



Field Notes for The Week Of

5-2-2022

Estimating Neutral Detergent Fiber In The Field

May is here and the weather is beginning to warm up but unfortunately the wet weather is also hanging around. With plenty of moisture and warm temperatures our forages are finally beginning to wake up and grow. This past week I was able to accomplish much field scouting and noticed many activities taking place from planting corn to fertilizing pastures and hay fields, farmers in Southern Ohio were busy as bees! As a part of my field scouting activities, I conducted a predictive equation for Alfalfa quality (PEAQ) to estimate the neutral Detergent Fiber of Alfalfa in the field. Alfalfa is a very high-quality crop, and the first cutting can provide a producer a high-quality forage for livestock feed and not to mention the highest yield amount in a four-cutting system. Neutral Detergent Fiber is the measure of total insoluble fiber, in simple terms NDF is a measure of % plant structure such as cell walls. Forages with low % of NDF values are considered higher value due to better digestion and absorption of nutrients. As forages mature the % plant structures increase make the feed value of that forage decrease also. Many think that estimating forage NDF values takes an expensive forage lab test but that is not the case, you can estimate NDF% in the field prior to harvest. The following are steps that you can take to estimate your alfalfa NDF value.

1. Choose a representative area within the field that measure 2'x2' square.
2. Determine the most mature plant within the area chosen. The three stages of growth are vegetative, the vegetative stage has no buds or flower present. The second stage is bud stage, this is when the plant has 1 or more nodes with buds present. The third stage of growth is flowering, this is when 1 or more nodes with open flowers.
3. Next measure the length of the tallest plant within the chosen area. Measure from the soil surface to the top of the stem (not the top of the leaf).
4. One you know the height of the plant and stage of maturity you can use the estimation chart found at <https://forages.osu.edu/sites/forages/files/imce/Estimate%20Alfalfa%20NDF.pdf>
5. You will want to repeat this process 4-5 times throughout the field.

There are many benefits to being able to estimate NDF% in the field, some of those benefits include making proper harvest timing decision without degrading the integrity of the forage stand life and being able to make higher quality forage without the expense and time waiting for a lab-based forage analysis test. Weather can also play a crucial role in forage development NDF% values. As May arrives the days will begin to get warmer and nighttime temps will follow suit. I would recommend grabbing your measuring tool of choice, put on the sunscreen and head to the field to estimate the fiber content of your alfalfa today!

Some Values from Adams County Ohio for April 29th, 2022, include = 30.6% NDF

Other sources include:

<https://hayandforage.com/article-3921-First-cut-alfalfa-try-not-to-blow-it.html>

<https://forages.osu.edu/home>