

1

---

---

---

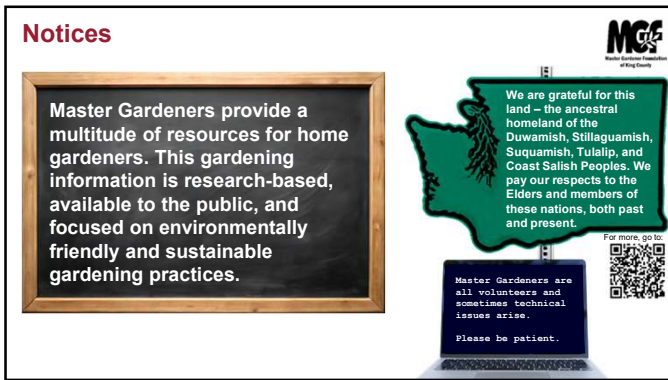
---

---

---

---

---



2

---

---

---

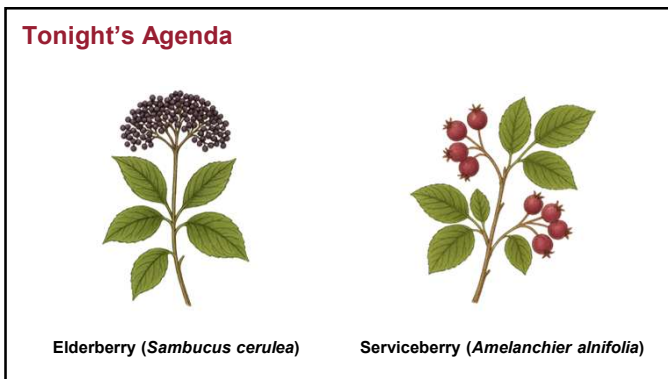
---

---

---

---

---



3

---

---

---

---

---

---

---

---

### Lesser known fruits that can grow in the PNW

- Elderberry, *Sambucus sp.*
- Juneberry/Serviceberry, *Amelanchier sp.*

Some species are native to Pacific Northwest

- Goumi & Autumn olive, *Eleagnus sp.*
- Chokeberry, *Aronia sp*
- Honeyberry, *Lonicera caerulea*
- Cornelian cherry, *Cornus mas*
- Persimmon, *Diospyros sp.*
- Quince, *Cydonia oblonga*
- Mulberry, *Sambucus sp.*
- Pawpaw, *Asimina triloba*
- Seaberry/Sea Buckthorn, *Hippophae salicifolia*
- Medlar, *Mespilus germanica*
- Goji berry/wolfberry, *Lycium barbarum*
- Shipova, *Sorbopyrus auriculatis*
- Some citrus, e.g., 'Meyer lemon'
- Highbush cranberry, *Viburnum edulis*
- Passionfruit, *Passiflora sp.*
- Magnolia vine, *Schizandra sp.*
- European olive, *Olea europaea*

Shout out and thank you to Ingela Wärnerstrand for teaching an entire course on growing these at Edmonds College

4

---

---

---

---

---

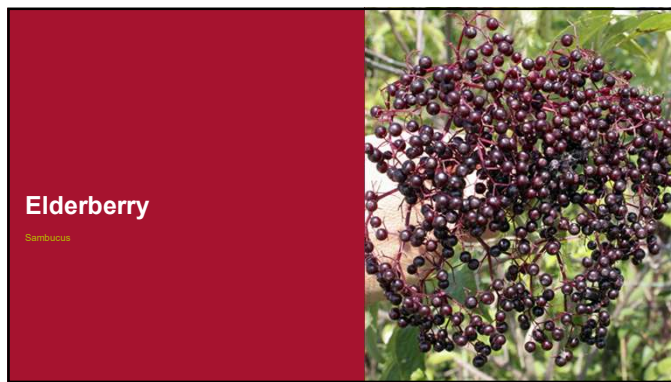
---

---

---

---

---



5

---

---

---

---

---

---

---

---

---

---

### Sambucus

- Elderberry (*Sambucus*) is a woody perennial
- Archeological finds of elderberry seeds at dig sites over 9,000 years old
- ***Sambucus canadensis***: North American
  - Sweetest of the cultivars
  - Found in wild of North America
- ***Sambucus nigra***: European
  - Colonists brought some cultivars over
  - Less hardy in U.S. than native *S. canadensis*
- ***Sambucus racemose***: European red elderberry
  - Highly toxic to humans
  - Mainly used for attractive landscaping



6

---

---

---

---

---

---

---

---

---

---

**Known by Many Names**

- Arbre de Judas
- Baccae
- Baies de Sureau
- Black-Berried Alder
- Black Elder
- Boor Tree
- Bountry
- Elder
- Common Elder
- Ellanwood
- Ellhorn
- European Alder
- Fruit de Sureau
- Grand Sureau
- Hautbois
- Holunderbeeren
- Sabugeuiro-negro
- Sambequier
- Sambu
- Sambuc
- Sambuci
- Sambucus
- Sambucus nigra
- Sambugo
- Sauco
- Saúco Europeo
- Schwarzer Holunduer
- Seuillon
- Sureau
- Sureau Européen
- Sureau Noir
- Sus
- Suseau
- Sussier
- Seuillet

---

---

---

---

---

---

---

---

---

---

7

**Elder**

- "Elder" comes from aeld or ellam, which means "to kindle fire"
- The woody canes were used to blow air into fire
- Also used to make flutes; *Sambu* appears to have originally referred to a flute-like instrument made from elder wood




---

---

---

---

---

---

---

---

---

---

8

**Bad Omens**

- European elderberry developed a reputation for superstition and bad luck
- It was associated with witchcraft and bad omens

*Bour tree, bour tree, crooked, wrong,  
Never straight and new strong, Never bush and never tree,  
Since our Lord was nailed on thee*

---

---

---

---

---

---

---

---

---

---

9

### Found Throughout History

- Mentioned in the earliest pharmacology texts Hippocrates said, "Boil leaves of the elder tree and of the fleabane and give the to the patient to drink."
- Pliny the Elder devoted an entire chapter to elder: "A decoction of the leaves, seed, or root ... in old wine, though bad for the upper regions of the stomach, carries off all aqueous humours by stool." He also says, "If a decoction of the leaves is sprinkled about a place, it will exterminate flies."
- Shakespeare spoke of elderberry both for its bad omens (Cymbeline) and healing properties (Merry Wives of Windsor).
- Nicholas Culpeper, an English doctor in the 1600s, noted use for a tooth ache by, "take the inner rind of an Elder ... and make it into balls, and hold them between the teeth that ache."
- Winemaking with elderberry has been documented throughout history.



**Oil of Elder Leaves**  
 For the treatment of beriberi, warts, etc., take one part of the leaves of the common elderberry and three parts of good linseed oil, and boil gently till the leaves are quite crisp, and the oil is then pressed out, and again heated with more leaves till it becomes quite green. This is much used by veterinary surgeons.



10

---

---

---

---

---

---

---

---

---

---

### Planting Sites

- Likes wet, well-drained soil
- Moderately acidic pH 5.5-6.5
- Likes full sun or partial shade
- Can tolerate flooding
- Great as a riparian buffer
- Does well on uneven terrain
- Plants need 6-8 feet of space



11

---

---

---

---

---

---

---

---

---

---

### Form

- American elderberry (*Sambucus canadensis*) is more shrub-like and can grow up to 8 to 10 feet high
- European black elder (*Sambucus nigra*) has the makings of a small tree and will reach 20 feet
- It has a thick, mat-like root system that is rather shallow
- Plants need 1 to 2 inches of water per week
- Plants take three to four years to reach maturity



12

---

---

---

---

---

---

---

---

---

---

**Pollination**

- Primarily wind pollinated
- Partially self-fruitful; requires planting more than one variety to ensure cross-pollination
- Most of the cropping occurs on one- and two-year-old wood
- Mature elderberries should have five to eight canes per bush for good air circulation, etc.

---

---

---

---

---

---

---

---

13

**Cultivars of *Sambucus canadensis***

**Adams (*Sambucus canadensis* 'Adams')** The Adams No. 1 and Adams No. 2 cultivars were selected from the wild in New York in 1928. Adams No. 2 has the largest fruit of all elderberries. Somewhat self-fruitful. Fruit ripens in August. Fruit is purple, firm, juicy and sweet (among the sweeter of the cultivars).



**York (*Sambucus canadensis* 'York')** Originated at the New York Agricultural Experimental Station. This is a hybrid between cultivars Ezyoff and Adams No. 2, released in 1964. Loaded with white flowers. Fruit ripens in mid- to late August. Fruit is medium to large, purple to almost black, glossy, soft, juicy and somewhat sweet (lower in sugar). It has a vigorous, upright and somewhat spreading growth habit. It is very pigmented and often used as a natural dye.

**Nova (*Sambucus canadensis* 'Nova')** Open-pollinated seedling of Adams No. 2, selected in 1946 and released by the AgCanada Research Station in Kentville, Nova Scotia, in 1959. It was named by the province of origin. It is a multi-stemmed shrub with a vigorous and upright growth habit. It has wide clusters of creamy-white flowers. Fruit ripens in early August earlier than Adams No. 2. It bears large, purple-black, soft, sweet and juicy fruit – sweeter than other cultivars.

---

---

---

---

---

---

---

---

14

**Other Cultivars**

Cultivar	Description
Coomer	Developed in Vermont by Lewis Hill; very cold hardy, ripens uniformly all at one time.
Berry Hill	Developed in Vermont by Lewis Hill; very cold hardy, ripens uniformly all at one time.
Goodbarn	Introduced by Elwyn Meader of Rochester, N.H. Professor Meader named this Goodbarn because it was the good elderberry growing under the eaves of his barn in New Hampshire.
Johns	Medium to large berries. Very vigorous, tall, moderately hardy; large fruit clusters; yields less than Adams
Kent	Seedling of Adams No. 1. Medium to large berries. Ripens before Adams No. 2. Fairly high sugar content.
Scotia	Seedling of Adams No. 2. Medium to large berries. Berries sweeter than Kent or Victoria. Highest sugar.
Victoria	Seedling of Adams 2; moderately vigorous with medium sized berries. Ripens earlier than Adams No. 2.
Bob Gordon	Developed in Missouri in 1999. Yields three times that of Adams No. 2. Sought by winemakers.
Eridu	Native to Missouri River region. Found on Dunham Farm in 1968. Medium sized berries, very sweet.
Ranch	Found at an abandoned homestead in Missouri. Drought tolerant. Single stemmed. Very hardy.
Wyldewood 1	Developed at University of Missouri Extension in 2010. Vigorous, first to break buds and latest to ripen.

---

---

---

---

---

---

---

---

15

### Cultivars of *Sambucus nigra*

**Black Beauty (*Sambucus nigra* 'Gerda')** Foliage emerges bronze, then becomes deep maroon-black foliage which acts as a foil to the pink flowers. Blue-black berries follow the flowers, loved by songbirds. Arching form, can reach 15', or be pruned hard in spring to give larger, lusher foliage. Will also act as a pollinizer for Nova or York elderberries. A [Great Plant Picks](#) selection.



**Black Lace (*Sambucus nigra* 'Eva')** Intense purple black foliage is finely cut like lace, giving it an effect similar to that of Japanese maple. Indeed, some designers are using it in place of more sensitive plants since Black Lace is extremely durable and adaptable. Pink flowers in early summer contrast with the dark leaves for a stunning effect and give way to black berries if a compatible pollinator is planted nearby.

**Instant Karma (*Sambucus nigra* 'Sanivalk')** A major improvement over older variegated elderberries, Instant Karma offers neat, clean foliage of interlaying green and white. Large, lacy flower clusters appear in early summer, and if a pollinator variety (like Black Lace® or Black Beauty® elderberry) is present, you'll get a crop of purple-black fruit in autumn.

16

---

---

---

---

---

---

---

---

---

---

### Elderberry Borer Beetle (*Desmocerus palliatus*)

- Female elderberry borer beetles lay their eggs near the plant base
- Hatched larvae burrow their way into stem, tunneling and eating their way into roots
- As they mature, larvae migrate from roots upward into canes where they pupate
- It may take up to two years for the larvae to mature. The adult beetles emerge and feed on leaves and flowers



17

---

---

---

---

---

---

---

---

---

---

### Cane or Shoot Borer (*Achatodes zeae*)

- Moths
- Eggs hatch in April to May; larvae first start feeding on young leaves
- Then larvae start boring into the young shoots, leaving a visible hole on it
- Early summer, fully grown larvae move from shoots into the dead canes to pupate
- Adults emerge in July and August to lay eggs in canes that hatch the following spring



18

---

---

---

---

---

---

---

---

---

---

**Japanese Beetle (*Popillia japonica*)**

- Feeds on leaves
- Overwinters themselves as larvae 8 to 10 inches deep in the soil
- Grubs will feed on anything on their way to the surface, including elderberry roots
- Emerge as adults at the end of June
- Adult beetles spend the next 30 to 45 days feeding on leaves and mating
- Grubs spend up to 10 months underground



19

---

---

---

---

---

---

---

---

**Spotted Wing Drosophila**

- Invasive species from Asia
- First discovered in California in 2008
- Attracted to the ripening
- Eggs are deposited in fruit as it ripens and in over-ripe
- Larvae feed within the fruit, causing it to become soft and drop



20

---

---

---

---

---

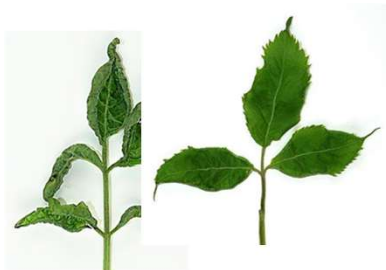
---

---

---

**Eriophyd Mites.**

- Very small and cannot be seen by the naked eye
- Overwinter under the bud scales, particularly at terminal
- Symptoms appear as crinkling, folding and cupping of the leaves
- Not life-threatening damage
- Most often, beneficial mites take care of them so the miticide applications are not necessary.



21

---

---

---

---

---

---

---

---



**Harvesting**

- Fruit starts green and slowly ripens over summer
- Time for harvest is usually end of August
- Berries on different age canes will ripen at different times
- Generally harvested weekly over a period of approximately three weeks

22

---

---

---

---

---

---

---

---

**Best When Cooked or Steeped**

- Stems, leaves and roots, and seeds in the berries contain chemical cyanogenic glycoside (sambunigrin)
- With help of gut bacteria, it metabolizes into hydrogen cyanide
- Eating too many raw berries can lead to build up of cyanide in the body
- Cyanogenic glycoside breaks down with heat... so the best way to use elderberry is in tea, jam, jelly, wine, syrup, or pies.



23

---

---

---

---

---

---

---

---

**Taste**

- Fresh, ripe elderberries are tart, tangy, or bitter.
- American elderberries are the sweetest variety
- Not as sweet as blackberries or raspberries
- Not often eaten raw; great as jam, pie, syrup
- Considered a superfruit high in antioxidants



24

---

---

---

---

---

---

---

---



**Other Uses**

- Elderberry leaves were set at heads of bedridden patients to keep flies away
- Elder was used in the U.S. Civil War as a, "decoction made by pouring boiling water over the leaves, flowers or berries of the elder bush ... as a wash for wounds to prevent injuries from flies."
- Elderberry was often used as dyes for clothing, food, and makeup
- If you deal with elderberry, even if it doesn't heal everything, it will stain it!
- Traditional folk medicine holds the elderberry plant in high regard

25

---

---

---

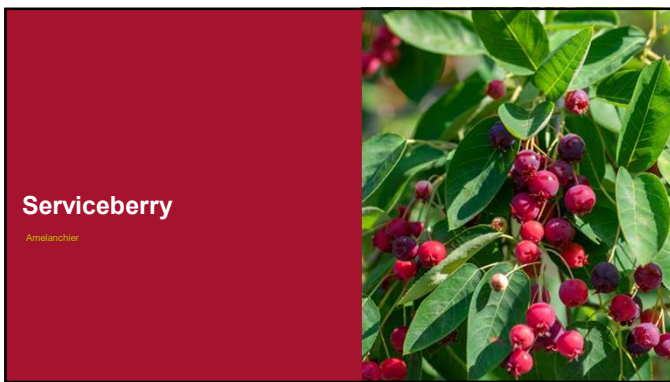
---

---

---

---

---



26

---

---

---

---

---

---

---

---

**Amelanchier**

- **Common Names:** Serviceberry, Juneberry, Saskatoon Berry
- Saskatoon comes from the Cree word misâskwatômina (Mis-sack-qua-too-mina)
- Most diverse genus taxonomically in North America
- PNW native species is *Amelanchier alnifolia*. Native range is most of Western North America



27

---

---

---

---

---

---

---

---

**Form, Type, Habit**

- **Plant Type:** Deciduous Shrub/Tree
- **Form:** Can be multi stem (suckering) or single trunk
- **Size:** Up to 30ft tall depending on species
- Sun to part shade
- Fairly drought tolerant, grows in a variety of well draining soil types
- Can help with erosion



28

---

---

---

---

---

---

---

---

**Flowers**

- Clusters of showy white to pinkish five petaled flowers
- Blooms in Spring before leaf out
- Provides abundant early nectar for pollinators
- Self fertile but fruit production does benefit from being planted near others



29

---

---

---

---

---

---

---

---

**Foliage**

- Leaves are simple and oval with fine teeth
- Light to medium green
- Alternately arraigned
- Depending on species, may have nice fall color (others just turn yellowish)



30

---

---

---

---

---

---

---

---

**Berries**

- 1-1.5 cm round berries
- Resembles a blueberry
- White to red to purple/blue as they ripen
- Loved by birds and wildlife
- Edible and enjoyed by humans
- Taste varies depending on species
- Growing in popularity as a commercially grown crop though still not common



31

---

---

---

---

---

---

---

---

**Fruit production**

- Around 20lbs of fruit per year
- First harvest around three years
- Fruits best on 2-4 year old wood
- Fruits more in full sun
- Prune out old wood to help airflow/light/increase production/disease
- Needs at least 100 days without frost to fruit
- Berries store 2-3 days when ripe
- Can ripen off the plant and may transport better if not quite ripe



Nutrient	Saskatoon Berry	Blueberry	Strawberry	Raspberry
Calories	95 kcal	57 kcal	32 kcal	52 kcal
Protein	1.0 g	0.7 g	0.7 g	1.2 g
Carbohydrates	18.5 g	14.5 g	7.7 g	11.9 g
Sugars	11.4 g	10.0 g	4.9 g	5.4 g
Fiber	5.9 g	2.4 g	2.0 g	8.0 g
Fat	1.0 g	0.3 g	0.3 g	0.66 g
Vitamin C	3.6 mg	9.7 mg	59 mg	32.2 mg

32

---

---

---

---

---

---

---

---

**Problems**

- Birds
- Mammals (Rodents , Deer)
- Brown Rot
- Leaf spot
- Powdery Mildew
- Sawfly
- Leaf miner
- Borers
- Scale
- Fire Blight
- Rust



33

---

---

---

---

---

---

---

---

## Taste and Uses

### Taste

- Sweet with a slight nutty, almond-like flavor
- Often compared to a mix between blueberries and apples
- Mild, earthy undertones with hints of cherry or grape



### Uses

- **Baking:** Common in pies, muffins, cakes, and scones
- **Preserves:** Made into jams, jellies, and syrups
- **Beverages:** Used in smoothies, wines, ciders, and even craft beers
- **Snacking:** Eaten fresh, dried, or added to trail mixes
- **Sauces:** Made into compotes or reductions for meats like pork or game
- **Desserts:** Topping for ice cream, yogurt, or cheesecake
- **Nutritional Products:** Sometimes used in health foods due to high antioxidant content

34

---

---

---

---

---

---

---

---

---

---



# Thank You!

And now for some closing announcements before questions...

35

---

---

---

---

---

---

---

---

---

---

## Resources

**Elderberry**

- Moody, John. *The Elderberry Book*. British Columbia, Canada: New Society Publishers, 2019.
- Shimurik, Susanah. *Everything Elderberry*. New York: Skyhorse Publishing, 2020.
- Bayer, Alicia. *Elderberries: The Beginner's Guide to Foraging, Preserving and Using Elderberries for Health Remedies, Recipes, Drinks & More*. Las Vegas, Nevada, 2017.
- Phillips, Michael. *The Holistic Orchard: Tree Fruits and Berries the Biological Way*. White River Junction, Vermont: Chelsea Green Publishing, 2011.
- Reich, Lee. *Grow Fruit Naturally*. Newtown, Connecticut: The Taunton Press, 2012.
- Wilson, Rose. "Growing Elderberries: A Production Manual and Enterprise Viability Guide for Vermont and the Northeast." *University of Vermont Extension*. Ed. Ginger Nickerson. 2016. 15 April 2022 <<https://www.uvm.edu/sites/default/files/media/ElderberryGuide/Complete.pdf>>
- Kaiser, C. and M. Ernst. "Elderberry." *Center for Crop Diversification, University of Kentucky College of Agriculture, Food and Environment*. 2018. 15 April 2022 <http://www.uky.edu/ocd/sites/www.uky.edu/ocd/files/elderberry.pdf>
- Bulatovic-Dankovich, Mijana. "Elderberry: A New Crop." *West Virginia University Extension*. 2022. 15 April 2022 <https://extension.wvu.edu/agriculture/horticulture/elderberry>
- Warmund, Michèle. "Elderberry Insect and Disease Management." *University of Missouri Extension*. 2021. 15 April 2022 <https://extension.missouri.edu/publications/np1637>
- Brownlee, Liz. "Elderberry and Beyond: New Options for River Lands in the Northeast." *Cornell College of Agriculture and Life Sciences*. 2013. 15 April 2022 <https://smallfarms.cornell.edu/2013/06/elderberry-and-beyond-new-options-for-river-lands-in-the-northeast>

**Serviceberry**

- Washington Native Plant Society: <https://www.wnps.org>
- Oregon State University: <https://landscapegiants.oregonstate.edu>
- Washington State University: <http://pnwplants.wsu.edu>
- Missouri Botanical Garden: <https://www.missouribotanicalgarden.org/PlantFinder>
- *Trees of Seattle* (second edition) by Arthur Lee Jacobson
- *Grow Fruit Naturally* by Lee Reich
- <https://saskatoonberryinstitute.org>
- <https://kijpivyfarm.com>

36

---

---

---

---

---


---

---


---

---


---



## Upcoming Presentations




**Growing Groceries**  
2025 Warm Season Series  
Wednesdays 7:00pm-8:30pm



Date	Class
Wed, April 16	Growing the 'Other' Edible Nightshades: Peppers, Tomatillos, Eggplant
Wed, April 30	Roots and Rare Fruits
Wed, May 14	Grow Cukes, Squash and Melons- Big and Small
Wed, May 28th	The Nutritional Powerhouse: Corn and Beans (legumes)
Wed, June 11	Summer Starts for Fall and Early Spring Harvests
Wed, June 25	Caring for Community: Master Gardener Demonstration Gardens

**PNW Garden Savvy**  
2025 Series 2  
Saturdays 9:30am-10:30am



Date	Class
Sat, April 12	Gardening with Children
Sat, April 26	Plant It Where the Sun Don't Shine
Sat, May 3	Protecting Our Unsung Heroes, Our Pollinators
Sat, May 17	Understanding King County Soils for Better Gardening
Sat, May 31	Rain Gardens
Sat, June 7	Deer Resistant Gardening

More info: <https://kingcounty.mastergardenerfoundation.org/education>

37

---

---

---

---

---

---

---

---

---

---



## Master Gardener Resources



**Ask a Master Gardener**

Visit: <https://extension.wsu.edu/king/ask-a-master-gardener>

**Become a Master Gardener**

For information on King County Master Gardener training (including signing up for the email notification list), visit: <https://extension.wsu.edu/king/gardening/become-a-master-gardener>

Applications for the 2026 class will open in September 2025

38

---

---

---

---

---

---

---

---

---

---

# Thank you for the support!




is brought to you by



**King County Master Gardener Program**  
<https://extension.wsu.edu/king/gardening>

- Demonstration Gardens
- Plant Clinics
- Education Outreach
- Science-based Publications



**Master Gardener Foundation of King County**  
<http://www.mgfk.org>

- Fundraising for these programs

More information about growing groceries:  
<https://kingcounty.mastergardenerfoundation.org/education/gg/>

39

---

---

---

---

---

---

---

---

---

---



40

---

---

---

---

---

---

---