Dairy One News from Dairy One - Where Information Creates Opportunity.
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Forage Laboratory

SEASONAL FORAGE VALUES

Tabulated in this issue are the average results for the major forage types. These statistics are for samples received in October 1991, originating from New York State. The average values ± one standard deviation are presented. For comparison's sake, the average values for all of 1990 are also listed.

Historically, corn silage is a fairly uniform crop with not a lot of annual variation. This year the ADF, NDF and SP are all running significantly less than last year. The ADF and NDF are running about 4 percentage points below last year's average. A lot of this difference can be attributed to the dry conditions that existed this summer. In many areas, stalk development was poor while ear development was fairly typical. We ended up with a lot of short corn with normal ears. This resulted in a greater proportion of ear to stalk and the low fiber values. While 24% ADF is a low average value, we have seen many samples in the 18 - 22% ADF range. Samples in this range are actually borderline ear corn. Predicted NEI are running .76 Mcal or higher. Care should be exercised when using these values in feed programming. If a lot of corn is passing through the cows into the manure, they won't be getting the full value of the corn. In these cases, you may want to discount the energy value 5 - 10 Mcals. Be sure plenty of other forages are available to offset the low fiber corn silage.

The soluble protein is running 10% units lower (37% SP) on the average than last year (47% SP). Many samples are running in the mid to upper 20's. This is probably due to the silage containing more grain and being drier than previous years.

Third and fourth cutting haylages are, to say the least, outstanding. Samples have been running 21 - 24% CP (some 25 - 27%) and testing 28 - 33% ADF. Combining haylage of this caliber with the corn silage described above may put some dairies in a serious bind for functional fiber. Some grass hay may be "just what the doctor ordered" to help boost the fiber of these rations.

It appears that this winter will present a major challenge to those of you involved in feed programming. Let us know how we can help.

TMR's - A CHALLENGE FOR ALL SEASONS

Total mixed rations (TMR) are a real challenge to sample. Your goal is to obtain a good representative sample to determine if the TMR is properly blended and that the cows are receiving the ration as programmed. What makes it a challenge is that there are many factors, alone or in combination, that affect the final mix. Some of these are outlined below.

* Type of mixer/mixing time — "all mixers are not created equal". Adequate mixing time is dependent upon the design of the mixer. Be sure manufacturers recommendations are being followed to allow adequate time for all feeds to be completely blended.

* Particle size — corn silage, haylage, HMSC, roasted soybeans, whole cottonseed, soybean meal, blood meal, salt, mineral-vitamin premix, bicarb, lime, dical – sound familiar? This is only an example of the different types of ingredients that may appear in a single TMR. The variation in particle sizes opens up the opportunity for separation and incomplete mixing. This is why it is crucial that adequate time is allowed for the ingredients to be properly blended.

* Moisture — a dry TMR will separate faster than a wet one.

* Daily ingredient variation — moisture and nutrient composition are subject to change. A new sample of haylage (for example) should be taken when it visibly changes or when you know that you are getting into a different cutting. Moisture is more apt to fluctuate on a daily basis. Feeding levels need to change as moisture changes in order to keep the intake of dry matter constant. Failure to monitor and correct for moisture changes can result in significant changes in the composition of the mix.

* Person doing the mixing — should be competent to realize when forages or moisture levels change (or under the daily supervision of someone who is). Should be able to adjust feed levels based on moisture changes or changes in number of cows fed.

* Why and where the sample is taken — TMR's should be sampled fresh as they are fed to the cows. Avoid sampling if the feed has been in front of the cows for a while. They may have picked it over which will result in an analysis of only what they haven't eaten. Sample 12 - 20 sites from the feed bunk or from in front of 12 - 20 cows in a stanchion barn. Mix thoroughly in a plastic bucket and pull your sample from here.

* Person taking the sample — make sure the sample taker takes the time necessary to gather a truly representative sample as described above. Nothing can make up for a poorly taken sample.

All of these factors will have an impact on the final analysis. This is why TMR's are one of the most challenging samples to take and analyze. Another factor influencing results not mentioned above is the use of average or book values for some ingredients in the mix. For example in 1990, we analyzed 139 samples of whole cottonseed that ranged from 21- 28.3% crude protein (DM basis). Average values may lead you to believe the ration is balanced, when in fact; certain nutrients may be over or under supplied.

Keep these factors in mind when taking samples and interpreting results. As TMR's continue to grow in popularity, we all need to be conscious of the many things that can affect the success or failure of the mix.

THE BEAUTIFUL PEOPLE

Many of you send in your samples from the far reaches of the state, the country and the globe. We have had the pleasure of speaking with most of you on the phone and have met many of you in person. However, there are a lot of our valued customers who we may never have the opportunity to meet face to face. In an effort to get to know you better, our customer support group has begun a scrapbook that contains photos of our hardworking customers.

This is your opportunity to be inducted into the Northeast DHIA Forage Lab "Hall of Fame". Take advantage of this chance for eternal stardom as a respected and revered member of the agricultural community. Send in your picture today. In exchange, we'll send you a picture of us and a collector's edition DHI hat. Better yet, be one of the first 15 people to respond and receive a high tech insulated DHI coffee mug. It's suitable for hot or cold drinks and comes with a snap-on lid. This valuable feature helps your drink maintain a constant temperature and allows you to enjoy your favorite beverage with a minimum chance of spillage. It's perfect for those early morning farm calls.

So, don't delay! Send us your picture today!

Short on Forages — contact the forage lab support group for information on the Feed and Forage Marketing Network (607.257.1272).

The lab will be closed Thursday and Friday, November 28th and 29th for the Thanksgiving Holiday. Have a Happy Thanksgiving!

TABLE 1. October 1991 New York Forage Crop Summary, No. 1

These averages are from analyses performed on NY State forages by the Northeast DHIA Forage Testing Lab during October of 1991. It is assumed that the majority of samples were harvested this year. The average ± one standard deviation is listed. The 1990 averages are for all samples analyzed by Northeast DHIA during the period from 5/01/90 to 4/30/91.

NUTRIENT ANALYSES (DM BASIS)

Forage Type		DM%	CP%	ADF%	NDF%	NSC%	RFV	SP	NEl*	Ca%	P%
Legume Hay	**10/91**	90.1	19±2.7	29.9±4.9	41.6±5.6	27.4±4.2	150±25	31.8±6.0	.68 ±.06	1.41±.24	.26±.05
	1990	90.6	18.6	35.7	46.1	23.4	126	31.7	.61	1.34	.30
MML Hay	**10/91**	90.5	17.3±3.3	33.1±4.1	47.2±7.7	24.6±5.3	128±25	29.5±3.9	.61±.05	1.20±.33	.27±.05
	1990	90.4	16.8	37.2	51.3	21.0	111	29.6	.56	1.17	.30
MMG Hay	**10/91**	91.5	12.5±3.4	36.5±3.5	58.2±7.2	19.2±4.8	99±19	29.0±4.5	.57±.05	.72±.31	.25±.05
	1990	91	12.5	39.5	60.1	16.6	91	27.2	.53	.76	.27
Grass Hay	**10/91**	91.8	10.9±3.0	37.7±3.1	61.2±4.9	18.6±3.8	91±11	28.7±5.2	.52±.05	.59±.20	.23±.05
	1990	91.5	11.1	40.0	62.4	16.6	87	27	.49	.61	.25
Legume Haylage	**10/91**	42.5±11.0	21.3±3.2	34.1±5.4	44.0±7.2	23.5±4.7	137±31	54.3±8.4	.62±.07	1.39±.27	.30±.05
	1990	42.5	19.7	38.5	48.8	17.8	115	54.6	.57	1.29	.32
MML Haylage	**10/91**	43.2±11.1	19.2±3.6	36.4±5.1	48.5±7.9	22.7±5.0	121±28	51.8±9.2	.57±.07	1.23±.32	.30±.05
	1990	40.9	17.9	39.6	52.2	17.8	106	52.6	.53	1.14	.32
MMG Haylage	**10/91**	42.7±11.5	15.2±3.4	39.3±4.7	56.7±7.5	19.4±4.9	98±21	49.8±9.5	.53±.06	.85±.30	.28±.05
	1990	39.1	14.4	41.6	59.7	14.0	90	49.1	.50	.81	.29
Grass Haylage	**10/91**	44.1±11.5	13.4±2.8	39.3±3.9	59.5±5.5	19.4±3.7	92±13	46.1±10.1	.50±.06	.64±.25	.27±.05
	1990	38.1	13.1	41.7	62.1	14.2	86	47.7	.46	.68	.28
Corn Silage	**10/91**	36.9±6.5	8.8±1.1	24.3±4.1	43.8±6.0	38.9±6.3	––	37.1±8.3	.75±.03	.23±.06	.21±.04
	1990	32.7	8.9	27.8	47.3	35.4		47.6	.72	.25	.23
HMSC	**10/91**	73.0±5.8	10.0±1.0	2.9±1.8	10.6±3.4	73.8±3.5	––	27.7±10.1	.92±.02	.03±.02	.33±.04
	1990	74.2	9.6	3.8	10.8	74.1		25.9	.91	.03	.33
HMEC	**10/91**	66.2±6.2	9.6±1.0	9.2±4.1	22.4±6.8	62.8±6.6	––	28.2±9.2	.87±.03	.04±.03	.03±.04
	1990	68.6	8.8	10.0	22.4	63.5		33.2	.86	.04	.30
***Mcal/lb.**											