

Wisconsin Manure Quantity Estimation

V 09/01/03

Name: _____ Date: _____

Animal	Size	Daily Manure Production To Apply						Annual Manure Production To Apply					
		Solid		Liquid				Number x	Daily x	365 Day x	%	=	Total
	Lbs	Lbs/day	ft ³ /day	MWPS ft ³ /day x WI dairy & beef dilution factor	ft ³ /day & WI dilution	MWPS gal./day x WI dairy & beef dilution factor	gal./day & WI dilution	of Head	Total Tons or Gal.	Total	Collected	=	Total Tons or Gal.
Dairy													
Calf	150	13	0.200	.21*1.8=	.37	1.53*1.8=	2.80						
Calf	250	21	0.320	.33*1.8=	.60	2.47*1.8=	4.50						
Heifer	750	65	1.000	1.03*1.8=	1.85	7.70*1.8=	13.8						
Lact. Cows	1000	106	1.700	1.71*1.8=	3.07	12.7*1.8=	23.0						
	1400	148	2.400	2.38*1.8=	4.28	17.7*1.8=	32.0						
Dry Cows	1000	82	1.300	1.30*1.8=	2.35	9.7*1.8=	18.0						
	1400	115	1.820	1.82*1.8=	3.33	13.6*1.8=	25.0						
Beef													
Calf	450	26	0.420	.415*3.2=	1.3	3.1*3.2=	9.9						
High Forage	750	62	1.000	1.00*3.2=	3.2	7.5*3.2=	24.0						
High Forage	1100	92	1.400	1.48*3.2=	4.8	11*3.2=	35.0						
High Energy	750	54	0.870	.87*3.2=	2.7	6.5*3.2=	20.8						
High Energy	1100	80	1.260	1.27*3.2=	4.1	9.5*3.2=	30.5						
Beef Cow	1000	63	1.000	1.00*3.2=	3.2	7.5*3.2=	24.0						
Swine													
Nursery Pig	25	2.7	0.040		.04		.30						
Grow-Finish Pig	150	9.5	0.150		.17		1.20						
Gestating Sow	275	7.5	0.120		.14		1.00						
Sow & Litter	375	22.5	0.360		.42		3.00						
Boar	350	7.2	0.120		.14		1.00						
Poultry / Other													
Layers	4	0.26	0.004		.004		.03						
Broilers	2	0.18	0.003		.003		.02						
Turkeys	20	0.9	0.014		.015		.11						
Duck	6	0.33	0.005		.006		.04						
Sheep	100	4	0.060		.055		.40						
Horse	1000	50	0.800		.827		5.98						

Source: Midwest Plan Service publication number MWPS-18 "Manure Characteristics" Section 1, copyright 2000. Solid volumes are as excreted. The liquid dairy and beef values are computed from the MWPS daily production and have approximately equal nutrient values annually as solid manure. MWPS liquid dairy and beef factors are multiplied by 1.8 and 3.2 respectively. Dilution on your operation may be substantially different. Use manure analysis and manure storage volumes to determine manure production whenever possible.

Manure quantities are likely to be more accurate estimated from storage size:

What is the manure storage pit size? _____ gallons or tons?

Multiply pit size x Number of times emptied/yr? _____ = Total annual manure collection

Available Manure Nutrients

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Manure analysis testing for available nutrients in (lbs./ton or lbs./1000 gallons) N ___ P₂O₅ ___ K₂O ___

Manure book values for available nutrients in (lbs./ton or lbs./1000 gallons)

Species/ Management	Total Available Nutrients from Solid Manure lbs./ton				Species/ Management	Total Available Nutrients from Liquid Manure lbs./ 1,000 gallons			
	N	N	P ₂ O ₅	K ₂ O		N	N	P ₂ O ₅	K ₂ O
	Surface applied	Incorporated by 3 rd day				Surface applied	Incorporated by 3 rd day		

One Year of Application

Dairy	3	4	3	7	Dairy	7	10	5	16
Beef	4	5	5	9	Veal calf	6	8	6	20
Swine	7	9	6	7	Beef	5	7	5	16
Duck	9	10	13	24	Swine indoor pit	25	33	25	24
Chicken	20	24	30	24	Swine outdoor pit	17	22	10	16
Turkey	20	24	24	24	Swine farrow nursery indoor pit	13	16	14	18
Sheep	7	9	11	32	Poultry	8	10	6	10
Horse	3	4	4	8					

Two Consecutive Years of Application

Dairy	4	5	4	8	Dairy	10	12	6	18
Beef	5	6	6	10	Veal calf	8	9	7	23
Swine	8	11	7	8	Beef	7	9	6	18
Duck	10	12	15	27	Swine indoor pit	30	38	29	27
Chicken	24	28	35	27	Swine outdoor pit	20	26	11	18
Turkey	24	28	28	27	Swine farrow nursery indoor pit	15	19	16	20
Sheep	9	12	13	36	Poultry	10	11	7	11
Horse	4	5	4	9					

Three or More Consecutive Years of Application

Dairy	5	6	4	9	Dairy	11	13	7	19
Beef	6	7	7	10	Veal calf	8	10	8	24
Swine	9	11	8	9	Beef	8	10	7	19
Duck	11	13	16	29	Swine indoor pit	33	40	32	29
Chicken	26	30	38	29	Swine outdoor pit	22	27	12	19
Turkey	26	30	30	29	Swine farrow nursery indoor pit	16	20	17	21
Sheep	10	13	14	38	Poultry	10	12	8	11
Horse	4	5	5	10					

Figures are rounded to the nearest whole pound. Manure book values table replaces UWEX Publication A-2809 (1998)

Wisconsin Certified Laboratories

A Wisconsin nutrient management plan must be based on soil tests conducted at the soil testing laboratory certified by the Department of Agriculture, Trade and Consumer Protection. This requirement ensures soil test results and recommendations will be generated through analytical procedures approved by the University of Wisconsin. The results are consistent. Laboratories must perform with a certain level of success, to remain certified.

The following soil testing laboratories are Wisconsin DATCP certified. The laboratories participating in the Manure Analysis Proficiency (MAP) program are indicated below to provide quality control to the Laboratory Analysis Industry. You can learn more about the MAP program and find other participating laboratories at <http://ghex.colostate.edu/map/>.

UW Soil & Plant Analysis Laboratory
5711 Mineral Point Rd
Madison, WI 53705
(608)262-4364
soil-lab@uwmadmail.services.wisc.edu

UW Soil & Forage Lab
8396 Yellowstone Dr.
Marshfield, WI 54449
(715)387-2523
jbpeter1@facstaff.wisc.edu
MAP participant

Agsources Soil & Forage Lab
106 N. Cecil Street
Bonduel, WI 54107
(715)758-2178
aglab@agsources.com
MAP participant

Rock River Laboratory
PO Box 169
Watertown, WI 53904
(920)261-0446
rrllab@execpc.com
MAP participant

Dairyland Laboratories
217 E. Main Street
Arcadia, WI 54612
(608)323-2123
info@dairylandlabs.com
MAP participant

A&L Great Lakes
Laboratories
3505 Conestoga Dr.
Fort Wayne, IN 46808
(219)483-4759
lparker@algreatlakes.com
MAP participant

Mowers Soil Testing Plus, Inc.
117 E Main St
Toulon, IL 61483
(309)286-2761
swiedman@mowersplus.com

Logan Labs
P.O. Box 1455
184 West Main Street
Russells Point, OH 43348
Ph: (937) 842-6100