

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

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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Material Type
Dairy, liquid (quite watery) ▾

Application Rate **Units**
0 US gallons/ac ▾

Application Season/Method
Spring - Shallow injection ▾

Region
Fraser Valley, East (including Abbotsfor ▾

Custom nutrient analysis and advanced features ▾

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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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Moisture (%) ⓘ 95-98%

N (%) ⓘ 0.2

NH₄-N (ppm) ⓘ 1110

P (%) ⓘ 0.04

K (%) ⓘ 0.16

Ammonium-N Retention (%) ⓘ 85.00

Organic N Available This Year (%) ⓘ 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.

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Material Type

Dairy, liquid (quite watery)

Application Rate

5000

Units

US gallons/ac

Application Season/Method

Spring - Shallow injection

Region

Fraser Valley, East (including Abbotsfoi

Custom nutrient analysis and advanced features

Calculate

Available This Year (lb/ac)

N

P₂O₅

K₂O

52

27

80

Available Long Term (lb/ac)

N

P₂O₅

K₂O

68

38

80

- 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.