

Manitoba Average Feed Values for the Dairy Producer



DAIRY PRODUCTION

From 2000 to 2005, Manitoba Agriculture, Food and Rural Initiatives conducted an extension program designed to encourage feed testing and ration balancing with livestock producers in Manitoba. These reported results have been calculated from feed samples submitted by Manitoba producers. All samples were analyzed at Norwest/Bodycote Labs in Winnipeg.

		HAY											
		Alfalfa				Alfalfa/Grass				Grass / Alfalfa	Grass - all types	Clover	Clover/ Grass
		1 st cut	2 nd cut	3 rd cut	All cuts	1 st cut	2 nd cut	3 rd cut	All cuts	All cuts			
As Fed Moisture (%)	# Samples	283	376	35	1138	314	195	10	1513	206	439	9	24
	Average	16.7	17.4	16.5	16.8	17.2	16.7	16.9	16.5	16.4	16.9	14.6	16.3
	Minimum	9.2	8.9	9.6	3.9	9.0	9.2	11.0	8.1	8.2	7.0	10.7	9.7
	Maximum	38.8	34.7	36.9	38.8	52.2	34.9	23.1	78.4	62.0	59.1	17.4	24.7
Crude Protein (%)	# Samples	283	381	36	1169	314	202	10	1549	204	459	10	23
	Average	19.3	21.6	23.5	20.3	16.0	19.6	22.0	16.1	13.2	11.2	16.5	14.8
	Minimum	10.5	9.7	14.6	7.7	5.6	8.8	14.3	4.4	5.9	3.0	11.6	7.7
	Maximum	28.4	28.8	29.8	29.8	25.3	25.8	25.5	26.2	28.2	25.3	22.1	23.3
NEgain (Mcal/kg)	# Samples	227	304	28	965	283	179	10	1399	200	403	6	21
	Average	0.63	0.71	0.82	0.67	0.55	0.70	0.83	0.59	0.58	0.52	0.57	0.54
	Minimum	0.20	0.32	0.59	0.20	0.05	0.26	0.53	0.05	0.05	0.07	0.43	0.12
	Maximum	0.92	1.02	0.99	1.02	0.88	0.98	1.00	1.00	0.86	1.00	0.66	0.91
NElact (Mcal/kg)	# Samples	227	304	28	965	283	179	10	1399	200	405	6	21
	Average	1.33	1.41	1.53	1.37	1.28	1.41	1.55	1.31	1.30	1.26	1.25	1.22
	Minimum	0.85	0.85	1.31	0.75	0.85	0.86	1.30	0.67	0.82	0.68	1.15	0.62
	Maximum	1.64	1.78	1.71	1.78	1.60	1.64	1.75	1.75	1.56	1.75	1.39	1.63
NEmaint (Mcal/kg)	# Samples	227	304	28	965	283	179	10	1399	200	405	6	21
	Average	1.33	1.41	1.52	1.37	1.25	1.40	1.53	1.29	1.28	1.22	1.27	1.24
	Minimum	0.90	1.02	1.29	0.90	0.75	0.96	1.23	0.75	0.75	0.63	1.13	0.82
	Maximum	1.62	1.72	1.69	1.72	1.58	1.68	1.70	1.70	1.56	1.70	1.36	1.61
Acid Detergent Fibre (%)	# Samples	287	383	36	1181	284	181	10	1393	208	447	10	24
	Average	36.6	32.1	26.7	34.2	17.0	16.7	16.9	16.5	37.8	39.3	36.5	40.0
	Minimum	22.9	20.4	18.2	18.2	9.0	9.2	11.0	8.1	30.5	26.7	27.9	29.1
	Maximum	54.1	53.2	39.3	57.1	37.6	34.9	23.1	78.4	51.7	55.0	47.5	56.6
Neutral Detergent Fibre (%)	# Samples	253	354	35	1043	286	190	10	1319	169	362	8	19
	Average	48.6	42.6	37.2	45.5	54.7	45.6	39.5	53.0	56.9	62.0	49.2	52.7
	Minimum	30.9	30.5	26.5	26.5	37.5	31.6	33.4	18.1	21.1	38.9	37.3	40.7
	Maximum	73.0	70.4	55.0	78.5	74.7	69.5	52.9	474.0	74.5	80.0	59.1	72.3
Calcium (%)	# Samples	76	84	7	391	87	54	1	634	79	241	2	13
	Average	1.57	1.63	1.59	1.59	1.17	1.46	1.53	1.19	0.81	0.58	1.28	1.01
	Minimum	0.63	0.60	1.22	0.41	0.42	0.80	1.53	0.20	0.25	0.11	1.15	0.41
	Maximum	2.58	2.30	2.13	2.89	1.92	2.33	1.53	2.62	1.58	1.92	1.40	1.52
Phosphorus (%)	# Samples	76	84	7	391	87	54	1	634	79	229	2	13
	Average	0.24	0.23	0.25	0.23	0.21	0.22	0.21	0.20	0.19	0.17	0.23	0.18
	Minimum	0.09	0.11	0.21	0.09	0.05	0.13	0.21	0.05	0.08	0.05	0.14	0.10
	Maximum	0.45	0.39	0.34	0.45	0.39	0.39	0.21	0.40	0.44	0.39	0.31	0.24
Potassium (%)	# Samples	76	84	7	391	87	54	1	634	79	229	2	13
	Average	2.32	2.21	2.33	2.24	2.09	2.13	2.16	1.99	1.93	1.71	2.27	1.99
	Minimum	0.95	0.59	2.05	0.59	0.54	0.87	2.16	0.54	0.75	0.21	1.83	1.38
	Maximum	3.50	3.27	2.50	4.05	3.25	2.87	2.16	3.33	3.72	3.09	2.70	2.98
Magnesium (%)	# Samples	76	84	7	391	87	54	1	634	79	241	2	13
	Average	0.34	0.36	0.34	0.35	0.30	0.37	0.30	0.30	0.24	0.21	0.46	0.35
	Minimum	0.15	0.17	0.23	0.15	0.12	0.20	0.30	0.07	0.08	0.04	0.38	0.23
	Maximum	0.61	0.58	0.40	0.67	0.51	0.61	0.30	0.66	0.60	0.45	0.53	0.53

- All analyte values are shown on a dry matter basis unless otherwise specified
- All mineral data (C, P, K, Mg) was analyzed by wet chemistry
- Data collected from random feed samples submitted by Manitoba producers to Norwest/Bodycote Lab between 2000 and 2005.

		SILAGE																
		Alfalfa				Alfalfa/grass			Barley	Canola	Corn	Fall Rye	Millet	Oats	Sorghum Sudan grass	Wheat	Barley & Oat	Barley & Pea
		1 st cut	2 nd cut	3 rd cut	All cuts	1 st cut	2 nd cut	All cuts	All cuts									
As Fed Moisture (%)	# Samples	18	15	2	178	14	12	108	272	8	394	7	18	103	15	10	9	11
	Average	54.6	56.4	24.6	53.9	52.0	52.9	32.7	59.1	65.6	65.3	62.9	57.7	61.3	62.4	49.1	60.8	62.2
	Minimum	27.9	33.2	17.4	15.0	19.5	33.4	0.3	26.2	44.9	25.0	44.5	19.5	25.0	31.4	25.4	44.1	44.6
	Maximum	75.9	79.6	31.7	79.6	76.9	77.7	77.7	78.3	79.2	82.4	74.0	76.8	80.5	84.8	66.0	71.1	74.7
Crude Protein (%)	# Samples	22	15	2	193	13	12	106	261	8	372	6	17	101	11	10	9	11
	Average	20.1	22.8	20.3	19.0	16.4	20.5	17.4	11.1	14.7	9.4	11.9	11.9	10.9	11.9	10.1	13.3	13.5
	Minimum	10.3	19.0	19.4	7.1	11.1	15.8	10.4	5.7	9.3	2.7	8.5	7.5	6.9	6.1	7.4	9.8	10.4
	Maximum	24.3	24.9	21.3	28.1	24.8	23.3	24.8	18.0	23.5	21.4	19.2	20.0	19.2	17.4	13.2	19.2	16.3
NEgain (Mcal/kg)	# Samples	15	13	1	116	14	12	92	237	8	305	6	17	95	12	4	9	10
	Average	0.66	0.70	0.54	0.64	0.57	0.68	0.60	0.89	0.69	0.90	0.84	0.62	0.85	0.76	0.86	0.87	0.89
	Minimum	0.45	0.49	0.54	0.15	0.40	0.47	0.12	0.47	0.33	0.28	0.82	0.22	0.46	0.44	0.80	0.74	0.83
	Maximum	0.81	0.79	0.54	0.96	0.80	0.85	0.92	1.00	0.91	1.02	0.88	0.87	0.97	0.88	0.89	0.96	0.95
NElact (Mcal/kg)	# Samples	15	13	1	116	14	12	92	237	8	305	6	17	95	12	4	9	10
	Average	1.39	1.41	1.30	1.34	1.29	1.41	1.32	1.50	1.30	1.53	1.46	1.28	1.45	1.37	1.46	1.46	1.51
	Minimum	1.24	1.27	1.30	0.91	1.07	1.25	0.96	1.28	0.88	1.13	1.40	0.74	1.05	1.20	1.32	1.41	1.45
	Maximum	1.51	1.49	1.30	1.67	1.50	1.55	1.64	1.71	1.48	1.70	1.55	1.58	1.61	1.53	1.55	1.55	1.55
NEmaint (Mcal/kg)	# Samples	15	13	1	116	14	12	92	237	8	305	6	17	95	12	4	9	10
	Average	1.36	1.40	1.24	1.34	1.27	1.38	1.30	1.59	1.39	1.60	1.54	1.32	1.55	1.46	1.56	1.57	1.59
	Minimum	1.15	1.19	1.24	0.85	1.10	1.17	0.64	1.17	1.03	0.98	1.52	0.92	1.16	1.14	1.50	1.44	1.53
	Maximum	1.51	1.49	1.24	1.66	1.50	1.55	1.62	1.70	1.61	1.72	1.58	1.57	1.67	1.58	1.59	1.66	1.65
Acid Detergent Fibre (%)	# Samples	22	15	2	196	14	13	111	272	8	396	7	17	104	12	10	9	11
	Average	34.6	32.9	35.2	36.7	38.6	34.0	36.7	33.1	37.5	30.1	37.7	36.8	37.0	39.3	34.6	35.4	32.9
	Minimum	28.7	28.4	30.8	22.9	29.1	25.1	23.5	15.5	34.0	16.5	29.4	30.1	24.2	31.1	29.2	28.9	28.8
	Maximum	43.1	41.4	39.7	54.1	45.3	42.4	54.8	47.8	44.4	46.6	42.1	47.3	50.6	47.7	48.2	39.0	37.8
Neutral Detergent Fibre (%)	# Samples	21	15	2	165	11	11	89	171	5	236	3	9	67	8	8	8	6
	Average	44.8	39.8	48.2	45.8	51.0	46.0	50.2	53.3	46.3	53.6	61.1	62.3	58.8	62.4	56.5	55.7	50.3
	Minimum	36.1	27.7	45.3	27.7	37.5	38.0	34.6	39.0	44.4	29.7	52.4	52.3	44.7	47.0	50.0	48.8	46.5
	Maximum	56.6	49.3	51.1	70.4	63.0	56.5	65.9	67.5	51.4	75.8	66.4	72.0	68.3	71.5	66.6	60.5	54.0
Calcium (%)	# Samples	6	4	2	110	4	3	45	180	7	281	6	15	68	8	4	4	6
	Average	1.47	1.52	1.32	1.54	1.24	2.20	1.41	0.43	1.64	0.28	0.43	0.43	0.36	0.69	0.23	0.42	0.68
	Minimum	0.87	1.26	0.94	0.14	0.82	1.29	0.65	0.15	0.69	0.08	0.16	0.19	0.10	0.38	0.16	0.24	0.51
	Maximum	1.88	1.87	1.69	2.70	1.50	2.81	2.81	1.71	2.09	2.09	1.38	0.72	0.64	1.24	0.31	0.73	0.95
Phosphorus (%)	# Samples	6	4	2	110	4	3	45	180	7	281	6	15	68	8	4	4	6
	Average	0.33	0.31	0.20	0.28	0.25	0.26	0.25	0.26	0.28	0.24	0.28	0.24	0.25	0.23	0.23	0.22	0.30
	Minimum	0.28	0.27	0.17	0.08	0.16	0.17	0.14	0.11	0.20	0.06	0.14	0.14	0.08	0.12	0.18	0.16	0.23
	Maximum	0.37	0.34	0.22	0.66	0.34	0.40	0.40	0.46	0.33	0.43	0.43	0.35	0.46	0.36	0.30	0.28	0.36
Potassium (%)	# Samples	6	4	2	110	4	3	45	180	7	281	6	15	68	8	4	4	6
	Average	2.16	2.35	1.71	2.44	2.28	2.01	2.36	1.71	1.71	1.19	1.74	2.52	2.02	2.42	1.74	1.85	1.55
	Minimum	1.52	1.87	1.41	0.46	1.53	1.95	1.53	0.62	1.44	0.52	1.08	1.34	0.78	1.30	0.88	1.19	1.02
	Maximum	3.46	3.28	2.01	4.09	3.02	2.07	4.14	2.97	2.69	3.02	2.33	4.73	4.42	3.06	2.57	2.86	2.32
Magnesium (%)	# Samples	6	4	2	110	4	3	45	0	0	0	0	0	0	0	4	6	6
	Average	0.38	0.43	0.48	0.38	0.31	0.38	0.35	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.35	0.35
	Minimum	0.30	0.28	0.46	0.04	0.19	0.28	0.19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.16	0.28
	Maximum	0.45	0.55	0.49	0.64	0.48	0.50	0.87	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.50	0.42

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- All mineral data (C, P, K, Mg) was analyzed by wet chemistry
- Data collected from random feed samples submitted by Manitoba producers to Norwest/Bodycote Lab between 2000 and 2005.

		GREENFEED										GRAIN		MISC. FEEDS		
		Barley	Canola	Corn	Fall Rye	Millet	Oats	Sorghum Sudan grass	Soy bean	Turnips	Wheat	Barley	Oats	Wild oat green feed	Kochia hay	Quack grass hay
		All cuts														
As Fed Moisture (%)	# Samples	253	20	98	11	200	609	31	6	3	42	110	81	3	6	5
	Average	26.0	26.6	66.0	20.3	24.2	23.4	36.8	21.2	87.7	25.2	13.5	12.3	53.2	19.5	18.8
	Minimum	3.7	14.4	12.2	9.7	7.5	2.9	13.8	18.0	87.2	7.8	8.6	8.0	14.8	15.8	10.4
	Maximum	85.8	74.8	89.8	84.6	84.7	79.4	85.8	31.3	88.5	77.5	24.9	17.0	76.0	26.5	30.9
Crude Protein (%)	# Samples	225	14	78	11	176	511	27	6	3	37	108	76	1	6	6
	Average	11.4	12.3	9.8	12.7	10.9	10.3	11.5	14.6	21.0	10.7	12.6	12.4	9.5	12.7	8.9
	Minimum	5.0	8.2	5.1	3.8	4.9	3.3	8.7	11.2	18.7	6.1	8.1	7.7	9.5	10.2	4.1
	Maximum	23.1	16.4	21.4	26.2	21.7	20.8	15.6	17.0	23.4	23.8	15.2	16.8	9.5	18.8	11.7
NEgain (Mcal/kg)	# Samples	220	18	79	10	177	503	26	6	3	35	101	69	1	5	5
	Average	0.69	0.51	0.82	0.60	0.61	0.61	0.75	0.73	0.96	0.49	1.34	1.02	0.75	0.58	0.49
	Minimum	0.01	0.01	0.08	0.08	0.04	0.01	0.20	0.52	0.96	0.06	1.07	0.29	0.75	0.40	0.24
	Maximum	1.44	0.89	1.00	1.03	1.06	1.15	1.01	0.85	0.97	1.13	1.43	1.36	0.75	0.81	0.67
NElact (Mcal/kg)	# Samples	220	17	79	11	177	504	26	6	3	35	101	69	1	6	5
	Average	1.38	1.15	1.50	1.20	1.28	1.33	1.30	1.39	1.66	1.24	1.95	1.73	1.42	1.17	1.21
	Minimum	0.72	0.84	1.09	0.17	0.57	0.38	0.88	1.11	1.66	0.82	1.76	1.22	1.42	0.97	0.76
	Maximum	2.03	1.60	1.72	1.56	1.82	1.76	1.76	1.54	1.67	1.91	2.01	1.96	1.42	1.50	1.38
NEmaint (Mcal/kg)	# Samples	220	17	79	11	177	504	26	6	3	35	101	69	1	6	5
	Average	1.39	1.24	1.52	1.22	1.31	1.31	1.32	1.43	1.66	1.19	2.04	1.72	1.45	1.17	1.19
	Minimum	0.71	1.00	0.78	0.48	0.74	0.64	0.90	1.22	1.66	0.76	1.77	0.99	1.45	0.64	0.94
	Maximum	2.14	1.59	1.70	1.73	1.76	1.85	1.71	1.55	1.67	1.83	2.13	2.06	1.45	1.51	1.37
Acid Detergent Fibre (%)	# Samples	227	17	72	11	179	518	27	6	3	37	103	70	1	6	6
	Average	35.2	39.0	32.6	39.3	36.9	37.0	37.3	31.8	19.7	40.2	7.5	15.5	33.4	40.2	39.0
	Minimum	21.1	29.7	19.0	26.1	25.2	22.8	26.5	25.5	19.0	23.3	5.0	7.0	33.4	28.9	32.0
	Maximum	52.7	45.2	51.0	58.8	50.8	54.6	48.0	42.7	20.2	51.4	14.3	34.4	33.4	54.6	46.8
Neutral Detergent Fibre (%)	# Samples	165	12	64	7	65	334	8	1	3	27	6	4	0	1	5
	Average	56.4	52.1	51.9	58.8	61.5	58.7	62.7	44.4	21.1	60.8	21.2	31.8	n/a	74.1	63.0
	Minimum	38.8	43.8	29.1	45.5	49.1	41.7	54.3	n/a	19.7	40.7	16.6	25.9	n/a	74.1	58.1
	Maximum	74.0	60.9	76.9	76.6	91.1	83.6	74.8	n/a	22.2	69.8	28.8	39.9	n/a	74.1	69.7
Calcium (%)	# Samples	153	16	40	5	163	304	25	6	3	22	101	72	1	6	2
	Average	0.45	1.52	0.23	0.40	0.44	0.33	0.50	1.13	2.10	0.24	0.06	0.10	0.30	0.91	0.53
	Minimum	0.12	1.04	0.06	0.21	0.17	0.06	0.06	0.80	2.04	0.09	0.03	0.06	0.30	0.75	0.41
	Maximum	1.15	1.98	0.46	0.89	1.94	0.90	0.89	1.62	2.20	1.05	0.35	0.35	0.30	1.23	0.64
Phosphorus (%)	# Samples	153	16	40	5	163	304	25	6	3	22	101	72	1	6	2
	Average	0.25	0.27	0.27	0.25	0.22	0.23	0.21	0.23	0.57	0.23	0.37	0.37	0.27	0.20	0.17
	Minimum	0.08	0.18	0.04	0.07	0.06	0.04	0.09	0.16	0.53	0.13	0.23	0.22	0.27	0.15	0.14
	Maximum	0.46	0.36	0.40	0.32	0.48	0.55	0.37	0.35	0.59	0.35	0.51	0.60	0.27	0.25	0.19
Potassium (%)	# Samples	153	16	40	5	163	304	25	6	3	22	101	71	1	6	2
	Average	1.78	1.43	1.15	1.78	2.20	2.03	2.08	0.85	4.72	1.42	0.53	0.46	2.14	1.61	0.62
	Minimum	0.45	0.77	0.68	0.88	0.72	0.41	0.45	0.60	4.41	0.42	0.31	0.26	2.14	1.01	0.28
	Maximum	3.57	2.20	2.66	3.45	4.38	4.06	3.10	1.31	5.07	2.43	0.91	0.67	2.14	2.90	0.95
Magnesium (%)	# Samples	153	16	40	5	163	304	25	6	3	22	101	71	1	6	2
	Average	0.25	0.35	0.24	0.18	0.39	0.22	0.41	0.61	0.55	0.16	0.14	0.16	0.22	0.65	0.13
	Minimum	0.08	0.18	0.12	0.08	0.17	0.07	0.15	0.53	0.48	0.10	0.11	0.10	0.22	0.56	0.12
	Maximum	0.57	0.62	0.48	0.48	1.10	0.49	0.85	0.71	0.59	0.55	0.21	0.22	0.22	0.82	0.14

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		STRAW											
		Barley	Corn	Flax	Oats	Peas	Wheat	Meadow Fescue	Perennial Rye grass	Rye grass	Smooth Brome grass	Tall Fescue	Timothy
As Fed Moisture (%)	# Samples	247	9	7	300	33	108	5	7	7	2	5	8
	Average	19.4	31.3	14.6	19.5	16.6	17.3	16.0	18.0	15.7	13.4	15.3	14.4
	Minimum	6.1	12.5	11.1	5.6	10.1	7.8	12.9	9.0	9.1	13.4	11.4	12.0
	Maximum	55.3	58.2	18.0	84.7	31.5	37.3	21.7	32.2	28.5	13.4	22.0	17.6
Crude Protein (%)	# Samples	240	9	7	267	33	107	5	9	7	2	5	8
	Average	5.5	5.7	6.7	5.3	6.5	4.4	8.4	7.3	7.4	11.4	10.1	5.1
	Minimum	1.4	4.4	3.0	1.6	4.2	1.3	7.6	3.3	5.8	11.4	7.4	1.8
	Maximum	12.6	8.3	13.0	14.0	10.6	11.8	9.2	13.2	9.3	11.4	11.5	6.9
NEgain (Mcal/kg)	# Samples	176	9	7	181	31	78	0	6	7	0	4	7
	Average	0.20	0.54	0.00	0.20	0.32	0.10	n/a	0.31	0.31	n/a	0.29	0.37
	Minimum	-0.11	0.09	-0.65	-0.14	0.08	-0.23	n/a	0.06	0.07	n/a	0.18	0.23
	Maximum	0.72	0.84	0.83	0.68	0.47	0.65	n/a	0.55	0.50	n/a	0.50	0.55
NElact (Mcal/kg)	# Samples	219	9	7	250	34	107	0	6	7	0	4	7
	Average	0.89	1.25	0.45	0.94	0.90	0.79	n/a	1.01	0.97	n/a	1.20	1.10
	Minimum	0.31	1.06	-0.39	0.23	0.57	0.17	n/a	0.77	0.54	n/a	1.14	0.80
	Maximum	1.44	1.46	1.53	1.58	1.31	1.50	n/a	1.17	1.22	n/a	1.30	1.32
NEmaint (Mcal/kg)	# Samples	219	9	7	250	34	107	0	6	7	0	4	7
	Average	0.84	1.24	0.70	0.85	1.04	0.77	n/a	1.01	1.01	n/a	0.99	1.07
	Minimum	0.40	0.79	0.05	0.41	0.78	0.47	n/a	0.76	0.77	n/a	0.88	0.93
	Maximum	1.42	1.54	1.53	1.57	1.35	1.56	n/a	1.25	1.20	n/a	1.20	1.25
Acid Detergent Fibre (%)	# Samples	241	9	7	268	34	107	5	9	7	2	5	8
	Average	49.4	45.6	53.1	49.4	48.3	51.4	45.3	42.8	44.9	38.1	44.2	43.9
	Minimum	32.3	36.3	31.2	30.2	35.0	31.8	42.8	36.7	39.9	38.1	39.0	38.6
	Maximum	60.9	50.8	70.3	60.8	58.1	59.0	47.5	51.5	51.3	38.1	48.2	47.6
Neutral Detergent Fibre (%)	# Samples	147	4	0	181	6	49	5	4	5	2	5	4
	Average	74.1	76.2	n/a	73.0	65.8	76.2	72.1	67.7	66.2	62.6	68.1	69.2
	Minimum	41.7	74.8	n/a	48.8	57.4	60.7	68.4	61.0	60.4	62.6	61.6	66.9
	Maximum	85.2	77.1	n/a	85.4	74.8	88.9	78.3	74.9	69.5	62.6	74.1	71.6
Calcium (%)	# Samples	155	7	7	173	33	85	5	5	5	0	4	4
	Average	0.36	0.32	0.61	0.29	1.65	0.22	0.30	0.37	0.44	n/a	0.30	0.26
	Minimum	0.18	0.19	0.41	0.12	0.80	0.09	0.23	0.18	0.37	n/a	0.24	0.19
	Maximum	0.78	0.45	1.00	0.92	2.42	0.64	0.42	0.60	0.50	n/a	0.42	0.35
Phosphorus (%)	# Samples	155	7	7	173	33	85	5	5	5	0	4	4
	Average	0.09	0.17	0.11	0.10	0.09	0.08	0.22	0.17	0.13	n/a	0.14	0.09
	Minimum	0.03	0.06	0.03	0.02	0.04	0.02	0.18	0.05	0.07	n/a	0.09	0.05
	Maximum	0.30	0.42	0.27	0.30	0.16	0.28	0.26	0.30	0.20	n/a	0.22	0.12
Potassium (%)	# Samples	155	7	7	173	33	85	5	5	5	0	4	4
	Average	1.76	1.42	0.71	2.32	1.48	1.39	2.05	1.64	1.60	n/a	2.72	0.87
	Minimum	0.60	1.16	0.46	0.33	0.34	0.23	1.37	0.94	1.15	n/a	2.34	0.53
	Maximum	4.18	1.76	1.06	4.08	3.02	2.66	3.11	2.91	2.08	n/a	2.94	1.20
Magnesium (%)	# Samples	155	7	7	173	33	85	5	5	5	0	4	4
	Average	0.17	0.31	0.33	0.16	0.44	0.14	0.20	0.17	0.23	n/a	0.26	0.11
	Minimum	0.07	0.17	0.17	0.06	0.14	0.05	0.17	0.14	0.17	n/a	0.20	0.07
	Maximum	0.36	0.51	0.68	0.40	0.89	0.47	0.22	0.24	0.31	n/a	0.28	0.14

- All analyte values are shown on a dry matter basis unless otherwise specified
- All mineral data (C, P, K, Mg) was analyzed by wet chemistry
- Data collected from random feed samples submitted by Manitoba producers to Norwest/Bodycote Lab between 2000 and 2005.

For more information, contact:

- your local Manitoba Agriculture, Food and Rural Initiatives GO Centre or Office
- the Manitoba Agriculture, Food and Rural Initiatives website www.manitoba.ca/agriculture
- the Manitoba Forage Council website www.mbforagecouncil.mb.ca

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