



# Dairy One

Forage Laboratories

## January 2017 Newsletter - #60

### In This Issue

[2016 Fresh Legume, Grass and Mixed Forage Results](#)

[WANTED...](#)

[Upcoming Events](#)

### About Us

The Dairy One Forage Lab excels in providing high quality analyses and customer service. Our goal is to provide analytical services designed to meet the expanding demands of modern agriculture. New technology and traditional methods are combined to deliver fast, accurate results.



## Why does it take some samples longer to be analyzed than others?

By Paul Sirois, MS, PAS - Lab Manager

We know how important it is to get your results on a timely basis. Once samples arrive at the lab, the average in-house turnaround time for 2016 was 1.5 days.

Turnaround time is affected by many factors. First and foremost is the time required to complete individual wet chemistry analysis. For example, a protein analysis can generally be completed in a day, whereas a lignin analysis takes three days. Seasonally heavy sample volume also plays a role. Sample volume in the Fall can be 2 - 3x greater than other periods of the year. Large research projects consisting of several hundred samples may also take longer to process. Beyond these circumstances, the following will play a major role in the processing of your samples.

**Edits** All results pass through a final quality assurance check prior to leaving the lab. Internally, this is known as the "Edit System". The edit system is designed to flag results that fall outside of the expected range for a given feed type. For example, the expected crude protein range for legume hays is 16 - 25%. If a sample falls out of the range, it is flagged for review by one of our editors to decide if the result is representative or if it needs to be retested for verification.

If the world dealt in absolutes, we could have the computer take care of this. But, everything is **relative** when it comes to forage quality. For example, in hay crops, protein and fiber move in opposite directions. As plants mature, protein decreases and fiber increases. This needs to be taken into consideration when evaluating results. For example, Table 1. outlines the expected range of CP, ADF and NDF for legume hays. Alfalfa A. fell outside of the range for CP and Alfalfa B for CP and NDF. Alfalfa A would be retested for CP as it is lower than expected in relation to the fiber values. Alfalfa B would be released, as it is an exceptionally high quality sample and the high protein lines up nicely with the low fibers.

**Table 1.** Legume hay samples flagged for editing

	CP range	ADF range	NDF range
<b>Sample</b>	<b>16-25%</b>	<b>24-37%</b>	<b>35-48%</b>
Alfalfa A	<b>14</b>	33	44
Alfalfa B	<b>26</b>	24	<b>29</b>

All of our editors have been trained to understand and recognize the differences within and between forage types. This is no small task given the large variety of feed types that pass through the lab every day.

Typically, two-thirds of all samples have one or more components that fall outside of the expected range. This alone is an excellent reason to have the tests done!

Once a sample has been designated for retesting, the time it takes to complete the verification depends upon the analyses being performed. Again, crude protein usually takes 1 day while lignin or NDFD analyses can take 3 days or more.

If your sample has been edited and is being retested, you can call the lab for preliminary results. The results will be released to you with the understanding that the nutrient in question may change.

**Instrumentation** In all businesses, equipment breakdowns will affect productivity. For most analyses, we have backup systems in place so in the event of an instrument malfunction we have the ability to continue to process samples, albeit at a lower rate. In areas without redundant equipment, failures will cause a backlog of samples until the instrumentation is repaired. Over the last year, there have been intermittent breaks in service in the mineral analysis area. There'd be a breakdown, we'd get behind, get caught up, followed by another breakdown. It was a continual battle. This continued for several weeks until the service engineers finally identified the root cause of the problem. We're hoping this is the end of it. In 2017, we'll be exploring alternative systems to support and enhance our mineral analysis capabilities.

Also, samples submitted in a group may not all process at the same time. For example, samples from Farm X included a grass hay, haylage, corn silage and wet brewers grains (WBG). All samples requested NIR analyses. In all likelihood, the hay, haylage, and corn silage would probably process at the same time. The WBG, however, if it was <20% dry matter, will require additional drying time and not process in the same run. These results may be released at a later time the same day or the following day.

We understand the importance of turnaround time and strive to get your results back to you as quickly as possible!

**Thanks for your continued support. We at Dairy One wish you all a Happy and Healthy New Year!**

## "WANTED"

**Sales and Technician Support Specialist** for the Dairy One Forage and Soils Lab. [Click here](#) for more information.

## Upcoming Events - Come see us!

January 16-18, 2017

**Georgia Dairy Conference**

Savannah, GA

[www.gadairyconference.com](http://www.gadairyconference.com)



Dairy One - Forage Laboratory  
730 Warren Road ~ Ithaca, NY ~ 14850  
Phone: 1-800-344-2697 Ext. 9962

[www.dairyone.com](http://www.dairyone.com) ~ [www.facebook.com/DairyOne](http://www.facebook.com/DairyOne)