

Cherry (sweet and tart)

Purnus avium and Purnus. cerasus (Rosaceae)

Fast Facts:

Acres in Washington:	Sweet: 36,000 Acres Tart: 1,600
Percent U.S. Acreage:	Sweet: 48% Tart: 33%
Per Acre Value:	Sweet: \$5,500-\$8,500 Tart: \$3000-\$4000
Number of Growers:	Sweet: 2000 Tart: 50
Value of Production in Washington:	Sweet: \$143.2 Million Tart: \$8.2 Million
Percent of Value of U.S. Production:	Sweet: 48% Tart: 10.5%

Washington is the 3rd largest producer of tart cherries in the country and the leading sweet cherry producer in the nation.

Cherries are the 8th most valuable commodity in the state

Description of crop:

Washington produces both sweet cherry and tart cherry. Both have the same production practices and pest problems. Sweet cherry is normally a larger tree; however, the trees are pruned to a similar size as tart cherry. Sweet cherries are marketed fresh or processed. Processed cherries are canned or brined as maraschino cherries. Tart cherries are processed frozen or canned for pies, preserves and jellies. Trees are propagated commercially by either budding or grafting. Most cherry trees are grown on Mazzard rootstocks. Mahaleb was a fairly popular rootstock at one time but is little used now due to gopher problems. Some cherries are grafted onto Colt or Geisela rootstocks. A new rootstock out of Germany, the Weirroot, is showing promise for size control in Washington. At this time, rootstocks are used for resistance to disease and insect pests. Trees are pruned winter and summer. Winter pruning directs growth in specific areas of the tree, and summer pruning removes unwanted growth and allows light to reach all parts of the tree. Pruning also ensures good fruit bud development from year to year. The recent trend to higher density orchards demands that more pruning is done to control size and eliminate shade issues for neighboring trees. Commercial practices include irrigation, fertilization and weed control. Frost protection may be necessary in many production areas. Cherries are harvested by

hand from mid-June through late July or early August, depending on the production area, the weather and the cherry variety. Gibberellic acid is used in some areas and on some varieties to increase size by delaying maturation. Much research is being done on new varieties that can be used in different regions to lengthen the harvest. Early varieties may be planted in early areas and later ripening varieties could be planted in later districts in order to extend the harvest windows and take advantage of higher priced market windows. Trees are in full production generally within six to eight years and can remain in production 40 to 50 years. Newer rootstock types and higher densities may have effects that are still unknown regarding the longevity of cherry blocks. It is also very conceivable that new varieties will force growers to replace blocks of cherries well before they reach the end of their productive life in order to remain competitive in the marketplace. Some cherry varieties are self-fertile but the most common Washington variety, Bing, is not. Pollination must be a consideration when planning a cherry orchard. Bees are a requirement for adequate pollination so protection of the bees must factor in to all chemical programs.

Washington varieties include: Chelan, Tieton, Lambert, Bing, Ranier, Lapins, Skeena, and Sweetheart cherries.

Key pests:

Weeds are a problem due primarily to their competition with the crop for sunlight, water, and nutrients. Young trees are especially at risk. Weeds cause three additional problems. They can block sprinkler heads, making irrigation difficult, or provide alternated host sites for harmful insects. They also encourage mice to populate the orchard, often necessitating chemical control of rodents. Common annual weed problems include mustards, pigweeds, lambsquarter and grasses. Common perennial weeds include quackgrass, field bindweed and dandelion. The most common disease is powdery mildew. Viruses can cause significant problems also. Two emerging virus issues are Western X virus and crinkle leaf virus. Bacterial canker and verticillium wilt can limit production. Bacterial canker is a problem in wetter areas. Depending on the weather conditions and the stage of development of the fruit this can be a devastating problem. Verticillium wilt is a localized problem. It is generally only a problem in orchards that were planted in ground that had produced a host such as potatoes. Cherry fruit fly is the most severe insect pest; California and other areas quarantine against it. Leafrollers are an increasing problem. Leafminers are an occasional, relatively minor pest.

Key pesticides:

Unlike pears and apples, stone fruits are intolerant of many residual herbicides. Growers must, therefore, apply herbicides such as Roundup and Gramoxone more frequently and diligently for effective weed control. A new herbicide, Chateau, is a very effective broad spectrum herbicide that can be used in stone fruits. Prowl is now labeled for bearing orchards. Surflan is also used.

Powdery mildew is controlled with Rally, Rubigan and sulfur products. Viruses are controlled by using certified planting stock. There are very little

organophosphate being used to control cherry fruit fly. Guthion has been lost as a control tool. Cherry fruit fly is a zero tolerance pest in many areas so its control is critical to the grower. Malathion ULV is used because of its short re-entry and pre-harvest interval. Growers are using a fly bait called GF120 that can be applied easily and attracts the fruit fly to it as a food source rather than the cherries. Control involves a combination of these pesticides because of the intervals required between pesticide application and the harvest of the crop. Early season control of cherry fruit fly is done with a delayed dormant spray of Lorsban and oil. This program is a cost effective spray that offers control of a wide number of pests including some lepidoptera. Extensive trapping for cherry fruit fly takes place and the control sprays are not applied until the first fruit fly is caught. Dimethoate is often applied after the cherry season is over to act as a clean up spray to reduce pressure for the next year.

**Critical pest
control issues:**

Weed control is important in orchards, because bees can be attracted to weeds in bloom. Should growers apply insecticides harmful to bees, even when the crop is not in bloom, bees attracted to blooming weeds may be harmed inadvertently. Due to the large amount of hand labor needed for production, farm worker safety is an important issue to industry members.

New chemicals or formulations are a critical pest issue for cherry growers. Powdery mildew is rapidly developing resistance to the control measures being used now. Aphid and leafroller need control measures also. Cherry fruit fly is always in need of new controls. It is critical that growers have enough chemicals available to use in rotation so that the insects do not develop resistance.

The increased demand for sustainability in the U.S. has necessitated a number of new technologies and techniques some of which are not readily known in other countries. As U.S. growers pursue safety and sustainability with the most recent developments, other countries have not yet had the time or the focus to do the testing they require before food so treated is allowed within their borders. Export markets, ironically, can be shut to the best technologies merely because they have not yet had time to test it. Growers can then be trapped between the consumers here and the markets abroad when trying to plan pest control strategies.

Cherries grown by homeowners that do not control the pests are a huge problem for commercial growers. Washington State laws prohibit the production of cherries in any amount unless the pests are controlled. Increased chemical costs incurred in combating infestations and inoculums from backyard trees are substantial. There is also a very real possibility that insects from neighboring backyard trees can result in a commercial orchard violating the zero tolerance standards and not being able to market the entire crop.

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