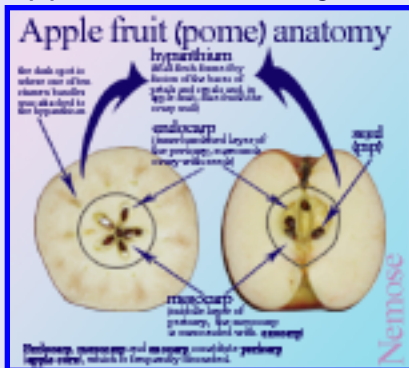


Malus x domestica apple

- Taxonomy
- Brief facts
- Developmental stages (Life cycle)
- Apple fruit anatomy



- References

cellular organisms - Eukaryota - Viridiplantae - Streptophyta - Streptophytina - Embryophyta - Tracheophyta - Euphyllophyta - Spermatophyta - Magnoliophyta - eudicotyledons - core eudicotyledons - rosids - eurosids I - Rosales - Rosaceae - Maloideae - Malus - Malus x domestica

Brief facts

- The apple is a small deciduous tree reaching 5-12 m tall, with a broad, often densely twiggy crown.
- The apple tree is one of the most widely cultivated tree fruits, and, probably, the earliest tree to be cultivated.
- The ancestor of the modern domesticated apple tree, *Malus*

sieversii, is native to the mountainous areas of Central Asia in southern Kazakhstan, Kyrgyzstan, Tajikistan, and Xinjiang, China.

Developmental stages (life cycle)

Life Cycle Stages

- **seed stage MeSH**

usually apple cultivars used as a rootstock are grown from seeds

- **seedling MeSH**

usually seedling is used as a rootstock for grafting scion of desired cultivar on it after it is about 1 year old; also, most of new cultivars originate as seedlings, which either arise by chance or are bred by deliberately crossing cultivars with promising characteristics

- **sapling**

2-4 years old tree which consists of a rootstock and a graft of desirable cultivar

- **mature**

5-10 years old tree; mature tree can bear 40-200 kg of apples per year

- **flowering**

apples must be cross-pollinated to develop fruit

- **early flowering**

the center of the flower cluster, King Bloom, has opened

- full bloom

80% or more of the flowers on the tree or in the orchard are open

- petal fall

flower petals are falling from the tree

- ripening

- fruit set

8-15 mm fruits; during this period farmers thin the fruits; also, natural dropping of inferior fruits occurs

- green fruit

1-2.5 inches fruits (for Red Delicious cultivar); green or mostly green in color; by this time final fruit count has been determined (no more fruit thinning and fruit dropping)

- ripe

harvestable fruit; final fruit size is a result of the number of fruit on the tree and the growing conditions that year

Apple fruit anatomy

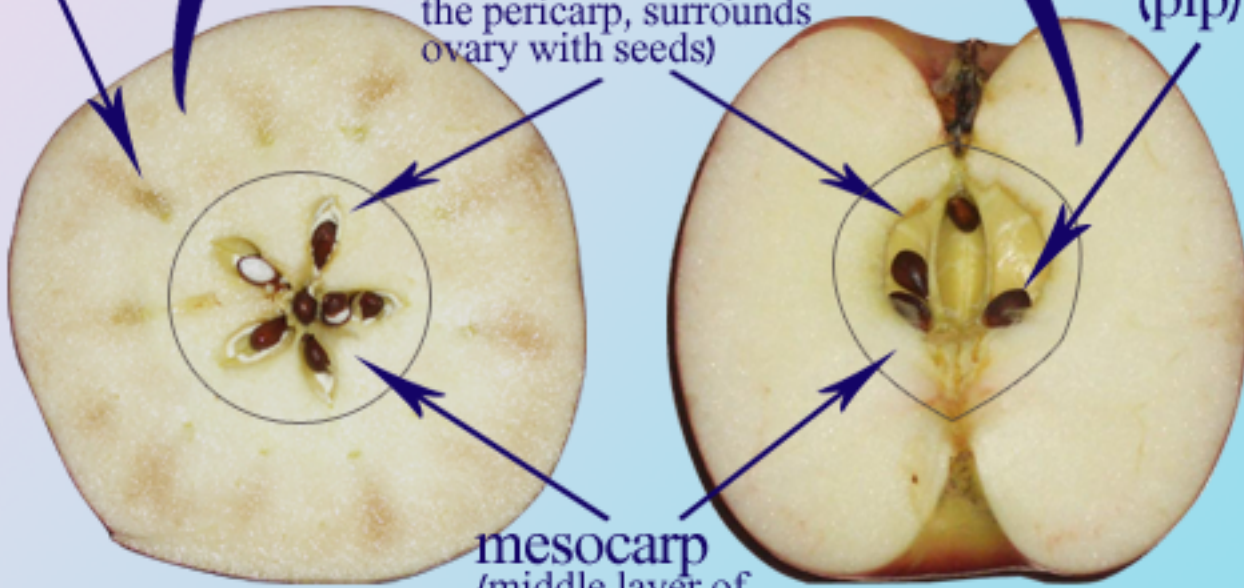
Apple fruit (pome) anatomy

the dark spot is where one of ten stamen bundles was attached to the hypanthium

hypanthium
(fruit flesh formed by fusion of the bases of petals and sepals and, in apple fruit, fused with the ovary wall)

endocarp
(inner hardened layer of the pericarp, surrounds ovary with seeds)

seed (pip)



mesocarp
(middle layer of pericarp, the mesocarp is surrounded with **exocarp**)

Endocarp, mesocarp and exocarp constitute pericarp (apple core), which is frequently discarded.

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References

PubMed articles

- Major topic "Malus": free full text articles in PubMed



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