

# Blackberry

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*Rubus.* (Rosaceae)

## Fast Facts:

Acres in Washington: less than 150
Percent of U.S. Acreage: less than 2%
Per Acre Value: \$5,130
Number of growers: less than 10
Value of Production in Washington: \$500,000

## Description of crop:

Blackberries are perennial plants that produce fruit on biennial canes. The canes grow one year (primocanes) and produce fruit the following year (floricanes). The floricanes die after they have fruited. Primocanes continue to grow along the ground up to 20 feet from a single crown. In late summer or early winter, prior to bud break, the dead floricanes are pruned away and the primocanes are trained upright onto trellis for support of fruit production and to help facilitate mechanical harvest. In order to reduce production, labor costs, and pesticide inputs, some blackberry acreage is converted to an alternate-year (AY) system of production following initial establishment years of every-year (EY) production. The AY system manages plants to produce fruit every other year rather than annually. This can result in yields that are 120 –150% of EY production systems from the alternate cropping year. Both floricanes and primocanes are cut and removed after harvest with AY production systems. This radical pruning of all canes is quicker and easier for labor efficiency. The year following this radical pruning, only primocanes are produced which then become the floricanes during the next season. There are fewer pesticide and fertilizer inputs in the non-bearing year as well. In either production system, harvest season lasts about 4 weeks with the method of harvest determining the picking intervals. Picking intervals are every four to five days for mechanically harvested fruit; every seven to ten days for hand picked fruit. Harvest begins in early July for most blackberry cultivars with late ripening cultivars like Evergreen beginning to bear fruit in mid-August. Up to 95% of the blackberry crop is processed into the same classified quality as raspberries, that is IQF, preserves, puree, or juice with the balance sold in fresh market.

The blackberry fruit is similar to raspberries but a white core remains part of the fruit when picked, whereas it remains attached to the stem when a raspberry is removed to give a hollowed-out berry. Blackberries are the least hardy of the caneberries grown in Washington and varieties such as marionberry and boysenberry may be damaged in very cold winters. Boysenberry, loganberry, marionberry, and thornless evergreen are common varieties of blackberry.

Oregon has the preponderance of blackberry production in the U.S. with 6,400 acres. Washington's production is divided between blackberries for processing which are

shipped to the Willamette Valley of Oregon and for the fresh market in Washington and Vancouver, British Columbia, Canada.

**Key pests:**

Prior to crop establishment, soil samples are required to determine presence of parasitic nematodes such as *Xiphenema* spp. and root disease organisms such as *Armillaria*, *Phytophthora*, and *Verticilium* spp. or root feeding insects such as symphylans, root weevils, and wireworms. On the basis of the samples, fumigation may be necessary. Crown gall and cane gall caused by *Agrobacterium* spp. can also be present and suppressed with fumigation. On a long-lived crop like blackberries, perennial weeds such as bindweed, horsetail, Canada thistle, nutsedge, and quackgrass can require herbicide treatment. The primary insect pests of blackberry are armyworms, two-spotted spider mites, redberry mite, raspberry crown borer and obliquebanded leafroller. The raspberry beetle and climbing cutworms can also be a problem. Insects such as aphids and stinkbugs pose a contamination risk when mechanically harvested for IQF and high numbers of contaminants can result in dockage. *Verticilium* wilt, crown and cane gall, cane and leaf rust, and cane and leaf spot, can become severe if left untreated. Purple blotch, bud and leaf blights, Anthracnose, Blackberry rust, downy and powdery mildews are important foliar diseases while *Botrytis* fruit rots can impact berry yields.

**Key pesticides:**

Telone and Vapam are effective fumigants with the highly effective fumigant, methyl bromide-chloropicrin, being phased out in 2005. Cover crops such as rye grass are commonly used to promote the presence of beneficial insects and keep weeds and dust in check. Diazinon, Sevin, malathion, and *Bacillus thuringiensis* are effective against worm pests when used at the proper timings. Bifenthrin is effective but can cause mite flare-ups. Armyworms and cutworms are controlled with Sevin, Success, Entrust and Diazinon. Leafrollers are controlled with Asana, Brigade and Capture. The two-spotted spider mite is controlled with Brigade and Capture. The raspberry crown borer is controlled with Capture and Diazinon. Red berry mite can be effectively controlled with lime sulfur and copper hydroxide. Anthracnose, is controlled with Abound, Cabrio and Bordeaux mix. *Botrytis* fruit rot is controlled with Captan, Iprodione and Switch. Cane and leaf rust is controlled with Cabrio and Rally. Cane and leaf spot and purple blotch are controlled with Abound, Cabrio and Bordeaux Mix. Crown and cane gall is controlled with Gallex and Nogall. Downy mildew is controlled with Aliette. Available herbicides effective against most weeds are Roundup, diuron, Princep, Solicam, Surflan, and pronamide.

**Critical pest control issues:**

Growers can help control disease with the establishment of certified disease-free planting stock.

**Expert contacts:** DeFrancesco, Joe. 2003.  
Pest Management Strategic Plan, Caneberry Production in Washington and Oregon, July 2003.

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**Location**

**of production:** All blackberries are located in Western Washington; Whatcom, Skagit, Pierce, Clark and Cowlitz counties.

