any teaching methods can be used in studying the meaning and importance of forage quality and the factors to be considered in the evaluation of forage. Members should understand the importance of forage quality in livestock feeding programs before evaluating hay.

The principal objective of this program is to gain practical knowledge; winning a judging contest is secondary and is one of the learning methods. As a 4-H leader, you should stress the five physical factors that determine quality: stage of maturity, leafiness, color, foreign material, and odor and condition. Place particular emphasis on stage of maturity since it is the most important factor determining quality. These presentations would be appropriate for club meetings held during the winter or early spring.

Subsequent meetings could include quizzes on background material to reinforce members' understanding of quality factors. In late spring and early summer, schedule field trips to various hay fields to look for stages of maturity in grasses and legumes. Stage of maturity is more easily identified before the crop is cut. Seeing the different stages in the field also will help in identifying them in the bale.

In the first few training sessions in which members will evaluate hays, it may be helpful to have them use a score sheet. Use a separate sheet for each hay sample. Members can then compare their scores for each sample and discuss their evaluations. Any score given to a sample is a matter of judgment. It is an estimate of feed value based on indicators of acceptability to the animal. But the use of a score sheet is not required in a contest.

As members become more proficient in their evaluation skills, club activities might include practice judging sessions and contests within the club as well as between clubs, and at county and state fairs.

### How to obtain samples

If possible, obtain samples from hay that has been chemically analyzed. Chemical analysis (crude protein, acid detergent fiber, etc.) can be used to confirm your visual evaluation when selecting samples for contest classes. Chemical analysis also is helpful in settling arguments and disputes in a contest if members disagree with your official placings.

Possible sources of samples are:

- Parents of club members.
- Hay producers in your area.
- Dairy farmers in your area, especially those who buy large quantities of hay.
- County fairs that sponsor a hay judging contest. They may be willing to give you the material when the fair is over.
- Farm co-ops and marketing organizations handling hays.
- County Extension agents may be able to direct you to possible sources.
- Material exchange with other 4-H clubs. When you locate a source, obtain enough material for several samples and work cooperatively with other clubs.

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Since visual analysis will be the most difficult part of judging hay samples, you may want to begin your training program with samples the members bring. In the first sessions, have samples for the members to pull apart and closely examine. Members should look for stage of maturity, leafiness, color, foreign material, and odor and condition of samples. Save the “analysis” samples for later stages of the training program when members will be able to evaluate samples without tearing them apart. This will allow you to reuse the samples since these may be more difficult to obtain than are the non-analysis samples.

Remember that chemical analysis is a tool to assist you in setting up your training sessions. It can be used as a method to check and prove the accuracy of your visual evaluation when you assemble hay samples for your training activities.

In obtaining samples, try to get a range from excellent to very poor quality hays. Obtain samples of hay that have been rained on several times, are nearly black, are mostly stems, and are musty or moldy. Include samples that have some weeds or other foreign material. The greater the variety of samples, the better the learning experience for the club members.

**Setting up an evaluation session**

A class consists of four samples. Try to include at least one excellent and one poor sample in each class so that there are obvious differences. Examples of different ways in which classes can be made are:

- An excellent quality sample for first place and a poor quality sample for last place. The decision between the remaining two samples for second and third places should be more difficult.

- Obvious third and fourth place samples, with the decision between the remaining two samples for first and second place being more difficult.

- Obvious first and second place samples, but the decision between the third and fourth place samples being more difficult.

Do not mix two different kinds of hay in the same class. A class should consist of only one kind of hay, such as alfalfa, clover, grass, or alfalfa-grass hay (mixture of alfalfa and grass in the field).

When collecting samples, get as much information as you can about them. The more information you obtain about the date of harvest, stage of maturity when cut, or rain damage, the less guesswork later.

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