Tephrosia villosa

(L.) Persoon

Fabaceae - Papilionoideae

BOTANIC DESCRIPTION
Tephrosia villosa is an annual or perennial bushy herb, 0.3-1.3 m tall. Stem white tomentose.

Leaves imparipinnately compound with 7-19 leaflets, up to 10 cm long; stipules 2-5 mm long; leaflets obovate to elliptical, up to 21 mm x 9 mm, hairy on both sides, each side with 4-8 pairs of distinct veins. Stipules tomentose, caducous and lanceolate.

Flowers in a terminal or upper axillary pseudoraceme 8-22 cm long; pedicel with densely matted hairs, 2-4 mm long; calyx densely matted-hairy, tube about 2 mm long, lobes long-acuminate, to 9 mm long; standard transversely elliptical to broadly ovate, up to 7 mm x 10 mm, dorsally with dense brown hairs. Style glabrous, up to 3-5 mm long, bent sharply upward at base, twisted, penicillate.

Pod strongly curved, up to 4 cm x 6 mm, densely silvery or brown-tomentose, hairs to 2 mm long, 4-10-seeded.

Seed 12-16, rectangular, black, smooth, with short hard excrescences, up to 4.5 mm x 2.5-2.75 mm.

The specific name ‘villosa’ means covered in white soft hair in Greek.

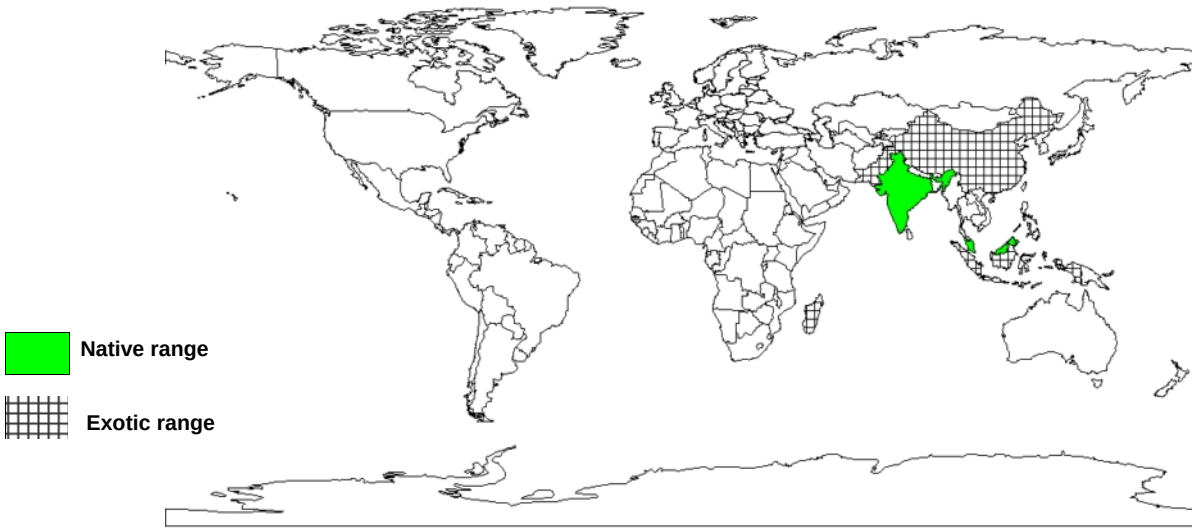
BIOLOGY
Flower in November and fruit in February in India.

ECOLOGY
T. villosa occurs in open fields, floodplains, often on sandy soils. It is tolerant of a long dry season and of heavy rain.

BIOPHYSICAL LIMITS
Altitude: 0-500 m.
Soil type: The species prefer sandy soils

DOCUMENTED SPECIES DISTRIBUTION

Native: India, Malaysia
Exotic: China, Indonesia, Madagascar, Pakistan



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS
Medicine: Leaf juice is used to treat dropsy and diabetes in India.

Poison: Toxic to livestock and also used as a fish poison.

SERVICES
Erosion control: In Africa, it is appreciated for its dense foliage hence annual cover crop.

Soil improver: Used as green manure and annual cover crop in Africa, tested in Indonesia.

TREE MANAGEMENT

GERMPLASM MANAGEMENT

PESTS AND DISEASES
A virus called symptomless causes no symptoms in susceptible species has been isolated only from species of Tephrosia in eastern Kenya

FURTHER READNG

Backer CA, Bakhuizen van den Brink Jr, RC. 1963-1968. Flora of Java. 3 volumes. Noordhoff, Groningen, the Netherlands. Vol. 1 (1963) 647 pp., Vol. 2 (1965) 641 pp., Vol. 3 (1968) 761 pp.

Bhandari MM. 1978. Flora of the Indian desert. Scientific publisher, Jodhpur, India. 472 pp.

Bosman MTM, de Haas AJP. 1983. A revision of the genus Tephrosia (Leguminosae, Papilionoideae) in Malesia. Blumea. 28: 421-487.

Faridah Hanum I, van der Maesen LJG (eds.). 1997. Plant Resources of South-East Asia No 11. Auxillary Plants. Backhuys Publishers, Leiden, the Netherlands.

Hedberg I and Edwards S (eds.). 1989. Flora of Ethiopia Volume 3: Pittosporaceae to Araliaceae. The National Herbarium, Biology Department, Addis Ababa University and The Department of Systematic Botany, Uppsala University, Sweden.

Ibrahim, KM. 1989. An illustrated manual of Kenya legumes (Herbs and climbers). FAO/UNDP Forage Plant Development and Extension, National Agriculture Research Centre, Kenya. pp 250, 575.

Nasir E, Ali SI. (Editors). 1970-. Flora of (West) Pakistan. Volume 1-. Department of Botany, University of Karachi, Karachi, Pakistan.

SUGGESTED CITATION

Orwa C, A Mutua, Kindt R , Jamnadass R, S Anthony. 2009 Agroforestree Database:a tree reference and selection guide version 4.0 (http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp)