

# Nutrient Management

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*April 2023*

## Liquid Manure Production Data for Livestock in British Columbia

The amount of liquid manure generated by livestock for various periods of time is shown in the table below. These numbers are used in the B.C. Nutrient Management Calculator and are given on a per animal basis. Note that liquid manure does not include wash water from flush manure systems or milking parlours and does not factor in any treatment, such as solid/liquid separation, bedding materials, feed, or any other additional materials.

This table is intended to inform decisions by Nutrient Management Planners and agricultural consultants for planning and comparison purposes.

Data used in the B.C. Nutrient Management Calculator originates from both the B.C. Environmental Farm Plan Reference Guide and the Ontario Ministry of Agriculture, Food and Rural Affairs' Agricultural Planning Tools Suite (AgriSuite) system.

### **How to use this data**

In order to calculate the amount of liquid manure generated, follow the steps below:

- 1) Find the Animal Class and Animal in question in the two columns on the leftmost side of the table
- 2) Determine the amount of time (days, months, etc.) and number of animals that are generating manure
- 3) Multiply the number of animals by the amount of time in question

For example, if you are collecting manure from 100 milking cows for 10 months:

Manure generated = 100 milking cows \* 602.7 US Gallons per month \* 10 months = 602,700 US Gallons

**Liquid manure generation by various livestock for daily, monthly, six month, and yearly time periods. All data is given on a per animal basis.**

| <b>Animal class</b> | <b>Animal</b>                         | <b>Daily</b> |       | <b>Monthly</b> |        | <b>6 Months</b> |                | <b>Yearly</b> |                |
|---------------------|---------------------------------------|--------------|-------|----------------|--------|-----------------|----------------|---------------|----------------|
|                     |                                       | US gallons   | Litre | US gallons     | Litre  | US gallons      | m <sup>3</sup> | US gallons    | m <sup>3</sup> |
| Dairy               | Calves (0 to 3 months old)            | 1.85         | 7.00  | 56.2           | 212.9  | 337.4           | 1.28           | 674.9         | 2.55           |
| Dairy               | Calves (3 to 6 months old)            | 3.70         | 14.00 | 112.5          | 425.9  | 675.1           | 2.56           | 1350.1        | 5.11           |
| Dairy               | Heifers (6 to 15 months old)          | 7.40         | 28.00 | 225.0          | 851.8  | 1350.1          | 5.11           | 2700.3        | 10.22          |
| Dairy               | Heifers (15 to 26 months old)         | 12.95        | 49.01 | 393.8          | 1490.6 | 2362.6          | 8.94           | 4725.3        | 17.89          |
| Dairy               | Dry Cow                               | 18.49        | 70.01 | 562.5          | 2129.4 | 3375.2          | 12.78          | 6750.3        | 25.55          |
| Dairy               | Milking Cow                           | 19.82        | 75.01 | 602.7          | 2281.5 | 3616.2          | 13.69          | 7232.5        | 27.38          |
| Poultry             | Pullets - Cage Housing                | 0.14         | 0.55  | 4.4            | 16.6   | 26.3            | 0.10           | 52.6          | 0.20           |
| Poultry             | Pullets - Floor Housing               | 0.29         | 1.09  | 8.8            | 33.2   | 52.6            | 0.20           | 105.1         | 0.40           |
| Poultry             | Layer                                 | 0.24         | 0.91  | 7.3            | 27.6   | 43.8            | 0.17           | 87.6          | 0.33           |
| Poultry             | Broiler Breeder Layer - Cage Housing  | 0.25         | 0.95  | 7.7            | 29.0   | 46.0            | 0.17           | 92.0          | 0.35           |
| Poultry             | Broiler Breeder Layer - Floor Housing | 0.25         | 0.95  | 7.7            | 29.0   | 46.0            | 0.17           | 92.0          | 0.35           |
| Poultry             | Broiler Breeder Pullets               | 0.29         | 1.09  | 8.8            | 33.2   | 52.6            | 0.20           | 105.1         | 0.40           |
| Poultry             | Broiler Chicken                       | 0.26         | 0.98  | 7.9            | 29.8   | 47.3            | 0.18           | 94.5          | 0.36           |
| Poultry             | Roaster Chicken                       | 0.26         | 0.98  | 7.9            | 29.8   | 47.3            | 0.18           | 94.5          | 0.36           |
| Poultry             | Turkey Broiler                        | 0.31         | 1.16  | 9.3            | 35.2   | 55.8            | 0.21           | 111.7         | 0.42           |

| Animal class | Animal                  | Daily      |       | Monthly    |       | 6 Months   |                | Yearly     |                |
|--------------|-------------------------|------------|-------|------------|-------|------------|----------------|------------|----------------|
|              |                         | US gallons | Litre | US gallons | Litre | US gallons | m <sup>3</sup> | US gallons | m <sup>3</sup> |
| Poultry      | Turkey Heavy Hen        | 0.31       | 1.16  | 9.3        | 35.2  | 55.8       | 0.21           | 111.7      | 0.42           |
| Poultry      | Turkey Heavy Tom        | 0.31       | 1.16  | 9.3        | 35.2  | 55.8       | 0.21           | 111.7      | 0.42           |
| Swine        | Dry Sow, Boar, or Gilts | 4.17       | 15.80 | 127.0      | 480.6 | 761.8      | 2.88           | 1523.5     | 5.77           |
| Swine        | Nursing Sow and Litter  | 6.21       | 23.50 | 188.9      | 714.9 | 1133.1     | 4.29           | 2266.3     | 8.58           |
| Swine        | Nursery                 | 0.66       | 2.50  | 20.1       | 76.1  | 120.6      | 0.46           | 241.3      | 0.91           |
| Swine        | Grower                  | 1.66       | 6.30  | 50.6       | 191.6 | 303.7      | 1.15           | 607.4      | 2.30           |
| Swine        | Finisher                | 3.17       | 12.00 | 96.4       | 365.0 | 578.5      | 2.19           | 1157.1     | 4.38           |
| Swine        | Grower Finisher         | 2.67       | 10.10 | 81.2       | 307.2 | 486.9      | 1.84           | 973.8      | 3.69           |