

Determining the Fertilizer-N Application Rate using the Manure Nutrient Calculator

How to determine the fertilizer-N application rate using the Manure Nutrient Calculator.

Data to collect:

- New fertilizer application rate (kg N/ha)

Before you begin, you'll need to know your planned **annual N application rate** – either in lb N/ac or kg N/ha. Once the amount of applied N from manure is determined, the amount of supplemental N from fertilizer will be determined by subtracting the amount of N from manure and other non-fertilizer N sources (such as compost).

Steps:

- 1) Navigate to the Manure Nutrient Calculator using this link:
<https://nmp.apps.nrs.gov.bc.ca/MiniApps/ManureNutrientCalculator>
- 2) In the Manure Nutrient Calculator, select the type of manure being applied, the season and method that manure is applied, and the region your farm is located.

Manure Nutrient Calculator

The calculator will estimate the nutrient contributions of nitrogen, phosphorus and potassium from manures and the other organic nutrient sources.

Material Type	Application Rate	Units
Dairy, liquid (quite watery)	0	US gallons/ac
Application Season/Method	Region	
Spring - Shallow injection	Fraser Valley, East (including Abbotsford)	

Custom nutrient analysis and advanced features

Calculate

3) Enter the application rate and select the appropriate units of application (e.g. US gallons/ac, m³/ha, imperial gallon/ac).

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4) (optional) If you have a manure nutrient analysis from an analytical laboratory, select the 'Custom nutrient analysis and advanced features' dropdown and enter the nutrient analysis information from your lab report.

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Dairy, liquid (quite watery)	0	US gallons/ac

Application Season/Method	Region
Spring - Shallow injection	Fraser Valley, East (including Abbotsford)

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Moisture (%) ⓘ	N (%) ⓘ	NH ₄ -N (ppm) ⓘ	P (%) ⓘ	K (%) ⓘ
95-98%	0.2	1110	0.04	0.16

Ammonium-N Retention (%) ⓘ	Organic N Available This Year (%) ⓘ
85.00	35.00

Calculate

5) Hit the Calculate button. The amount of N shown under the 'Available This Year' is the amount of N supplied from that application of manure (in lb

N/acre). If there are multiple applications of manure, enter the details into the Manure Nutrient Calculator and add the amount of N from each application together.

Manure Nutrient Calculator

The calculator will estimate the nutrient contributions of nitrogen, phosphorus and potassium from manures and the other organic nutrient sources.

Material Type	Application Rate	Units
Dairy, liquid (quite watery)	5000	US gallons/ac

Application Season/Method	Region
Spring - Shallow injection	Fraser Valley, East (including Abbotsford)

Custom nutrient analysis and advanced features

Available This Year (lb/ac) i			Available Long Term (lb/ac) i		
N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
52	27	80	68	38	80

Calculate

- 6) Convert the amount of N applied from manure from lb N/ac to kg N/ha by multiplying by 1.12. For example, 50 lb N/ac * 1.12 = 56 kg N/ha. If necessary, convert the annual N application rate to kg N/ha as well.
- 7) Subtract the amount of N applied from manure from the annual N application rate to determine the amount of supplemental N required from fertilizer. For example: 250 kg N/ha - 145 kg N/ha from manure = 105 kg N/ha required from fertilizer.