

Management of Over-mature and/or Rain Damaged Hay

The first step in dealing with over-mature or rain damaged hay is forage testing. Forage testing results provide the information needed to accurately balance animal rations. When taking hay samples, be sure to get a core sample and not a grab sample. If possible avoid end bales, also.

Low quality grass hay can be baled and treated with ammonia in a procedure known as "ammoniation." Ammonia treatment should only be applied to low quality grass hay. Ammonia breaks linkages in the fiber that prevent forage digestion; the result of ammonia treatment is increased fiber digestibility and high energy.

According to research at the University of Missouri, ammonia treatment also degrades ergovaline and other ergot alkaloids produced by the tall fescue endophyte. Ammonia-treated fescue is far less toxic than untreated fescue.

The procedure for ammoniation can be found at the following link: <http://extension.missouri.edu/p/AGW1003> . Take note that this bulletin shows bales stacked as 2 on the bottom and 1 on top. Some of our producers have stacked 4 on the bottom and 3 on the top. Also, please be aware of that this bulletin does not account for changes in cost of anhydrous ammonia over recent years.

Another option is to provide grain or grain by-product supplements to meet the nutritional needs of the animals. There are lots of good supplemental feed options, but best results require knowledge of forage nutritive value.

Recent work at MU showed that for those with the equipment to do it, treatment with calcium hydroxide or calcium oxide can work. Here is a link to an article from North Dakota State: <https://www.ag.ndsu.edu/news/columns/dairy-focus/dairy-focus-improve-low-quality-forages/> .

Lastly, fertilize cool-season grass hay fields in mid-August. Good quality cool-season grass pastures this autumn can be used to "supplement" poor quality hay. Following a strip grazing program where a few days of grass and a few bales of hay are fed at the same time can stretch the good quality pasture while using some of the hay. Move stock to a new strip of grass and provide a new bale or two when the original hay bales are 80% consumed.