

Urban and Small Farms Conference – March 2nd 2021

Utah Berry Grower's Session (morning)

*Presentation slides, handouts, and other materials used in the session are available on the [schedule page](#)

**Video recordings of the sessions will be available on diverseag.org soon

Raspberry Season Extension Research Update

1. What is the general bloom time of raspberries with tunnels?
 - Generally, bloom begins about a month before ripe fruit. In the field, we are getting bloom to start about the first of August. In our tunnels, this is starting about a month earlier.
2. Do you have data for how tunnels with roll-up sides compare to totally removing the plastic?
 - We have used both kinds. The tunnels we use are quite small, about 14 to 16 feet wide, but only about 7 to 10' tall, so there isn't really room to roll up the sides. For these smaller tunnels, it is quite quick and easy to remove the plastic. For the bigger tunnels, which we've also used, it is too cumbersome to remove the plastic, and so we've used shade cloth over the top of the tunnels. You can still get some heat buildup, and so having the side walls rolled up all the way helps. For our taller permanently covered tunnels, we also had doors near the top of the end wall that we could let the heat escape. Keeping the heat from accumulating is really key to healthy raspberries.
3. Can you please share website he mentioned?
 - Here you go: <https://smallfruits.wsu.edu/>

Weed Management for Cane Fruits

1. I don't see "hand weeding" listed under Integrated Weed Management Tools. Would you consider that "cultural" or "mechanical"?
 - Yes, hand-weeding would be a mechanical type of control option.

Alternative Berry and Small Fruit Crops for the Intermountain West & Small Fruit Research for the Northern Rockies

1. Any reason you are not trialing Golden Currant (*Ribes aureum*), our native species?
 - Native Golden Currants (*Ribes aureum* and *odoratum*), named for the showy yellow flowers, are not well-suited for commercial production. There are no breeding programs that I'm aware of and the plants available are variable. The fruit varies in flavor, size, and color (from black to red to yellow). They don't ripen evenly, so harvests are small and repeated. They do have a milder flavor and are better suited for fresh eating than Black or Red Currants.
2. Are Black Currants basically the same as Gooseberries?
 - No, gooseberries are a different species (*R. uvacrispa* and others) in the same genus and have large fruit that range from green to red/pink. The flowers and fruits are not in clusters (strigs) like in red and black currants. Here's a link to more info:
<https://www.extension.uidaho.edu/publishing/pdf/bul/bul0855.pdf>
<https://apps.msueextension.org/montguide/guide.html?sku=MT202101AG>
3. Honeyberry: can we grow these in desert climates (St. George)?
 - I'm not sure, but Honeyberries are adapted to cold climates with long, cold winters and short growing seasons and can struggle in warmer areas with warmer winters. I suggest trying Maxine Thompsons varieties that were selected in Oregon climates (warmer winters-zone 7), but since St. George is zone 8 I would expect that that Honeyberries would not get the right dormancy requirements and could struggle in the summer heat. There has not been any research on this but other's have speculated on the climate limits for where

honeyberries can be grown. <http://www.lovehoneyberry.com/where-will-honeyberries-grow/>

- Added note – in Western WA (8b), ‘Aurora’ is already blooming but I suspect there aren’t many pollinators flying and don’t have high hopes for a crop. I’ve heard that ‘Keiko’ and ‘Tana’ perform well but have not seen for myself.
4. Are the letters for compatibility?
 - No, the letters indicate significant differences in yield. If a yield shares a letter the means were not significantly different. We use statistical test and the variation in yield within a variety to let us know how much difference in yields among varieties we’d expect by chance.
 5. These berry/small fruit varieties all appear to be reasonably ornamental; do you have any favorites for use in an edible landscape?
 - Aronia, because you don't need to net out the birds, but they are bitter like chokecherries but excellent in smoothies or blended with other fruit. Also, in edible landscapes you need to consider pest management which can be difficult in a diverse planting.
 6. Do you have any information on golden currents?
 - We have not researched golden currents. In general, native are not as suited for commercial production.
 7. Elderberries?
 - There's info on our website. The general finding is that the newer American cultivars have been more productive and hardier than the European cultivars. Elderberries require a lot of harvest labor as they ripen throughout the late summer and you need to do many small harvests. In addition, makes sure to look for even ripening cultivars – there aren’t many (turns out the ones in our trial are NOT even ripening) but it seems they exist. You will save yourself a lot of harvest labor if you don’t have to pick fruit every week.
 - Here's a link to the info on our website.
https://agresearch.montana.edu/warc/research_current/berries/elderberry.html
 - Also University of Missouri has a solid elderberry research program.
<http://centerforagroforestry.org/profit/2014GrowingElderberryGuide.pdf>
 - You may find this helpful as well:
<https://www.uvm.edu/sites/default/files/media/ElderberryGuideComplete.pdf>
 8. Any information on hardy kiwi berries for this region?
 - USU has a fact sheet available on hardy kiwi. Go to fruit.usu.edu and you can find it there. The title is "Hardy Kiwi in the Garden."
 - The direct link is here:
https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1684&context=extension_cura
https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1684&context=extension_cura
 9. Would it be possible to have the information and slides for the Elderberries?
 - Here's a link to the info on our website.
https://agresearch.montana.edu/warc/research_current/berries/elderberry.html
 - Also University of Missouri has a solid elderberry research program.
<http://centerforagroforestry.org/profit/2014GrowingElderberryGuide.pdf>
 - You may find this helpful as well:
<https://www.uvm.edu/sites/default/files/media/ElderberryGuideComplete.pdf>
 10. Are they all able to pollinate each other?
 - Dwarf Sour Cherry, Serviceberry, and Aronia can self-pollinate. Other species, like most fruits, will do better with a different, compatible variety.

- Most haskaps need another, compatible variety to pollinate. The University of Saskatchewan has a chart of compatibility among their varieties:
<https://research-groups.usask.ca/fruit/Fruit%20crops/haskap.php>
11. Best 3 or 4 varieties of haskap for fresh markets?
 - Early- Indigo Gem
 - Mid-Aurora + Borealis
 - Late harvest—lots of options. The Boreal Blizzard/Beauty's large berries have a wow factor, but we planted them later so don't know the mature yields. Maxine's Tana is very productive and has good flavor, but the flavor is a bit basic. We are doing more consumer acceptance (taste tests) work that should be out next fall. However 'Tana' tends to hang onto its leaves which could be problematic for fresh or whole frozen fruit. 'Solo' is good all around late season cultivar in terms of not having high pre-harvest drop, hanging onto its leaves, and having reasonable yields. It's also reported to be somewhat self-pollinating. The flavor is good – sweet-tart.
 12. Which of the haskaps have the most intense flavor? The few I tried were "mild" in flavor. Maybe they weren't ripe enough?
 - Aurora has always done well in our informal taste tests. The early Russian varieties have odd flavors (like quinine/tonic water).
 - Additional note – 'Aurora' was the variety used in our formal taste tests too, where we worked with over 150 CSA members. It rated 7.6 out of 9 on a scale of 1 to 9 with 9 being "like extremely". More about our consumer study is available here:
https://agresearch.montana.edu/warc/research_current/berries/berry_consumer_study_20.html
 - I personally think 'Indigo Gem' and 'Borealis' exhibit more of the unique haskap flavor which does include a very slight bitter quinine edge.
 13. Are all varieties able to pollinate each other?
 - Most haskaps need another, compatible variety to pollinate. The University of Saskatchewan has a chart of compatibility among their varieties:
<https://research-groups.usask.ca/fruit/Fruit%20crops/haskap.php>
 - Solo is one variety that has been reported to self-pollinate, but we have not tested this.
 14. Where can you find dwarf sour cherry trees?
 - Ask your local nursery or look online. There are great online sources in the US and Canada. We have more info on our sources on our website:
https://agresearch.montana.edu/warc/research_current/berries/cherries.html
 15. Mulberries and Nanking Cherries for small fruit production?
 - We have not worked with these, but my understanding is that they are not as suited for commercial production. Mulberry is difficult to harvest (large tree, hand harvest).
 16. Have you trialed Western Sand Cherry (*Prunus besseyi*)? Ornamental and very tasty.
 - Have not trialed but I have tasted. They're variable but can be delicious. A Montana vineyard winery (Tongue River Winery) grows them and has some recommendations.
 17. Have you tried drying the dwarf sour cherries? How do they taste?
 - Yes, they're fantastic.
 - I think they're pretty tart – too sour for me to eat fresh but some do like them fresh. The flavor and aroma is wonderful though if you can overlook the tart. More about their performance in our consumer acceptance trial here:
https://agresearch.montana.edu/warc/research_current/berries/berry_consumer_study_20.html

18. Are the sour cherries self-compatible or do you need different varieties?
- They are self-compatible.
 - https://research-groups.usask.ca/fruit/?utm_source=fruit&utm_medium=redirect&utm_campaign=2019-02-28dwarfsourcherries.html
 - Also, Bob Bors and Sarah Williams book, *Growing Fruit in Northern Gardens*.
19. You mentioned you preferred Aurora Haskap; which else do you recommend?
- I also like Borealis too in terms of flavor, yield, ease of production. Borealis is early-mid season, and Aurora is mid-season for harvest timing. Boreal Blizzard and Boreal Beauty have huge fruit that are satisfying to pick. Some people say they are blander but I like them. Indigo Gem has good flavor and is early season but the fruit are a bit smaller and the plant tends to be a bit more prostrate, not as easy to work with, not as easy to harvest. For later season, I like Tana and Solo for the combination of minimal pre-harvest drop and flavor, although Tana tends to hang onto its leaves after harvest. Keiko, Kawai, and Taka are productive later season cultivars but we tend to see a lot of pre-harvest drop with them.
20. Could you provide suggested sources for bulk plant material for haskap, dwarf cherry, Aronia, and such mentioned in the last two presentations?
- For U. Saskatchewan Dwarf Sour Cherry, Haskap, etc. here's a list of licensed distributors: <https://research-groups.usask.ca/fruit/buying-our-plants/buyingourplants.php>
 - Honeyberry USA in MINN is a good US source <http://honeyberryusa.com/honeyberry-plants-2.html>
 - Remember to look for the commercial fruit varieties for the Aronia—there are lots of ornamental ones that have much smaller fruit and are less productive.

New Blackberry Cultivars and North Carolina Blackberry Industry

1. Which blackberry varieties are rated for Zone 5 or colder?
 - Our experience is that the coldest hardy thornless ones are Chester, Triple Crown, Navajo
2. What variety of Eastern Erect blackberries are good for Northern Utah Climate?
 - We have a fact sheet where we present data from the Kaysville farm (Davis County). It is available at www.berry.usu.edu under "cultivar recommendations." The direct link is: https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=2657&context=extension_cura
3. Could you share blackberry recommendations again for cache valley area/zone 5?
 - Cache Valley can only do the coldest hardy summer bearers. Unfortunately, we have not yet been able to test some of these newer varieties. For our results go to berry.usu.edu and click on the "cultivar recommendations" link there.

New Raspberry Cultivars

1. Where do you buy these raspberries from? Are they sold through retailers or do you have to buy them direct from the source?
 - The Dutch cultivars he talked about are only available through Nourse Farms nursery as they have exclusive rights in the US. They do sell their plants mail-order to small acreage producers