

## Tree Species No. TTS3

*Anacardium occidentale*, Family Anacardiaceae

*Anacardium occidentale* is a fast growing evergreen tree or shrub that produces a well known economic crop, cashew nuts. It has light grey bark that is smooth when young but develops small cracks with increased age and has dark green leaves. It has potential as a soil stabilising plant because it tolerates drought and is able to grow on relatively dry infertile soils and still provide some financial returns. It has also been successfully used in dune stabilisation projects.

**Common names:** Cashew nut, pomme cajou, anacardier, maranon, kasuy.

**Distribution:** The cashew nut is indigenous to Central and South America but has now been introduced to most tropical lowland areas.

### Ecology

Rainfall: 500-3500mm.

Temperature: 19-34° C.

Altitude: 0-1000m.

Soil type: The cashew nut will tolerate most soil types, however if rainfall is above 1500mm then best results are achieved on well drained soils. It is usually found on slightly acid to slightly alkaline soils (pH 5-8.)

Other: Will not tolerate waterlogging and is sensitive to frost.



### Botany

Height: Up to 12m.

Diameter at breast height: 15-25cm, depending on environmental conditions.

Crown: Broad, deep and massive.

Flowers: Male and female flowers occur on the same tree. Each flower has five petals and are 1cm diameter.

Fruit: The fruit have two distinct parts, a receptacle called the cashew apple and, at the base of the receptacle, a kidney shaped nut.

## Uses

**Main:** The cashew nut is an important export crop for many countries and is used in confectionary. The shell of the nut is also used in the production of phenol-containing oils that can be used in preserving and waterproofing and once refined can be used as a brake lining and in inks and cements.

The cashew nut is able to grow on poor soils and is drought tolerant, so the tree is often used for soil conservation and erosion control.

**Others:** The bark is used in the production of tannin and it is commonly used as a hedge species and also as a source of firewood. It is also used as a shade tree and is said to be resistant to strong winds. The scented flowers are attractive to bees.

**Yield:** The tree begins producing fruit after approximately three years and reaches full production in 7-10 years. Under good conditions up to 70kg/tree/year can be produced, however under poor conditions it can be as little as 8-10kg/tree/year.

## Cultural instructions

**Seed storage:** Dry the seeds in the sun for two days and then store in ordinary room conditions for up to one year.

**Pre-treatment:** Soak seeds in water for two days.

**Germination:** Seed viability can be tested by placing seeds in water; those that sink are likely to be viable. Dense seeds tend to be more vigorous, this can be tested by placing the seeds in a solution of 700g of sugar dissolved in 5 litres of water. Those that sink are likely to be most vigorous and healthy.

**Nursery:** Use plastic planting pouches or something similar and then transplant with care due to the extreme fragility of the roots, in some cases direct sowing is preferable to prevent the risk of root damage. Three seeds should be planted approximately 5-10 cm deep but only the most vigorous should be allowed to remain.

**Planting out:** The cashew nut is commonly grown from seed despite a large variability in yield within the species. Plant in soil 3-4cm deep with the stalk end up. Plant approximately three seeds per hole, 20cm apart, to improve survival. Weaker seedlings can be removed later.

Vegetative propagation is also possible but is not widely practised. It is preferable because cuttings can be taken from high yielding plants thus increasing yield potential.

**Spacing:** 10x10m or 100 plants per hectare.

**Management:** Regular weeding is necessary in the first two years to reduce light competition.

## Other

Pests and diseases: There are two pests that can cause serious damage to the cashew nut, *Helopeltis anacardii* and *H. schoutedeni*. These suck the sap from the host plant and the saliva causes the cells of the plant to die. Black patches appear and young shoots die back. These can be reduced by the introduction of natural enemies such as spiders, mantids and assassin bugs. Do not grow cashew next to other crops susceptible to *Helopeltis* attack and improve the fertility and drainage of the soil as attack is more common on infertile and waterlogged land.

Limitations: The roots of young plants are fragile and are thus difficult to transplant, therefore great care should be taken. The shell of the nut can cause poisoning if not roasted or grilled thoroughly.

Produced by the Tropical Advisory Service, June 2000

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