

'Boreal Blizzard' by Bob Bors

Available in 2016



*Figure 1. 'Boreal Blizzard' berries are huge, for a Haskap. The spoon in the photo is 3.5 cm wide!
If this page is printed on 8 ½ x 11 paper the berries should be shown at actual size.
Well-pollinated fruits are easily greater than 3 grams and we've weighed a few that were 3.9 grams.*

'Boreal Blizzard' was so named because the fruit size, productivity, and flavour stopped us in our tracks. Like a major winter storm, 'Boreal Blizzard' was hard to forget when evaluating other haskap in our breeding fields. It has the 3rd largest haskap we have ever seen in our program. The largest one didn't taste good ('Boreal Blizzard' tastes great!) and the 2nd largest had wimpy branches that fell over and crept along the ground. I've not seen anything this big elsewhere. It surpasses the largest haskap that I saw on my visit to Hokkaido and its weight is larger than any variety description I have read. 'Boreal Blizzard's berries are more than twice as heavy as 'Tundra' or 'Borealis' and are 3 times heavier than the largest varieties in our trial a decade ago. I've noticed most variety descriptions on the internet neglect to mention the weight of their berries. This is because some haskap can have air pockets within the berries and long thin berries don't weigh much. But some Haskap are very meaty and heavy, and 'Boreal Blizzard' is one of them.

Does size matter? Of course it does! In Japan, consumers pay a premium for larger berries. Some producers sort through their berries to find the largest ones. It was pointed out to me at a wholesale produce market in Hokkaido that two cases of large Haskap would sell for a similar amount as 20 cases of average-sized fruits. The large haskap berries I saw probably averaged half the weight of 'Boreal Blizzard'. Unless you can ship fresh to Japan, I wouldn't expect a premium price in Japan for large berries for processing.

I don't think anyone cares about fruit size if the fruit is processed. Sugar infusing them as a candy or vodka or other alcohol with whole fruit might be the exceptions. 'Boreal Blizzard' could be used for processing of course. Perhaps the largest fruit could be marketed fresh and the small berries processed. But even its "small" berries would be larger than most varieties.

Perhaps a profitable niche for this variety in North America would be the fresh market. I wouldn't expect such a price differential like Japan has for fruit size in North America, but the larger size is likely worth something. These would certainly be more noticeable on a store shelf than regular-size berries. Their unique shape would not get confused with blueberries! If one is going to the trouble to handpick haskap (less fruit damage than by machines and longer shelf life) picking larger fruit reduces harvesting costs. Fruits are easier to see and each grab of a cluster weighs more. This could be an ideal variety for U-pick farms as customers will fill their pails faster.

Large fruit could also indicate large yields if plants produce many berries. And that does seem to be the case with 'Boreal Blizzard'.



Figure 2. Boreal Blizzard berries, each weighing more than 3.5 grams.

Large size fruit could have disadvantages. They might be more easily damaged by some harvesting equipment. A heavier fruit falling from a taller plant could have more damage. But 'Boreal Blizzard' berries are more firm than 'Indigo Gem' and many growers are mechanically

harvesting that variety. If mechanically harvesting, it is good to keep in mind that berries are always more firm with cooler temperatures. Plan to harvest early in the morning before it gets too hot. I've heard of Saskatoon berry growers harvesting before sunrise to take advantage of the firmness but also to have cooler berries going into freezers.

'Boreal Blizzard' holds onto its berries with a similar strength to 'Tundra' or 'Indigo Gem'. Since 'Boreal Blizzard' berries weigh twice as much, they start to drop 3 weeks after ripe. In contrast, Tundra can hold onto its fruit 6 weeks after ripening. Presumably, a very strong windstorm could knock them off a bit easier than some of the U of SK varieties especially when they have been ripe for a week or two. But I have seen many varieties that do not hold onto their fruit as strongly as 'Boreal Blizzard'.

Important to consider, is that 'Boreal Blizzard' blooms and ripens later than other varieties from the U of SK. This could extend the harvesting season of Haskap a week or two. Later bloom time will make the bees happy to stay in the orchard. The late bloom characteristic may indicate a better adaptation to somewhat warmer areas (see article "Shape of things to come" at www.fruit.usask.ca, in the haskap section).

'Boreal Blizzard' Details
Plant Breeders Rights application #: 14-8412 Breeder denomination: '22-06-25.5'
Ancestry: 50% Japanese, 50% Russian
Bloom Time Category: Late. Peak bloom is 4 to 7 days after Tundra/Indigo series We categorize haskap bloom into 4 categories early, mid, late and very late. The late category is similar to many Japanese selections but there are many Japanese selections that bloom later.
Harvest Season: Coincides with strawberry season. At Saskatoon in 2014 fruits were good the 1 st 3 weeks of July then began dropping. Ripening started 7 days after Tundra & Indigos and 14 days after most Russian varieties in our collection.
Fruit Weight: 2.8 grams avg., 3.9 grams max
Fruit Shape: 'Surfboard'= Rounded narrower ends, wide centre, a bit flattened
Fruit Firmness: Good Flavour: Excellent
Sugars: 13.3 Brix pH: 3.3 Total Acidity: 1.08% Malic Equivalent
Bush Habit and Vigour: Upright and strong grower. The original seedling was 50% taller than 'Indigo Gem' planted at the same time, same field
Mildew and Sunscald Resistance: Excellent
Productivity: Heavy

'Indigo Gem' and 'Tundra' are tentatively recommended as pollinizers for 'Boreal Blizzard'. Both worked well in controlled crosses. However they are mid-season bloomers while 'Boreal Blizzard' is a late bloomer. 'Aurora' is unlikely to be a good pollinator since it is closely related to 'Boreal Blizzard'. Mid and Late bloomers usually have an overlap in their bloom time of 60 to

75% in Saskatoon. That could mean the first flowers of ‘Boreal Blizzard’ that open will be well pollinated but its last flowers will be poorly pollinated. If only the earliest flowers got pollinated would those fewer berries overcompensate and get even larger? Perhaps it would be worth the reduction of yield if fruit size got much bigger and one got higher prices.

I advise growers who are the first to plant ‘Boreal Blizzard’ to leave space for alternate rows in orchards to plant late blooming varieties when they come out. ‘Boreal Beauty’ is late ripening and is not closely related to ‘Boreal Blizzard’ making it a highly probable that it will bloom late and be compatible for pollination. But we need to test that to be sure. Another possibility for compatible pollination could be varieties from Maxine Thompson’s program when her varieties come on the market. Her breeding program is based on Japanese germplasm which is usually late or very late blooming. In 2015, we will be intercrossing ‘Boreal Blizzard’ with ‘Boreal Beauty’ as well as several other selections to identify compatible pollinators.

Keep in mind that ‘late’ is a relative term. A nursery selling only early Russian varieties might label a plant as ‘late blooming’ if it blooms 4 days after the first to bloom. But someone growing a diverse collection that includes Russian and Japanese hybrids might label plants as ‘late’ if there is a 2 or 3 weeks difference. A ‘late’ blooming Russian variety in our collection is much earlier than the earliest blooming Japanese plants.

Some possible orchard plans to maximize pollination are listed in tables 1, 2 and 3. Plan 3 might have an interesting advantage. Perhaps with no pollinator available in the early years, the plants can put more energy into growing faster because they don’t have to grow any fruit. Growers of fruit trees frequently deliberately remove flowers and fruits to increase establishment during the first couple years. It might even be desirable to wait 2 years before planting a pollinator. As with many guesses of what could be, the best advice would be to try different scenarios and experiment. Or start small and get more plants when you have gained more experience.

Table 1. Planting strategy for a late harvesting Haskap Orchard. The only problems with this scenario is that the early flowers of ‘Tundra’ will never be pollinated and smaller Tundra or Indigo berries will be intermixed with ‘Boreal Blizzard’ in some rows.									
Future	BB	BB	BB	Future	Future	BB	BB	BB	Future
Future	BB	Tundra	BB	Future	Future	BB	Indigo	BB	Future
Future	BB	BB	BB	Future	Future	BB	BB	BB	Future
Future	BB	BB	BB	Future	Future	BB	BB	BB	Future
Future	BB	Tundra	BB	Future	Future	BB	Indigo	BB	Future
Future	BB	BB	BB	Future	Future	BB	BB	BB	Future
Future	BB	BB	BB	Future	Future	BB	BB	BB	Future
Future	BB	Tundra	BB	Future	Future	BB	Indigo	BB	Future
Future	BB	BB	BB	Future	Future	BB	BB	BB	Future
BB=Boreal Blizzard, Future=Late blooming varieties not yet on the market. Indigo = Indigo Gem. Tundra or Indigo Gem could be used interchangeably.									

Table 2. Strategy for a mixed early and late harvesting Haskap Orchard. In this scenario each row is a different variety. Aurora and Tundra fully pollinate each other. But 'Tundra also pollinates 'Boreal Blizzard'. Fruit set will improve in 'Boreal Blizzard' when the future variety gets established.

Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra
Future	BB	Tundra	Aurora	Future	BB	Indigo	Aurora	Future	BB	Tundra

Table 3. Strategy for a late harvesting Haskap Orchard. In this scenario there are twice as much 'Boreal Blizzard' plants as the future variety. When the future variety comes out it will likely be in short supply that 1st year, so it is better to count on not getting as many. Perhaps Boreal Blizzard plants will grow faster without having a pollinator for a while.

BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB
BB	Future	BB	BB	Future	BB	BB	Future	BB

'Boreal Blizzard' has excellent flavour, most similar to 'Aurora' to which it is closely related. Table two has a plan to have both of these varieties in an orchard. Despite being closely related, 'Aurora' and 'Boreal blizzard' do not bloom at the same time nor do they ripen at the same time. We've had several growers who tried 'Boreal Blizzard' on Haskap day (but they didn't know what the name would be) and several people tried it at the Agriculture Building at the U of SK. Uniformly, tasters were shocked at how big the berries were and how good they tasted. Several of the tasters proclaimed "You've got a winner there!" This fruit has what I've been calling "tang" or "zing". For many tasters at our haskap days, "zing" is a highly desirable characteristic, second only to sweetness; 'Boreal Blizzard' has both. Others noted that the berries were rather firm for being so big.

Availability: 'Boreal Blizzard' will begin to be available in 2016. When contracts are finalized we will post a list of propagators for Canada, likely in late October, 2014. It may take longer to decide who will offer these in the USA and Europe. Not all currently listed propagators will be carrying this variety. Propagators with the best history of paying royalties will have priority in receiving start-up material.

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