

2025 Fertility Guidelines for Haskap Grown in Ontario

There are currently no Ontario fertility recommendations for haskap. The following tables for nitrogen (N), phosphorus (P), potassium (K) and lime applications are guidelines only and are provided for reference based on similar common crops and published research on haskap in other jurisdictions (note: lime, phosphorus and potassium should always be applied according to a soil test). Information on best practices for foliar nutrient applications are also included.



Nitrogen (N):

The table below provides optimal minimum to maximum range of nitrogen (N) fertilizer required based on previous haskap research in North America and preliminary N-specific fertility trials in Ontario, Canada. Choose N rate based on plant age and site-specific experience with the crop. Applications should be adjusted for application area (e.g., broadcasting over entire field including rows and alleyways vs. sidedressing on the row and targeting only the plant rooting area). Avoid fertilizing late summer and into the autumn to minimize late season growth which could make the plants more susceptible to winter injury.

Range of annual nitrogen (N) fertilizer required based on research in Northeastern North America. Choose N rate based on plant age and site-specific experience with the crop.

Plant Age	kg N/ha (lb N/ac)	Application Options
New Plantings (1– 2 yrs. old)	50-70 (45-62)	<u>Granular Applications</u> Apply fertilizer in a split application with the first application at bud break and the second application approximately 30-60 days later.
Established Plantings (3+yrs old)	80-100 (71-89)	<u>Fertigation</u> Split the season long nitrogen requirement in three applications beginning 1) at budbreak; followed by applications at 2) 30-50 days later; and, 3) just after harvest.

Calculating the Amount of Fertilizer to Apply

Example:

Fertilizers come in many different formats. This example will use calcium ammonium nitrate (27-0-0). You require 80 kg of actual nitrogen per hectare and will use calcium ammonium nitrate with 27% nitrogen. Note: the numbers on the fertilizer bag represent percent (%) Nitrogen-Phosphorus-Potassium (N-P-K).

Calculation:

Amount of fertilizer product required per ha
 = (kg/ha nutrient ÷ % nutrient in fertilizer) x 100
 = (80 kg N/ha ÷ 27% N) x 100
 = 296.3 kg of calcium ammonium nitrate is needed per ha for 80 kg of actual nitrogen per ha

Phosphorus (P) and Potassium (K):

Phosphate Guidelines for Haskaps Based on OMAFA Accredited Soil Tests for Similar Bushberry Crops (based on Publication 360, Guide to Fruit Production, 2016-2017)

0.5M Sodium Bicarbonate Extract Soil Test (ppm P)	Rating ^z	Phosphate (P ₂ O ₅) ^y required (kg/ha)	
		New Plantings	Established Plantings
0-3	HR	140	100
4-5		130	90
6-7		120	80
8-9		110	70
10-12		100	70
13-15		90	60
16-20		MR	70
21-25	60		40
26-30	50		30
31-40	40		20
Above 40	LR	0	0

^zHR, MR, LR, RR, and NR denote, respectively, high, medium, low, rare and no probabilities of profitable crop response to applied nutrient.

^y Where manure is applied, reduce fertilizer applications according to the amount and quality of manure.

Potassium Guidelines for Haskaps Based on OMAFA Accredited Soil Tests for Similar Bushberry Crops (based on Publication 360, Guide to Fruit Production, 2016-2017)

1 M Ammonium Acetate Extract Soil Test (ppm K)	Rating ^z	Potassium (K ₂ O) ^y required (kg/ha)
0-15	HR	130
16-30		120
31-45		110
46-60		100
61-80		90
81-100		80
101-120		MR
121-150	60	
151-180	40	
Above 180	LR	0

^zHR, MR, LR, RR, and NR denote, respectively, high, medium, low, rare and no probabilities of profitable crop response to applied nutrient.

^y Where manure is applied, reduce fertilizer applications according to the amount and quality of manure.

Foliar Fertilizer Applications

The successfulness of foliar application is complex and depends on crop species, nutrient, nutrient form and mobility (phloem mobility), application (leaf coverage), absorption (leaf structure and conditions), environmental conditions (e.g., %RH – needs to be between 60-80%), demand of the plant and nutrient status in the soil (growth stage and availability in the soil solution is not adequate).

Source: Dr. Thomas Eichert, University of Bonn Institute of Crop Science and Resource Conservation Division Plant Nutrition

Ca, Mn, B	Soil application preferred to foliar application (no known benefit at this time from foliar application in haskap).
Fe, Zn, Cu, Mo	Apply as a foliar application if needed and cost-benefit makes sense compared to soil applications.
N, P, K, Mg, Ca, B, Mn, S, Cl, N	Soil apply via granular fertilizer or fertigation.

Lime:

In Canada, haskap is grown in a range of soil pH from 5.5 - 8.0. However, as with most horticultural crops, a pH range of 6.0 and above is typically suitable for plant growth. Ground limestone is traditionally used to correct soil acidity and is easiest to apply prior to crop establishment. In the case of perennial crops it can be difficult to incorporate large amounts of limestone after crop establishment. If preplant application was not considered or fully effective, applying and incorporating split applications of total recommended lime over multiple years will help distribute the lime more uniformly over a pre-existing planting and make it easier when working around perennial crops such as haskap. Soil pH and buffer pH will be provided on your soil test. The soil pH value indicates the current pH status of the soil. If the soil pH is lower than optimum, the buffer pH value is used to calculate lime requirements.

Note: Full effects of lime may not be realized for up to three years after application.

Lime Requirements to Correct Soil Acidity (based on OMAFRA Pub 611, Soil Fertility Handbook)

Buffer pH ^z	Ground Limestone Required (t/ha) Based on Agricultural Index of 75			
	Target soil pH = 7.0 ^y	Target soil pH = 6.5 ^x	Target soil pH = 6.0 ^w	Target soil pH = 5.5 ^v
7.0	2	2	1	1
6.9	3	2	1	1
6.8	3	2	1	1
6.7	4	2	2	1
6.6	5	3	2	1
6.5	6	3	2	1
6.4	7	4	3	2
6.3	8	5	3	2
6.2	10	6	4	2
6.1	11	7	5	2
6.0	13	9	6	3
5.9	14	10	7	4
5.8	16	12	8	4
5.7	18	13	9	5
5.6	20	15	11	6
5.5	20	17	12	8
5.4	20	19	14	9
5.3	20	20	15	10
5.2	20	20	17	11
5.1	20	20	19	13
5.0	20	20	20	15
4.9	20	20	20	16
4.8	20	20	20	18
4.7	20	20	20	20
4.6	20	20	20	20

^z Buffer pH value is found on soil test report along with the starting pH value.

^y Liming to pH 7.0 is recommended only for club-root control on cole crops.

^x Add lime if soil pH is below 6.1.

^w Add lime if soil pH is below 5.6.

^v Add lime if soil pH is below 5.1.