

Haskap Berry: Production Information

Market Research & Economic Feasibility on Specialty & Alternative Crops in the Bulkley-Nechako Regional District

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<https://www.veseys.com>

Geographic Suitability

This project was developed for the Bulkley-Nechako Regional District, but is applicable to the central-interior of B.C.

Crop Overview

Haskap (*Lonicera caerulea*) is a deciduous fruit bearing shrub, that is surprisingly more closely related to the potato, tomato, snowberry, and elderberry than to the blueberry or cranberry. Haskap bushes grow to 1.5-2m (~5-7ft) tall, have slightly waxy, long oval leaves, yellowish-white flowers, and blue berries 1cm (~0.4") in diameter.

Native to northern Japan and Russia, and naturalized in Canada, Haskap has many names, including the Blue, Edible and Sweet Berry Honeysuckle, and the Honeyberry.

The berry is attracting great interest, partly due to its flavour, described as something between a blueberry, Saskatoon berry and raspberry, and partly due to its high nutritional value. Predominantly eaten fresh, Haskap berries are increasingly being used in drinks, jams, ice-cream, and other value-added products.

Crop Varieties

The University of Saskatchewan has developed a series of new varieties by crossing superior tasting Japanese varieties with the more winter hardy Russian varieties. Haskaps require a pollinator variety to optimize growth.

Variety	Trait
Tundra	Firm skin; less bleeding.
Borealis	Softer skin; sweet, large berry.
Aurora	Companion pollinator for Borealis.
Honeybee	Companion pollinator for Borealis & Tundra.
Boreal Beauty	Firm, oval berries; later maturity.
Boreal Blizzard	Larger berries; superior taste.

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Growing Considerations

- Most varieties are cold hardy to minus 45°C, while flowers have been known to survive and set fruit after spring temperatures as low as minus 11°C.
- Uniquely, Haskap is tolerant of a wide range of soil pH of 5.4-7.9.
- Haskap can be successfully grown in heavy, clay soil where water sits for a few weeks each spring. Haskap also grows well in well-drained soils.
- Haskap will produce fruit after the first year, but yields increase significantly after three to four years, when they are able to yield 2.5-4 kg/bush (~4.5-9 lb/bush).
- All Haskap varieties require a pollinator variety to optimise growth (e.g. 2+ varieties are required, with compatible flowering and genetics), and bees and other insects are key to pollination.
- Well-tended Haskap plant should stay productive for > 20 years.



Crop Nutrient Needs

As a relatively new cultivated crop, little is known about Haskap's specific nutrient requirements. Current recommendations are annual application of:

Nitrogen	110-160 lb/acre
Phosphorous	90-130 lb/acre
Potassium	180-270 lb/acre

Other recommended nutrients include calcium, magnesium, and sulphur.

Fertilization should be done in spring, as growth later in the season is prone to winter injury.



Equipment & Infrastructure

Haskap should be planted by hand. Many varieties have uniform ripening, at which time berries can be harvested by hand or using mechanical equipment. Harvesting can be done over several weeks because berries will keep on the bush for weeks.

During the first few years after planting, irrigation is necessary to promote deep root growth. In heavy clay soils that hold moisture, irrigation may not be necessary. Once established, plants may not require additional irrigation and work on a rainfall-fed system.

Once harvested, the berries should be quickly moved to cold storage and kept at below 2°C and > 95% humidity.

Market & Economic Information

Key finding from market analysis:

Haskap represents a significant and growing opportunity, with several value-added opportunities available once a significant local production base is established.

Market trends:

Haskap is benefiting from the broader trend of “superfood” diets and supplements. The overall category is seeing increased interest from health-oriented consumers in North America and Asia. Juices and powders are particularly strong uses of products in these categories, with powders being particularly popular in Asian markets – especially China.

A processing facility to create juices or powders is essential to add value to the crop. Retailers will only carry Haskap in the form that consumers demand it in, which currently is juices or powders. Future options may include berries in 5lb and 10lb containers, but that is not a significant market as of 2018. In the absence of a processing/bottling option, volume production of Haskap is based on wholesale pricing.

Based on the sensitivity analysis with varying \$/kg and kg/ha, haskaps ranged from a net cash of **\$20,228-\$101,228**. The following is a 5-year cash-flow chart; assuming midrange prices at \$9/kg and mid-level yields of 8,000 kg/ha, the expected annual net cash by Year 4 is \$53,228/ha.

	Year 1					
	Start-Up	Year 2	Year 3	Year 4	Year 5	Years 1-5
Yield (kg/bush)		1	2.5	3.2	3.2	
Yield (kg/ha)		2,500	6,250	8,000	8,000	
Price (\$/kg)		\$9.00	\$9.00	\$9.00	\$9.00	
Revenue		\$22,500	\$56,250	\$72,000	\$72,000	
Expenses	\$35,172	\$18,772	\$18,772	\$18,772	\$18,772	
Net Cash	-\$35,172	\$3,728	\$37,478	\$53,228	\$53,228	\$112,489

For more information:

UNBC Cash and Bioenergy Crop Feasibility Study for BNRD:

<https://www.unbc.ca/research/supplementary-data-unbc-publications>

UNBC Market Research and Economic Feasibility on Specialty and Alternative Crops in the BNRD.

B.C. Haskap Association:

<https://www.bchaskapassociation.com/>

University of Saskatchewan

<https://research-groups.usask.ca/fruit/Fruit%20crops/haskap.php>

Efficient Harvesting of Haskap Berries in Japan.

<http://www.csbe-scgab.ca/docs/meetings/2010/CSBE100465.pdf>

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