Texas AgriLife Extension Service– Hopkins County

Hopkings Forages

NOVEMBER 10, 2009 **VOLUME 1, ISSUE 1**

Interpreting Forage Analysis

As hay gets produced, marketing and utilization of the crop plays a significant role in the hay farm. A good way to evaluate hay properties is using hay tests. Several values are obtained using mathematical estimations and computer-based equipment. Below is an explanation of the results that you might get and how to interpret them.

ADF– Acid Detergent Fiber– This indicates the amount of highly digestible plant material, cellulose and lignin, present in the forage. The higher the ADF value, the lower quality the forage. Ideally, grass hays should have and ADF value less than 40%. Legumes hays should be 30-35%.

ADP– Acid Detergent Protein. This indicates the amount of bound protein in the forage, which is considered unavailable as nutrient.

CA, K, MG, P– These are the chemical symbols for the following minerals respectively: Calcium, Potassium, Magnesium and Phosphorous.

DM_WET_DRY– This is the percent dry matter of the forage calculated by subtracting % moisture from 100.

NDF– Neutral Detergent Fiber. This indicates the amount of cell wall or plant structural Fiber in the Forage, and is made up of ADF and hemicelluloses. The more mature the plant, the higher the NDF values. NDF can be used to predict forage intake because as NDF values increase, dry matter intake generally decreases.

Protein– This is a measure of nitrogen in forage and will include both true protein and non-protein nitrogen, which ruminants can use to make protein. This does not indicate if any protein has been heat damaged.

RFV– Relative Feed Value. This is an index that takes into account the dry matter intake potential and the digestive dry matter value of the forage. There are no units, but baseline is considered to be 100. Forages with an RFV bigger than 100 are considered to provide more energy than those with an RFV smaller than 100.

TDN– Total Digestive Nutrients. This measures the digestibility of the forage, and can be used as another indicator of the energy value of the feed. If the TDN is low, less can be digested and used for energy.

DIG Prot– Digestible Protein. This is a calculated value and is the percent of protein that will be absorbed by the animal.

NEL Mcal/LB– Net Energy of Lactation. This is the estimate of the energy value of the forage when is used in then production of milk.

SPECIAL POINTS OF INTEREST:

- How to interpret hay tests results.
- How to better market the hay you produced.
- How to better use you hay.

Texas AgriLife Extension Service, County Extension Office Hopkins County, TX.

Mario Villarino

Dr. Mario A. Villarino
County Extension Agent
1200 West Houston Street
Sulphur Springs, Texas 75482.