

Gliricidia sepium

General. Known commonly as gliricidia or *madre tree*, *Gliricidia sepium* is well known in plantation agriculture as a shade tree. Therefore, it is also called the Mother of Cocoa. It is a nitrogen-fixing tree that is native to Central and South America. Gliricidia was introduced to Sri Lanka from West Indies and later to India.

Tree. Gliricidia is a small fast growing, deciduous, thornless tree. Its short trunk is covered with soft gray bark marked by longitudinal cracks. It grows up to 10 m height. It has an open crown and a trunk of less than 30 cm diameter.

Distribution. It is grown for green manure in Maharashtra, Tamil Nadu, Karnataka and Kerala. It is widely planted on farm bunds, backyards, and as live fencing.

Soil and Climate. Gliricidia prefers deep, rich, well-drained soils. It can be grown up to an elevation of 1000 m, but does not tolerate frost. It is a fast-growing species, especially in warm and humid climate.

Propagation. It is propagated by seed or cuttings. The easiest method is to use poles of about 2.0 m length, which regenerate readily and grow into a tree within a short period. Removal of such poles also helps keep the tree in proper shape. Seeds can be sown directly or in polybags and raised in a nursery for transplanting.

Important uses:

Green manure. Gliricidia enhances soil organic matter when green foliage and dry leaf litter are incorporated. Being a nitrogen fixer, the biomass of gliricidia is a rich source of nitrogen. During dry and cold seasons, it sheds its leaves and thereby conserves precious soil moisture. It can be grown along the boundaries of the field and the green matter per ha annually. Its essential nutrient composition is 2.9% N, 0.5% P₂O₅ and 2.8% K₂O.

Wood and fuel. Wood finishes smoothly and is suitable for making small articles, agricultural implements and tool handles. Wood is highly resistant to termites and decay. It is also used for ports and heavy construction. It is a good fuel wood with a calorific value of 4,900 k. cal per kg. Gliricidia produces ample branch wood as it coppices easily.

Ornamental value. The tree produces dense masses of attractive white or pink flowers. The flowers are a good source of forage for bees. The flowers appear during January March when the tree is leafless. It can be grown along paths of parks, gardens and avenues. It can also be pruned to a height of 2.0 m and maintained as a hedge.

Shade. Gliricidia is traditionally used as a shade tree for plantation crops and as a support for pepper and vanilla.

Fodder. Leaves of gliricidia contain more than 20% crude protein and are nutritious for cattle. But livestock not conditioned to it may not readily eat it. In such situations, wilting the leaf may be helpful.

Other uses. The roots, bark and seeds are poisonous. Juice of the leaves is used for treating centipede bite. Flowers and seeds are used as rat poison. Powdered seeds, leaves and bark mixed with rice are used for controlling storage pests.