

EDIBLE AUSTRALIAN ACACIAS

Acacia coleii, *A. elachantha*, *A. torulosa*, *A. tumida*

Leguminosae

ECHO® PLANT INFORMATION SHEET

Most edible Acacia seed species are from northern semi-arid regions of Australia and range from medium-sized trees to large, multi-stemmed bushes. Several edible Acacia species have been successfully introduced into African semi-arid regions like Niger and Senegal. *A. coleii* has excelled in acacia trials in Niger, showing the most potential for use as a new crop plant. *A. corriacea* is a highly esteemed food of the Aboriginal people of Australia, but establishment has been difficult in Niger. *A. corriacea* can reportedly live for 30-50 years. Its needle-like leaves and light canopy give low shading, and the deep taproot should not interfere with nearby crops. *A. elachantha* has a good growth rate and higher seed yields than *A. coleii*, but it has a long ripening period and a tendency to shatter. Due to its tall size, judicious pruning is necessary for an easy harvest; the new branches are flexible enough to be pulled down for harvesting. *A. elachantha* is a vigorous tree producing a lot of biomass and strong poles 3-4 m (10-13 ft) in length. Plantings of *A. torulosa* show high survival rates after planting out, and mature *A. torulosa* in Niger showed no signs of stress and carried a heavy seed crop after a low rainfall year. *A. tumida* has grown well in Niger but needs slightly higher rainfall conditions to thrive; the tree may grow rapidly but fail to set seed. It has large seeds which are easy to harvest and better balanced nutritionally than *A. coleii* seed. For alkaline and salt affected areas, try *A. ampliceps*, *A. victoriae*, and *A. stenophylla*. These occur naturally in salt-affected and high water table sites.

Edible Acacia seeds have long served as a food source for Australian Aboriginal peoples. The nutritious seeds of the edible Acacia plants often are parched and ground into a meal for baking. Seeds have also served as sources of a coffee substitute. *Acacia coleii* trees make good windbreaks if planted in rows. This species colonizes wastelands well and has nitrogen-fixing capability. Dried leaves of *A. coleii* have been used as low-grade animal fodder.

- French
 - edible australian acacias
- English
 - Acacia
 - Edible Australian
 - Cole Wattle
 - Acacia, Torulosa
 - Acacia, Tumida

- Rainfall: 250-600 mm/yr (10-20 in), plant by waterways under drier conditions
- Soil Types: Versatile, can handle both sand and clay soils, hardpans, eroded gullies, and degraded or abandoned agricultural land
- Temperature Range: Can withstand hot, dry climates

A. coleii germinates easily, has a high survival rate after transplanting, and has rapid early growth even under difficult conditions. *A. coleii* grows on a wide variety of soils from pure sand to heavy clay. It thrives on wasteland and hardpans where regular crops cannot be grown. In drier areas receiving less than 250-350 mm (9.8-13.7 in) of rainfall, they do best planted along water flow lines where runoff water passes. *A. coleii* has an extensive shallow root system and will be severely stressed if planted too close together. The planting distance recommended in Niger is 10 m (33 ft); where rainfall is greater than 450 mm (18 in) closer spacing is successful. Avoid planting Acacia close to agricultural crops as the spreading root systems of the Acacias will compete with nearby crops for available moisture and nutrients.

Seed ripening occurs within a 4-week period. Coiled-podded Acacia, *A. coleii* var. *ileocarpa*, does not shatter as much as other species because the seed is firmly held in the pod by a thread-like aril. The clusters of bean-like seedpods can be easily harvested by hand. For food purposes it is OK to pick the pods just as they begin to turn brown or later when they have dried on the tree; for reproduction purposes the seeds should remain on the tree until dry. Protective glasses should be worn while harvesting dry seeds, which cause irritation to the eyes on contact. Once the seed is dried, it can be removed from the pod by threshing with a mortar and pestle. Threshing should be done on a windy day, as the dust from pods is irritating to the nose and throat, causing sneezing and a runny nose. In their native habitat, trees are easily harvested by placing a sheet on the ground and beating the branches with a stick. Seed may be stored for many years without deterioration, though the aril is susceptible to weevil attack. The weevils do not damage the grain, but if their numbers are allowed to build up, their wastes cause spoilage. Periodic winnowing reduces the weevil population.

Lizards, grasshoppers, chickens, and some bird species are destructive in nurseries if the nursery is close to dwellings or there is little other greenery available. Wire cages may be necessary to prevent bird damage. Mice may eat seedlings or gnaw the bark. Also susceptible to

borers and wasp galls.



The seed is washed, dried, and ground to flour. As much of the black seed coat as possible is removed by sieving through a fine mesh sieve. The flour is then used in traditional recipes, being mixed with the flour that would be used for a particular recipe (e.g. millet flour for traditional porridge) at a rate of no more than 25% Acacia flour to 75% of other ingredients. The Acacias are high in protein, tasty and versatile and have gained wide acceptance and usage in many different dishes including the traditional porridge, bean cakes, and pancakes. The seed can also be roasted and ground to make a substitute for coffee.

References