

## Juneberry Update – 2011-12

While there are still some Juneberry plants lagging behind the group, in general, we are happy with growth and production. Production has been increasing nicely, though diseases and insects are starting to appear.

There were no further plant losses since 2008 and only two plants are considered to have 'very low' vigor. We did not apply Admire insecticide in 2011 or 2012 as the plants have mostly outgrown their susceptibility to wooly elm aphid feeding.

Entomosporium leaf and berry spot infection has increased a bit each year. This year there was some cosmetic fruit damage and more leaves than ever turned yellow, had lesions and dropped from the plants in early September. Fungicides will be applied in 2013.

Thrips damaged 'Smoky' flowers and fruits in 2011. These tiny insects chew on the buds and flowers and ruin the fruit. The damaged fruit is split open on the blossom end with hard gray/brown callous. The seeds are all exposed and are also gray/brown. They are ugly and seem inedible. Surveys in early 2012 showed thrips on the buds and blossoms of all of the five varieties. Three insecticides were applied in this order: 4-19 Pyrethrins, 4T/gal; 4-24 Neem Azaguard 1tsp/gal; 4-30 Spinosad 2.5oz/gal; and 5-3 Neem Azaguard 1.5tsp/gal. The day after each treatment, I surveyed the flowers and all of them seemed to be teeming with thrips. However, there was almost no fruit damage except a little was seen in 'Smoky'. In the future, I will spray earlier with Azaguard as its mode of action is to interrupt the molting stages of the insects.



In 2011, it was pretty dry leading up to veraison in the Juneberries. Even though the berries were not very purple, the birds started eating them anyway. There were reports in the area of birds eating green chokecherries and highbush cranberries. We netted early and the birds stayed persistent for about a week until they gave up. The peskiest were the young robins, followed by waxwings and thrashers. We patrolled the nets twice a day or more, but still lost a few robins. This picture shows the berry color 4-5 days after netting.

Temperatures during ripening in 2011 were nice – in the 70s. But just as the berries were peaking, it became very hot. Our first picking was a little early but we wanted to pick before the weekend, so Friday, July 15<sup>th</sup> was the planned day. At 2am, we received over 2 inches of rain and the berries were split by 8am. We picked what we could. It rained again on Saturday and by Monday, most of the berries that were split but not ripe on Friday were spoiled. We threw out a lot. Primarily, 'Smoky' berries were the greatest number left, but they seemed to stop ripening in the heat. We waited one more week and still those berries did not finish ripening. They tasted funky and we took off the nets to let the birds have the rest.



By 2012, the plants were outgrowing the original extruded netting. I bought woven 17-foot netting and my summer assistant, Lindsay, and I spent a day sewing 2 nets together (and ruining our backs!) Let them try to outgrow these!! On the one hand, the nets are really long on the sides, but on the other, they drape nicely onto the ground and we don't have to stake them as tightly to keep out the birds. Here's how we keep the nets on and up: I use a soil probe to make 8-inch-deep holes. A 6-ft bamboo pole goes into the hole at every-other plant, a soda can goes over the top of the pole, and the net gets pulled over all of it. The ground staples are pushed in at every pole or maybe closer if there's a gap along the ground.

The growing season was really far ahead in 2012. As noted earlier, I sprayed pesticides for thrips that might damage the flowers. On Monday, May 30<sup>th</sup>, the 3 larger-berried varieties had 25-50% of their blossoms open. 'Honeywood' was a little behind and 'Smoky' was still tightly budded. Two days later flowering was at 95-100% and on May 10<sup>th</sup>, all were done except a few 'Smoky' flowers. That's early!

After June 10<sup>th</sup>, a 15-day period of cooler weather began but it switched to above normal temps 5 days prior to harvest. We were able to monitor the crop and begin harvest on Monday, July 2<sup>nd</sup>. The first picking harvested almost all of the berries and we had just one follow-up picking on July 10<sup>th</sup> instead of three pickings as we have done in prior years.

For a second year 'Smoky' was not able to finish ripening its fruit. The weather was not super warm after the first picking, yet the fruit did not progress well. Again the color was stuck at an in-between purple-red and did not taste the best. Smoky is also having the most problems with thrips and entomosporium leaf and berry spot fungus.

In 2012, we saw entomosporium leaf and berry spot lesions on the fruits during harvest and on the leaves later in the season. The effects were a bit more pronounced this year than last, and I only expect this disease to continue to grow worse. There was also a bit more juniper-apple rust on both leaves and fruit. To the *right* is a picture of the 'best' rust I've seen on a fruit!



	Harvest 2011 (lbs)			Harvest 2012 (lbs)			Comments
	7/15	7/18	7/25	7/2	7/10	NA	
<b>Honeywood</b>	14.9	20.5	8.2	60.9	11.5		Traditional flavor, longer ripening period. U Pick.
<b>JB30</b>	30.3	16.2	5.2	62.8	4.3		Newer, sweeter, more juicy and mild
<b>Martin</b>	13.9	10.1	4.2	49.2	6.3		Newer, sweeter, more juicy and mild
<b>Smoky</b>	0	23.9	5.3	18.0	55.9		Traditional flavor, longer ripening period. <i>Most disease and insects.</i>
<b>Thiessen</b>	28.0	15.4	4.7	65.5	5.4		Newer, more juicy and mild, the <i>sweetest variety</i>