

AgriLIFE EXTENSION

Texas A&M System



Jr. Hay Judging Made Easy!!!

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Cherokee County Hay Judging Blog can be accessed online 24/7:

www.cherokeehayjudging.blogspot.com

Why Judge Hay?

Though economic concerns will always dictate the daily quantity and quality of products we purchase, there are several physical factors to weigh when considering hay. Being a good judge of hay quality is a direct benefit to those who are buying hay, as well as to the animals it will feed. Less expensive hay is not necessarily the best deal just because it's cheap, because an uneducated decision could potentially result in a much higher cost due to animal morbidity or mortality. When considering hay, it is also important to take into account the relative feed value (RFV). The RFV is simply a measure of the nutritional value of the hay relative to the species and/or dietary need of the animal. The RFV and protein requirements of a pregnant or lactating beef cow may be similar to those of a dairy cow but both are much higher than those of the average dry (not pregnant or lactating) beef cow. Horses, goats and sheep also have different nutritional needs relative to their expected performance, so it would pay to research those needs before you buy "the best hay money can buy". If you buy hay with qualities beyond the actual needs of the animal that you intend to feed, everything beyond those needs will quite literally end up as waste.

Lack of adequate rain fall and mass grass-eating insect infestations (Army Worms, Grasshoppers, etc) can cause hay to be in great demand during the winter months. This means that nearly all East Texas stock animal producers will, at some time, be forced to purchase hay to feed their herds. To maximize the return on their investment, it is imperative for them to know that the hay they are buying is of sufficient quality to meet their herd needs. A major visual key to being able to judge hay quality is being able to recognize the stage of its lifecycle that the hay was harvested in.

Below you will see a brief description of the physical characteristics to consider when judging hay:

Maturity

You first need to understand that the ultimate goal of any hay grass is to survive only long enough to propagate. That means that it wants to sprout and grow a healthy stem, put on leaves, produce its own seedling to emerge in its bloom, and drop the seed once mature, in turn, producing a new plant, and so on, and so on....

There are three distinct developmental stages of the life within this life cycle. The first stage of this cycle is the "pre-boot" stage. At this stage, the grass has already produced strong healthy stem tissue and is now concentrating all of its energy into creating leaf tissue. At "pre-boot", the plant should show little or no signs of seed head development. When the plant transitions to the next stage, it starts concentrating its energy into developing seed heads, it is said to be in the "Boot" stage and remains in this stage until the seed heads emerge into full bloom. The middle portion of this stage is the optimum time to harvest the hay, as a good bit of nutritional quality remains in leaf tissue, as well as in the pre-emerged seeds.

The last stage within the plant's life cycle is that of "full bloom" this is when the mature seeds are in full view just prior to their being released from the seed head. Remember the plants ultimate goal is to propagate itself, so at this stage, the plant stem and leaf have stopped growing and nutrient values begin to decrease. All energy is focused on nurturing the seeds to maturity. Hay can still be harvested early in this stage, but it should be done as soon as possible. If the seeds are allowed to grow to full maturity, then they will likely fall off the plant either before or during the harvest, rendering the harvest nearly useless as far as nutrient content. Hay harvested late in this stage is still useful as "fiber-filler" (roughage) if a supplemental feed program is going to be implemented. But that is a whole other subject...

In judging the maturity of a hay sample, it's all about the seed. We use the word boot to describe the stage of seed development. Boot simply means "put on". So logically, a sample in "pre-boot stage" would mean that there should be plenty of healthy intact leaves, with very few to no signs of seed head development. A sample in "boot stage" should have both healthy leaves and a majority of the sample should show beginning to full seed head development. A sample in "full bloom stage" will have dark and sometimes "hairy" looking (depending on grass variety) large seeds with moderate to no leaf presence.

Texture

Remember we are looking for the best return on our investment with any hay purchase. And since animals can be just as picky as humans when it comes to what they put in their mouths, we need to also consider the texture of the hay before we purchase it. If the hay isn't palatable (satisfactory to eat) to the animal, then the animal doesn't eat it as often or in as much quantity. Texture is measured in pliability (softness) and is done so by ranking it in three categories: pliable, moderately pliable, and un-pliable. Typically, the fresher the cut, the more pliable the hay; however, older hay, if properly stored, may be just as pliable. Dry, sun-bleached, older hay old can still be pliable if it is good quality hay. Stem size also is a consideration when judging texture. As a general rule, the larger the stem size the less pliable the hay.

Leafiness

Remember the leaf of good quality hay still holds nutritional value and is judged to be either "leafy", "shattered", or "stemmy". A sample is said to be "leafy" when the majority of the hay stems still have broad healthy intact leaves attached to them. If the sample's majority is comprised of hay stem few to no leaves present, it is said to be "stemmy". A sample is said to be "shattered" when the leaves are present but the majority of them are no longer attached to the stems. This indicates that a good deal of nutritional value will be unavailable to the animals as the leaves fall away during the transport, storing, or feeding of the hay.

Foreign Matter

This is just what it says. If a sample contains anything other than what it is marketed as, it is said to have foreign matter. This is not always a bad thing. Say you are judging a sample of Bahia Grass hay and you find good Coastal Bermuda or Clover mixed in with it. In this case, the foreign matter may have a higher nutritional value than the Bahia Grass hay itself and that is a good thing. Now, in the event that a sample has noxious or poisonous weeds mixed throughout (Silver Leaf Nightshade, Coyotillo, Buffalobur, etc...) it is a potential herd health threat and as such, should be avoided. Also, consider that you may have pastures that normally produce good "horse quality costal" however, you find yourself needing to purchase hay for whatever reason (drought, insect devastation, etc) and you bring in weed laden hay bails to your pasture, you are risking the spread of that weed growth in your pasture even if the cows don't eat the weed. Typically, cows will sort past the weeds to get to the good hay. This will leave the weeds to be trampled into the ground only to sprout and grow during the next growing season, thus increasing herbicide costs for the next years pasture maintenance program.

Hay Color

Hay can lose its bright green color because of rain during the curing process, sun bleaching, and bale fermentation or simply as a result of the hay being too mature at the time of harvest. Don't let the color of the hay be the only factor you consider when judging hay for a purchase. Often, an early cut, rain damaged hay that is off-color will have a higher nutritive value than bright green over mature hay. As humans, we often put too much stock in the color of the hay we are judging. Remember cattle are color blind, which means that they can not tell the difference between blue, brown, and green. In judging a sample think like a cow, not like a human. Bleached hay (sun-bleached) will appear light golden brown colored. This is not a problem, typically because only the outer parameter of the bale that gets bleached. Hay that has been rained on can look brown or even black due to the high water content.

Complete Chemical Forage Analysis

This is by far, both the most reliable and most accurate indicator of hay quality. Not only does this provide a complete chemical profile of the hay in question, but will list the crude protein and fiber percentage values as well. Since this is a process that can only be done using specialized equipment within a laboratory, few hay producers provide such documentation of their hay's quality. When this data is not available, it is all the more reason to be as proficient as possible in judging the physical characteristics of hay. This information sheet is meant to help you prepare for the Jr. Hay Judging competition and is provided at no charge by the Cherokee County Extension Office.

Jr. Hay Judging Competition Explained

This competition is both a team and an individual competition. A team is comprised of three or four competitors; however, only the top three individual scores on a four man team will be calculated to provide the team's final score. Individually, all competitors' scores will be ranked against those of their peers within two categories, 4-H & FFA. The high point individual in each category will receive a scholarship in the amount to be determined by the Cherokee County Ag. Business Committee (typically \$1000.00 but is subject to change).

Competition Structure:

There will be 4 judging station, at each of the first three stations (A, B, & C) there will be four hay samples. These three stations will make up the placing class. At each station individual competitors will rank the samples against each other in order from best to worst, by sample number. Competitors will be given 15 minutes to rank these hay samples and mark their choice on the judging cards provided by their coaches prior to the contest. Each competitor must stand with his/her back to the table until the signal is given to begin the competition. At which time, competitors will turn and begin judging the samples. At the end of the 15 minute judging period all competitors will hand their judging card to the contest official monitoring their station and then proceed to the next station to stand again with his/her back to the table until the signal is again given to begin the next judging round.

The fourth station (D) will be made up of 10 samples. This station will be the Grading Class. Each sample will be judged by the criteria listed on the Blue Judging Card. The criteria are Maturity, Texture, Leafiness, Foreign Matter, and Color. The competitor will place a check mark in the box that best describes the condition of the hay sample under each of the listed criteria. At the end of the 15 minute judging period the cards from this station will be collected in the same manner.

Contest Scoring & Records Retention

All Judging Cards will be kept on file in the County Extension Office until August 31 of the following year.

Cards will be scored and ranked by the County Extension Office. Official results will be emailed to coaches by 2PM the following day and posted to the County Hay Judging Blog (www.cherokeehayjudging.blogspot.com).

RESULTS WILL NOT BE RELEASED VIA TELEPHONE!!

Below is a sample similar to the Grading Class card you will be using:

Cherokee County Jr. Hay Judging Competition - Grading Card																			
_____														01-A					
Contestant's Name – Print Legibly														Team Number - Member Letter					
Sample #	MATURITY			TEXTURE			LEAFINESS			FOREIGN MATTER					COLOR				SCORE
	Pre-Boot	Boot	Full Bloom	Pliable	Moderately Pliable	Un-Pliable	Leafy	Shattered	Stemmy	Clean	Weeds	Stubble	Mold	Other	Bright	Bleached	Dark	Non Uniform	
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

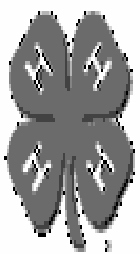
SCORING SECTION - DO NOT WRITE BELOW

	MATURITY	TEXTURE	LEAFINESS	FOREIGN MATTER	COLOR
GRASS	4	2	1	2	1
LEGUME	2	2	3	2	1

Cherokee County Jr. Hay Judging Results to be posted online: www.cherokeehayjudging.blogspot.com

Below is a sample similar to the Judging Placing Card you will be using:

PD600



Judging Card

John Smith 108

(Number or Name)

Pets

(Class)


Tanner

(Class)

Placing Score _____

Reason Score _____

A	1234	
B	1243	
C	1324	
D	1342	
E	1423	
F	1432	
G	2134	
H	2143	
I	2314	
J	2341	
K	2413	
L	2431	
M	3124	
N	3142	
O	3214	
P	3241	
Q	3412	
R	3421	
S	4123	
T	4132	
U	4213	
V	4231	
W	4312	
X	4321	


Texas A&M System



*For more information on this or any other Agriculture or Family
& Consumer Science related subject, please contact your
County Extension Agents.*

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