

# Northern Hardy Fruit Evaluation Project: Weather Effects and Fruit Production

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**T**he Northern Hardy Fruit Evaluation Project is in its third year of fruit production and trends are starting to be identified. The low rainfall of 2012 did not induce noticeable plant stress this year, but may affect fruit production in 2013 if flower bud set was affected. Mulch preserved the extensive moisture from the 2011 season and rainfall that did arrive this year tended to be in 1-inch increments.

Approximately 600 people participated in outreach activities where information about the fruit project was presented. Six cooperators utilized fruit: Three vintners made wines from aronia, honeyberries, haskaps, black currants or red currants; two jelly makers used aronia, Juneberries or haskaps; one kuchen maker is trying aronia and haskaps.

More than 80 people joined the fruit project tour at the annual field day event on July 17. During the field tour, Steve Fouch, retired consumer horticulture educator and Juneberry Extension specialist with Michigan State University, discussed Juneberry production. In the afternoon session, Fouch presented information on marketing an agricultural business.

## Notable Events in the Fruit Orchard:

- Little snow and warm winter weather left very little moisture in the soil this spring. The plants of the fruit project, however, are mulched with woodchips and did not suffer the moisture losses that open ground did. March was notably warm, with an average high temperature of 51.8° F (normal 36.1° F) and average low temperature of 28.1° F (normal 17.0° F). Following 10 days with an average high temperature of 61.1° F, three days of freezing weather developed April 9 to 11, and lows fell to 24, 16 and 19° F, consecutively. The period of May 1 to September 15 was, however, near average in temperature. Rainfall events, though sparse, fell in generous 0.5- to 1.2-inch amounts. Carrington was 3.2 inches below normal rainfall amounts during the growing season.
- Buds started to swell early for all of the fruit plants. Black currants were most advanced with ¼- to ¾-inch green leaves appearing before the April freeze; entire branches were killed and fruit production was severely affected for most cultivars. Haskaps and honeyberries were blooming during this same period but berry production was unaffected. Other plants in bud, including grapes, seemed unhurt as well.
- Winemakers continue to be very interested in honeyberries (Russian origins) and haskaps (Japanese origins). Fruit was also shared with a jellymaker in 2012 and she would like to source 200 pounds of fruit. Twelve new Japanese haskap selections from Oregon were added to the collection this fall.
- Juneberry harvest increased 69 percent with an ideal first-harvest window. A program to control flower thrips with three organic pesticides was successfully implemented this spring. Entomosporium leaf and berry spot affected more of the planting in 2012 and a control program will be used next year. 'Smoky' continues to be the variety most affected by insects and fungus and fails to finish ripening during warm weather.

The grapes had good bud survival on canes with moderate growth. Fruit production and pruning was modulated according to plant growth in 2011. Despite the early, warm start to the year, most red grapes did not fully ripen. The calculation for corn growing degree days fell below the average after mid-August and there was not enough heat to finish the crop. In concert with the lack of rain and slightly lower temperatures, many red grapes began to shrivel before frost and remained quite tart.

### Northern Hardy Fruit Project Production Records

		No. of plants	2010		2011		2012	
			Date	pounds	Date	pounds	Date	pounds
<b>Aronia</b>	Nero	4	9-Sep	37.3	9/19-23	28.1	8/22-24	28.6
	Raintree Seedling	4	10-Sep	40.3	23-Sep	20.4	8/22-24	29.0
	Raintree Select	4	8-Sep	29.8	19-Sep	22.3	8/22-24	41.2
	Viking	4	10-Sep	40.6	19-Sep	20.3	8/22-24	39.6
				<b>148.0</b>		<b>91.1</b>		<b>138.4</b>
<b>Hardy Cherries</b>	SK Carmine Jewel	12	28-Jul	37.4	8/2-4	34.1	7/10-11	137.6
	SK Crimson Passion	12	28-Jul	7.7	4-Aug	2.7	7/10-12	94.7
				<b>45.1</b>		<b>36.7</b>		<b>232.2</b>
	Evans / Bali	3	22-Jul	0.7	6-Aug	7.2	x	x
<b>Black Currant Variety Trial</b>	<i>Whistler</i>	12		x		x		x
	<i>Black Down</i>	16	29-Jul	29.5	15-Aug	49.4	24-Jul	18.7
	<i>Hilltop Baldwin</i>	16	29-Jul	11.3	18-Aug	42.4	24-Jul	2.9
	<i>Titania</i>	16	2-Aug	10.4	8/23-25	45.7	24-Jul	58.7
	<i>Swedish Black</i>	16	2-Aug	2.7	8/16-22	25.2	24-Jul	0.5
				<b>78.5</b>		<b>162.7</b>		<b>80.7</b>
<b>Black Currant</b>	Ben Lomand	4	2-Aug	4.9	16-Aug	5.9	7/23-25	13.0
	Champion	4	2-Aug	4.2	16-Aug	8.6	23-Jul	3.6
	Blackcomb	4		x		x	x	x
	Minaj Smyriou	4	29-Jul	4.4	16-Aug	8.7	24-Jul	18.3
				<b>18.6</b>		<b>23.2</b>		<b>35.0</b>
<b>Red Currant</b>	Jhonkheer Van Tets	4	11-Aug	4.7	25-Aug	17.7	16-Jul	35.3
	Red Lake	4	29-Jul	21.3	9-Aug	30.3	7/23-27	23.8
	Redstart	4	9-Aug	12.3	8-Aug	24.7	30-Jul	20.1
	Rosetta	4	11-Aug	8.4	17-Aug	40.4	7/23-27	34.2
	Rovada	4	10-Aug	10.1	17-Aug	33.3	7/23-27	48.2
				<b>56.8</b>		<b>146.4</b>		<b>161.7</b>
<b>White Currant</b>	Blanka	4	10-Aug	18.9	26-Aug	23.5	7/27-30	49.0
	Swedish White	4	3-Aug	14.6	4-Aug	29	20-Jul	51.1
				<b>48.1</b>		<b>52.5</b>		<b>100.1</b>
<b>Ore. Honeyberry</b>	22-37	3	6-Jul	2.3	28-Jul	2.4	10-Jul	7.4
	41-100	3	6-Jul	3.8	28-Jul	2.8	10-Jul	13.3
	43-87	3	6-Jul	1.1	21-Jul	4.4	3-Jul	12.0
	43-97	3	6-Jul	3.4	1-Aug	3.2	3-Jul	5.4
	45-57	3	6-Jul	3.3	27-Jul	4.4	9-Jul	6.2
	85-26	3	6-Jul	3.9	27-Jul	6.2	10-Jul	13.4
				<b>17.8</b>		<b>23.4</b>		<b>57.7</b>

**Northern Hardy Fruit Project Production Records (cont.)**

		No. of plants	2010		2011		2012	
			Date	pounds	Date	pounds	Date	pounds
<b>Rus. Honeyberry</b>	Berry Blue	4	2-Jul	9.3	12-Jul	12.6	27-Jun	10.1
	Blue Belle	4	15-Jun	5.6	7-Jul	6.2	15-Jun	3.8
	Blue Moon	4	7-Jul	3.5	x	x	3-Jul	11.6
	Blue Velvet	4	2-Jul	2.7	x	x	16-Jul	4.0
	Kamchatka	4	2-Jul	2.0	7-Jul	6.4	21-Jun	3.1
				<b>23.2</b>		<b>25.2</b>		<b>32.6</b>
<b>Haskaps - Canadian</b>	Borealis	4		x	20-Jul	0.5	26-Jun	2.7
	Tundra	5		x	14-Jul	4	26-Jun	5.2
	Indigo Gem (9-15)	5		x	12-Jul	4.8	26-Jun	7.7
	Indigo Treat (9-91)	5		x	14-Jul	1.4	26-Jun	2.1
						<b>10.7</b>		<b>17.6</b>
<b>Juneberry Variety Trial</b>	<i>JB30</i>	20	7-Jul	37.5	15-Jul	51.7	2-Jul	72.4
	<i>Honeywood</i> ++	20	to	37.3	to	43.7	to	67.1
	<i>Martin</i>	20	16-Jul	13.8	25-Jul	28.1	10-Jul	55.5
	<i>Smoky</i>	20		43.2		29.1		73.9
	<i>Thiessen</i>	20		29.3		48.1		70.9
				<b>161.2</b>		<b>200.7</b>		<b>339.8</b>

++ - Juneberries are picked 3 times. Honeywood produces longer than this.

*The Project was planted in 2007, except Juneberries 2006.*