



# TESTING HARVXTRA® ALFALFA FORAGE QUALITY



Higher quality alfalfa (such as HarvXtra® Alfalfa) may not test accurately on standard forage quality tests. There are two alternative options: wet chemistry or the High Quality Forage Analysis from Calibrate® technologies.

- If wet chemistry is the choice, proceed as usual with the lab of choice and balance rations based on those values.
- If Calibrate® High Quality Forage Analysis is the choice, commercial labs offering the analysis includes Sure Tech, Dairyland Labs, Rock River Labs and Dairy One. The values Calibrate® High Quality Forage Analysis provides can be used to balance rations in the same way.

## Calibrate® High Quality Forage Analysis Talking Points:

1. Calibrate® Technologies provides a High Quality Forage Analysis testing option with improved accuracy for high quality forages. Designed to eliminate the necessity of an in-vitro analysis (wet chemistry).
2. When comparing results between products or samples between fields; make sure both were managed and harvested the same. Management and harvest timing may be large influencers and can skew a comparison of samples results.
3. Quality testing procedures are not necessary to discuss during the sale. Focus on agronomic benefits first. Near harvest would be appropriate time to discuss measuring the forage quality at harvest and again in the bale or bunker.
4. What does the Calibrate® High Quality Forage Analysis report contain?
  - NDF, NDFD, RFV, RFQ, TDN, CP, Ash
  - Nutritionist will be interested in NDF, NDFD, CP, Ash
  - Hay sellers and buyers will be interested more in NDFD, CP, TDN, RFV, RFQ
5. Why is Calibrate® High Quality Forage Analysis data better than normal High Quality Forage Analysis data?
  - Calibrate® High Quality Forage Analysis is a High Quality Forage Analysis equation developed from in-vitro results from over 125,000 samples and 12+ years of research representing a wide range of forage quality from across the US.
  - The resulting values for NDF, NDFD, ash and protein are entered into the standard RFQ equations (Moore and Undersander, 2002), the resulting calculations for RFQ are more robust and accurate.
  - The volume of samples tested and placing emphasis on samples of extreme quality (high and low) make the Calibrate® High Quality Forage Analysis more precise.
  - High Quality Forage Analysis prediction equations are only as good as the accuracy and range of the wet chemistry it was developed from.
  - See Alfalfa Quality Chart, right. The vertical bars represent a typical frequency distribution of a lab's alfalfa sample quality results, and the light bars at the ends of the "bell curve" represent a lower frequency of alfalfa samples that test either high or low quality. Calibrate(R) HQFA analysis can provide more accuracy of sample results in these low frequency ends.
6. The RFQ equation includes terms (NDF, NDFD, crude protein, fat and ash) that are important indicators of forage quality. It consolidates these values into one number.
  - RFV and RFQ are DIFFERENT. RFV does not take into account NDFD. Therefore, RFV and RFQ may not be similar values.
  - When comparing forage quality for delay harvest, focus on NDFD instead of RFQ. The RFQ equation can skew or weight the importance of each value as the alfalfa plant matures.
  - Most farmers, nutritionist, hay buyers and sellers all understand NDFD. This makes it an easy common term to talk about "forage quality".
7. Importance of testing alfalfa for lignin on reduced lignin alfalfa.
  - Lignin alteration in the plant is the means by which NDFD is improved. Focusing on the true forage quality measured by NDFD will provide the most accurate indicator.
  - There are many environmental factors (growing conditions, maturity at harvest, etc.) that can influence the lignin value.
  - Comparing lignin values alone between individual samples can be difficult to see true forage quality differences.
  - It can be difficult to see true forage quality differences between individual samples when comparing lignin values alone.
  - It is nutritionally more relevant to measure and balance a ration for NDFD, rather than lignin.

## Alfalfa Quality Ranges

