

**ENERGIES FOR HORSES** – The recently published 1989 NRC Nutrient Requirements of Horses discusses the latest developments in horse nutrition and provides revised daily requirements. Along with the usual tables of nutrient requirements, a computer diskette is included that will determine daily nutritional requirements for all classes of horses. In conjunction with this, DHIA will provide digestible energy (DE, Mcal/lb.) and total digestible nutrients (TDN, %) for horses calculated in accordance with NRC guidelines. Energy values will be determined for most hays, pasture (fresh forage), grains, ingredients and grain mixes at no additional charge. These values will enable you to better evaluate, balance and make recommendations about horse rations.

The number of people scientifically evaluating horse rations is on the rise. We hope that providing energy values for horses will enable you to better serve your customers.

**AFLATOXINS** – Please be sure to do a good job of taking a well-mixed representative of the feed in question. A minimum of 150 grams is necessary to run the test. This is in addition to the amount of sample necessary to run the remaining analyses. Thus, it is best to submit at least 1 pound of sample.

The test we are conducting is designed specifically for grains, grain mixes and ingredients, not for forages. We are working to determine if this test procedure may also be used for forages.

**FORAGE SUMMARY** – These results (TABLE 1.) are from analyses performed on NY State forages by the Northeast DHIA Forage Testing Lab during November of 1989. As most of us are already aware, the protein and energies of forages are running lower this year. Of particular interest is the general decline of soluble protein values (TABLE 2.). On the average, hay is 6.0% lower in soluble protein and silages 7.3% lower. Most industry experts feel that this trend was due to the large amount of rain in June, although it is difficult to explain why. It may be due to excessive soil moisture, low amount of sunlight or soil temperature.

It may also be possible that we are seeing more of the natural variation in feedstuffs. Although soluble protein analysis has been on the rise for the last few years, it has probably been the more progressive dairymen and feed companies who were routinely requesting it. These dairymen are probably excellent forage managers who harvested top quality, early cut material. These forage types are more likely to contain a large amount of soluble protein and may have biased our yearly averages on the high side. Now that soluble protein is being run routinely on most forage types, we may be seeing a lot more of the natural variation.

To compensate for the low amount of soluble protein, urea has been added to some rations. Several feed dealers have indicated that urea has helped improve production in these herds. If urea is used, remember that the recommended upper limit for dairy cows is 1/2 lb./head/day. Urea should be gradually added to the ration to give cows time to adjust to it.

TABLE 1.

Forage Type	DM%	CP%	ADF%	NDF%	NEI <sup>1</sup>	NSC,% <sup>2</sup>	SP, % <sup>3</sup>	Ca, %	P, %	RFV
Legume Hay	89.9	17.7	34.8	48.3	.62	22.0	28.2	1.23	.29	121
MML Hay	90.4	15.6	36.5	53.0	.57	20.4	25.5	1.03	.28	108
MMG Hay	91.0	11.4	38.9	60.1	.53	17.7	22.7	.68	.24	92
Grass Hay	91.3	10.3	39.4	61.8	.49	18.3	21.6	.59	.23	88
Legume Haylage	42.1	19.2	38.3	48.6	.57	16.7	51.5	1.29	.30	117
MML Haylage	42.3	17.4	39.4	52.1	.53	16.6	48.6	1.13	.29	107
MMG Haylage	42.0	13.5	42.1	60.1	.49	12.7	42.3	.78	.26	88
Grass Haylage	43.6	11.8	41.8	62.2	.46	13.9	39.0	.67	.24	85
Corn Silage	32.4	8.6	29.2	49.1	.71	33.8	38.5	.30	.20	
HMSC	71.3	9.2	3.6	10.5	.91	74.8	22.8	.02	.28	
HMEC	66.3	8.7	10.1	22.4	.86	63.5	26.2	.04	.29	

1. NEI, Mcal/lb.

2. NSC = calculated Non-structural Carbohydrates as a % of DM.

3. SP = Soluble Protein expressed as a percentage of CP.

**TABLE 2. Soluble Protein Results (average  $\pm$ 1 SD) from November 1989 vs. the results from 1988 (5/87 - 4/88)**

<b>Forage Type</b>	<b>1989 (Nov.)</b>	<b>1988 (All)</b>
<b>Legume Hay</b>	28.2 $\pm$ 3.8	31.5 $\pm$ 6.3
<b>MML Hay</b>	25.5 $\pm$ 4.6	30.4 $\pm$ 5.4
<b>MMG Hay</b>	22.7 $\pm$ 4.8	30.6 $\pm$ 7.1
<b>Grass Hay</b>	21.6 $\pm$ 5.7	29.4 $\pm$ 6.6
<b>Legume Haylage</b>	51.5 $\pm$ 9.5	56.5 $\pm$ 8.6
<b>MML Haylage</b>	48.6 $\pm$ 8.3	54.1 $\pm$ 9.4
<b>MMG Haylage</b>	42.3 $\pm$ 9.1	50.1 $\pm$ 10.2
<b>Grass Haylage</b>	39.0 $\pm$ 7.8	48.9 $\pm$ 10.9
<b>Corn Silage</b>	38.5 $\pm$ 7.5	46.7 $\pm$ 10.6
<b>HMSC</b>	22.8 $\pm$ 6.6	23.8 $\pm$ 9.1
<b>HMEC</b>	26.2 $\pm$ 9.0	30.1 $\pm$ 10.4

# Happy Holidays!

The entire Forage Lab Staff wishes you a Merry Christmas and a joyous holiday season. Thanks for your patronage during the past year. You helped make it a very successful one for the DHIA Forage Lab.

---