



Cosmic Crisp® brand apples are a cross between Enterprise and Honeycrisp Apples.

Fruit Characteristics:

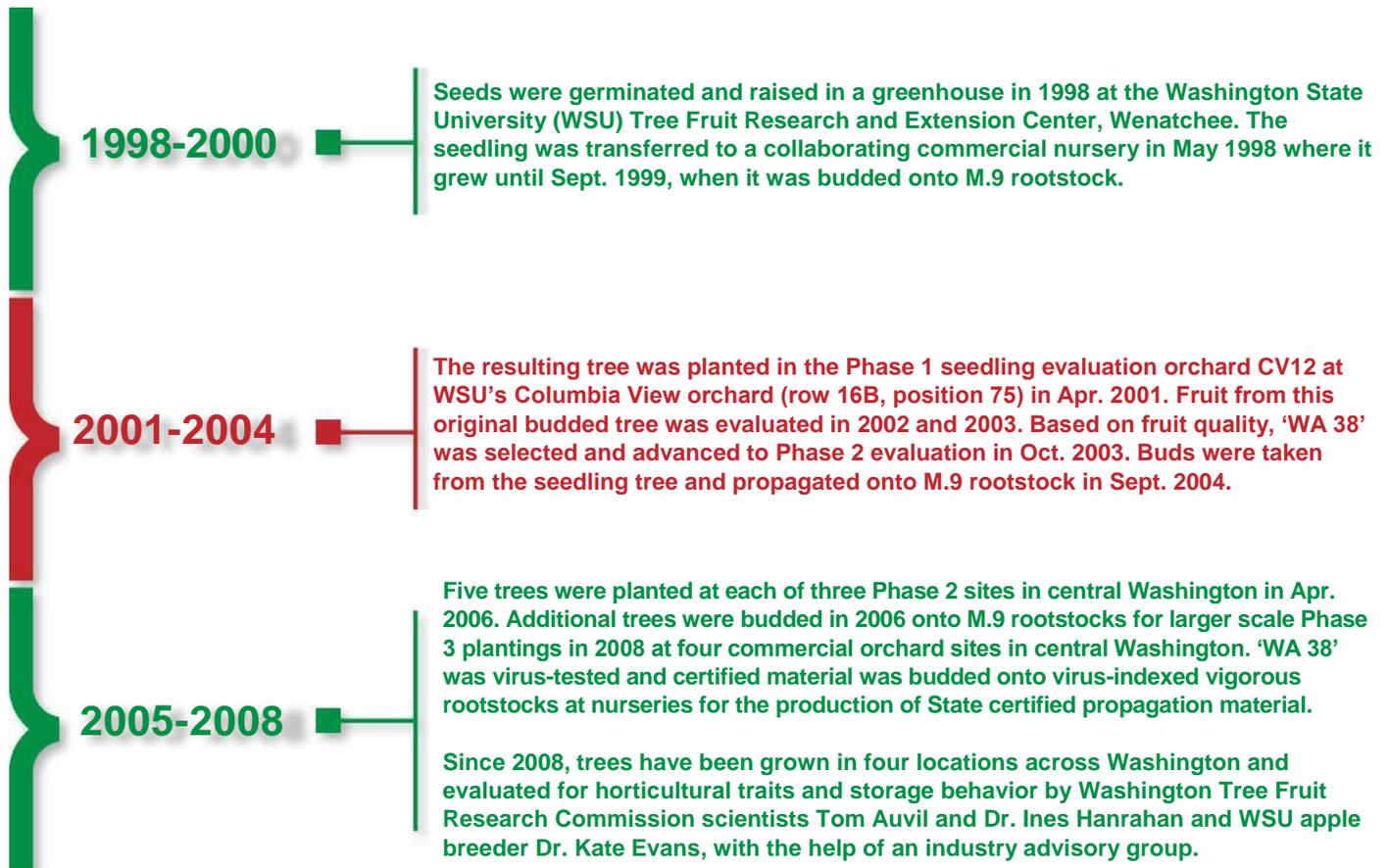
- Late September to early October season
- Medium fruit size, round
- Red, red-striped blush 55-80%
- Prominent lenticels
- Balanced sweet/tart flavor
- Firm with excellent crispness and juiciness
- Maintains fruit flavor and texture throughout storage
- Does not brown easily



Sources: WSU CAHNRS - Tom Auvil and Ines Hanrahan (Washington Tree Fruit Research Commission), Kate Evans (Washington State University, Wenatchee)

Timeline

Cosmic Crisp® brand apples have been in the development process for the past 15 years.



Growing Regions

1. Okanogan Region

From the terraced riverside orchards of the scenic Okanogan comes much of our late season fruit. Located to the north, it consists of the narrow Methow Valley, its lush orchards hugging the Methow River, and the wider, steep-walled Okanogan Valley. The region's shorter growing days and cool temperatures produce excellent apples of all varieties.



2. Lake Chelan Region

Orchards lining the shores of Lake Chelan are steeped in a unique, temperate microclimate. This deep lake cools the hot summer days and warms the air temperature in winter. The Chelan region is known for producing apples of exquisite color, shape and keeping quality demanded for export.

3. Wenatchee Region

The heart of Washington apple country is the Wenatchee Valley. Its waterfront orchards embrace the region's rushing rivers, producing crisp, delicious apples in every color and flavor.

1. Columbia River Region

Between the Columbia and Snake rivers, lays the broad Columbia Basin. Its rich volcanic soil, fed by the cool waters of the Columbia, nurtures vast acres of apples. Blessed by a long growing season, the basin is noted for producing larger apples and later-maturing varieties.

2. Yakima Valley Region

Surrounded by gently rolling mountains, the wide Yakima Valley employs irrigation to create an oasis for apple cultivation. Stretching from the Naches to the Tri-Cities, it is the largest apple producing region in Washington. Noted for its earlier, as well as longer, growing season, the Yakima region produces high quality apples of every variety.

Sources: Washington Apples

Availability

Tree production is managed by the Northwest Nursery Improvement Institute in concert with its nursery members. Just over 629,000 trees were delivered in 2017 and roughly 5,000,000 trees are booked for 2018 delivery. Trees can be purchased through participating Northwest Nursery Improvement Institute (NNII) member nursery. There are currently 13 member nurseries to which 11 of them are participating in growing and selling WA38 cv. trees. Certified apple trees of Cosmic Crisp® brand 'WA 38' cv. (PP 24,210) can be ordered at the following nurseries:

- C&O Nursery www.c-onursery.com
- Van Well Nursery www.vanwell.net
- Willow Drive Nursery www.willowdrive.com

- Cameron Nursery www.cameronnursery.com
- Brandt's Fruit Trees www.brandtsfruittrees.com
- Biringer Nursery www.biringernursery.com
- ProTree Nursery www.protreenursery.com
- Gold Crown Nursery 509-664-2973
- Helios Nursery 509-888-7244
- Mike & Brian's Nursery www.mikeandbriansnursery.com
- Tree Connection www.treeconnect.com

Rootstock

Learn More About Cosmic Crisp® Brand WA 38 Apples

Site

On the right rootstock, WA 38 will perform well at all elevations in Eastern Washington. The bloom period and harvest period are a good fit for both early and late districts. Netting or evaporative cooling will need to be installed in the warmer parts of the state.

Rootstocks

WSU evaluated WA 38 on two different rootstocks M.9 Nic® 29 and G41. In a sandy loam soil at the WSU Roza orchard in Prosser, trees on both rootstocks performed well. On G41 the canopy volume and height was more consistent when compared to M.9 Nic® 29. At the Sunrise Orchard in Rock Island, WA the soils are a lighter, variable texture soil. Overall trees at Sunrise showed less canopy volume than trees at the Roza. Trees on G41 at Sunrise were larger with more consistent canopy volume and height when compared to the trees on M.9 Nic® 29.

Pollinizers

WA 38 blooms mid to late-season during the same period as Snowdrift pollinizers. Manchurian crabapples are not a good selection because they flower too early and because of 50% pollen incompatibility.

Tree Characteristics: Field Days

Tree Habit

WA 38 is a type 4 tree like a Granny Smith (Figure 1). It tends to have long branches and produce blind wood near the trunk. It is a reasonably vigorous variety which can be managed with cropping.

Bloom

WA 38 produces a lot of secondary lateral blooms. Laterals can be 40% of the total cluster. Tree fruit have two types of buds, terminal and lateral buds. A terminal, sometimes called the apical bud, is located at the tip of a shoot. A lateral bud forms along the developing shoot at the base of the leaf blade. Lateral flower buds bloom after the terminal buds and in a cool spring many lateral buds will lengthen the time between primary and secondary bloom.



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Cultivation

The following traits have been observed during Phase 3 evaluation:



- Growth habit: Type IV tip bearer similar to cv Granny Smith; vigorous; thins to singles IP
- Bloom timing: Blooms 5 to 7 days after cv Gala and cv Red Delicious; bloom period shorter than Red Delicious
- Disease/disorder sensitivity: Moderately susceptible to mildew and fire blight; not prone to sunburn or bitter pit
- Harvest timing: Fruit matures in cv Red Delicious season, late September and early October, in one or two picks
- Fruit: Red symmetrical fruit with red-striped blush (55-80%) and attractive, prominent lenticels; size medium to large, decreases as trees mature; narrow size range with 85-90% of fruit within four classes

Post-Harvest Performance:

- Handling characteristics: Generally high packout; not sensitive to bruising, handles well on commercial packing line; can become greasy in prolonged storage, but greasiness does not affect ability to wax fruit.
- Storage potential: 6 months in refrigerated storage. 12 months in controlled atmosphere (1% carbon dioxide, 2% oxygen) with or without 1-MCP.
- Grade reducing defects: stem punctures, decay (5% or less).
- Disorders; no disorders observed.
- Eating quality: balanced with excellent crispness and juiciness.
- Flesh: does not brown readily after cutting.
- Other: not sensitive to bruising, easy to handle on commercial packing line, fruit has adequate shine after waxing.

