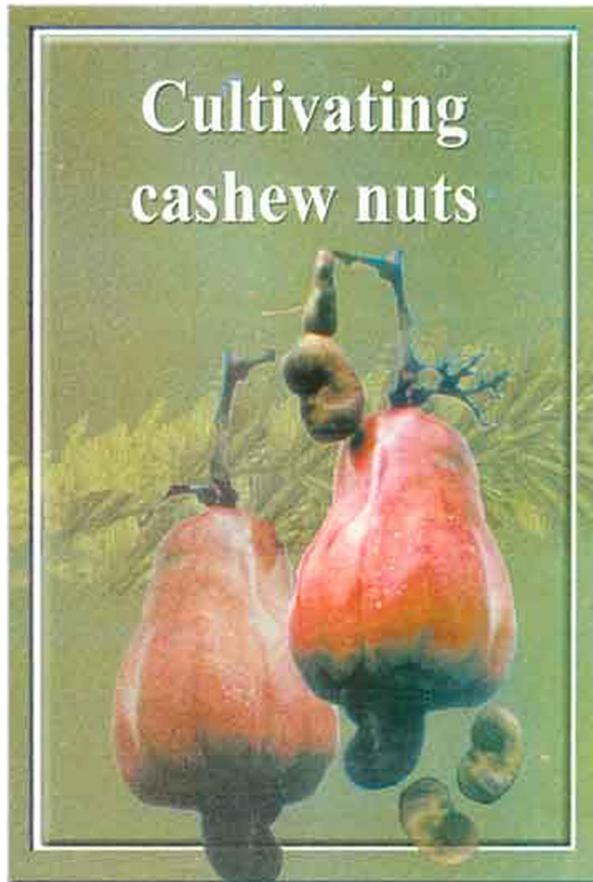




DEPARTMENT: AGRICULTURE



The tree

The cashew-nut tree is a fast grower and an evergreen tropical tree. It grows to a height of 12 m. Blossoming takes place between November and January. Seedling trees flower in the third year after planting. The fruit ripens fully within 2 months.

The fruit (nut)

The nut is attached to the lower portion of the cashew apple which is conically shaped. The cashew nut (seed) hangs at the bottom of the apple, and is c-shaped.

The cashew seed has within the outside shell the edible kernel or nut. In its raw form the cashew kernel is soft, white and meaty. When roasted it changes colour and taste. Salted, it appeals to the palate as the most delicious nut.

Cashew apples and cashew nuts are excellent sources of nutrition. The cashew apple contains five times more vitamin C than an orange and contains more calcium, iron and vitamin B1 than other fruit such as citrus, avocados and bananas.

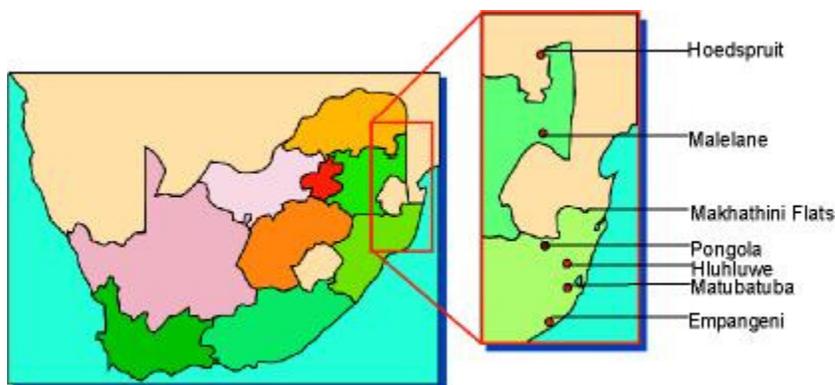
Cashew shell oil extracted from the shells is caustic and causes burns on the skin. The mucous membranes of the mouth and throat are severely affected when it comes into contact with shell oil or the irritating fumes emitted during roasting. The oily shell liquid has many uses.



Climatic requirements

- Cashew trees are genuinely tropical and very frost sensitive.
- The trees grow in a wide spectrum of climatic regions between the 25 °N and S latitudes.
- Although the cashew can withstand high temperatures, a monthly mean of 25 °C is regarded as optimal.
- Yearly rainfall of 1 000 mm is sufficient for production but 1 500 to 2 000 mm can be regarded as optimal.
- The cashew tree has a well-developed root system and can tolerate drought conditions. Rain during the flowering season causes flower abortion due to anthracnose and mildew.
- During harvesting, while nuts are on the ground, rain and overcast weather causes the nuts to rot or start germinating.
- Nuts germinate within 4 days when lying on wet soil.

Trees grow well at Pongola, Hluhluwe, Mtubatuba and Makhathini where the climate can be described as warm-subtropical. The Natal coastal region north of Empangeni as well as the Pongola valley are suitable areas for cashew production. Regions in the interior, such as Malelane and Hoedspruit, with warm summers and winters are also suitable. In other subtropical regions of South Africa, where the absolute minimum temperature falls below 7 °C, commercial plantings will be at a high risk.



Areas where cashew trees grow well

Soil requirements

The cashew is a strong plant that is renowned for growing in soils, especially sandy soils, that are generally unsuitable for other fruit trees. For the best production deep, well-drained sandy or sandy-loam soil is recommended. Cashew trees will not grow in poorly-drained soils.

Establishment

Self-pollination and cross-pollination play an important role in the formation of cashew seed. Seedlings therefore show great variation and no "true to type" trees can be grown from seed.

Selected trees should preferably be multiplied by grafting or air layering because vegetative propagation will ensure the best production and quality. Trees that are precocious bearers and grow vigorously are selected.

Nuts should weigh between 8 and 9 g with a density of not less than 1,0.

Trees with yellow to grey-brown apples have exhibited the most resistance against anthracnose and are associated with the best production.

Planting

Fresh seeds that sink in water are planted in an upright position in a planting bag containing a loose, sterilised soil mixture. Three to four seeds can be planted directly in the planting hole. The weakest ones are thinned out later and the strongest left to develop further. The seedlings are very susceptible to *Phytophthora* root rot. The plant bags should be 350 to 400 mm deep, as the tap-root grows very fast and bends around as soon as it touches the bottom.

Grafting

Two grafting techniques, namely side grafting and wedge grafting are practised with success. Grafting should commence as soon as possible (seedlings of 3-4 months old) and planted out in the orchard to prevent the tap-root from bending.

Seedlings

Cashew seedlings are grown under shade (45 %) and hardened off before planting in the orchard. It is very important not to disturb the root system during planting. Young trees should be supported for the first 2 to 3 years so that wind will not blow the plants over.

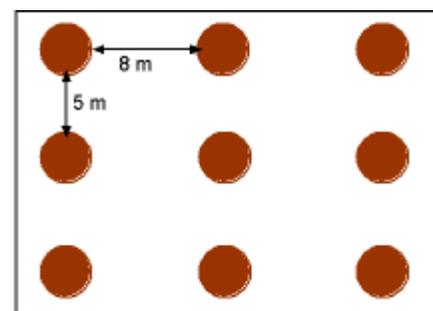
Planting distance

Planting distances of 8 x 5 m is recommended. The trees grow vigorously in the first 3 years and as soon as the crowns touch each other alternate trees should be removed until the permanent planting distance of 10 to 12 m is reached. Branches hanging on the ground should be removed because they interfere with harvesting. In other parts of the world cashew trees bear well, in spite of the little attention devoted to the orchards.

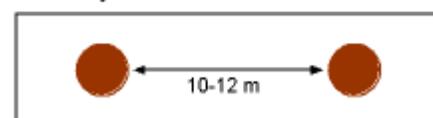
Growth and production of cashew trees can be enhanced by establishing clonal orchards, and improving fertilising and irrigation practices

Fertilisation

The application of nitrogen and phosphate are important.



Planting distances of 8 x 5 m is recommended in the first 3 years



Permanent planting distance of 10 to 12 m is recommended



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