

Scientific Name:

Leucaena leucocephala

Family:

Fabaceae

Common Names:

Leucaena,
Wild Tamarind,
Jumbie bean

**Plant Description**

Leucaena is a fast growing, evergreen, thornless shrub that grows up to 20 m tall (FAO 2009). This perennial legume is well adapted to our local conditions and can be seen growing wild along the roadways. This is also so with gliricidia especially in Tobago.

Roots: The root system comprises of a deep taproot that is highly branched (Cook et al. 2005).

Leaves: Leaves are bipinnate, bearing numerous leaflets 8 mm to 16 mm long.

Flowers: The inflorescence is a cream coloured globular shape.

Pods & Seeds: Pods are flat and brown and found in clusters 13 to 18 mm long containing 15-30 seeds.

Propagation and Cultivation

Sowing: Freshly harvested Leucaena seeds often has a high degree of hard seed due to an impermeable waxy coat which must be broken before sowing. To break the hard coat treat seeds with boiling water for 4 seconds (Shelton, 1998). Select seeds from mature dried pods, seeds can be sown directly or in containers.

Cuttings: Should be 30-60 cm long with brownish-green bark and cut at a 45 degree angle at both ends.

Transplanting: Seeds and cuttings can be transplanted 50-100 cm apart and planted in rows (width dependent on intended plant height).

Fertilisation: Organic fertilisers (Manure) can be applied pre-planting and biannually.

Forage Management:

Average yield ranges from 3 to 30 tonnes dry matter (DM) per ha/year depending on soil, and moisture conditions. For optimal yields, harvest intervals can vary from 6-8 weeks in very productive sites; to 12 weeks in less productive ones (Cook et al. 2005). Leucaena may be lightly grazed in the first year after seedling and heavily grazed thereafter.

Nutrient content *Leucaena* leaves, fresh

Analysis	Unit	Avg	Min	Max
Dry matter	% as fed	29.9	22.7	37.4
Crude protein	% DM	23.3	14.2	33.3
Crude fibre	% DM	19.9	12.5	29.7
Ether extract	% DM	4.0	1.5	6.1
Ash	% DM	8.5	4.7	14.0
Gross energy	MJ/kg DM	19	18.3	23.5

Table taken from <http://www.feedipedia.org/node/282>

Feeding *Leucaena* to Small Ruminants

Leucaena is an excellent source of protein, but due to its high levels of mimosine (up to 12% DM in young shoots) (Heuzé et al. 2015) it is recommended that it should comprise up to more than 20% of the animal's dry matter intake. Wilting of the leaves is also recommended for storage, increasing animal intake and reducing potential toxicity. (Heuzé et al. 2015)

- A normal standard for feeding small ruminants is to feed at 4% of the body weight of the animal on a dry matter basis example:
- According to the table above the average dry matter of *Leucaena* is 29.9% which means that 100 lb of fresh *Leucaena* contains approximately 29.9 lb of dry matter and 70.1 lb of water.
- A 100 lb animal would require 4 lb DM and as previously recommended *Leucaena* should comprise 20% of the daily intake therefore 20% of 4 lbs is 0.8 lb DM.
- To provide 0.8 lb DM of *Leucaena* you would have to feed $100/29.9 \times 0.8 = 2.7$ lb of wet *Leucaena* leaves.

Mature animals should be fed 2.5% body weight on a dry matter basis

References

1. FAO, 2009. Grassland Index. A searchable catalogue of grass and forage legumes. FAO
2. Heuzé V., and G. Tran. 2015. *Leucaena (Leucaena leucocephala)*. Feedipedia, a programme by INRA, CIRAD, AFZ and FAO. <http://www.feedipedia.org/node/282> Last updated on Sept. 9, 2015, 10:46
3. Shelton, H.M., R.C. Gutteridge, B. F Mullen, and R.A Bray. 1998. (eds) *Leucaena - adaptation, quality and farming systems*. ACIAR, Canberra, Australia.

Please contact the TTGSS at email: tgss@gmail.com or 789-8765 and IICA at email: iica.tt@iica.int 645-4555 / 645-5020 / 645-8886 for further details.