



## Agroforestry Facts Subabul



Botanical Name	<i>Leucaena leucocephala</i> (Lam.) de Wit
Name in English	Subabul
Name in Kannada	Subabul
Family	Fabaceae
Seeds Collection	Seeds collected from the fallen fruits or by collecting the ripe fruit from the plant during November – December. A kg of seed contain 30000 seeds.
Seeds Processing & Treatment	Seed viability is high, but the hard seed coat posses dormancy. To hasten germination seeds are to be dipped in concentrated sulfuric acid for four minutes and then washed or put in hot water at 80 °C for four minutes. The seeds should be sundried afterwards for about one hour before sowing.
Nursery	Seeds sown in mother bed. Germinations starts after 3rd week. 9 – 12 months old seedlings are lifted for stump preparation. Stump size 2.5 cm shoot portion 22.5 root portion. Stump are used directly for planting.
Plantation Management	Subabul is best suited for warm regions and grows well between 22 and 30°C in regions of 500 to 2000 mm annual rainfall. Because of its strong and deep root system, the tree is highly drought resistant. It is restricted to elevations



	<p>below 500 m but withstands variations in rainfall, sunlight, windstorm, slight frost and drought. It cannot withstand water logging. It requires deep well drained neutral soil and can tolerate saline and acid soil. It can also be grown in steep slopes, hilly terrains, gravelly areas and sandy loams. It can grow under a wide range of conditions as a range plant, roadside plant, in pastures, etc. The land should, however, be cleared of bushes, ploughed and levelled before sowing for better performance. The tree grows very well under alkaline soils and also performs under dry clayey soils. The growth is average under sandy, acidic &amp; dry gravel soils. The performance is poor under marshy, usar lands &amp; in high altitudes.</p> <p>Planting of seedlings can be done with the onset of rains in May-June or Sept-October. A seed rate of 3-4 kg/ha is recommended. Sowing is preferably done during February-March in a nursery or in polythene bags or in situ at 2-3 cm depth. Seedlings (1.5 to 3 months old with 6-8 leaves) are planted in the main field. A spacing of 1 x 0.1 m is recommended for a pure crop of fodder, 1.5 x 0.2 m for planting in boundaries and borders of coconut gardens and 2 x 0.2 m when raised along boundaries.</p> <p>Methods of propagation for raising plantation are : (i) Direct sowing of seeds; (ii) Bag Plantation; (iii) Naked seedlings collected from existing plantation regeneration. The most common spacing adopted are 1.27m x 1.27m (50" x 50") (i.e. 6200 plants/ha); 2m x 2m (2500 plants/ha); 3 x 1.5m (2222 plants/ha). However, the recommended spacing is 1.5m x 1.5m (4445 plants/ha). Inter cultivation may not be possible from second year onwards.</p> <p>v Weeding / Soil working. Two weedings / soil workings are required per year for the first 3 years of sowing / planting. Suitable for growing in the monsoon season under rainfed condition.</p> <p>Fertiliser of 2 kg of farmyard manure, 50 g of super phosphate, 50 g DAP.</p>
Model/Spacing	1.5 x 1.5 m is ideal
Pests, diseases and Management	Subabul generally has been free of serious insect & diseases, but is susceptible to jumping plant lice (psyllids) which have caused serious defoliation and mortality in some areas. Some varieties are susceptible to gummosis, which is most likely caused by Fusarium or Phytophthora species. Leaf spot fungus also can cause defoliation under wet conditions
Plant Rotation	4 – 6 years



Yield	<p>The stumps removed from plantations after three rotations may fetch a rate of Rs. 350/- to Rs. 400/-/ton for usage as fuel wood for tobacco barns.</p> <p>Green fodder yield, Irrigated: 80-100 t/ha/year; Rainfed: 40 t/ha/year.</p>
Uses	<p>Subabul wood can be used for light construction, poles, props, pulp, furniture, flooring and fuel wood. Subabul wood is an excellent fuel wood with a specific gravity of 0.45-0.55 and a high heating value of 4000 kcal/kg. Subabul forage has a high protein and carotene content and pellets or cubes are internationally marketed as animal feed.</p>
Buyers /Industries	<p>There is enormous demand for Subabul wood for pulp (raw material) from many paper industries.</p>
Harvesting	<p>Harvesting is done at the end of fourth year. The average yield is 70 ton/ha. Farmers adopt a rotation of 4 year. Normally they go for 3 coppice crops. During second rotation, only 2 coppice shoots are retained in each stem. The sale price for pulpwood is considered at Rs. 1000/ton.</p>
Economic Returns	<p>Rs 60,000 per Ha/year</p>
Current Market Rate	<p>Rs 420/100 kgs</p>