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MESQUITE

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Mesquite (*Prosopis spp.*) is a legume belonging to the same group of plants as the wattles (*Mimosaceae*).

There are over 40 different species of mesquite which differ mainly in the appearance of the compound leaves. There are also numerous hybrids. To avoid difficulties of definition all members of the genus *Prosopis* are declared plants (noxious weeds) in Western Australia.

Mesquite trees were planted on many north-west stations in the 1920's for shade and ornamental purposes and also for their nutritious pods. The original plants were spineless and showed little tendency to spread. However, within a few years some trees reverted to wild types with spines and weedy tendencies.

Mesquite trees were initially hard to establish, but spread rapidly after a series of wet years. They have continued to spread in favourable seasons, but do not reduce in area during drought. They now infest many square kilometres of valuable river-front grazing land, especially in the Pilbara region of WA and other parts of the Australian tropics.

Honey mesquite is a native of Texas, New Mexico and Arizona rangelands. It has become a major weed there due to grazing by cattle, which remove competing plants and leave mesquite largely undamaged.

Control of prairie fires may also have favoured mesquite at the expense of other plants. Other species originate from South America.

Mesquite has been introduced to many countries but has only become a weed in Australia, South Africa and the USA. In many third world countries it is valued for fuel wood and the edible pods which are gathered by hand.

Mesquite is an aggressive invader of rangeland. It forms dense thickets which shade out more useful forage plants, interfere with stock mustering and block access to watering places. When cattle eat large amounts of leaf and pods, digestive problems frequently occur. Mesquite has sharp spines which injure animals and puncture vehicle tyres.

Description

Mesquite is found either as a densely branched shrub about one metre high or as a tree that can reach 15 metres or more in height.

The leaves are dark green and divided into numerous small fern-like leaflets. Most varieties have minute hairs on both surfaces.

The twigs are smooth-barked and armed with straight spines which vary in size, but may reach a length of 10cm. They are usually found in pairs rising from the leaf base. The wood is hard and reddish brown with an outside layer of yellow sapwood. In the USA it is highly valued as a decorative timber and as a fuel for barbecues.

The flowers are small and greenish-yellow. They are borne near the ends of the branches in cylindrical clusters 5 to 8cm long. The pods are sickle shaped and flattened. They vary from 10 to 20cm in length and about one cm in width.

Sometimes the pod is constricted between the seeds. Pods are usually green and fleshy when immature, turning hard and straw-coloured when ripe, but some plants bear purple-flecked pods. Each contains 10 to 20 seeds embedded in a sweet pulp.

Seedling mesquite trees are often confused with prickly acacia (*Acacia farnesiana*), also known as prickly bush. They may be differentiated by three features.

1. Prickly acacia twigs have small, grey, wart-like lumps, while mesquite twigs are smooth.
2. Prickly acacia has circular yellow flower heads about 8mm in diameter.
3. Prickly acacia flowers produce dark brown, woody pods which contain only one or two seeds each.

Life history

Mesquite is a long-lived perennial, spread only by seed. Shrubs do not flower until they are two or more years old. Flowering begins in April and peaks in early summer but can occur as late as February. Germination can take place under a wide range of conditions.

Shortly after germination a deep tap root is formed and surface roots spread out while the growth of aboveground parts is relatively slow.

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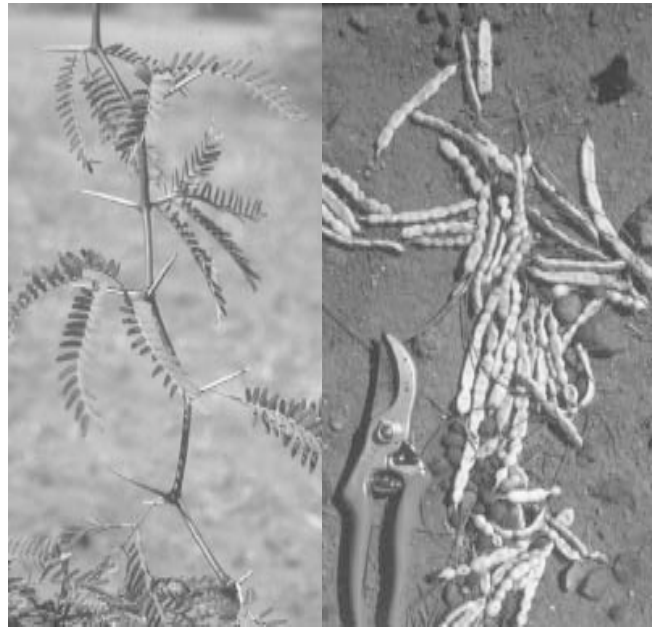
Ecology

Mesquite grows well on a variety of soils including saline and highly alkaline areas, but makes the best growth on alluvial soils associated with water courses. It can draw water from deep in the soil profile.

Seed production is variable but even in seasons of sparse rainfall, some plants may produce a crop of pods. Like many other legumes, mesquite forms a proportion of hard seeds which can remain dormant for many years. Seeds were found to be viable after 44 years storage in the WA Herbarium.

Pods are transported by flood water and seeds by animals such as cattle, kangaroos and emus.

Some of the seed passes through the animal without being digested; in fact, this may stimulate germination. When some varieties of mesquite are cut off at the base they rapidly regrow from buds in the roots and stump. They can survive repeated cutting or defoliation for several years.



Left: Branch showing thorns Right: Seed Pods



Seedlings



Flowers



Infestation



Mature Plant