When you go grocery shopping, what is one thing that human nutritionists and health experts always recommend you do? Read the label! This is no different for our livestock, but without a label attached to the back of a bale of hay, how do we check it for nutritional value? The best way to do this is to send in a sample for analysis. Join us at our Hay, Balage, and Forage Quality School to learn more about how to take a sample and how to use the analysis on your farm.

Cornell Cooperative Extension will be holding the classes this March in Otsego, Columbia, and Saratoga Counties (for more information or to register visit http://blogs.cornell.edu/capitalareaagandhortprogram/category/field-crops/). We can help you answer questions like which of your animals should be getting the feed, how much it’s worth if you wanted to sell it, or how you could make better quality forage in the future.

With all of the values that would come back on a typical forage analysis, two could be especially important when deciding which animals should be fed which feed. These are Relative Feed Value (RFV) and Relative Feed Quality (RFQ). They sound so similar, but there are some big differences in these two numbers. We will go in to detail on reading and understanding a forage analysis at the upcoming “Hay, Balage, and Forage Quality School,” but for now let’s take a quick look at these two values. First let’s look at some definitions of terms we will be using:

- **Neutral Detergent Fiber (NDF):** Structural components of the plant, specifically cell wall. NDF is a predictor of voluntary intake because it provides bulk or fill. In general, low NDF values are desired because NDF increases as forages mature.
- **Acid Detergent Fiber (ADF):** The least digestible plant components, including cellulose and lignin. ADF values are inversely related to digestibility, so forages with low ADF concentrations are usually higher in energy.
- **Dry Matter (DM):** Dry matter is the moisture-free content of the sample, it is important to always balance and evaluate rations on a dry-matter basis.
- **Digestible Dry Matter (DDM):** Calculated from acid detergent fiber; the proportion of a forage that is digestible.

All of these values will be explored in more depth, along with their relationship to feed quality at our upcoming school. RFV has been around for years and is used to compare legume and legume/grass hay and silage quality. This quality parameter gives an estimate of the digestibility (from % ADF) and potential intake (from % NDF). This system has been used for years and can compare alfalfa and alfalfa/grass mixes in a way that enables easy comparison for nutrient content and pricing. DMI and DDM are used in this calculation, a downfall of which is
that DDM is assumed constant for all forages in this calculation. In addition, crude protein is not used; the only values from the laboratory that are used are ADF and NDF.

How does Relative Forage Quality (RFQ) differ? RFQ was developed by researchers at the University of Wisconsin and uses the fiber’s digestibility to evaluate how much the animal will eat, as well as the total digestible nutrients of the forage. Although similar to RFV, RFQ is considered a better alternative because it will give the producer a better idea of the performance they can expect from their animals. In addition, where RFV is better suited to comparing legumes, RFQ can easily compare grasses and legumes against each other. This is because RFQ puts a greater emphasis on fiber digestibility, where in contrast RFV uses digestible dry matter intake. When you are analyzing grasses, they tend to have more fiber when compared to alfalfa, but this fiber tends to be more easily digestible for the animal. You could potentially have similar RFV’s and have different animal performance because the fibers are not able to be digested in the same way.

At our upcoming school on forages we will go into further detail on how to use these values and others to decide which animal should get which feed and how to improve the forages you produce in the future. Neither RFV nor RFQ are used in ration formulation, but do provide a great way to gauge the price you should be paying for the forage, which animals you should be feeding it to, and what type of performance you can expect from them. Try checking the label on the forages you plan to purchase or use on your farm!

Want to learn more about forages? Come to the upcoming **Hay, Balage, and Forage Quality School**, which will be held in:

- **Otsego County**
  - March 4th and 11th
  - Borden Hose Company FD
  - 1698 State Route 8
  - Mt. Upton, NY 13809

- **Columbia County**
  - March 5th and 12th
  - Columbia County CCE
  - 479 New York 66
  - Hudson, NY 12534

- **Saratoga County**
  - March 6th and 13th
  - Saratoga County CCE
  - 50 West High Street
  - Ballston Spa, NY 12020

These evening meetings will cover renovating, establishing, and maintaining hay fields, the hay and silage making process and machinery, storage, an in depth discussion of forage quality, and on farm economics. This event is for anyone that makes hay, whether you are a seasoned veteran or a beginning farmer. If you have any questions about this event, please feel free to contact Cornell Cooperative Extension at (315) 866-7920 or Ashley at arp253@cornell.edu/(518) 272-4210. You can also register online at [http://blogs.cornell.edu/capitalareaagandhortprogram/category/field-crops/](http://blogs.cornell.edu/capitalareaagandhortprogram/category/field-crops/). I hope to see you there!

Sources: **479 New York 66**  
*Understanding Feed Analysis*, Dr. Rick Rasby and Jeremy, Martin University of Nebraska-Lincoln