



Extreme Weather Conditions Lead to Extreme Managerial Decisions

By: George Mitchell, President / Agronomist

It's mid-October and so another growing season is winding down. As I think about what message this article should contain I can only think of the farmer, producer and grower. On behalf of the staff at Agri Analysis our thoughts and prayers go out to everyone affected by the extreme weather these past 3 months. Picking up the pieces can only be summed up by saying we will continue to offer the best laboratory services possible and stand ready to assist in any way feasible.

Considerations to think about:

- 1) Feed Management:** Recently, I read a very good article in the Lancaster Farming September 10, 2011 issue entitled, "Feed Management vs. Mother Nature" by Virginia Ishler. Essentially, the article encouraged farmers to be fully engaged with their animal nutritionists due to the many weather extremes this past growing season. At Agri Analysis, we would also encourage you to consult with your agronomic professionals.
- 2) Supply Management:** Forage and feed supply will be tight this year due to reduced yield and quality. This will lead to a limited inventory, resulting in an increase in off farm purchases. Because of this, an increase in variability of quality will require frequent nutrient testing.
- 3) Agronomic considerations,** such as nutrient management, should rank as high priority! Take the time to have animal waste products analyzed for nutritive make-up. Any forage that is not being used as animal feed (due to soil contamination by manure and/or other chemicals) should be analyzed and spread.
- 4) Fall soil testing:** Never guess! Extreme weather conditions present challenges. A soil basic test cost anywhere from \$6.00 to \$9.00. The information obtained will be useful in determining which fertilizers should be applied and what cropping systems are best suited for that particular farm.
- 5) Molds, Yeast, Mycotoxins:** Now that most forage has gone through a fermentation cycle, be on the look out for molds, yeast, and mycotoxin formation. Plants coming into direct contact with the soil for an extended period of time due to forages being damaged (i.e.; broken, lodged, and/or fattened) are susceptible to mycotoxin formation.

WHAT'S NEW?

We have expanded our testing capabilities!

24-hour NIRS NDFd:

In addition to the 30 and 48 hour NIRS NDFd time-points we already offer, we are now able to offer our customers 24-hour NIRS NDFd values. You can add the 24-hour NIRS NDFd time-point to the NINDFD, NINDMK or NINDS packages, which include a 30 or 48 hour NIRS NDFd time-point.

Starch Digestibility:

Customers can now receive 7hr NIRS Starch Digestibility values on Corn Silage and Ear and Shell Corn samples!

To learn more about the NIR testing packages we offer, view page 4 of our fee schedule [HERE](#).

In summary, flood damaged crops are at risk for quality and harvest losses. Make sure you are fully engaged with your animal nutritionist, crop consultant, county extension and fertilizer dealer. Obtain as much information as possible on your road to recovery.

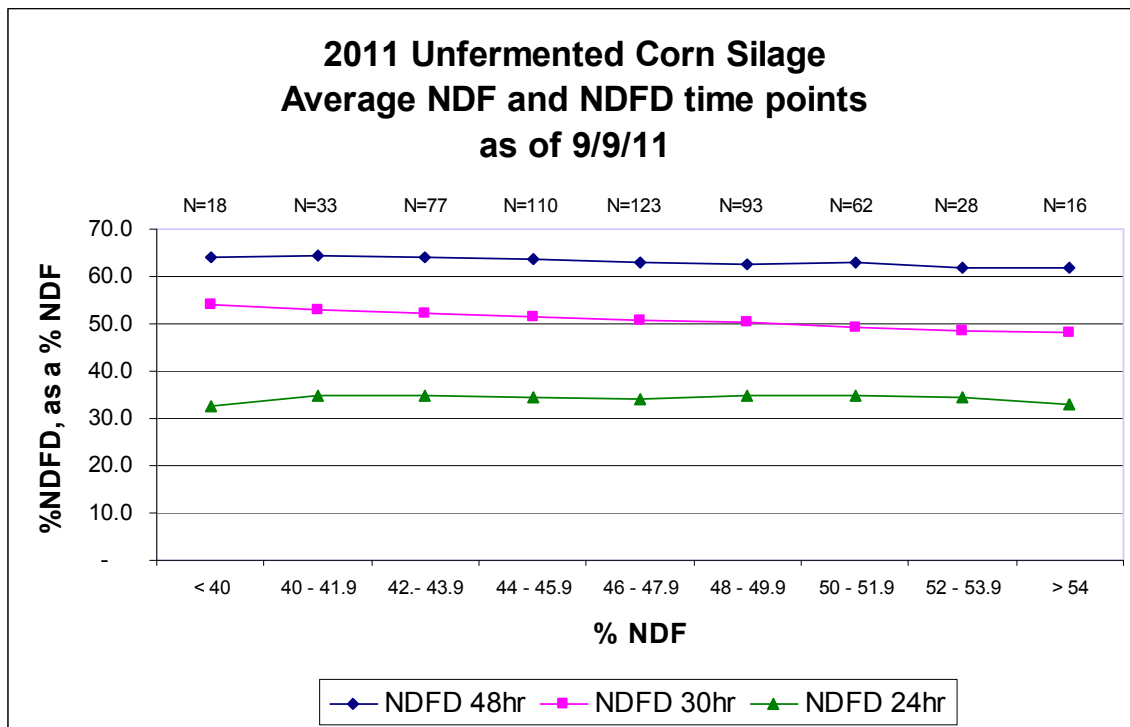


Early 2011 Unfermented Corn Silage Neutral Detergent Fiber Digestibility Results at 24 Hour, 30 Hour and 48 Hour

By: Jeff Foster, Owner / CFO

Agri Analysis Inc has enhanced our NIRS equations to include the 24 hours NDFD time point. We are now providing this additional digestibility time point on our reports. We thought it would be interesting to see how the different NDFD time points on the 2011 Unfermented Corn Silage compares at different NDF levels.

We looked at 560 samples of the 2011 unfermented corn silages and grouped the NDF's into 9 different categories as shown in the table below. We graphed the average values the NDFD24, NDFD30 and NDFD48



The results are pretty much as expected. The obvious message is the longer the sample is digested the higher the NDFD result. It's interesting to see how linear the 30hr and 48hr digestibility appears at different NDF levels. The chart also shows as NDF increases the NDFD 30hr and 48hr digestibility slightly decreases. In contrast, notice how the 24hr digestibility appears to maintain a mid 30% NDFD and tails off at each end.

A penny for your thoughts!

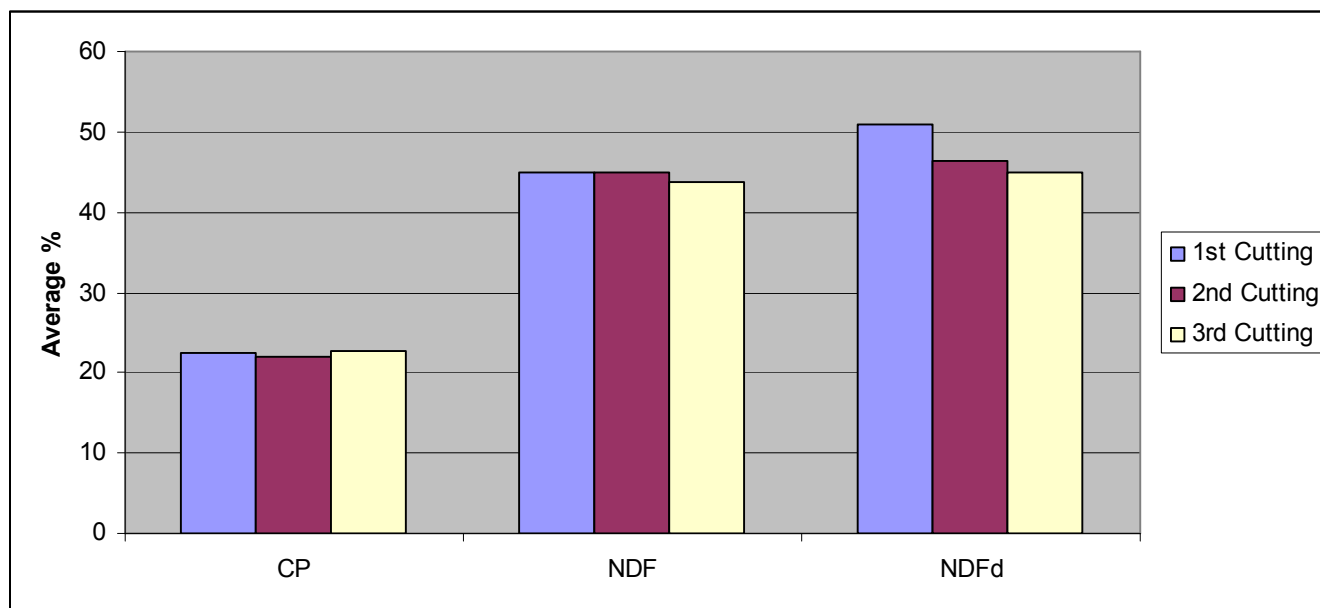
We'd like to reward the customer with a **\$50 gift card** that writes back and offers the best explanation on how you can use the different NDFD time points to maximize milk production.



Crop Spotlight: 2011 Alfalfa

Pennsylvania is the tenth largest producer of hay in the United States, producing 4.7 million tons of hay annually on nearly 2.1 million acres. Alfalfa is the state’s largest single forage crop, making up slightly over 800,000 acres. Research has shown that alfalfa forage nutritive value declines with different harvest periods across the growing season, with the nutritive value of the first cutting differing from that of the third cutting (Brink, et al., 2011).

Figure 1: Average Crude Protein, Nutrient Detergent Fiber, and Nutrient Detergent Fiber Digestibility values for 2011 1st cutting, 2nd cutting, and 3rd cutting alfalfa.



The typical protein content of alfalfa hay harvested at various stages of maturity also varies (Table 1). The crude protein content of 1st cutting and 3rd cutting 2011 alfalfa samples received at Agri Analysis were compared to the average alfalfa protein content expected at those harvest periods (Figure 2, 3).

Table 1: Average Alfalfa Protein Content (Mader, et al., 1997).

Maturity	Crude Protein (Dry Matter Basis)
Immature	20-28
Early Bloom	18-24
Mid-Bloom	16-22
Full-Bloom	14-18
Mature	10-14

continued in page 4...

Recently, a number of our customers have requested information that highlights the crop data we are seeing here at Agri Analysis Inc. As a result, we’ve updated our website to provide this to our customers.

Want to compare your forage results to other laboratory samples we’re receiving?

If you would like to see how all other laboratory samples are reporting, we have created a complimentary service to our customers where they can select our “*Statistical Reports.*” Once you select this area, you may select sample type (Corn Silage or Mixed Hay or another) and the time period. Select “*View Report*” to get a result summary of the many different nutrients.

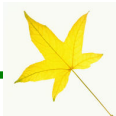


Figure 2: Percent Crude Protein in 1st cutting alfalfa samples received in 2011 (n = 205).

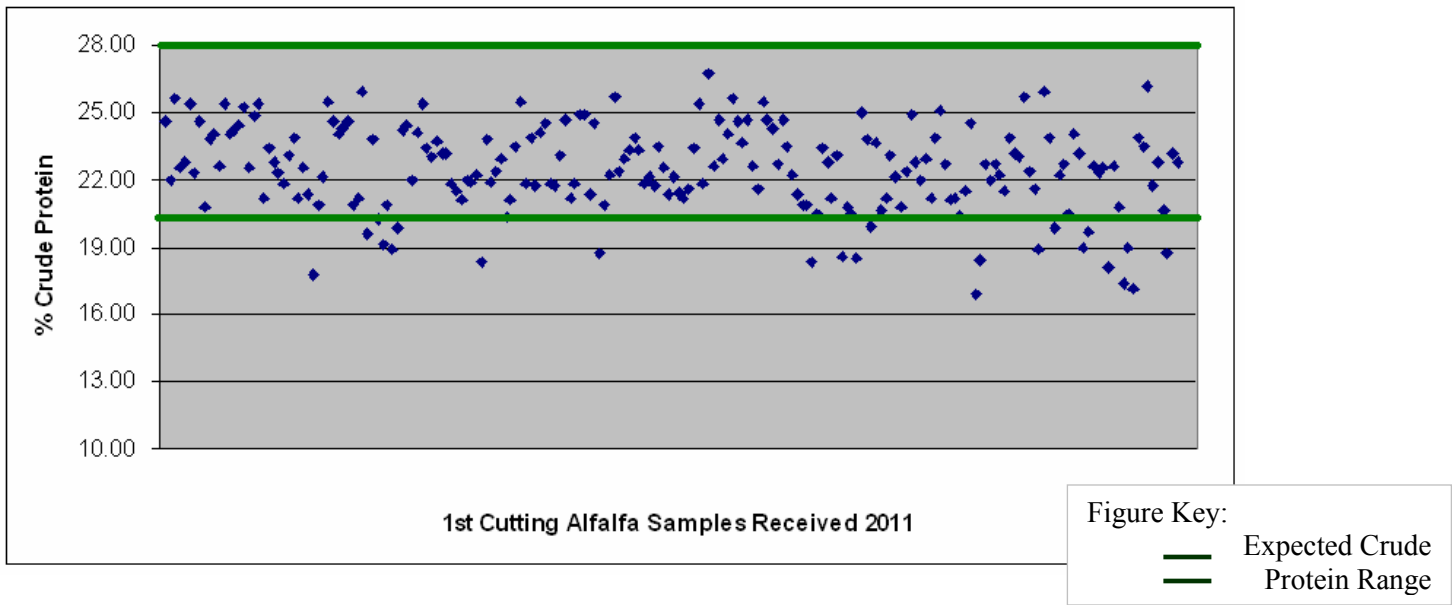
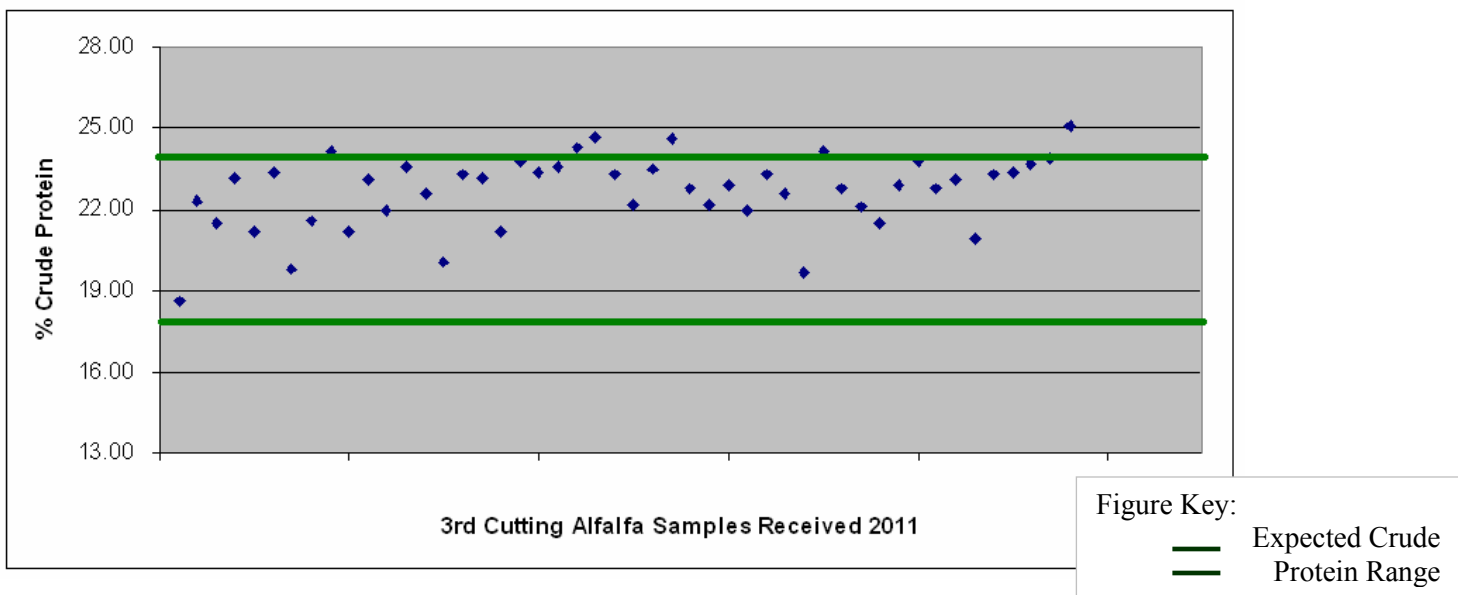


Figure 3: Percent Crude Protein in 3rd cutting alfalfa received in 2011 (n = 50).



Due to the variance across growing seasons, as seen in this year’s alfalfa crop, alfalfa requires intensive management to ensure that yield, quality and stand life are maximized. Since alfalfa management varies given the region, soil type, and climatic conditions there is no single management scheme that works for everyone.

References:

Brink, G., Hall, M., Shewmaker, G., Undersander, D., Martin, N., & Walgenbach, J. (2011). “Changes in Alfalfa Yield and Nutritive Value within Individual Harvest Periods. *Agronomy Journal*, 102:1274–1282.

Mader, T., Rush, I., Milton, T., Anderson, B. (1997). Feed Value of Alfalfa Hay and Alfalfa Silage. *University of Nebraska Cooperative Extension*, January 1998.

