



GRAPES TALKING POINTS

2. A Bunch of History about Grapes

- **Grapes are one of the oldest cultivated fruits.** Hieroglyphics show that Egyptians were involved in grape (and wine) production, and the early Romans were known to have developed many varieties.
- Records of grape cultivation go back to at least 1000 BC, with references to grapes appearing along the Nile, the Persian deserts, Palestine, and the Mediterranean areas of Europe. The Mediterranean is still a prime grape-growing area. **Grapes are grown all over the world because they grow in a variety of conditions** (temperature, soil type, etc) of all small fruits. **There are even grapes grown in Pierre!** (ChrisaMari Estate Vineyard)
- Grapes have been **grown in California for more than 200 years.** The tradition of viticulture (cultivation of grape vines) **began in 1769 when Spanish friars established missions throughout the region.** Padres planted a European grape variety known as “Mission” in order to make sacramental wine. Native American wild grapes of the type *Vitis girdiana* grew along California stream banks, but these grapes were sour and of little use for winemaking.
- In California, the boom in grapes planted for fresh consumption arose in the early 1800s when a number of settlers recognized the untapped agricultural possibilities of the then-Mexican territory.
- By the 1850s, the United States had officially acquired California from Mexico and 80,000 gold prospectors had moved to the region, a few of them recognizing that there was money in grapes as well as gold ore. The young agricultural society recognized that grapes were an important commodity in which to invest, and today California wine, table grapes and raisins are all important agricultural commodities, with approximately 700,000 acres planted in vineyards.
- Grapes are round or oval in shape with a variety of sizes, colors and tastes.
 - Size: **small as a pea** to as **big as a plum**
 - Color: **white, red, blue, or black.** White grapes usually range in color from light green to amber or light orange. Red varieties may vary from pink to deep red, and their coloration may differ with degree of ripeness and exposure of fruit to sunlight. The blue range includes types like New York Muscat, which have a reddish-blue color. Black grapes are typified by a dark, purplish-black color.
 - Taste: **sweet to sour** (some with seeds, some without)

3. 4. & 5. How Do Grapes Grow?

- **Grapes are a form of berry. Grapes grow in bunches on climbing, woody vines** that grow from the ground. Grapes can be grown in most temperate climates, but the vines thrive in tropical and subtropical regions with average annual temperatures above 50 F.
- Grapevines are grown from cuttings or grafted onto existing rootstocks. The **vines need to grow two years before the first grapes are ready to harvest.** As they grow, the vines need to be supported on trellises.
- Grape growing is a year-round job.
 - **Winter:** Vines are pruned (ensures the correct number of fruiting canes will sprout next year.)

- **Spring:** Growers “girdle” the vines, meaning they strip a small ring of bark from the trunk. This forces nutrients to stay toward the top of the vine, resulting in larger berries. The “bud break,” stage occurs in spring, followed by a burst in leaf growth. Branches, or caneshoots, grow rapidly and flower clusters, which eventually become grapes, emerge.
- **Summer:** Blooming occurs when temperatures reach 68 F. Young “green berries” (grapes) appear in place of flowers and ripen into clusters.
- **Late summer/Fall:** Harvest by hand with special clippers
- Like most fruits, **grapes develop sugar as they ripen**, but they neither ripen nor sweeten after being harvested. This makes harvest time very important. Several factors go into determining maturity of fresh grapes: measurement of grape sugar content, assessment of bunch and berry size, assessment of bunch and berry uniformity, and berry color.
- During **harvest, the grape bunches are trimmed, inspected, packed into shipping containers and then transported to a cold storage facility for cooling. Grapes are not immediately shipped to market**, but are maintained in a controlled climate storage facility between 30 to 33 F with 90 percent relative humidity. **This prolongs their life to allow consumers to enjoy California grapes through February.**
- In the warm desert areas of the Coachella Valley, harvest generally begins in late spring and lasts until mid-July. The San Joaquin Valley can harvest until late fall.
- Tolerance to winter cold temperatures is a complex phenomenon affected by health of the vine, crop load in the previous season, degree of vine acclimation to cold preceding exposure to a damage-inducing temperature, and other factors. Dormant buds may be damaged at one temperature and trunks at another temperature. The ratings of relative resistance to winter damage are generalized to reflect variation in responses by different varieties, although cultural practices and environmental conditions may reduce or increase a vine's resistance.
- Even without an understanding of grapevine floral biology and genetics, early farmers had the ability to select the best vines and plant new vineyards with vines propagated from their best selections. Today, the science is much more precise, but grapevine breeding is still based on hybridization schemes designed to develop a single elite individual vine combining the best traits of both carefully-chosen parents. Because **most grapes are propagated from cuttings, and not grown from seeds**, a single vine with good characteristics can be readily turned into many more vines, all with the same genes and thus the same characteristics.
- Grapes make an excellent back-yard crop. The vines do not take up much space, and since there are varieties that are well adapted to a wide range of climates, inexperienced gardeners should be able to produce a good crop. Although they do not begin to produce as quickly as some other small fruits, total fruit bearing years of the plant is much longer than other garden fruits. Raspberry and strawberry plants may have to be replaced every 3 to 5 years, grapes are resilient and if properly cared for, they live to a “ripe” old age. Some vineyards in the Western United States have plants that have grown and produced for more than a hundred years, while in other areas, they may be even older.

- American and European grapes and their hybrids are the most common types of grapes grown in the Western United States. Each type grows best in certain climatic environments.
- The **skin slips easily off American grapes** and they have soft flesh, seeds, and a distinctive, strong flavor. They are generally not as sweet as European grapes and therefore are not well suited to fresh eating. The **best-known American grape is the Concord**.
- American grapes, such as the Concord, are generally hardier than their European counterparts and make excellent juice and jelly, but because of their seeds, they are not good for raisins.
- European grapes are better acclimated to milder locations and may grow in warmer areas of the Western United States. However, they require long, hot summers to mature. **Most grapes grown in California vineyards are European types.**
- Some seedless table grapes will grow well in colder areas - most of them are hybrids of American and European grapes. Homegrown grapes are not likely to be as large as those found in grocery stores. Insect pests generally do little damage to maturing grapes. Occasionally, you may see the zig-zag hollow pathways of the grape leaf skeleton between the layers of the leaves, but these pest created leaf attacks inflict little damage to the plant and don't get into the fruit.
- Grapes will tolerate a wide range of soil types including the alkaline soils, but they grow best in well-drained loamy or sandy soils. Heavy clay soil tends to hold water around the roots, which has the same effect as over watering. Grapes have deep root systems and therefore don't need the same water schedule as shallow rooted plants. Place the plants where they can be watered heavily, but infrequently.
- Iron deficiency, or chlorosis is common, especially in overwatered grapes. This problem is readily seen with Concord grapes the receive too much water over time. Chlorosis is characterized by pale, small, yellowed leaves with dark green veins. In very severe cases, the edges of the leaves dry up and turn brown, and vines grow and yield poorly.

7. Why should we eat Grapes?

- Like other berries, grapes are highly nutritious and valuable with high content of vitamins A, B1, B2, B6 and C.
- **Vitamin A:** Plays a role in **vision**, bone growth, cell functions, immune system
- **B Vitamins:** play important roles in **cell metabolism**. The B vitamins were once thought to be a single vitamin, referred to as vitamin B (much as people refer to vitamin C). Later research showed that they are chemically distinct vitamins that often coexist in the same foods. A lack of B12 or B6 can cause anemia.
- **Vitamin C:** is important for your skin, bones, and connective tissue. It **promotes healing** and helps the body absorb iron.
- **Vitamin K:** helps your body by making proteins for healthy bones and tissues. It also **makes proteins for blood clotting**. If you don't have enough vitamin K, you may bleed too much.
- **Antioxidants:** substances that may protect your cells against the effects of free radicals. Free radicals are molecules produced when your body breaks down food, or by environmental exposures like tobacco smoke and radiation. **The deeper the**

color of the grapes, the richer the flavonoids. Antioxidants are called flavonoids and phenols that can help **brain function**, prevent heart disease and some cancers.

- Grapes also have **fiber, iron, and calcium**.
- They are about three-fourths cup water, which helps to keep the body hydrated.
- Red grape juice has high concentration of a compound called resveratrol. This compound has anti-aging, anti-cancer, anti-inflammation and anti-viral properties.

Health Benefits

- Although most variety of grapes are very sweet, its glycemic index is still at a very safe level of 50. In fact, grape juice is an excellent stimulator of your body metabolism in helping to burn excess food and waste. It supplies heat and energy to the body in a short space of time after drinking.
- Here are the many more health benefits of grapes or its juice:
 - **Anti-coagulant:** The juice from this tiny fruit can help prevent blood clotting and in the process, help improve blood circulation which would generally improve on overall health.
 - **Anti-inflammation:** The anti-inflammatory agents in grapes greatly help reduce the risks of inflammatory problems like rheumatism, gout and asthma.
 - **Atherosclerosis:** Resveratrol in grapes is a good scrubber of arterial deposits, thus it effectively helps reduce the risk, or even reverse atherosclerosis.
 - **Bladder:** Highly cleansing to the bladder, cleaning out the stones and improving urination, improves bile flow and elimination of waste materials.
 - **Cancer:** The rich and high content of anti-oxidants in cancer are superb for the prevention of cancer.
 - **Eyes:** The flavonol compounds in grape seeds are effective for the treatment of night blindness, retinal disorders and vision improvement.
 - **Fever:** Drink grape juice consistently to reduce fever. It would also help relieve fatigue and provide energy to the body.
 - **Heart disease:** Grapes are beneficial in toning up the heart, reduce heart pains, and can normalize heart palpitations. To enjoy the benefits, go on a grape diet for a few days.
 - **Indigestion:** A gentle and natural home remedy for indigestion.
 - **Mouth and throat infection:** Drink juice of unripe grapes to help clear infections in the mouth and throat.
 - **Migraine:** Certain compounds in grapes make this miracle juice powerfully effective in relieving headaches and migraine.
 - **Kidney:** Grape juice is diuretic and is excellent for cleaning out the kidney and may help remedy kidney stones.
 - **Liver:** The abundance of minerals in grapes stimulate the cleansing activity in liver, helps to detoxify.
 - **Skin:** The highly cleansing properties of grape juice and the high vitamin C content is very beneficial for the skin and helps reduce acne.

8. How do you pick good grapes?

- In the store the **grapes should be plump and they should be secured on to the stem**, not loose and fall off easily.
- Also, if the stems are brown and wilted the grapes may not be very good to eat.

- Grapes are among fruits that have high pesticide residues. Try to choose organic where possible. If not, take the trouble to soak the tiny fruits in water with some salt and vinegar to rid it of the pesticides. Soak for about 10-15 minutes, then rinse and pat dry. Store in refrigerator to maintain its freshness for a few days.

Eat Your Colors

- Fruits and vegetables come in a rainbow of colors. Eat a variety of colorful fruits and vegetables every day — red, yellow/orange, white, green and blue/purple. There are three main color varieties of grapes — red, green and blue/black (part of the blue/purple color group).
- Red fruits and vegetables help maintain a healthy heart, memory function and urinary tract health. They may also lower the risk of some cancers. Examples of red California grape varieties include Flame Seedless, Red Globe, Ruby Seedless, Christmas Rose, Emperor, Rouge and Crimson Seedless.
- Green fruits and vegetables help maintain vision health and strong bones and teeth. They may also lower the risk of some cancers. Examples of green California grape varieties include Perlette, Sugraone, Thompson Seedless and Calmeria.
- Blue/purple fruits and vegetables help maintain healthy aging, memory function and urinary tract health. They may also lower the risk of some cancers. Examples of blue/purple California grape varieties include Beauty Seedless, Autumn Royal, Ribier, Fantasy Seedless, Marroo Seedless and Niabel.

Economic Benefit of Grapes

The United States wine, grape and grape products industries contribute more than \$162 billion annually to the American economy, according to a comprehensive study by MKF Research LLC of Napa Valley unveiled on Capitol Hill by the Congressional Wine Caucus on January 17.

- Employment: 1.1 million full-time equivalent jobs
- Agriculture: 23,856 grape growers, 934,750 grape bearing acres, \$3.5 billion in farm gate grape sales
- Wine Industry Direct Impact: 4,929 wineries in 2005, up from 2,904 in 2000, a 70% increase in five years; wineries now in all 50 states; \$11.4 billion in winery sales revenues

Welch's is the world's leading marketer of Concord and Niagara grape-based products, including grape juice and jelly.