hardy grains to lengthen the grazing season is partly dependant upon weather conditions, some producers have successfully used them. For more information see the UK Extension publication *Managing Small Grains for Livestock Forage (AGR-160)*. Copies may be obtained at your local county Extension office.

7. Supplement. In years when hay supplies are short, it may be necessary to supplement feeding with grain or a commercial feed ration in order to meet your goat's energy requirement. A word of caution: Do not switch directly from feeding your goats little or no grain to high levels of grain. This can wreak havoc on a goat's digestive tract by lowering the pH and disturbing the natural microbes that assist with digestion. Other supplementation options are distillers grains and other by-product feeds. These are generally less expensive, contain little or no starch, and cause fewer digestive problems.

8. Purchase hay. In years when hay is short it is difficult to find hay and when you do it is typically high priced. The most important thing to remember when purchasing hay is to never make the

purchase without first getting a forage sample and sending it to a lab for analysis. Your county Extension Agent can assist you with this. Sometimes what sounds like a good deal may not be a deal at all.

## Culling Strategies to Survive Drought

Ken Andries PhD.  
Kentucky State University

The decision to reduce the herd due to drought is a difficult one from several aspects. First, when forage returns, you have lost the genetic base of your herd. Second, because many producers are selling prices are lower than normal. Finally, many producers don't have good records to make the most effective culling possible.

The first step in herd reduction is to determine how many animals can be maintained on the available forage and hay supply without excessive spending on feed. Two publications that can help with the calculations are *Estimating Winter Hay Needs for Goats (Page 8)* and *Goat Parasite Management Application of Farm Gastrointestinal Parasite Assessment (Farm-GPA)*

[www.uky.edu/Ag/AnimalSciences/goats/newsletter/april0107goatproducersnewsletterweb.pdf](http://www.uky.edu/Ag/AnimalSciences/goats/newsletter/april0107goatproducersnewsletterweb.pdf)

Then look at your existing herd and determine how many head you will need to remove to fit the resources you have available.

The first group to cull is those with health issues. You need to look over your records for animals that have higher incidence of foot problems and parasite treatments. Does with any indications of current or future udder problems should also be removed at this time. If you have any animals with other health or temperament problems this is the time to remove them from the herd. Cull these animals first to reduce future problems.

The next step in a successful drought herd reduction program is to evaluate the age structure of your herd. Your older animals have less of their reproductive life remaining and should not be as good genetically as the younger animals. This is a good time to sell older animals. Younger animals are also the better investment of feed than the older animals.

If you have production records, it's time to put them to use. Remove any does that don't produce multiple births. Reproduction is our most economically important trait so we should select heavily for multiple births. Also cull those does that are not weaning good kids, those does producing kids below average weaning weight, or those with sickly kids. You should be removing these types of animals each year drought is a good time to remove the remaining ones.

When selecting replacements, be sure they are the best performing and out of good maternal lines. Don't keep extra animals due to the heavier culling this year, remember we are trying to reduce the herd size. Finally, when the drought ends and we have good forage next year, start building your herd back slowly through selection of good quality replacements out of your herd. You don't have to build back in one season. Also, evaluate your carrying capacity to be sure you don't overstock.

## DROUGHT – FORAGE ISSUES

Garry Lacefield, Ray Smith, and Tom Keene  
Plant & Soil Science Department  
University of Kentucky

## STOCKPILING Tall Fescue

Stockpiling has been our best, most consistent, way of producing fall and early winter pasture. As hay prices increase, this option, even with high nitrogen, should be

## STOCKPILING Tall Fescue –

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**Table 1.** Yield and crude protein content of Kentucky bluegrass and tall fescue produced from Aug. 15 to Dec. 1 under different levels of N fertilization at Lexington (average of three years).

Nitrogen Applied lb/acre	Bluegrass		Fescue	
	Yield lb/acre	% Protein	Yield lb/acre	% Protein
0	700	12.8	1700	11.1
45	1600	15.5	2800	11.8
90	2100	19.1	3900	14.8

Source: Taylor, T.H., and Templeton Jr., W.C. 1976. Agron. J. Vol. 68, Mar-Apr.

**Table 2.** Effect of time of nitrogen application on production efficiency of KY 31 tall fescue.

Date N Applied	Nitrogen Efficiency lb DM*/lb N added
Aug 1	27.2
Aug 15	25.8
Sep 1	19.2
Oct 1	10.8

\*Dry matter.

Source: Murdock, Lloyd W. 1982. Agronomy Notes. Vol. 15, No. 2, April 1982.

**Table 3.** Pounds of tall fescue 10 weeks after N application.

Application Date	lb/acre %			
	None	Ammonium Nitrate	Urea	U/N*
Early August	786	1683	1406	84
Mid-August	741	1438	1287	89
September	372	1076	852	79

\*Efficiency of urea compared to ammonium nitrate.

Source: University of Kentucky.

considered (see Stockpiling for Fall and Winter Pasture AGR-162

<http://www.ca.uky.edu/agc/pubs/agr/agr162/agr162.pdf>

## NEW SEEDINGS

We are receiving many questions about what can be seeded to provide late summer and fall grazing and hay. The first answer is that there are no “easy solution” to the feed shortage created by the drought and the late freeze. There are a number of options though, which are outlined in the following paragraphs including links to more detailed publications. Remember that now may be a time to “start over” on some pastures and hayfields, and fall is an ideal time to reestablish perennial cool season stands.

### Establishment Method

It is tempting to try to seed directly into existing pastures and hay fields especially with annual crops. While this approach is sometimes successful, all too often the competition of the well rooted perennial sod limits growth of the newly seeded forage. Seeding directly into existing stands is only recommended when stands are thin or severely weakened.

In general, planting into a conventionally tilled seedbed is more effective than no-till seedings. Planting depth for small grains is 1 - 2 inches, but it is essential that

perennial forage grass and legume seed not be planted deeper than ¼ - ½ inches. Planting too deep is one of the most common reasons for stand failure.

No-till seeding can be successful and is often preferred on sloping land. No-till establishment works best into crop stubble but will also work into existing sod as long as the existing vegetation is killed or suppressed. Existing stands can be suppressed by close grazing or herbicides. Suppression rates range from 1 to 1½ pints per acre of glyphosate (at 3 lb ai/gal) or Gramoxone. Kill rates range from 3 to 6 pints/acre glyphosate (at 3 lb ai/gal) and should be applied 3 to 4 weeks before overseeding. Ideally, two sequential applications (4 to 6 weeks apart) of glyphosate are preferred for a complete kill.

Surface broadcast seeding is only recommended for red and white clover seeded during February (frost seeding) onto a closely grazed or clipped sod. Broadcast seeding rarely works in the late summer with exception of annual ryegrass, and even with ryegrass drilling is preferred. The recently updated UK publication Grain and Forage Crop Guide for Kentucky, (AGR-18) <http://www.uky.edu/Ag/Forage/AGR%2018%20BookletFinal%20Revisions1.pdf> provides seeding rate and other establishment details for all forage and grain crops that can be grown in Kentucky.

### Small Grains

Late summer seeded small grains provide fall grazing, late winter/early spring grazing, and a hay or silage harvest next spring. There are a number of small grain options which include: wheat, cereal rye, spring and winter oats, barley and triticale. Below are a few advantages and disadvantages of wheat, rye and oats and basic management guidelines. Remember that all most small grains require a cold period before they will produce a seedhead (spring oats are the main exception). Therefore, late summer and fall plantings will remain vegetative (only leaf growth) and continue to regrow after grazing in the fall and early spring. For more management information or details on other small grains see Managing Small Grains for Livestock Forage, (AGR-160)

<http://www.ca.uky.edu/agc/pubs/agr/agr160/agr160.pdf>

Cereal rye provides rapid grown for fall grazing and more fall growth than wheat. It is also has early spring growth but is lower quality than wheat as it matures. Wheat provides a high quality grazing and hay/silage crop, and seed is plentiful and cheap. Oats are also an option, but remember there are two types of oats. Winter oats are planted in the fall and mature with seedheads next spring, but most varieties have marginal winter survival in Kentucky. Spring oats show good growth after seeding and heads out in the fall and then winterkills after freezing temperatures. In recent years, some producers in Ohio have reported good fall cut hay yields from spring oats. This is an option worth considering this season with hay supplies low and prices high. Spring oats can also be grazed but will not regrow after grazing once seedheads start to elongate.

The recommended planting date for small grains is mid-August to early September when grazing in the fall or when growing spring oats for hay or late grazing. Poor pasture growth and hay shortages have encouraged even earlier seedings this year. Some reports show that oats can be successfully seeded in late July/early August, but the

advantages of early seeding may be negated by high August temperatures and low rainfall. The use of “bin run” seed may be preferred with early seeding since the risk of stand failure due to low moisture and high temperatures is greater.

**TAKE NOTE:**

- Planting should be delayed until late September and October when growing small grains for grain, hay or silage since excess unutilized fall growth limits yield.
- Remember that crabgrass can provide excessive competitive with earlier seedings. This is one of the reasons that perennial grass establishment is often most in early to mid-September once nights are cooler and the growth of weedy grasses slows down.
- Remember if wheat is planted earlier than October 1 it has a high risk of being infected with Hessian fly larvae. Vegetative or leaf growth continues, but most seedheads do not develop the following spring severely reducing hay or silage yield.

Annual Ryegrass

Annual ryegrass is a good option for late fall and spring grazing with relatively fast growth after seeding (not as fast as rye or wheat), good regrowth, and high quality. Make sure to choose an annual ryegrass variety that has proven winterhardiness in Kentucky. For more detailed information see Annual Ryegrass (AGR-179) <http://www.ca.uky.edu/agc/pubs/agr/agr179/AGR179.PDF>

**HAY**

Hay producers in Kentucky have been hit with 2 major setbacks during the early part of the 2007 hay making season. First, there were the freezing temperatures that first week in April right before Easter. Temperatures dipped to the upper teens around the state on two separate nights freezing back new plant growth that had occurred during a record warm March. Frozen plant material losses of between ½ a ton and 1½ tons per acre seemed to be the norm. Several cool, cloudy, damp days followed the freeze, holding back plant growth even more. Once regrowth started, most stands made a decent recovery (although alfalfa struggled to out-compete the weevils). However, that’s when Mother Nature decided to turn off the water and that brings us to our second setback....extremely dry months of May and June.

Livestock producers do have some tools, however, to deal with these reductions in hay yields. First, we need to do a much better job of storing the hay we were able to make. Storage losses in Kentucky can run up to 50 % during a normal year when round bales are just stored outside along the fence line. If inside storage is not available, covering the bales, elevating them off ground, etc..., will help reduce storage losses and no one can afford storage losses this year. Anything that we can do to reduce those storage losses will make our hay go further.

The hay that was made during May and early June was good quality for most part since there was little rain damage. With the quality of the hay being better, we need to stretch that hay as far as it will go. So a forage analysis on the hay is imperative.

**Table 4. Effect of feeding systems on losses of Johnson-grass hay and on steer performance.**

Item	Conventional bales on sod	Round bales on sod	Round bales with panels
Hay fed (lb/day)	9.1	19.1	12.3
Days on test	79	79	79
Initial wt. (lb)	535	538	538
Final wt. (lb)	615	635	646
Gain/animal	80	97	108
Average daily gain (lb)	1.0	1.2	1.4
Lb hay required/lb of gain			

Adapted from: W.B. Anthony, E.S. Renoll, and J.L. Stallings. 1975. Alabama Agric. Exp. Stn. Cir. 216.

also see [Minimizing Losses in Hay Storage and Feeding](http://www.uky.edu/Ag/Forage/MinimizingLossesInHayStorageAndFeeding(MSUEPub).pdf)

This analysis will help us to balance our feed rations accordingly. Hay that has a TDN of 45% must certainly be fed differently than hay that has a TDN of 67%. The only way to accurately determine how a producer should feed that hay is by means of a forage analysis. To get your hay tested you can contact your local county agent or contact the Kentucky Department of Agriculture ([www.kyagr.com](http://www.kyagr.com)) direct at 1-800-248-4628. This year producers can’t just put out “X” number of bales to carry the cattle (or particular livestock unit) until they get around to feeding them again. Knowing how many pounds of hay that we are feeding a day to each unit will help stretch the hay and make the animals do a better job of cleaning it up. Feeding racks will also help stretch the hay further by keeping it up off of the ground so the animals won’t trample it.

The Department of Agriculture has implemented a “Hay Hotline” to help producers’ source hay and other commodities from around Kentucky and other parts of the country as well. That number is **1-888-567-9589**. You may also go to the following web address to obtain contact details for growers and brokers of hay and as well as listing hay that you may want to sell. <http://www.kyagr.com/marketing/forage/HayForageDroughtRelief.htm>

As you can see, there are some options and tools for livestock producers to utilize during this short hay period. However, time is not on our side. Prices of hay and commodity feeds will continue to rise as the year progresses. So, it is imperative that producers sit down with their county agent, advisor or feed supplier to work out a feeding plan that will carry them all the way through next spring or at least until new grass arrives in mid to late March.

# Dealing with Hay Shortages and High Corn Prices with By-Product Feed Substitutes

Terry Hutchens, Extension Specialist  
University of Kentucky

## Goats Are Moderate Quality Feeders

Goats are moderate nutritional feeders. They do not digest low quality forages as efficiently as do cattle. Forage feeds extremely high in fiber and low in protein (TDN 40%-50%) escape digestion, accumulate within the rumen, and slowly move out of the gut as undigested organic matter. Goats do not perform well on high concentrate or high starch diets; however, they perform best on feeds in the range of 55-70% TDN with just enough nitrogen in the gut to produce microbial protein and enough digestible fiber to produce fatty acids. These volatile fatty acids are quickly and efficiently converted to metabolizable energy. It is within this ruminal environment that goats, perform best. Low quality forages can be greatly improved by supplementation of the forages with highly digestible fiber by-product feedstuffs. In addition, substations for hay can be made with many by-product feeds. Hay substations are often needed following poor growing and harvesting conditions like those experienced in 2007.

## Common By-product Feeds

By-product feeds are produced secondarily as a result of an extraction or milling process. There are many by-product feeds on the market, however the most common ones fed in Kentucky are Distillers Dried Grains with Solubles (DDGS), Corn Gluten Feed (CGF) and Soybean Hull (SBH). These by-product feeds are ideal for goat rations due to the highly digestible fiber content, highly digestible and bypass proteins, and the absence of starch. High levels of starch may produce rumen pH drop and related metabolic disorders.

1. Corn Gluten Feed is generally 2/3 corn bran and 1/3 steep water following the extraction of corn oil and other products. CGF is commonly used as a protein and energy source in high fiber forage-based diets. The protein content is highly degradable and is an excellent source of microbial protein nitrogen. In beef cow studies, CGF has been shown to replace up to 40% of the hay needs. Perhaps 30-35% replacement rate should be used for goats. CGF has shown an improvement of feed efficiency for beef calves consuming high fiber diets, showing a 10% conversion improvement when compared to rolled corn. In a concentrate mixes, CGF should not comprise more than 25-35% of the concentrate or 15-25% of the total daily diet. In order to conserve feed, start feeding the concentrate (1.5 lbs and 2-3 lbs of hay for a 100 lb doe) the last 45 days of gestation through the 5th week of lactation. Otherwise, feed 4 lbs of hay daily or 2 lb of hay and 1-1.5 lb of CGF daily (CGF as hay

- substation). CGF is low in calcium and high in phosphorus; therefore ground limestone and ammonium chloride should be added to the concentrate.
2. Distillers Dried Grain with Solubles are made from combining the stillage water and protein solubles following the distillation of ethanol. DDGS is commonly used as a protein source in high fiber diets but has shown to improve feed efficiency (energy) in beef calves by as much as 27% when compared to corn-hay diets. Likewise, a feeder kid study conducted in Kentucky indicated that concentrates containing 20 and 30% DDGS was equal to a conventional pelleted feed in average daily gain and total gain. The total cost of feeds and cost of the gain was 50% less for the DDGS treatments when compared to the conventional feed. DDGS is an excellent source of bypass protein (50% rumen bypass). Fifty-fifty mixtures of DDGS and CGF have shown greater gains in beef calves due to a synergistic effect from feeding the two commodities. DDGS is low in starch and high in digestible fiber. DDGS is low in calcium and high in phosphorus, therefore ground limestone and ammonium chloride should be added to the concentrate. DDGS should not comprise more than 25-35% of the concentrate or 15-25% of the total daily diet. In order to conserve feed, start feeding the concentrate, (1.5 lbs and 2-3 lbs of hay for a 100 lb doe) the last 45 days of gestation through the 5th week of lactation. Otherwise, feed 4 lbs of hay daily or 2-3 lb of hay and 1lb of DDGS daily (DDGS as hay substitution).
3. Soybean Hulls is the by-product of the soybean oil industry. Soybean hulls are considered an energy source that substitutes well for corn in a high fiber diet. In addition SBH are rich in digestible fiber and can substitute in part for hay. A prime benefit to SBH is that it is very low in starch content and contains highly digestible fiber which makes SBH a fiber carbohydrate source, high in energy. Goats consuming SBH will not experience a drop in rumen pH as would be expected with corn. Beef cattle research has shown corn substitution rates as high as 40-50%; likewise, feeder kid research in Kentucky has shown that a 50% substitution rate for corn is possible. Again, cattle research has shown as much as 40% substitution rate for hay. SBH works well in a concentrate mix with DDGS or CGF. SBH can be the primary source of energy or can substitute for a portion of the corn up to 50% of total corn content. Likewise, SBH can be fed along with a hay diet comprising 40% of the hay needs. For a 100 lb doe, feed 2 lbs of hay and 1-1.5 lb SBH would be adequate. Finally, SBH are adequate in calcium and phosphorous levels. Note that there are three classifications of SBH starting with Soybean Hulls at 9% protein, Soybean Hull Meal Feed is 13% protein; and Soybean Meal Run is 11% protein.

Nutrient Value of Common By-product Feeds			
Table 5	CGF	DDGS	SBH
DM	90	90	90
CP	21	30	9.4
TDN	78	92	77
Ca	0.1	.01	0.6
P	1	1	0.2

## How Much Can You Afford to Pay for Hay?

Step 1		
Feedstuffs	TDN % (Energy Value)	\$ Cost/Ton
Soybean Hulls	77	\$90
Some-What Sorry Hay	48	\$100

The following forage base rations have been formulated and evaluated on Kentucky farmers.

20-40-40  
 20% DDGS  
 40% SBH  
 40% Whole Corn  
 Free choice mineral & hay

Step 2			
Feedstuffs	TDN % (Energy Value)	Lbs Feed/Ton	Lbs TDN/Ton
Soybean Hulls	.77	2000	1540
Some-What Sorry Hay	.48	2000	960

30-30-40  
 20% DDGS  
 40% SBH  
 40% Whole Corn  
 Free choice mineral & hay

Step 3		
Feedstuffs	Calculate Cost of TDN	\$ TDN Cost/Lb
Soybean Hulls	$\frac{\$90/\text{Ton}}{1540 \text{ Lbs TDN}}$	= \$0.06
Some-What Sorry Hay	$\frac{\$100/\text{Ton}}{960 \text{ Lbs TDN}}$	= \$0.10

30% Grass Hay  
 38% SBH  
 9% Soybean Meal 48%  
 8% Whole Corn  
 1% Cotton Seed Hull  
 2% Limestone  
 1% Corn syrup  
 1% Mineral Pac

Step 4		
How much can you pay for SBH vs. Hay based on TDN?		
Feedstuffs		Breakeven Price SBH vs. Hay
Soybean Hulls	= \$0.06	\$150/Ton
		Breakeven Price Hay vs. SBH
Some-What Sorry Hay	= \$0.10	\$60/Ton

30% Grass Hay  
 10% DDGS  
 17% SBH  
 8% Soybean Meal 48%  
 28% Whole Corn  
 1% Cotton Seed Hull  
 4% Limestone  
 1% Corn syrup  
 1% Mineral Pac

30% Grass Hay  
 15% DDGS  
 32% SBH  
 3% Soybean Meal 48%  
 13% Whole Corn  
 1% Cotton Seed Hull  
 4% Limestone  
 1% Corn syrup  
 1% Mineral Pac

30% Grass Hay  
 25% DDGS  
 39% SBH  
 1% Cotton Seed Hull  
 3% Limestone  
 1% Corn syrup  
 1% Mineral Pac



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[www.kysheepandgoat.org](http://www.kysheepandgoat.org)

33% Corn  
 37% CGF  
 26% SBH  
 3% SBM  
 1% Limestone

All of these diets have TDN levels 70% or above and 16% protein levels.

## Reasonable Concentrate Feeding Levels

1. Doe: Last 45 days of gestation feed 1.5—2.5 lbs / 100 lbs of body weight as concentrate and 3 lbs of hay daily. Continue feeding concentrate until the end of the 5th week of lactation.
2. Feeder Kids/Slaughter Kids: Feed the concentrate at 2.5-3.0 percent of body per day and provide an equal quantity of hay daily.
3. All course textured feeds should be hand-fed. They are not recommended in a self feeding system.

### Upcoming Events

- Sept. 7 & 8—2007 Mountain Pride Meat Goat Show & Field Day
- Sept. 8-Bullitt Co. Goat Field Day
- Sept. 20 KSU Small Farmer Field Day
- Oct. 3 Meat Goat & Sheep Field Day at (SIPAC)
- Oct. 9 - Eweprofit II
- Oct. 18 Third Thursday Fall Goat Day

See details at this site:

<http://www.uky.edu/Ag/AnimalSciences/goats/goatinfo.html>

**Southern Indiana Purdue Ag Center  
 Field Day 2007  
 September 8  
 2:00 – 6:00 PM CST**

Please join us for an education afternoon of offering concurrent sessions covering topics related to Beef Cattle, Forages, Meat Goat Production, and Aquaculture

Each session will be offered two times 2-4 PM and 4-6PM

Forage/Beef Session

The Ads say it Pays but does it really? Economics of using Max Q Tall Fescue – Kenny Burdine, University of Kentucky Ag Economists

Stretching Short Forage/Hay Inventories in a Tight Forage Supply Year  
 Dr. Ron Lemenager – Purdue University, Beef Extension Specialist

Meat Goat Production

Summary of initial study looking at different Selenium Sources for Meat Goat Production – Terry Hutchens, University of Kentucky Goat Specialist

How and Can Bio-Fuel Co-products Be Used in Meat Goat Production?

Terry Hutchens, University of Kentucky Goat Specialist

Aquaculture

Can Cage Culture Fish production work in Southern Indiana Ponds?

Bob Rode – Purdue University Aquaculture Research Lab

General overview of Farm Pond Management  
 Speaker to be announced

Please RSVP by September 5 so plenty of refreshments are available  
 812-482-1782- Dubois County Extension Office

**For additional information contact:  
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<http://www.uky.edu/Ag/AnimalSciences/goats/goatinfo.html>



## LAND GRANT PROGRAM - COOPERATIVE EXTENSION

### Estimating Winter Hay Needs For Meat Goats

Prepared by: Dr. Ken Andries, Animal Science Specialist, Kentucky State University  
Adapted from: Bill Halfman, University of Minnesota Extension Service

- 1) Weigh several bales of hay to get an average bale weight:  
(add weights of bales and divide by number of bales)

\_\_\_\_\_ lb.

Average Bale Wt: \_\_\_\_\_ lb

X

- 2) Count the number of bales available for feed:

Number of bales: \_\_\_\_\_

X

- 3) Account for storage/feeding loss (see below)  
(loss factor is from published data)

Loss Factor \_\_\_\_\_

=

Total lb Hay Available: \_\_\_\_\_ lb.

Type of Storage	Loss Factor
Inside on ground	.93 - .95
Inside on Crushed Stone	.95 - .97
Outside on ground, uncovered	.65 - .80
Outside on ground, covered	.65 - .85
Outside on stone, uncovered	.80 - .87
Outside on stone, covered	.83 - .90
Outside on other base, covered	.80 - .88

We can normally expect to feed hay from December through March in Kentucky (120 days). Feeding can start in November depending on weather conditions and grazing starts in late March or early April. Because of this you should plan for 150 to 160 days of winter feeding. Goats are rated between 0.14 and 0.18 AU depending on class. Animal units are based on the pounds of dry matter an animal will consume and 1 AU is the amount of DM for a 1000 lb cow.

- 4) Animals Units to Feed per day (Animal Unit Days)

Class	# Head	X	Days Fed	X	Factor	=	Animal Unit Days
Bucks		X		X	0.18	=	
Does		X		X	0.17	=	
Weaned Kids		X		X	0.14	=	

Total Animal Unit Days: \_\_\_\_\_

- 5) Daily hay Allocation/Animal Units:

Pounds Hay/Animal Unit Day: \_\_\_\_\_

(Calculate this from a balanced ration. 20 to 30 lbs of hay/AUD would be a good estimate, but does not replace the need for a balanced ration)

\_\_\_\_\_ Animal Unit Days X \_\_\_\_\_ Daily Hay Allocation = \_\_\_\_\_ Lbs. Hay Needed

\_\_\_\_\_ Lbs. Hay Available - \_\_\_\_\_ Lbs. Hay Needed = \_\_\_\_\_ Surplus or Shortage

The above is an estimate, feeding waste is included at 3% but can range up to 20% depending on type of forage and how it is feed. Most hay feeders reduce loss to between 3 and 15%.

**For more information contact:** Animal Science Specialist  
Kentucky State University, Cooperative Extension Program, 400 East Main Street,  
Frankfort, Kentucky 40601, Email: kenneth.andries@kysu.edu, www.kysu.edu



Educational programs of the Cooperative Extension System serve all people regardless of race, color, age, sex, religion, disability, or national origin.

## Meat Goat & Sheep Field Day

**Wednesday, October 3, 2007**

### **Southern Indiana Purdue Agriculture Center (SIPAC)**

**11371 E. Purdue Farm Road**

**Dubois, IN 47527**

4:30-8:00 p.m. Eastern Time

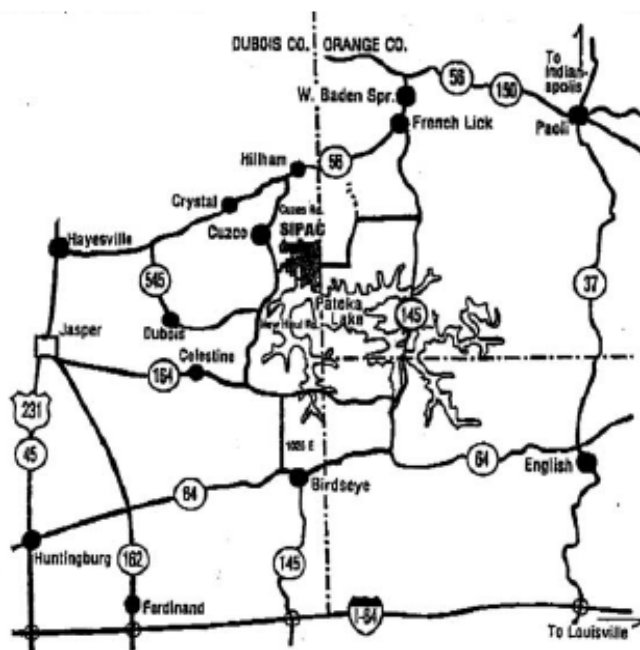
3:30-7:00 p.m. Central Time

(SIPAC is on Central Time)

Topics to be covered include:

- Options to deal with short hay supplies
- Feeding distillers dried grains to sheep and goats
- Hands on body condition scoring of goats
- Hands on grading and weight estimates for goat kids

Register the day of the workshop on site. There will be a \$2.00 registration fee/person.



This workshop is being sponsored by Purdue University, the University of Kentucky and Kentucky State University. Purdue University is an equal access/equal opportunity institution.

For further information contact:

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