Prunus persica (L.) Batsch

Rosaceae

LOCAL NAMES
English (Rio Oso gem peach,red haven peach,red Ceylon peach,peach,freestone peach,clingstone peach,bonanza peach,wild peach,common peach); French (pêche); German (pfirsich); Italian (pesca); Portuguese (pessego); Spanish (melocoton)

BOTANIC DESCRIPTION
Prunus persica is a medium-sized deciduous woody tree, 6-8.5 m high; rounded to broad-rounded, open crown, with vase-shaped ascending low slender branches.

Leaf alternate, simple, elliptic-lanceolate, finely serrated, 7.5-15 cm long, often curved along midrib, shiny dark green above, paler below with acuminate apex, a cuneate base and a glandular petiole, 5 mm long. The long narrow leaves hang somewhat pendulous providing an interesting effect. The leaves turn a poor yellow-green before dropping in fall.

Flowers hermaphrodite, showy white, pink or red, solitary, sessile, 5-petalled and 2.5-3.8 cm in diameter.

Buds narrow ovate and distinctly pubescent, imbricate with dark reddish brown scales that are mostly covered with gray pubescence.
Fruit a drupe, short-stalked, soft and pubescent at maturity, globular to oval with a protruding knob at the apex, 4.5-7 cm long and 3.8-6 cm wide; weight, 35.5 g; velvety, green with deep-red blush when ripe. The flesh is mainly white but a rich strawberry-red in the center; tender, juicy, and of excellent, sweet-acid flavor with a slight suggestion of bitter-almond. A hard, ribbed pit inside encloses the seed.
Seed free, rough and very hard; 2.1 cm long and 1.5 cm in diameter; weight, 2.52 g; weight of kernel, 1.8 g.

Bark dark gray, initially smooth with prominent horizontal lenticels, later splits and becomes irregularly scaly. Thin bark can be peeled off in circular pieces by hand, exposing the dark surface underneath; the girth of main stem is 71.5 cm.

BIOLOGY
Peaches start bearing fruit at 3-4 years old, reaching a peak at about 12 years. The flowers are hermaphrodite, pollinated by bees, flowering in early spring and ripening in mid summer. The fruiting season, like the flowering season is known to vary with altitude.

Tree(flowering); taken at: Lotusland - Santa Barbara, CA (W. Mark and J. Reimer)

Leaves; taken at: Lotusland - Santa Barbara, CA (W. Mark and J. Reimer)

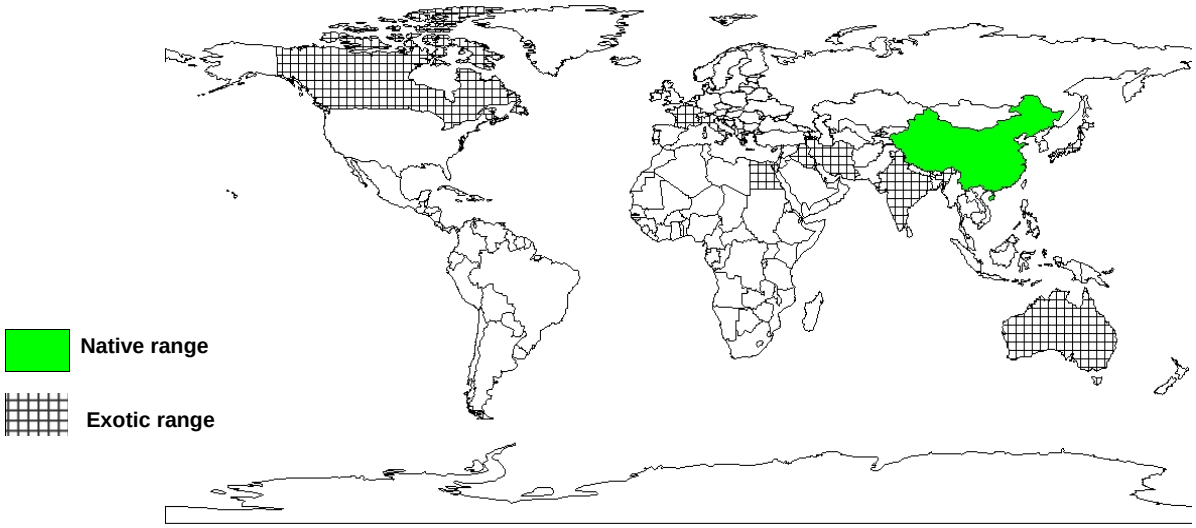
Flowers (close-up); taken at: Lotusland - Santa Barbara, CA (W. Mark and J. Reimer)

ECOLOGY
Woodland garden; sunny edge; dappled shade.

BIOPHYSICAL LIMITS
Altitude: 700-2 440 m
Temperature: Average 14°C; tolerate temperatures to around −26 °C to −30 °C with mean temperatures of the hottest month between 20-30 °C. Peach prefers full sun, and cannot grow in the shade.
Rainfall: 900 mm
Soil type: Prefers moist, deep, and acidic to neutral well drained soils that are either loamy, sandy or clay.

DOCUMENTED SPECIES DISTRIBUTION

Native: China
Exotic: Australia, Canada, Egypt, France, Greece, India, Iran, Iraq, Israel, Italy, Japan, Portugal, South Africa, Spain, US, Vietnam



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS
Food: The fruit can be eaten fresh, cooked or dried for later use. Fruit are best consumed in the day of picking. One peach (of around 100 gram size) supplies about 5% of an adults minimum daily Niacin (B3) needs. The fruit is a good source of vitamin A, vitamin C, protein and sugars. The fruit is often used in ice creams, pies, jams etc.

Flowers, raw or cooked can be added to salads or used as garnish. They can also be brewed into a tea. Distilled flowers yield a white liquid which can be used to impart a flavour of the seed.

Lipids: A semi-drying oil is obtained from the seed. The seed contains up to 45% oil. This oil resembles the oil from bitter almonds, for which it may be substituted in skin creams.

Tannin or dyestuff: A dark grey to green dye can be obtained from the fruit and leaves.

Gum: A gum is obtained from the stem. It can be used for chewing and as an adhesive.

Medicine: The leaves are astringent, demulcent, diuretic, expectorant, febrifuge, laxative, parasiticide and mildly sedative. The flowers are used as a purgative. The fruits are a tonic for the brain, enrich the blood and remove bad smell from the mouth and the sputum. The oil from the kernels is an abortifacient, good in piles, deafness, earache and stomach troubles of children. In China and Malaya, peach kernels are used to treat coughs, blood diseases, rheumatism and ague. The root bark is used in the treatment of dropsy and jaundice.

Poison: The seed can contain high levels of hydrogen cyanide, a poison that gives almonds their characteristic flavour. This toxin is readily detected by its bitter taste. Usually present in too small a quantity to do any harm, any very bitter seed or fruit should not be eaten. 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.

SERVICES
Ornamental: Peaches can make nice small ornamental trees in planting beds or alongside patios. They have been successfully used in medians of boulevards and around parking lots in a number of Texas communities. They make effective screens for six to seven months due to dense, low-branching habit, but are not particularly attractive in winter.

TREE MANAGEMENT
Common peach should be located in full sun, and with good air flow to allow cold air to flow away on frosty nights and keep the area cool in summer. They are best planted in early winter, to allow time for the roots to establish and be able to sustain the new spring growth. Planting in rows should be north-south.

Peaches require a constant supply of water which should be increased shortly before the harvest leading to best tasting fruit. Drip irrigation is ideal. In dry conditions, extra watering is important.

Peaches need more nitrogen than most other fruit trees. An NPK fertilizer should be applied regularly, and an additional mulch of poultry manure in autumn soon after the harvest is of benefit.

For best flower production in the subsequent year heavy pruning should be done after flowering. This should be done when they have reached 2 cm in diameter, usually about 2 months after flowering. If properly pruned trees can be maintained at 3-3.5 m high.

GERMPLASM MANAGEMENT
At the time of ripening, as much as fifty percent of the seed may be dormant. Seeds storage behaviour is described as orthodox, requiring hermitic air-dry storage at cool temperatures.

Seed requires 2-3 months cold stratification and is best sown in a cold frame as soon as it is ripe. Stored seed should be sown in a cold frame as early in the year as possible. The stored seed is best given 2 months warm followed by 3 months cold stratification. Seeds should be protected from mice etc.

In commercial nursery practice, peach stones are commonly planted in the fall of the year and germinate freely the following spring since fall planting provides the proper conditioning. However, better results are expected if the seeds are stratified over winter under controlled conditions and planted in the spring. The most favorable stratification temperature is between 0-7.2oC. At this temperature, the seed after germinates in approximately 75-100 days.

PESTS AND DISEASES
Borers are devastating to peaches, making most plants short-lived. Cold injury can kill flower buds or cause major branch dieback. Aphids cause distortion of new growth, deposits of honeydew, and sooty mold. Spider mites cause yellowing or stippling. Tent caterpillars make large webbed nests in trees then eat the foliage.

Peaches are also affected by a number of serious disease problems including fire blight and brown rot of the fruits. It is a host for fruit flies (including Anastrapha spp., Bactrocera spp., & Ceratitis spp.). a bacterium causes leaf spot and twig cankers. Small, reddish spots dry, and drop out, giving a shot holed appearance. Black knot causes black swellings or galls on the branches. Powdery mildew causes a white coating on the leaves.

FURTHER READNG

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SUGGESTED CITATION

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