Post-harvest handling

The fruit must be picked with a stalk attached to avoid tearing of the skin. A cluster is cut from the branch with a sharp knife or clippers. Both clusters and stalk will be detached from each fruit and the fruit is graded according to size and colour to provide uniform packs.

USES

It is a great source of vitamin C which forms an integral part of the human diet. Ripe fruit is edible and can be used to make excellent jam, jelly, cake, drink, dessert or is added to fruit salad. The unripe fruit is used to make pickles. Kei apple trees can be cultivated as a border or used to form an impenetrable hedge around a garden to keep unwanted animals and people out. The leaves are used as fodder. Animals such as monkeys, antelope and baboons also like the fruit.

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Kei Apple

Scientific name: *Dovyalis caffra*
Family: Salicaceae
Common names: Kei appel, Appelkoosdoring, Kei apple, Umgokolo, Amagokolo, Wild apricot, um-Qokolo, Umkokola, Dingaan's apricot, Motlhono.

agriculture, forestry & fisheries
Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

ORIGIN AND DISTRIBUTION

It is native to the Kei River (from which the common name derives) area of Namibia and abundant in the wild around the Eastern Cape and KwaZulu-Natal.

PRODUCTION AREAS IN SOUTH AFRICA

Kei apple is found in valley bushveld, dry areas, wooded grassland, on forest edges of Eastern Cape, KwaZulu-Natal and Limpopo.

DESCRIPTION

Kei apple is an evergreen fruit tree, or spiny shrub of South Africa. It grows up to 6 m tall in dry types of woodland in contrast to 8 m to 9 m in the moister types of open woodlands.

BARK

Kei apple bark is greyish to yellowish-brown in colour and smooth on young branches, but grey, fissured and flaky to cocky on older branches and stems. Young branches are heavily armed with long (40-70 mm) spines.

LEAVES

Kei apple leaves are simple and occur in clusters on dwarf side branches but alternate on young shoots, dark green with a waxy luster, with 3 to 5 prominent veins from base on both sides. The leaf tip is rounded to notched, leaf margin is smooth, slightly rolled under and base tapering to a leafstalk up to 5 mm long.

FLOWER

Flowers are creamy green in colour, inconspicuous, solitary or clustered without petals. Male and female flowers occur on separate plants, though some female plants are parthenogenetic. Male flowers are 3 mm long in dense clusters of 5 to 10 flowers. Female flowers are found in groups of up to 3 on stalks, 4 to 10 mm long in leaf axis.

FRUIT

The berry-size fruit and apple-like, is oblate or nearly round, glossy dark green when young and changing to bright yellow or orange colour (edible stage). It is up to 60 mm in diameter, containing 5 to 10 small seeds which are 10 mm long. The fruit is juicy, tasty and acidic.

CLIMATIC AND SOIL REQUIREMENTS

Temperature

Kei apple grows best where the mean temperature (especially day-time temperature) is high. It is also found in forest having a dry season minimum temperature of about 4^0C with a maximum temperature of 45^0C. It is a drought and frost-resistant species.

Rainfall

The plant grows naturally in the wild in low-lying subtropical areas and it withstands dry conditions. It is found mostly in areas of summer rainfall and it does well in a precipitation of about 700 mm. In South Africa, the tree does best where annual rainfall is 1000 mm to1 700 mm.

Soil

Kei apple is adapted to many varieties of soil, from sandy to loamy clay soils with a preference for well drained and aerated soil. However, the tree can grow well in poor soils. The tree grows well at a pH of 5, 5 to 8, 5.

CULTIVATION PRACTICES

Propagation

Kei apple is easily propagated from seed and can also be propagated from hardwood cuttings provided they are treated with a root-stimulating hormone before planting.

Planting

The seeds must be collected from the ripe fruit. They should be cleaned and dried in a shady spot before planting. The seed should then be sown in seedling trays filled with river sand or seedling mix. The seeds must be pressed down into the sand until they are level with the surface of the sand and they must be covered with a layer of fine sand and kept moist. Plants bear fruit at about four to five years after planting.

Diseases and pests

The fruit is attacked by the fruit fly and larvae of the African leopard butterfly feed on the leaves. Sanitation is important in reducing overall fruit fly densities. Removal of old fruit remaining on trees following harvest and burial of all fruit on the ground is recommended.

Harvesting maturity

The fruit reaches maturity in 90 days from full flower opening. The ripeness is determined by the full development of colour.