

RUBUS (Brambles)

2020 Herb of the Year

Red raspberry, Black raspberry, Blackberry & Wineberry

UConn Extension Master Gardener Program

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Since 1991, the International Herb Society has chosen an Herb of the Year. This year's choice is the genus *Rubus*. The name comes from the Latin word 'ruber' meaning red. Indigenous to 6 continents and readily hybridized, you can count up to 700 different species within the genus. It's mid summer and the raspberries, wineberries and even some blackberries are bearing their delicious fruit. What a great time to explore some of the commonalities and differences in this wide-ranging genus!

A member of the **Rosaceae** family, all *Rubus* species bear 5 petalled flowers, like a wild rose. These petals are usually white, but sometimes pink. Each flower has several pistils. Each flower has numerous pollen-laden stamens which attract insects, but many *Rubus* species are also self-fertile with the ability to set seed on their own. All flower parts are attached to a central cone-shaped receptacle (**torus**). *Rubus* fruit is an aggregate of small **drupelets** (individual fleshy fruits surrounding a single seed) attached to the torus.

Members of this genus thrive in well drained, humus rich soils in full sun to part shade. Their water requirement is modest. *Rubus* stems are called **canes**. Canes can be green to somewhat woody and are usually covered with bristles, prickles and/or gland-tipped hairs. They spread by seed, tip rooting, or suckering from stolon runners or rhizomes, depending on species.

Rubus root stock is **perennial**, but the canes are **biennial**. With the exception of some special cultivars, first year canes (**primocanes**) yield flowers and fruit only during their second season (**floricanes**), then die. The floricanes are then replaced by new primocanes the following year. Canes can vary in length, depending on type. In the wild, canes tend to bend and arc. In cultivation, canes are commonly pruned and trellised.

Rubus plants have been used since antiquity for food and medicine. Stems, roots, flowers and leaves have been used in infusions, plasters and extractions to treat a wide range of maladies. These include treatments for diarrhea, nausea, stomach ailments, shingles and fevers, as an external wash for wounds, as an anti-venom for snakebites, to strengthen gums, to reduce eye inflammation, to cool rashes and as a hair dye. *Rubus* fruits are full of fiber, antioxidants and vitamins and are delicious to eat.



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Red raspberry (Common name)

Rubus idaeus (Genus/species)

Rubus idaeus* var. *trigosus (Genus/species for American Red raspberry)

Description: *Rubus idaeus* is native to Europe and northern Asia. Our North American native Red raspberry, *Rubus idaeus* var. *trigosus*, is a closely related variant. Thriving in Zones 4 to 8, Red raspberries grow in a variety of locations including open woods, ravines, stream banks, bluffs and wooded mountain slopes. Red raspberries have an erect, sprawling, thicket-forming habit. Canes range from 3 to 9 feet long with a similar spread. Red raspberries sucker from their roots, stolons, rhizomes and crowns. If unmanaged, they can grow to form a tangled, prickly mess. The species Red raspberry can be found in the wild, but is seldom grown in the garden. Fortunately, many cultivars with superior flowers and fruit are available for commercial and home growing.

Leaves, canes, flowers and fruit: Red raspberries have alternately arranged, toothed compound leaves. First year stems (primocanes) generally bear 5-7 leaflets per leaf. Second year stems (floricanes) generally bear 3-5 leaflets per leaf. Leaves are bright green above and, compared to blackberries, markedly whitish below. Red raspberry canes are round and are usually shorter in length with thinner stems and bristles than blackberries. Red raspberries blossom in April and May with ascending to erect flower petals and sepals that stretch out. Berries usually ripen in mid summer. The numerous drupelets are held together into the familiar fruit by tiny hairs, remnants of each pistil. Fruits are hollow when picked; the stem and receptacle (torus) stays on the plant. Red raspberry plantings can last from 10 to 15 years.

In cultivation, some Red raspberry cultivars have been selected to bear fruit on their primocanes at the end of the growing season, giving you a choice of two types to plant:

1. Primocane type (also referred to as **Everbearing**) cultivars flower and fruit on their first year canes (primocanes), beginning at the tops and spiraling down. This part of the cane will die in the cold and is pruned out in the late winter or early spring. The remaining part of the cane (now a floricane) will resume fruiting this second year and then die. Sometimes the first flush of primocanes are cut back to promote stronger growth, flowering and fruiting of the floricanes. Sometimes the entire plant is cut back in the spring to minimize disease pressure and encourage greater primocane production, now the only source of fruit. Primocane types can be planted in 1-foot wide hedgerows as they generally do not grow as large as the Floricane types. Unless cut down entirely to the ground, Primocane types may not need to be trellised.

2. Floricane type cultivars flower and fruit on their second year canes. If not diseased, second year canes are best left on the plant until a late winter pruning to help the roots reabsorb nutrients. If the fruiting canes are diseased or damaged, they should be removed right away. Floricane types should be planted 2 to 3 feet apart in rows that are 10 feet apart. They grow fairly tall and generally need to be trellised.

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Black raspberry (Common name)

Rubus occidentalis (Genus/species)

Description: Although other Black raspberries are native to western North America and Asia, *Rubus occidentalis* is the Black raspberry native to eastern North America. Growing in Zones 4 to 8, Black raspberries are generally not as hardy as Red raspberries. In the wild, Black raspberries grow in meadows and fields, along streams and lakes, at forest edges and along trails and roads. They have a clump forming, semi-erect habit. Canes range from 3 to 5 feet long with a spread of 1 to 2 feet. Black raspberries do not sucker, but their arching canes will root where they touch the soil. Commercial Black raspberry production has declined in the Eastern US due to disease susceptibility and low fruit yield. However, Black raspberries can be a wonderful source of fruit for the home garden.

Leaves, canes, flowers and fruit: Black raspberries have alternately arranged compound leaves with serrated margins and 3-5 leaflets per leaf. Leaves are bright green above and, compared to blackberries, markedly whitish below. Black raspberry primocanes often have a whitish bloom that can be rubbed off. Black raspberry canes are round, are shorter in length and have thinner stems and bristles than blackberries, but heavier stems and bristles than Red raspberries. Black raspberries blossom in April and May. Their flower petals are narrow. Berries usually ripen in the early summer.

The numerous drupelets are held together into the familiar fruit by tiny hairs, remnants of each pistil. Fruits are hollow when picked; the stem and receptacle (torus) stay on the plant. Black raspberry plantings are relatively short lived, lasting only 5 to 10 years.

All Black raspberries bear fruit on second year floricanes; no cultivars that bear fruit on primocanes are available. In cultivation, floricanes should be removed immediately after harvest, leaving the primocanes on the plant to overwinter. In late winter, damaged or thin canes should be removed. Only healthy, well-spaced canes should remain on the plant. The top 6" of the longest canes usually produces the smallest fruit, so this should also be pruned away. In addition to increasing fruit yield, this trimming helps the plant be more self-supporting, although a simple trellis system may still be required.



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Blackberry (Common name)

Rubus fruticosus (Genus/species)

Description: Native to much of Europe, *Rubus fruticosus* (in many closely related variants) now grows in temperate regions throughout the world where it was introduced for its fruit and to form hedgerows. Escaping cultivation, Blackberries can be found in the wild. Blackberries grow in a variety of locations including disturbed and scrubby areas, hillsides, damp places, pastures and woodland margins. Blackberries exhibit a variety of growth habits, from upright to semi-upright to trailing. Blackberry canes can grow over 20 feet long. They are arching, entangling and woody. Canes may be green, purplish or red and hairy, sometimes with small stalked glands, and characterized by recurved prickles. Seeds are dispersed by animals. Blackberries also spread vegetatively. Where cane tips touch soil, new plants will form. New plants also regenerate from any root or stem fragment left in the soil. Recurved prickles hook themselves onto neighboring foliage, adding to the tangled mass. Blackberry roots are branching, creeping and deep-growing, eventually forming a mass of secondary roots and plants.

Leaves, canes, flowers and fruit: Blackberries have toothed compound leaves with 3-5 palmately arranged short-stalked leaflets per leaf. Blackberry leaves usually have prickly stalks and midribs. They are bright green above and lighter, somewhat whitish below, but not as white as Red and Black raspberry leaves. Blackberry leaves turn a vivid orange-red to purple color in the fall, holding that color until early to mid winter. Blackberry canes have ridges and are the longest in the *Rubus* genus with the thickest stems and prickles. Blackberries blossom in the late spring to early summer. Their flower petals are rather rounded and wrinkled near the center and their sepals fold down. Blackberry fruit is smooth, hairless and usually ripens in late summer. Fruits are solid when picked; the stem and receptacle (torus) stays with the berry. Blackberry plantings can last from 1 to 20 years.

Blackberry cultivars can be divided into Upright, Semi-upright and Trailing, depending on their growth habit. They can be further subdivided into “thornless” cultivars as well as those that bear fruit on their primocanes, offering many choices for planting.

Upright cultivars bear stiff canes from 4 to 7 feet long. Heavily suckering from the roots, this type of Blackberry will form a thick hedgerow if not thinned and pruned. In late winter, spent floricanes are removed and the current year’s floricanes are shortened. In the summer, the new primocanes are trimmed back to 3 feet to promote branching while the floricanes are allowed to grow, bloom and fruit. A 2-4 wire trellis system is recommended for support and protection.

Semi-upright cultivars grow from a crown and are thornless with 12 to 16 foot long arching canes. Semi-upright cultivars require trellising. Pruning is the same as for Upright varieties. The fruit from plants with this type of growing habit is generally rounder, firmer and less aromatic than fruit from the trailing types.

Trailing cultivars grow from a crown and produce long canes that trail along the ground. They are usually grown in rows spaced 3 to 6 feet apart with 10 feet between each row. Trailing Blackberries are not as hardy as other types, but they are often preferred for their excellent fruit quality. Trailing Blackberries are grown in an every year or alternate year system: Every year - In this system, floricanes are trellised and primocanes are left on the ground. The spent floricanes are removed in late winter and last season’s primocanes (now this season’s floricanes) are trellised. Alternate year - In this system, both the floricanes and primocanes are removed after fruiting. New primocanes are trellised to produce fruit the following year after which all canes will again be removed. Allowing the crowns to rest results in an abundance of fruit and may reduce the amount of trellising work.

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Wineberry (Common name)

Rubus phoenicolasius (Genus/species)

Description: *Rubus phoenicolasius* is native to Japan, Korea and China. The name translates into “blackberry with purple hairs”. It was introduced in the United States in 1890 as breeding stock for new *Rubus* cultivars. It is still being used for this purpose today. Wineberries are hardy to US Zone 5. They have escaped cultivation and now grow from eastern Canada south to North Carolina and west to Tennessee and Michigan. They have become a nuisance weed in many states. As with Raspberries and Blackberries, Wineberries grow in a variety of locations including disturbed areas, open woods, woodland edges, ravines and stream banks and along roadsides. Wineberries have an erect, sprawling, thicket-forming habit. Canes are upright and arching, growing to 9 feet long and 3 feet wide. Wineberries reproduce by seed and spread vegetatively by means of sprouting root buds and branch tips that root where they touch the soil. Although their branches provide cover for birds and mammals, Wineberry is a vigorous grower that can form large thickets, displacing native plants in the process.

Leaves, canes, flowers and fruit: Wineberries have compound leaves with 3 heart-shaped, purple-veined, serrated leaflets per leaf. Leaves are green above; silvery white and hairy below. Wineberry canes and flower calyxes are covered with distinctive glandular red hairs and small prickles. Wineberries blossom in the spring. Flowers are small and greenish with white, pointed tips, incurved petals and reddish hairs. After flowering, the fruit is enclosed in its calyx until just before it is ripe. Berries ripen in mid summer and are hollow when picked; the stem and receptacle (torus) stays on the plant. Wineberry plants can persist indefinitely.



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The red berries are delicious to eat. You're sure to enjoy the recipe below.

WINEBERRY CRUMBLE TART

- 2-1/2 cups all-purpose flour
- 1-1/2 sticks (3/4 cup) unsalted butter, cut into 1/2 inch cubes
- 1/4 cup vegetable shortening
- 1/2 teaspoon salt
- 5 to 7 tablespoons ice water
- 3/4 cup sliced almonds
- 3/4 cup sugar
- 6 to 8 cups of Wineberries
- 2 to 3 tablespoons fine, dry, plain bread or cracker crumbs

Special equipment:

11-1/4 x 8 inch rectangular or 10" round x 1" deep tart pan with a removable bottom

DOUGH: Combine flour, butter, shortening and salt and pulse in a food processor until the mixture resembles coarse meal with some small, pea-sized butter lumps.

Reserving the remaining mixture, transfer 2 cups to a bowl and drizzle 4 tablespoons ice water evenly over it. Stir gently with a fork until the water is incorporated.

-Squeeze a small handful of dough. If it doesn't hold together, add more ice water 1/2 tablespoon at a time, stirring until incorporated. (If you overwork the dough, the pastry will be tough.)

-Turn dough out on your work surface and divide into 4 portions. With the heel of your hand, smear each portion once or twice in a forward motion to help distribute the fat. Gather all the dough together, press it into a ball and flatten it into a 5 inch disc. If the dough is sticky, dust it lightly with additional flour. Wrap disc in plastic wrap and chill until firm, at least 1 hour.

MAKE TOPPING WHILE DOUGH CHILLS: Place reserved dough mixture in a bowl and add almonds and sugar. Rub together until some large clumps form. ASSEMBLE TART: Place a large, foil lined baking sheet on an oven rack in the lower third of your oven, preheating oven to 375 degrees. On a lightly floured surface or between 2 sheets of parchment paper, roll out the dough disc to fit the shape and height of your pan. Fit the dough into the pan and trim the excess dough, leaving a 1/2-inch overhang. Fold the overhang under the pastry and press against the pan's rim to reinforce the edge. Sprinkle bread/cracker crumbs evenly over the tart shell bottom (the crumbs absorb the berry juices and help keep the bottom crust crisp). Fill the shell evenly with the Wineberries and sprinkle evenly with the topping. Bake tart on the baking sheet until the topping and crust are golden and the filling is bubbling, about 55 to 60 minutes. Loosely cover with a sheet of foil after 30 minutes to prevent overbrowning. Cool in pan on a rack for 20 minutes, then remove the sides of the pan and wait for another 45 minutes until the tart is completely cool.

WHAT'S NEXT? The Herb of the Year for 2021 is Parsley/*Petroselinum*, Violet/*Viola* for 2022 and Ginger/*Zingiber* for 2023...much to look forward to!

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