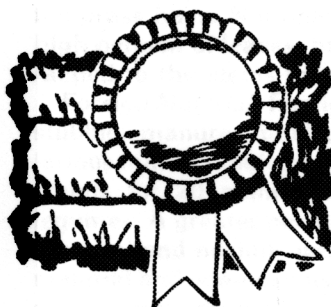


Hay Judging Guidelines



HAY JUDGING GUIDELINES

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Introduction

The quality of hay varies more than the quality of any other crop grown in Texas. True quality can be expressed only as feeding value. Factors affecting quality or feeding value are species, fertilization, stage of maturity and curing and harvesting practices. Certain chemical and physical characteristics also are associated with hay quality. Properly used, these can be reliable indicators of hay quality. When judging hay consider certain characteristics unique to different hay species. Then judge each sample in comparison with standards for an ideal sample of a particular species.

Determining Physical Score Hay Shows

Physical characteristics of hay are indicators of intake and digestibility as well as other factors affecting animal performance that are not reflected in the chemical score. To determine physical characteristics, open the bale and examine a representative sample from the center of the bale. Physical factors to consider are stages of maturity, texture, leafiness, foreign material and color.

Stage of Maturity. The maturity at which hay is harvested is one of the most important factors influencing quality. This factor has a value of 40 points for grass and 20 points for legume hay. Values differ because legume plants do not lose quality as rapidly with age as grasses do. In determining the maturity score look for blooms or seedheads and examine the length of stems. As a guide, grass hays with 1 percent or more seed stems should score not more than 30 points. Legumes at the one-tenth bloom stage should not score more than 15 points. Hays harvested at younger stages should receive higher scores while more mature plants have lower maturity scores. In the absence of seedhead or blooms, use length and coarseness of stems as an indicator of maturity (small, pliable stems indicate immaturity, while long, coarse, fibrous stems indicate excess maturity).

Texture. Texture pertains to stem size and pliability. It indicates to some extent the palatability or acceptance by animals. Small stems which are pliable and flexible have greater digestibility. Texture accounts for 20 points when judging grass hays and 15 points when judging legume hays. Texture is best determined by running the hand along the cut edge of the bale or by pressing a sample between the hands to determine pliability.

Leafiness. Leafiness refers to the proportion of leaves to stems. Leaves are higher in nutrients than stems; therefore, a hay containing a high proportion of leaves scores higher than one with a high proportion of stems. Leafiness accounts for 10 points when judging grass hays and 35 points when judging legume hays. This difference is due to the greater hazard of leaf shattering of legume hays. Leaf shattering is not considered a major problem in harvesting grass hays. Not only is it important to have a high percent of leaves, but the leaves should be attached to the stems to reduce feeding waste.

Foreign Material. Foreign material such as weeds, stubble, manure, mold and any non-edible or injurious matter is objectionable. Foreign material accounts for 20 points when judging grasses and legumes. A greater penalty is assessed for injurious material and noxious weeds than for non-injurious material and non-noxious weeds. The rules for some shows permit disqualification of samples considered to contain sufficient quantities of foreign material that may be hazardous to livestock.

Color. Color indicates carotene content and vitamin A potential. A bright green color also indicates good harvesting conditions. Although color is the most visible characteristic of hay, it alone is not a reliable indicator of quality. Color accounts for 10 points when judging both grasses and legumes.

Determining Chemical Score Hay Shows

The analysis used to determine the chemical score is the crude protein content of the hay. Protein is a major nutrient requirement of livestock, and reliable laboratory analyses are readily available for determining nutrients. Other analyses beneficial for deter-

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mining hay quality are available; however, many of these are laborious and often not readily available. The various hay plants have different protein level potentials. The chemical score of each type is based on a protein level considered attainable under practical management. These are indicated in the official scoring section which follows:

OFFICIAL SCORING FOR HAY SHOWS

Both physical and chemical (crude protein) factors are considered in classifying all hay entries.

A. Physical scorecard

| Factor | Grass hay | Legume hay |
|---------------------------------------|-----------|------------|
| Maturity | 40 | 20 |
| Texture (size of stem and pliability) | 20 | 15 |
| Leafiness | 10 | 35 |
| Freedom from foreign material | 20 | 20 |
| Color | 10 | 10 |
| Possible physical score | 100 | 100 |

B. Chemical (crude protein) scorecard

| Type of hay | Factor for each percent crude protein | Percent crude protein for 100 points |
|---|---------------------------------------|--------------------------------------|
| Grass, including perennials such as bermudagrass, blue-stem, etc. and annuals, such as sorghum-sudangrass hybrids | 8.33 | 12.0 |

| | | |
|---|------|------|
| Grass-legume mixtures and other legumes | 6.25 | 16.0 |
| Alfalfa | 5.00 | 20.0 |
| Possible chemical score | 100 | |

C. The chemical score and physical score are averaged to determine the final classification score for each entry. Ribbons are awarded as follows:

| Ribbon award | Final score |
|--------------|-------------|
| Blue | 85 or above |
| Red | 70 to 84 |
| White | 50 to 69 |
| None | Below 50 |

This scoring system is used by hay judges throughout Texas to evaluate hay. The physical scorecard is useful when placing hay in a contest.

Scorecards for Hay Judging Contests

Scorecards are necessary for contestants judging hay. Such cards are provided for the State Hay Judging Contest held in connection with the State Hay Show. If printed cards are not available for local or other contests, these can be easily prepared locally. A 5-inch by 8-inch card is a good size to use (see sample below).

For placing classes of hay of four samples per class, the following information should appear on one card. Place samples according to their physical characteristics only. The sample scoring highest when judged according to the physical scorecard places first in the class. Contestants should familiarize themselves with the hay characteristics necessary to determine physical score.

← 8 inches →

**HAY JUDGING CONTEST
PLACING CARD**

Contestant's name _____ Class number _____

First

Second

Third

Fourth

↑ 5 inches ↓

A hay grading class also can be used with the placing in hay judging contests. Grading classes should contain 10 samples from various species. These samples are graded according to physical condition and are not compared to other samples in the class or to numerical scorecard. Samples are examined for each of the physical characteristics affecting quality. The sample is determined to fit into one category of each physical factor. Contestants will mark an "X" or "✓" in only one category for each physical factor for each sample.

Scoring of the grading class samples by contest judges differs between legume and grass samples. The maturity category accounts for four points and leafiness one point for grass samples; whereas, maturity accounts for two points and leafiness three points for legume samples. Texture and foreign matter account for two points and color one point for both legumes and grasses. This scoring system allows for a 10-point maximum per sample and 100-point maximum for the class.

Maturity

Grass samples with no evidence of seedhead formation and legume samples with no evidence of bloom formation are considered "preboot" or "pre-bloom." Grass samples with 1 percent or less seedhead emergence with other seedheads enclosed in the uppermost leaves and legume samples with one-tenth or fewer seedstems showing a bloom are considered "boot" or "one-tenth bloom." Grass samples with more than 1 percent seedhead formation and legumes with more than one-tenth bloom are considered "headed" or "full bloom."

Texture

Samples are graded on whether stem size is pliable (small), moderately pliable (medium) or unpliant (large). Each sample should be graded according to an ideal sample of the same species; i.e., a stem size considered small for sorghum would certainly be large for bermudagrass.

Leafiness

The proportion of leaves to stems is important in all hays because of nutrient storage and availability. Because of the possibility of shattering, "leafiness" accounts for three points when grading a legume sample and only one point when grading a grass sample. Samples, in which 50 percent or more of the total weight is leaves, are graded as "leafy" unless the leaves shatter very badly. Samples without excessive shattering which are comprised of less than 50 percent leaves are graded "stemmy." Excessive leaf shattering contributes to feeding waste; therefore, samples with excessive leaf shattering are graded lower.

Foreign Matter

Samples with only a trace of foreign matter are judged "clean" if quantities are in such small

amounts that extremely careful inspection is required for detection.

Samples with musty or moldy odors are graded lower because of these objectionable odors.

Samples with easily detected weeds, old stubble or molds are graded lower.

Samples with noxious weeds, injurious materials or foreign material in excess of 1 percent are graded lower.

Color

Samples are graded according to bright, bleached, dark or non-uniform color. Samples with a green color and little evidence of excessive weathering are graded as bright. Samples with excessive weathering and bleaching are graded as bleached. Samples that have turned dark due to being baled too wet are graded as dark. Samples having a mottled appearance with mixed colors are graded as non-uniform.

Hay Grading Card

A hay grading card should contain information shown on the sample on page 5.

Entry and Record Form

To accurately record all contestants and their scores, use a form similar to the one on page 6 with suggested headings to obtain the necessary information.

STATE 4-H AND FFA HAY JUDGING CONTEST RULES

1. All participants must be bona fide 4-H or FFA members.
2. Participation may be on an individual or team basis. A team shall be composed of three members and an alternate.
3. There will be no limit as to the number of teams a county 4-H or FFA chapter may enter.
4. Awards will be presented to the high placing teams and individuals.
5. The contest will consist of three placing classes and one grading class. Placing classes will be selected from popular hay crops such as hybrid bermudagrass, sorghum-sudan hybrids, alfalfa, other perennial grasses and annual grasses. Each placing class will consist of four samples. The grading class will contain 10 samples selected from the various species.
6. Contestants will be allowed 15 minutes for each class.
7. Contestants on the same team will be divided into separate groups.
8. Talking between contestants or sharing information on scorecards while contest is in progress will be sufficient reason to have scorecards collected by group leader and disqualification by contest superintendent.
9. All official placings and gradings will be final.
10. Scores will be official after they have been announced.

HAY JUDGING CONTEST GRADING CARD

| Sample number | Contestant's name | | | Class number | | | | | | | | | | | | Score | | | |
|---------------|---------------------|-------------------------|----------------------|--------------|---------------------------|-----------------|---------|-----------|--------|-----------|-------|----------------|------|-------|--------|-------|----------|------|-------------|
| | | | | Maturity | | | Texture | | | Leafiness | | Foreign matter | | | Color | | | | |
| | Preboot or prebloom | Boot or one-tenth bloom | Headed or full bloom | Pliable | Moderately pliable medium | Unpliable large | Leafy | Shattered | Stemmy | Clean | Weeds | Stubble | Mold | Other | Bright | | Bleached | Dark | Non-uniform |
| 1 | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |

Scoring point value

| | Maturity | Texture | Leafiness | Foreign matter | Color |
|--------|----------|---------|-----------|----------------|-------|
| Grass | 4 | 2 | 1 | 2 | 1 |
| Legume | 2 | 2 | 3 | 2 | 1 |

HAY JUDGING CONTEST ENTRY AND RECORD FORM

Division _____

| Contestant's name | Club or chapter | Score | | | | Final | Place |
|-------------------|-----------------|-------|---|---|---|-------|-------|
| | | Class | | | | | |
| | | 1 | 2 | 3 | 4 | | |
| | | | | | | | |
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AGRS
 Department of Agriculture, Texas Agricultural Extension Service
 Agriculture and Home Economics Administration
 Extension Service, Texas Agricultural Experiment Station
 1974

| HAY JUDGING CONTEST ENTRY AND RECORD FORM | | | | | | | | | | | | | |
|---|----------|-------------------|-----------------|-------|---|---|---|-------|--------------|-----|-----|-----|--|
| Place | Division | Contestant's name | Club or chapter | Class | | | | Score | Judge's name | | | | |
| | | | | 1 | 2 | 3 | 4 | | 1st | 2nd | 3rd | 4th | |
| | | | | Date | | | | | Signature | | | | |
| | | | | | | | | | | | | | |
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Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Zerle L. Carpenter, Director, Texas Agricultural Extension Service, The Texas A&M University System.