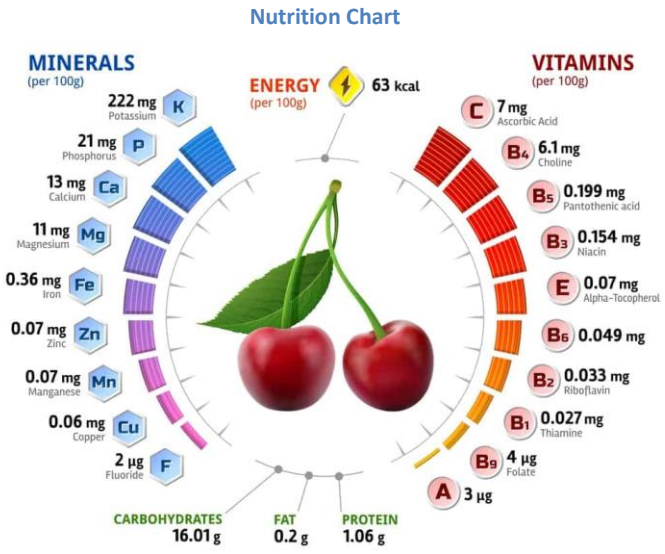
CC Orchards.com
2119 Naramata Rd. Naramata, BC
(250) 486-5113

… and now some ***Cherry Trivia***

There's been so much written about cherries that it's difficult to figure out where to start. Here is some information you may find interesting:

- **History / Culture / Legends**
  - Historians believe cherries come from Mesopotamia – the area between the Black and Caspian Seas.
  - Cherry seeds have been found in The Bronze Age and Roman archaeological sites throughout Europe.
  - Upon returning home victorious from the Third Mithridatic War, the Roman general Lucius Licinius Lucullus brought with him a cherry tree - *an omen of good fortune*. More importantly, his tree bore bigger & sweeter fruit than did the wild ones found in European forests. The General liked to serve his cherries at his renowned dinner parties.
  - European settlers brought cherries to America in the 17th century and by the 19th century, cherries had found their way to Washington & Oregon.
  - Gifting cherries symbolises success and happiness.
  - The Cherry blossom (Sakura) is the national flower of Japan. The cherry tree represents not only purity and aesthetic beauty but also melancholy & resignation.
  - ***Japanese Proverb:*** The flower of flowers is the Sakura as the Samurai is the man among men.
- **Production**
  - The sweet cherry, *Prunus Avium* is a member of the Rosaceae (rose) family.
  - There are over 1,000 varieties of cherry, but fewer than 10 % are produced commercially.
    - The flavor of the cherry ranks among the top flavor favorites in the world.
    - The bark & stems of wild cherries smell like almonds.
  - Cherries grow around the world in regions with moderate to cold climates. Sweet cherries have been produced in Canada for many years, but due to spring frosts and untimely rain sensitivity, sweet cherries can only be grown commercially in a few locations in Canada.
    - Production in British Columbia (~ 75% of the Canadian crop) began around the 1930s and is centred in the Okanagan, Similkameen and Creston valleys.
    - Ontario's production (~ 24%) is located in the Niagara/Hamilton-Wentworth areas. The remaining 1% is grown on small acreages in Nova Scotia, Manitoba and Quebec.
    - The **Cherry Tree** will live for over 100 years but can be damaged by:
      - **Disease**: Bacterial &/or Cytospora Canker, Coryneum Blight, Alternaria Fruit Rot,.
      - **Insects**: Black Cherry Aphids, Leafroller, Shothole Borer and Ambrosia beetle
      - **Weather**: Severe winter temperatures can cause cold injury to shoots, fruit spurs, trunks and even roots.
      - **Wildlife**: Deer, Rabbits, Voles, Bears
    - **Cherries** (the fruit) are primarily damaged by:
      - **Diseases**: Brown Rot, Botrytis & Powdery Mildew
      - **Insects:** Black and/or Western Cherry Fruit Fly, Spotted Wing Drosophila
      - **Wildlife:** Birds, Marmots.
      - **Weather**: Rain & Hail (impact damage)
        - Periods of heavy rain followed by Sun can cause cherries to **Split**. Rain softens the cherry's skin – especially in the bowl – where the stem meets the cherry. It's much like the skin on your fingertips when you've soaked them in water too long. Simultaneously, stimulated by Sun, the roots of the tree are intensely absorbing water and pumping it to the fruit. This results in the cherry exploding or bursting from the inside causing a split.
        - Over 50% loss can be experienced and the wound caused by splitting can be unsightly and serves as a point of entry for diseases. Cherries can be sprayed with a coating to reduce damage while some growers use helicopters or "AirBlast" sprayers to dry off the fruit.
  - Cherries are the only stone fruit that do not ripen after harvest.
  - On average, Canadians consume less than 1 lbs. / person / year.
  - The vast majority of cherries are used fresh. Cherries are also blended for sauces or drinks, frozen, canned, juiced and used for jams, pie fillings and yogurt flavouring.
    - It takes about 50 cherries to make a cherry pie.
  - Hot cherry stones were used in bed pans to warm beds.
  - Dried cherry stems make an excellent tea.
- **Medicinal Properties**
  - Cherries are an excellent source of Nutrition and have numerous health benefits (see Health Facts).



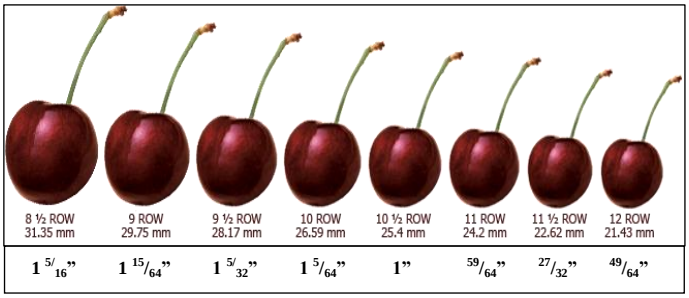
What Constitues a great Cherry?

- **COLOUR** - Ruby Red.
  - For the Sweetest cherries, the saying goes: On a tree, First you don't see the cherries, then all you see is cherries and then you don't see them again. That's when they're ready. They are so dark that they blend back into the leaves.
    - We are looking for cherries in the 4-6 Colour Range
    - We also use a Refractometer to measure the sugar level.

Cherry Colour Chart

- **STEMS ON**
  - A cherry without a stem will go bad in 3-4 days. With a stem they last much longer.
  - Stems should be green. The browner the stem, the older the cherry.

- **LARGE**
  - Sizes of 8, 8.5, 9 row. 11 or 11.5 row are too small and typically not sold for fresh eating.
  - What is a Row Size?
    - Years ago cherries were packed using the Face & Fill method.
    - A standard western lug (a wooden crate) would be hand packed upside down.
    - The lid would be nailed on & the crate flipped over.
    - Cherries were then placed in a neat row extending from one side of the crate to the other.
    - The number of cherries required to fill the row became known as the "Row Size". The larger the cherries, the fewer were required to fill the row. 8 Row cherries are larger than 9 R.
    - These lugs would have the top three rows place Packed and the remainder of the box would be volume filled – Hence the terminology of Face & Fill
    - The size of the cherries that were volume filled were allowed to be no more than 2 sizes smaller than the size of the cherries packed in the face.
    - The bottoms were then nailed onto the lugs.
    - When buyers would purchase the cherries and open the top, the display was a beautiful orderly selection.
    - Today, we use sizers. If the cherry drops through the prescribed hole, it is one size smaller than the opening.



Cherry Sizing Chart

- **FLAWLESS:**
  - Commercial cherries must be perfect. They can't have:
    - Bruises or Bird Damage.
      - From a Farmer's perspective, I'm constantly listening for cherries dropped into the bucket. If I can hear it, then the cherry is being bruised. Cherries need to be placed, not dropped.
      - We try to control birds with a Bird Call deterrent. Speakers are placed in the orchard broadcasting sounds birds don't like.
    - Worms
      - No one likes those ☹.
      - We are minimalists when it comes to using Insecticides.
    - Splits
      - Caused by rain followed by sun.
      - We allow Nature to take its course.
    - Sun Damage
      - Yes – Even fruit gets a sun burn.
      - Fruit will be sweet but leathery.
      - Irrigating the orchard tends to lower temperatures and intern, reduce sun damage.

CC Orchards.com
2119 Naramata Rd. Naramata, BC
(250) 486-5113

Stages of Cherry Development

Dormant

- This period begins when the last leaves have fallen from the tree in the fall. It extends until spring when the buds formed the previous year begin to swell.
- This is the overwintering stage.
- Normally an organic oil (Dormant Oil) is sprayed to suffocate insects that are on the trees.

Swollen Bud

- Buds formed the previous year tend to have a brown coloration. When the tree has left dormancy, the buds begin to swell and the tips of the buds turn green, an indicator that growth has begun.

Bud Burst

- The buds have become almost entirely green at this point. The tips have begun to split and separate.
- Brown color is visible at the base of the bud where it attaches to the branch.

Early White

- In this stage, the tips of the green buds give way to tiny glimpses of white petals beneath.

White Bud

- Here we see the white push out of their sheaths and are visible as white buds.
- Stems lengthen
- Honey Bees are placed in the orchard to start pollination.

Bloom

- Bloom technically begins when the first flower opens completely.
- More often the term is used to convey the fact that the majority of the buds have opened and the cherry tree is covered in open blossoms.
- This is the period when pollination occurs. No pesticides are applied during this time since pollinators like honeybees visit the tree.

Petal Fall

- This stage is apparent when the stems are left but less than 25% of the petals remain on the tree.

Fruit Set

- Following petal fall, if the flower was pollinated, a slight swelling becomes visible below the calyx (structural components of the flower).
- The swelling continues as the fruit develops.
- This stage is sometimes called "in the shuck" or "Husk Fall"

Fruit Development

- The cherries continue to grow in size, remaining green for more than half of their development time. As they near maturity, the colors begin to change.
- Most cherries go from green to yellow and later to various shades of red. Some varieties stay yellow.
- Cherries are most susceptible to damage from insects & birds at this stage.

CC Orchards.com
2119 Naramata Rd. Naramata, BC
(250) 486-5113

Health Facts: *Beyond being Delicious*, here are 8 Reasons To Eat Fresh Cherries or Sip/Savor Cherry Juice:

1. Helps Post-Workout Recovery

Cherries or Cherry Juice is naturally high in potassium. Potassium conducts electrical impulses throughout the body.

Potassium also helps maintain blood pressure, hydration, muscle recovery, nerve impulses, digestion, heart rate, and pH balance. Cherries contain about 330 milligrams (mg) of potassium per cup, which is almost 10 percent of your daily recommended value.

2. Fights Inflammation & Arthritis Pain

Research shows that the antioxidants in cherry juice can reduce pain and inflammation from osteoarthritis (OA). A 2012 study showed that drinking cherry juice twice a day for 21 days reduced the pain felt by people with OA. Blood tests also showed that they experienced significantly less inflammation.

- Cherries, along with many other berries, are a rich source of antioxidants which helps prevent or repair damage to the body's cells by free radicals. The antioxidants replace free radicals in your body before they can cause any damage.
- Cherries are rich in two important flavonoids, isoqueritrin and queritrin, which act as antioxidants and work to eliminate byproducts of oxidative stress, therefore slowing down the aging process.

3. Reduces Swelling & Headaches

When people experience pain from swelling, they often turn to nonsteroidal anti-inflammatory drugs (NSAIDs). However, the effects of these drugs can be harmful, especially when you take them too often or have allergies. A 2004 study found that cherry juice can reduce inflammation and pain in animals, showing promise as a treatment for swelling in humans.

By helping reduce inflammation in the body, the anthocyanin and bioflavonoids in cherries also help eliminate migraine headaches. These compounds are known to have similar activity to aspirin and ibuprofen.

4. Regulates Metabolism & Fights Fat

There is evidence in animals that cherries can help adjust the body's metabolism and ability to lose abdominal body fat. One study showed that anthocyanins, a type of flavonoid responsible for cherries' red color, act against the development of obesity.

Another study in rats found that cherries can help reduce inflammation and abdominal fat, and lower the risk of metabolic syndrome.

Even without its antioxidants and nutrients, cherry juice is delicious and refreshing which makes it a healthy replacement for sodas and sports drinks.

5. Helps You Sleep

The anti-inflammatory properties of cherry juice combined with a dash of sleep-regulating melatonin may help you sleep better, according to a 2010 study. The results suggest that cherry juice has similar effects as insomnia medications like valerian or melatonin on older adults.

- Melatonin is also found to help the body's natural sleep patterns. Since the body so rapidly absorbs melatonin, cherries can increase melatonin levels in the blood, therefore improving the way you sleep.
- Extensive evidence points out that the antioxidant melatonin, which is also rich in cherries, is significant in improving the body's circadian rhythms. Since melatonin is found in small quantities in the body, a slight increase can produce great results.

6. Boosts Immunity

Like all fruits and vegetables, cherries pack a powerful antioxidant and antiviral punch. Flavonoids, a type of antioxidant in cherry juice, are made by plants to fight infection. Research shows that these chemicals can have a significant impact on immune system function.

7. Blocks Cancer Growth

In a 2003 study, researchers pitted cherry juice against the NSAID sulindac, which is the most common preventive anti-inflammatory treatment for colon tumors. Although an animal study, it is notable that cherry juice — unlike the NSAID — reduced the growth of cancer cells.

- Queritrin--*a flavonoid*--is rich in cherries, and has been found by researchers to be one of the most potent anticancer agents. When eating cherries, the queritrin is set free to fight off all the body's cancerous cells.
- Cherries also contain ellagic acid, a naturally occurring plant phenolic known as an anti-carcinogenic/anti-mutagenic compound. Some researchers say that ellagic acid may be the most effective way to prevent cancer.
- Another compound found in cherries--perillyl alcohol (POH)--is extremely powerful in reducing the occurrence of all types of cancer. Researchers found that POH stops the growth of cancer cells by depriving them of the proteins they need to grow. It has worked on every kind of cancer that POH has been tested against.

8. Helps Manage Gout

Cherry juice contains anthocyanins, which is what gives cherries their color. Anthocyanins have anti-inflammatory properties, which makes cherry juice a natural anti-inflammatory. Cherry juice treats gout flare-ups by reducing the level of uric acid in the body. Uric acid buildup is what causes gout.
A 2012 pilot study found that consuming cherry juice was more effective than pomegranate concentrate at lowering uric acid levels.

- Tart cherries contain two powerful compounds, anthocyanins and bioflavonoids. Both of these compounds slow down the enzymes Cyclo-oxyygenase-1 and -2, which help to relieve and prevent arthritis and gout in the body.