

FEED ANALYSIS INFO SHEET

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Quality Parameter	My Sample ³	Comparative Values of Other Feeds (dry matter basis) ^{1,2}							Whole Grain (Wheat)
		Alfalfa (2nd Cut)	Greenfeed (Cereal)	Silage (Cereal)	Slough Hay	Timothy	Pea Straw	Straw (Bly/Wht)	
Moisture %		13.0	13.0	65.0	13.0	13.0	13.0	10.5	12.5
Protein %		18.5	10.5	10.5	9.0	8.2	8.5	5.3	15.0
Acid Detergent Fibre (ADF) %		27.0	29.5	29.5	36.0	37.5	45.2	53.0	3.8
Neutral Detergent Fibre (NDF) %		38.0	42.0	42.0	48.0	50.0	62.0	67.0	11.2
Calcium (Ca) %		1.80	0.36	0.36	0.46	0.54	1.75	0.43	0.12
Phosphorus (P) %		0.23	0.20	0.20	0.14	0.15	0.17	0.09	0.40
Potassium (K) %		1.80	1.35	1.35	1.30	1.25	1.54	1.45	0.45
Magnesium (Mg) %		0.31	0.18	0.18	0.18	0.14	0.43	0.13	0.38
Sodium (Na) %		0.02	0.06	0.06	0.01	0.01	0.01	0.05	0.01
Energy Values⁴:									
TDN (Total Digestible Nutrients)		68.6	66.8	66.8	62.3	61.2	55.8	50.4	84.8
DE (Digestible Energy)		3.02	2.95	2.95	2.75	2.70	2.46	2.22	3.74
NEL (Net Energy of Lactation)		1.58	1.55	1.55	1.47	1.45	1.36	1.26	1.85
NEM (Net Energy of Maintenance)		1.60	1.58	1.58	1.53	1.52	1.46	1.40	1.79
NEG (Net Energy of Gain)		0.90	0.88	0.88	0.83	0.82	0.76	0.70	1.09
RFV (Relative Feed Value)		166	146	146	118	111	80	66	713
(All energy units are in Mcal/Kg)									
Nitrate %		Nitrate levels considered critical vary with animal. Commonly proposed critical guidelines (e.g. Norwest Labs) are as follows: pregnant cows, pregnant sheep and young calves 0.49%, pregnant horses 0.92%, sheep and feedlot ruminants 0.74%, horses 1.23%. HOWEVER , these guidelines appear to have huge safety factors built in and if your feed tests high, you are encouraged to call AAFRD Call Centre (below) to discuss.							

¹ Comparative values are approximations based on Parkland Labs own test results and those contained in Alberta Agriculture Food and Rural Development (AAFRD): Average Analysis of Alberta Feeds

² For comparisons with other feed types, refer to AAFRD website link:

<https://open.alberta.ca/dataset/d4e5d1df-d9c1-434d-8c35-d6ca2f5bb8d7/resource/447ea663-7a3c-488b-a591-c91fb239f6a8/download/ten-year-average-analysis-alberta-feeds-1984-1994.pdf>

³ For questions on the suitability of your feed for your needs, contact your local animal nutritionist or feed management specialist or contact nutritionists at AAFRD Call Centre in Stettler toll free at 866-882-7677 or fax 403-742-7527 (non-Alberta residents call 403-742-7901).

⁴ All energy values are calculations only, calculated by inserting the ADF value into appropriate formulae. Formulae used vary among authorities and are feed-type dependent. Commonly used formulae include: $TDN(\%) = 87.484 - (0.7ADF)$; $DE_{(Mcal/Kg)} = [(87.484) - (0.7ADF)]0.0441$; $NEL_{(Mcal/Kg)} = 1.9 - (0.012ADF)$; $NEG_{(Mcal/Kg)} = 1.119 - (0.008ADF)$; $NEM_{(Mcal/Kg)} = (1.119 - 0.008ADF) + 0.7$. To calculate RFV, both ADF and NDF are required: $RFV = (DDM)(DMI)/1.29$ where $DDM = 88.9 - (0.779ADF)$ and $DMI = 120/NDF$.

There is an inverse relationship between ADF/NDF fibre levels and energy levels. That is, the higher the ADF and/or NDF, the lower the energy and hence the poorer the quality of the feed:

- As a guideline, feeds with ADF values below 30 are considered to be high in energy and hence very good
- feeds with ADF values between 30 and 37 would be considered good
- feeds with ADF values between 38 and 45 would be considered fair
- feeds with ADF values between 46 and 53 would be considered poor (straw)
- feeds with ADF values above 53 would be considered very poor