



Apples

Interesting Facts

Apples are the most valuable edible horticulture crop in BC. About 75% of all BC orchard land is planted with apple trees. The apple industry is a major employer in the Okanagan Valley. Each year, 7% of the labour force is employed by the apple industry. About 4,800 people work in the orchards, 2,500 in packinghouses, and 1,000 are hired as seasonal workers.

What are apples?

An apple is a round tree fruit that has crisp white flesh. The skin colour of an apple can vary from yellow to green to red. An apple is a pome fruit, as is a pear. A pome fruit has multiple seeds protected by a core. There are over 100 varieties of apples grown in North America. The varieties grown for BC's commercial production are Red and Golden Delicious, Royal Gala, McIntosh and Spartan. Newer varieties now being widely planted include Jonagold, Braeburn and Fuji.

Where are apples produced in BC?

About 98% of BC apples are produced in the Okanagan-Similkameen Valleys. The rest are grown in the Fraser Valley and in the Kootenay areas. The hot, dry weather in the Okanagan is ideal for growing Red and Golden Delicious apples. High sunlight and temperature levels are ideal for apple colouring and yield. The low rainfall level reduces the impact of disease. Most orchards are on slopes near lakes. This moderates the temperature and reduces the risk of winter injury and spring frost.

How many apples do we produce?

about 27% of apples grown in Canada. The total quantity ranges from 91,000 tonnes to

100,000 tonnes. British Columbians consume 25% of the apples grown in BC. That's about 75 to 100 apples per person per year.

How are apples produced?

Apples are grown in orchards. Apple growing has become a specialized science known as pomology. An apple tree is composed of two parts: the cultivar (fruit-bearing part of the tree) and the rootstock. Both cultivar and rootstock are selected for specific site conditions. The cultivar is grafted onto the rootstock.

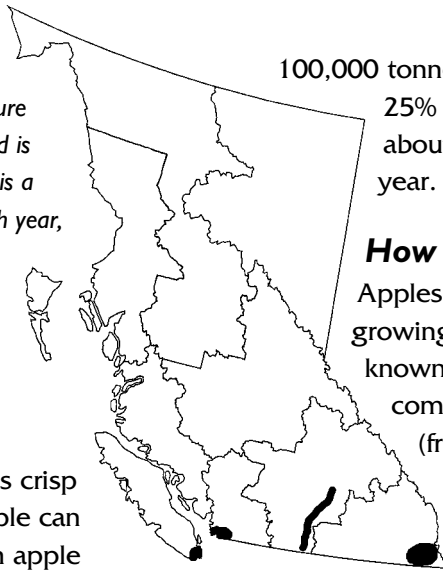
Grafting involves placing a short shoot of a dormant cultivar into the rootstock. The tongue and groove union is then wrapped with tape and left to grow. Caring for an orchard requires planting trees, pruning, fertilizing, controlling weed growth, insects, and other pests, watering, and replanting trees to ensure the orchard is always healthy.

Apple trees must be cross-pollinated. When the trees start to bloom, orchardists place beehives in fields to ensure pollination. It is important not to spray an orchard at this time, as honeybees are very sensitive to insecticides.

As small apples start to grow, some are removed to control the size and number of apples produced. The trees will also do this naturally during the June drop. Apples are harvested from August to October.

How are apples used?

About two-thirds of the apples grown are eaten as fresh fruit. Processed apples are used for fresh and frozen apple juice, sauce, pie filling, cider and vinegar, or dried into apple leather.



Apples are about 85% water. They contain a variety of essential minerals and vitamins. They are about 12% natural sugar or fructose. Fructose is a water-soluble sugar found in all ripe fruit. Because of the solubility of fructose, the body does not have to convert it into sugar before use, therefore, making apples a source of instant energy. Apples are a high source of pectin, a soluble fibre that can absorb more water than any other bulking agent.

Apples clean the digestive system. Eating an apple cleans the teeth and massages the gums, removing more bacteria. Scientists have proven that those who eat apples have fewer headaches, intestinal disorders, colds, respiratory problems and illnesses associated with the nervous system.

What happens after the apples leave the farm?

Two-thirds of the apple crop is sold fresh. Apples that are to be eaten fresh are hand picked. Apples are either sold directly right after harvest or taken to the packinghouse where they are stored, graded and packed into 18kg boxes and sometimes into smaller bags. Packinghouses use modern equipment and computers, but still rely on hand labour. Apples are shipped to North American markets by truck, and to other markets by boat. At the retail outlet, apples are either sold already bagged, or sold individually or in bulk by weight.

One-third of the crop is processed. Apple juice is the most popular form of processed apples. To make apple juice, apples are washed and ground to a pulp. The juice is squeezed out and filtered.

The juice is then pasteurized—heated to kill any harmful bacteria.

What challenges do apple growers face?

Fruit growers have modernized their growing methods to remain competitive. Many of the old orchards consisted of big apple trees planted large distances apart. Today, many orchardists have switched to high-density plantings. These orchards have smaller trees planted much closer together. For example, older orchards might have 80 trees per hectare. High-density orchards can have as many as 1500 to 12,000 trees per hectare. High-density planted trees produce fruit earlier, yield larger crops and are easier to harvest. Growers have planted different varieties of apples that are more popular in the international markets.

There are 3 main orchard pests that challenge apple production. They are the codling moth, leaf roller and bud moth.

Who's involved in producing apples?

- Orchard owners, managers and labourers
- Apiarists
- Packinghouse and processing plant employees
- Fertilizer, pesticide and equipment dealers
- Box, bin and pallet manufacturers
- Government and university researchers

Contacts and other resources:

BC Ministry of Agriculture and Lands
 BC Fruit Growers' Association
 BC Tree Fruits

Nutritional Facts

Serving Size: 1 medium apple (154g)

Calories	60
Total Fat	0g
Saturated Fat	0g
Cholesterol	0mg
Sodium	0mg
Total Carbohydrate	22g
Dietary Fibre	5g
Sugars	16g
Protein	0g
Vitamin A	2%

Vitamin C	8%
Iron	2%
Calcium	0%
Calories from Fat	0
Daily Value*	
Total Fat	0%
Saturated Fat	0%
Cholesterol	0%
Sodium	0%
Total Carbohydrate	7%
Dietary Fibre	20%

*Per cent Daily Values are based on a 2,000-calorie diet.