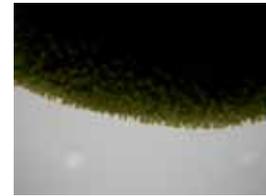


CHAPTER 8

Unique Features

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Fruit has its unique features because of variability on their skin and pulp colour, shape as well as smell and aroma. All these factors influence their nutritional quality thus beneficial for good diet and healthy consumption.

For instance, fruit with red skin or pulp such as dragon fruit, strawberries, red apples, pink grapefruit, watermelon and pomegranates are the richest sources of antioxidants called flavonols. Fruits in this category may protect against heart disease, cancer and urinary infections. According to a report by the World Cancer Research Fund, tomatoes, watermelon and pink grapefruit are also important providers of lycopene – a pigment in plants thought to reduce the risk of prostate cancer. Cranberries contain proanthocyanidins – plant chemicals that may help prevent infections of the urinary tract by stopping harmful bacteria such as *Escherichia coli* sticking to the bladder walls.

Fruit with green colour such as kiwi fruits is good for a strong immune system, healthy eyes and skin, as well as protection against cancer and heart disease. Filling up on greens, including kiwi fruit, will also give you plenty of immune-boosting vitamin C, also necessary for great skin, and folate – a B vitamin that protects

against birth defects. Sweet corn is also in this category. It is a rich source of lutein – a pigment in the eye that filters out damaging UV rays. A study at Massachusetts Eye and Ear Infirmary found a high intake of green source of fruit was associated with a substantially reduced risk of age-related blindness.

Fruit with orange and yellow skin and/or pulp such as mangoes, butternut squash, papaya, oranges and peppers are typically rich in alpha and betacarotene. Orange fruits can help bolster our body's defences and may prevent cancer and heart disease, maintain healthy skin and immunity. Fruits high in these nutrients are thought to reduce the risk of various gut and lung cancers, according to the World Cancer Research Fund and American Institute for Cancer Research. Beta carotene is also used by the body to make vitamin A, which is vital for eyes, skin and the health of mucous membranes in the nose and throat (so bacteria and viruses are less likely to penetrate). Orange citrus fruits are also a good source of vitamin C. What is a smart way to get more? Have a handful of chopped dried apricots with your breakfast cereal or use sliced peppers for a snack. Don't forget to drink orange juice with a meal.

Blueberries, blackcurrants, blackberries, prunes, black grapes, raspberries, plums, black and purple grapes, and cherries are fruits with purple and/or blue black skin or pulp. It's a good fruit source that can be used to defend against cancer and heart disease and also function as anti-aging agent and beneficial to get a healthy brain. In a study published in the Journal of Neuroscience, rats that ate an extract of blueberries, strawberries and spinach every day showed improvements in short-term memory. The blueberry extract was associated with improved balance and coordination as well.

White color also has their essential value. Taking a fruit such as bananas may have effect in lowering cholesterol, detoxifying the body, preventing cancer, and keeping blood pressure healthy. Other than that, some of the fruit groups contain sulphur compounds, which increase the activity of enzymes that remove toxic substances from the body. Sulphur compounds may also

help to lower cholesterol and keep a arteries flexible, lowering risk of heart disease. White fruit is also good source of potassium, which regulates blood pressure.

The fruit shape is an important quantitative trait closely related to the fruit quality. One of the unusual examples is cactus fruit called Sweet Pitaya. It's also commonly known as Dragon Fruit or Fire Dragon Fruit. The uniqueness of the plant dragon fruit is the triangle-shaped stem. In addition, the flowers only bloom at night time. The fruit has a season around July and November.

Avocado also has its own unique characteristic because its comes in a variety of shapes such as oblate, spheroid, high spheroid, ellipsoid, narrowly obovate, obovate, pyriform, clavate and rhomboidal.

The Blackberry is an edible fruit which is considered to be unique looking. In botany, it is called an aggregate fruit and is not a true

berry. This plant which is native to the temperate region is also called Caneberry or Bramble. Blackberry is a multiple fruit that is formed from a cluster of flowers but mature into a single mass.

'Gajus' or cashew nut is one of the well known local fruit. The fruit is in kidney or boxing-glove shaped drupe that grows at the end of the pseudo fruit. This fruit is one of the most peculiar fruit in the plant kingdom.

The skin surface of 'King fruit' – Durian (*D. zibethinus*) is very unique because of its sharp thorn or spine. But there was also a naturally spineless variety of durian growing wild in Davao, Philippines. In Malaysia, a spineless durian clone D172 is registered by the Agriculture Department on 17 Jun 1989. It was called "Durian Botak". In Indonesia, the spineless durian can be found in Kasembon, Malang.

The shape of fruit can also be designed by human. Mother nature is full of creativity, who always bring us some surprise. However, to make nature a little bit more wonderful, man's helping hand may be required. Some of the examples of human handmade unique features are baby-shaped pears, square or heart-shape watermelon. Some of them are totally naturally born like that while some of them are because of human will.

Fruit has also its unique smell, and aromatic features. The edible flesh emits a distinctive odour, strong and penetrating even when the husk is intact. Some people regard the durian as fragrant; others find the aroma overpowering and revolting. The smell evokes reactions from deep appreciation to intense disgust, and has been described variously as almonds, rotten onions, turpentine or maybe gym socks. The odour has led to the fruit's banishment from hotels and public transportation.