

Bill 46: *The Save Lake Winnipeg Act*. Presentation to the Legislative Review Committee
Caitlin McIntyre (Private Citizen), June 13, 2011

Table 1. Daily production of the major nutrients in the manure from various species and weights of animals (freshly excreted manure).

Animal	Size (lb)	Total manure (ft ³ /day)	Water (%)	Nutrient content (lb/day)		
				(N)	(P ₂ O ₅) ^a	(K ₂ O) ^a
Dairy cattle						
	150	0.2	88	0.05	0.01	0.04
Heifer	250	0.32	88	0.08	0.02	0.07
	750	1	88	0.23	0.07	0.22
Lactating cow	1,000	1.7	88	0.58	0.3	0.31
	1,400	2.4	88	0.82	0.42	0.48
Dry cow	1,000	1.3	88	0.36	0.11	0.28
	1,400	1.82	88	0.5	0.2	0.4
Veal	250	0.14	96	0.04	0.03	0.06
Beef cattle						
Calf	450	0.42	92	0.14	0.1	0.11
High-forage	750	1	92	0.41	0.14	0.25
	1,100	1.4	92	0.61	0.21	0.36
High-energy	750	0.87	92	0.38	0.14	0.22
	1,100	1.26	92	0.54	0.21	0.32
Cow	1,000	1	88	0.31	0.19	0.26
Swine						
Nursery	25	0.04	89	0.02	0.01	0.01
Grow-finish	150	0.15	89	0.08	0.05	0.04
Gestating	275	0.12	91	0.05	0.04	0.04
Lactating	375	0.36	90	0.18	0.13	0.14
Boar	350	0.12	91	0.05	0.04	0.04
Sheep	100	0.06	75	0.04	0.02	0.04
Poultry						
Layer	4	0.004	75	0.0035	0.0027	0.0016
Broiler	2	0.003	74	0.0023	0.0014	0.0011
Turkey	20	0.014	75	0.0126	0.0108	0.0054
Duck	6	0.005	73	0.0046	0.0038	0.0028
Horse	1,000	0.8	78	0.28	0.11	0.23

^a Phosphate (P₂O₅) = 2.29 x P, Potash (K₂O) = 1.21 x K
Source: MWPS-18, *Manure Management Systems Series*, Section 1, *Manure Characteristics*.
Notes: Values do not include bedding. The actual nutrient content can vary + or - 30% from table values. Increase nutrients by 4% for each 1% feed wasted above 5%.
Use only for planning purposes. These values should not be used in place of a regular manure analysis.

Lactating sow:

Production of N: 0.18 lb * 365 days = 65.7 lb/year
= 29.8 kg/year

Production of P₂O₅: 0.13 lb * 365 days
= 47.5 lb/year
= 21.5 kg/year

"animal unit" means the number of animals of a particular category of livestock that will excrete 73 kg of total nitrogen in a 12 month period.

-*The Livestock Manure and Mortalities Management Regulation of The Environment Act*

Specific Recommendations:

- 1) Amend *The Livestock Manure and Mortalities Management Regulations* under *The Environment Act* to include phosphorous output in a 12 month period.
- 2) Amend *Livestock Manure and Mortalities Management Regulations* under *The Environment Act* to include a separate definition of one Animal Unit for pigs to correlate to the nutrient output of a lactating sow, i.e. "In the case of pigs, one Animal Unit means the number of animals that will excrete 29.8 kg of total nitrogen and 21.5 kg of total phosphorous in a 12 month period."
- 3) Amend the definition of a "confined livestock area" to include indoor facilities in *The Livestock Manure and Mortalities Management Regulations* under *The Environment Act*
- 4) Initiate a 5-year program to cap the number of allowable pig Animal Units on all livestock operations in Manitoba, with a focus on confined livestock areas.