GUEST COLUMN

Do You Really Know the Quality of Your Alfalfa?

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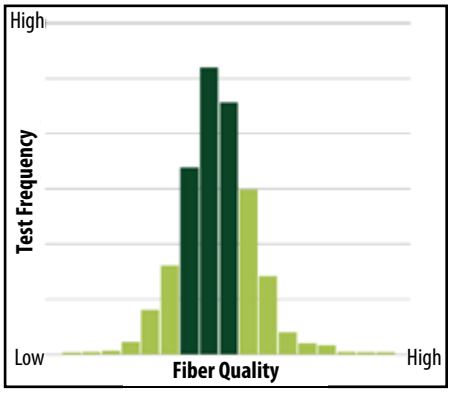
Sometimes things don't go according to plan, including harvesting high quality alfalfa. With new high quality alfalfa varieties coming to market, like HarvXtra® Alfalfa with Roundup Ready® Technology, there have been some questions about which tests accurately determine alfalfa quality, which is key to reducing quality variation. When a harvest delay, or other factor, causes you to suspect alfalfa quality, consider these suggestions:

Figure 1. Typical frequency distribution for alfalfa hay quality tests.



Use Accurate Testing

There is a lot of variation when it comes to alfalfa quality tests. From total digestible nutrients (TDN) to relative feed value (RFV) to relative forage quality (RFQ), each test is calculated from nutrient constituents predicted through a near-infrared (NIR) analysis and uses different calculations with different variables. Not only are there a wide range of tests, but results vary within the tests – especially when forage quality is unusually high or low. In Figure 1, the vertical bars represent a typical frequency distribution of a lab's results for alfalfa hay quality tests. The light bars at the ends of the bell curve represent where alfalfa fiber quality is either unusually high or low. Analysis accuracy of these extremes is financially critical – knowing exactly where your alfalfa quality is helps determine what steps are needed to re-balance the diet. For best results, test all forages with the most accurate NIR alfalfa quality test, one based on a sample set representing the widest range in forage quality, like the Calibrate® High Quality Forage Analysis. This will help ensure rations are adjusted accurately while aiming for the highest quality.

Determine the Digestibility

Pinpointing the exact amount of digestible fiber in your alfalfa will help determine how much supplemental forage you will need to balance fiber in your rations for the coming year. For an accurate measurement, test for neutral detergent fiber (NDF) and neutral detergent fiber digestibility (NDFD), in conjunction with analysis for other essential nutrients.

Knowing the NDF and NDFD of alfalfa can help maintain intakes and reduce chances for a drop in milk production. For example, when forage NDFD is high, more can be included in the diet without creating excessive rumen fill, which can reduce intake. However, when forage NDFD is low, inclusion levels should be reduced to avoid excessive rumen fill. This could increase feed cost if the byproduct feeds used to fill the resulting space in the diet are more costly than the alfalfa being replaced.

Consult with Your Nutritionist

It is likely not all of your harvest schedule got off track due to Mother Nature. Utilize all the higher quality alfalfa in high production rations in order to maintain growth and milk production. Then, depending on the amount of alfalfa affected by a rain-delayed harvest, there are a few different ways to work it into other rations. Work closely with your nutritionist to determine the best course of action for your farm. These forages can likely be used in older heifer, dry cow, or low production rations. Another option would be to sell it and purchase higher quality alfalfa to maintain high quality rations.

Adjust Rations Accordingly

If you decide incorporating lower quality alfalfa into your lactating herd's ration is necessary, knowing the exact alfalfa NDFD will help better determine how much you can include in the diet without compromising intake and milk production. Work with your nutritionist to balance rations more frequently and make sure new ration formulas are in place before the feed is fed. Also, alterations should be made as new feed analysis results become available.

Here are a few tips to help you and your nutritionist re-balance a ration for acceptable nutrition when dealing with affected alfalfa:

- Reduce the amount of hay in your ration.
- Reduce the total forage level in the diet and fill the resulting space with high-fiber supplements such as ear corn, soy hulls, whole cottonseed, brewer's grains, corn gluten feed, or beet pulp.
- Ensure dietary metabolizable protein levels are not compromised, since lower quality alfalfa can also be low in protein.
- If total dry matter intake is still compromised, consider including some fat to increase the energy density of the diet.

To avoid future impacts on forage quality due to a rain-delayed harvest, planting alfalfa varieties genetically engineered to be lower in lignin and higher in NDFD can help put some flexibility into Mother Nature's plan. Such varieties offer a wider harvest window without compromising NDFD. The resulting harvest flexibility will minimize the negative quality effects resulting from a delayed harvest.

No matter what lemons Mother Nature throws your way, by determining the exact alfalfa quality and NDFD with an accurate analysis as well as working closely with your nutritionist to make strategic ration adjustments, your 2018 alfalfa crop can provide a higher quality forage ration.

For more information, ask your local forage lab for a high quality alfalfa analysis to help bring precision to your ration.