

Prunus persica, peach, nectarine

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Brief facts

- *Prunus persica* is a small deciduous tree growing up to 15 feet tall with spreading crown.
- The plant produces delicious fruits: peaches and nectarines. Peach fruits are pubescent (fuzzy) throughout the growing season, whereas nectarines have a smooth, plum-like peel. Both peaches and nectarines may be **freestone** (pit relatively free of the flesh) or **clingstone** (pit adheres to flesh).
- Peaches are a tasty treat with modest calories (~70 kcal), a good source of potassium, vitamins A and C, low sodium, no saturated fat.
- The nectarine characteristic is controlled by a single recessive gene. In order for a tree to be a nectarine type, it has to receive the nectarine gene "g" from both parents. The cross

between two nectarines will always result in nectarine offspring. Most peaches are homozygous for "G", the peach characteristic. Two peach varieties that have a single nectarine gene are **Autumnglo** and **Encore**.

- The seed can contain high levels of hydrogen cyanide. In small quantities, hydrogen cyanide has been shown to stimulate respiration and improve digestion, it is also claimed to be of benefit in the treatment of cancer. In excess, however, it can cause respiratory failure and even death.
- China is widely held to be the native home of peaches. This is supported by the fact that there is a wide range of wild peach types in the countryside. The peach was brought to the Mediterranean area from Iran (formerly called Persia), the source the scientific name for the peach *Prunus persica*. The peach was known in Greece by 300 BC and by the Romans shortly after 100 AD. Into United States the peach trees were most likely introduced in 1500s by French explorers at territories along the Gulf coast near Mobil, Alabama, then by the Spaniards, who founded St. Augustine in Florida.

Developmental stages (life cycle)

Life Cycle Stages

The peach tree life expectancy is about 8-15 years.

- **seed stage MeSH**

- **dormant seed**

also called **stone** or **pit**

- **germinating seed MeSH**

peach pits germinate better after a cold treatment (stratification); germination can take from 2-3 weeks to up to 2-3 or more months

- **seedling MeSH**

also called **whip**; up to 1 year of age

- **sapling**

juvenile tree that displays vegetative growth only; plant may bloom without bearing fruits

- **adolescent**

the plant bears its first fruit; yield increases gradually over the next few years; up to 3 years old

- **mature**

the plant starts to bear significant harvests; 4 years old and older

- **dormant**

in winter season (November-February) the peaches are "asleep"; peach trees require a large number of chilling hours (hours of cold weather below 45 degrees) to awaken and produce a high quality crop; the chilling hour requirements range from 600 to 1100 depending on the variety and pick date

- **flowering**

the bloom occurs in March-May

- **green fruit**

a period of rapid growth that lasts about 30 days; by the end of this stage, nearly all the cells of the fruit have been formed and the pit begins to harden

- **mature green fruit**

pit hardening; fruit size increases more slowly

- ripening

fruit development from pollination to harvesting; peach fruit development typically requires ~90 days or longer; peach fruit is **climacteric** and is characterized by production of **ethylene** during its development; the ethylene is involved in the fruit's ripening; concentration of the ethylene is gradually rising during fruit development and at certain point it induces a mature, not growing tissue to switch rapidly into a new state - ripening

- breaker stage

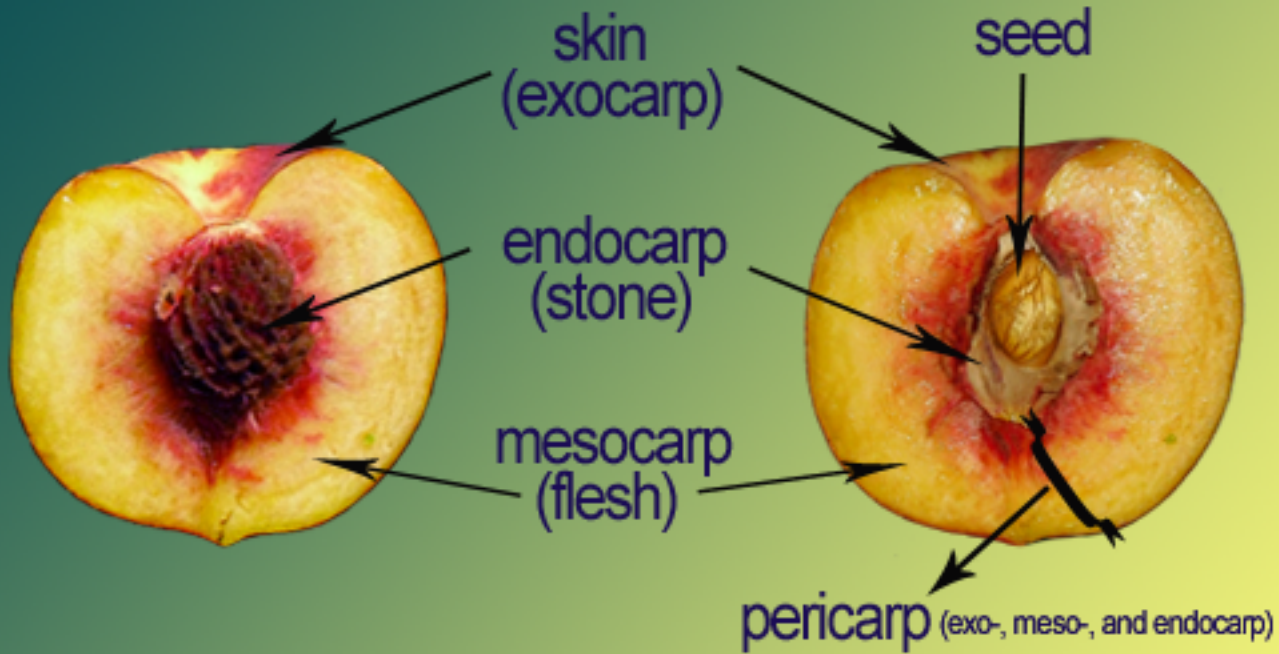
turning of the fruit color and fruit softening; the stage begins 4 to 6 weeks before harvest; it is period of rapid growth of the skin (exocarp) and flesh (mesocarp) of the fruit; climacteric rise of the ethylene occurs at the end of this stage; usually peaches are harvested at the at the firm-breaker stage

- ripe

post-climacteric



Peach fruit anatomy



Peach fruit anatomy

Plant Components

- fruit MeSH

the peach fruit is a **drupe**; it is fleshy and contains a single hard stone that encloses a seed

- pericarp

tissue surrounding a seed that develops from the ovary wall of the flower

- fruit skin

exocarp

- **mesocarp**

also called **flesh**; a fleshy interior of the fruit

- **endocarp**

a hard, lignified **stone** or **pit** derived from the ovary wall of the flower

- **seed**

the seed is enclosed by hardened **endocarp**

References

Websites

- [History of Peach Trees, *Prunus persica*](#)
- [Wikipedia: Peach](#)



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