Ways to improve hay quality

Source: Jimmy Henning, UK extension forage specialist

If you raise livestock, you know it is very important to feed your animals nutritious hay to keep them healthy. You can take many practical steps to improve your hay quality.

You must first get and maintain a good forage stand. Making sure your soil has adequate nutrients is key to getting good stands. A soil test is important, because it will let you know the nutrient levels in the soil, so you only apply what is needed.

Your extension agent can help you learn how to effectively test your soil and can submit your samples to one of UK’s soil testing laboratories. Agents can also help you understand the results.

Soil tests with adequate levels of phosphorus and nitrogen but low levels of potassium are becoming common across Kentucky hay fields. Inadequate potassium can increase the amount of broomsedge, a very undesirable forage. There may be a couple of reasons for low potassium levels. When you cut hay, potash is removed at nearly three times the amount that phosphorus is, and the soil is not able to replenish this nutrient to sufficient levels on its own. Repeatedly using only ‘balanced’ fertilizers like triple-19 (19-19-19) will deplete potassium in hayfields. In tight financial times, producers may skip potash applications to save money.

Controlling weeds at the right time and using the right herbicide will help you improve hay quality. With many weeds, like buttercup, by the time you see the blooms, they are much harder to control. University of Kentucky has an extension publication, AGR-207: Broadleaf Weeds of Kentucky, that contains common pasture weeds, when to treat each and which herbicide you can use for effective control. This publication is available online at <http://www2.ca.uky.edu/agcomm/pubs/AGR/AGR207/AGR207.pdf>. You can also get a paper copy at the (COUNTY NAME) Extension office.

The stage of maturity when you cut your hay is the most important factor affecting quality. You must harvest at the right time, when the plant is switching from a vegetative to a reproductive (flowering) stage. Many times, this means cutting the hay earlier than normal. Of course, the challenge of cutting hay in the spring in Kentucky is our wet weather. However, we often get a string of days with good sun and dry weather in late April and early May. Being ready to cut early when the weather allows is extremely helpful.

Using legumes, especially the tall ones like red clover and alfalfa, provide high yields and will add nitrogen to the soil over time. They are higher in protein and energy than grasses and continue to yield well in the summer when many of our cool-season grasses are suffering from the heat. Research shows that red clover, in particular, is good at minimizing the adverse effects animals get from consuming too much toxic endophyte-infected tall fescue.

Tedding and raking hay are integral parts of harvesting. But if you ted or rake the hay when it is too dry, it can lead to leaf shatter. This hurts hay quality, because the high-quality nutrients are concentrated in the leaf.

Making good hay means baling at the right moisture content and protecting hay from the weather. Proper moisture at baling will prevent heating and molding of stored hay. Covered storage structures are best for hay storage. If you don’t have covered storage space, breaking the contact between the bale and the ground is important, since most moisture enters the hay from soil contact. You can prevent moisture absorption by using materials, such as old tires and/or crushed rock, to elevate the hay off the ground.

You can also wrap your hay in plastic, which will provide some protection from the rain. Hay should be as dry as possible before covering in plastic and should be fed out in the year it was made.

After you have done a good job harvesting hay, remember to feed it efficiently to minimize losses. There are many methods of feeding hay, but the best ensure that there is minimal waste. Livestock tend to eat high quality hay quickly, which also lowers waste.

More information on producing quality forages is available by contacting the (COUNTY NAME) office of the UK Cooperative Extension Service.

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