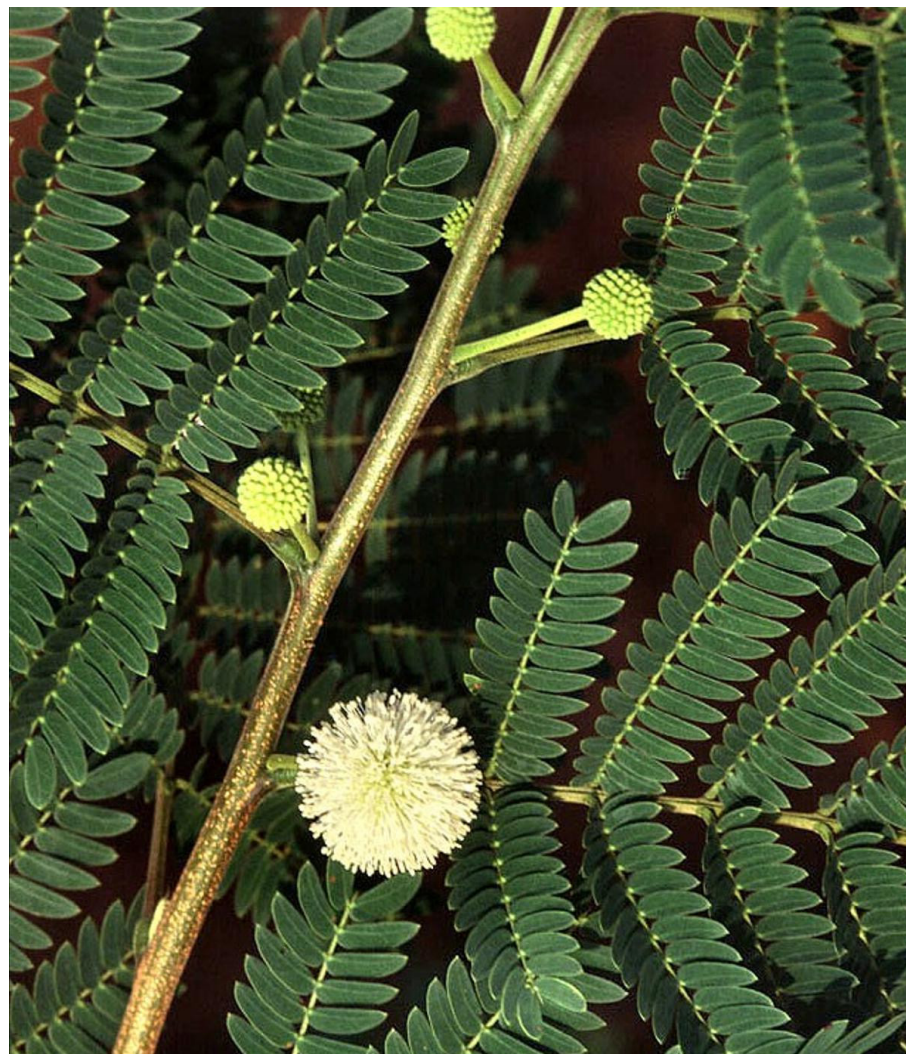


LEUCAENA LEUCOCEPHALA: AN EXCELLENT FODDER TREE FOR ANIMALS

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Leucaena leucocephala is popularly known as 'Subabul' due to its resemblance to the Babul tree which is quite a common sight in India. It is a very fast-growing tree and can be grown in all type of soil including problematic soils like- saline, alkaline soil. It can also be grown with poor quality irrigation water. Subabul is a highly nutritious fodder tree and protein derived from its fodder is considered equivalent to lucerne in nutritional value. Its leaves contain approximately 21.45% crude protein and 14.25% crude fibre content. Further, it is thorne free; therefore animal feed it with fervor. Besides giving fodder, this tree also deposits valuable nitrogen and phosphorus elements in the soil. In India, it has been introduced from hot areas of America and now it is successfully cultivated in the states of Andhra Pradesh, Karnataka, Tamil Nadu, Himachal Pradesh and Uttar Pradesh. Once its plants established in the field, green fodder is continuously obtained for the animals for about 10-15 years.



Climate: *Leucaena leucocephala* is capable of withstanding large variations in rainfall, temperature and wind. It requires a warm climate, low temperature in winter limits its growth. It performs best in the areas with 600 – 1700 mm rainfall, though it can be grown in areas with as low as 250 mm rainfall.

Soil: It can be grown in a wide range of soil condition; however, it performs best on deep and fertile soils which can supply adequate moisture and nutrients. It grows well in neutral to alkaline soils with pH 6.0- 7.7.

Propagation: *Leucaena leucocephala* is reproduced through seed and coppice. It can be raised either by direct sowing or by planting out seedlings raised in containers.

Varieties and seed rate: The main varieties of this fodder tree are Hawaiian, Perugia, Jet and K-8. These varieties have been successfully tested in our country. The Hawaiian variety is tall and shrubby and can be grown easily in summer, winter and low rainfall areas. For direct sowing, the quantity of seeds for Hawaiian and K-8 varieties is 10 kg whereas for Jat variety it is 15 kg per hectare.

Seed treatment: The seed of Subabul has to be prepared by a special technique before planting it in the nursery. First of all clean the seed then put these seeds in a ceramic vessel and pour sulphuric acid in the ratio of 100: 5 and keep it turning. This activity continues for 15-20 minutes. After that, wash the seeds thoroughly with water. After washing, the seeds should be kept in a gunny bag and pressed it into a manure pit. After 48 hours, it should be taken out and the sprouted seed can be used for nursery raising.

Nursery rising: Nursery should be prepared before transplanting of Subabul plant. For this, take the polythene envelope of 8" x 5" size. After that, take the soil from fertile land and put 8th equal part of well-decomposed FYM and mix it, after mixing, fill it well in polythene bags and keep them in one place then fill the bag with water. After the soil in the polythene bag settles down, the prepared seed should be planted in these bags. Subabul nursery can be prepared at any time from 15th February to July. Nursery raised in March - April grows up to 2.5 - 3.0 feet in July. This can be transplanted in the fields very easily.

Transplanting: The right time for transplanting Subabul plants is the rainy season. Transplanting of the plants should start immediately after one or two showers of rains. The appropriate row to row and plant to plant spacing for Subabul is 5 metre. For this, a 6 feet deep pit of 6-8 inch diameter should be dug. Add compost manure and gypsum to these pits and mix them. Before, planting the seedling remove the polythene carefully so that filled soil should not be broken. After planting, the plant must be given water so that they stand up well.

Intercropping: Fodder crops such as pearl millet, sorghum, cowpea, berseem, and other perennial grasses can be successfully cultivated in empty spaces between Subabul plants.

Harvesting: First harvesting of Subabul is taken after 5-6 months of transplanting in the field and subsequent cuts can be taken with a difference of 60 days. On average 35-40 tonnes/acre of green fodder can be obtained from Subabul.

Fodder Value: It is a promising forage tree for tropics and sub-tropics. Its leaf fodder is highly palatable; however, high mimosin content limits its use as sole feed but nowadays low mimosine varieties are also available. The leaves are a good source of carotene and vitamins; pro-vitamins-A content is among the highest recorded in plant species. Subabul leaf meal is especially valuable due to its amino acid content which is superior to other plant proteins and it is almost as good as lucerne. It is reported that anaerobic microbes of goat rumen can degrade mimosin to non-toxic form; hence, a goat can be reared with ration containing 30% Subabul leaves.