***Sesbania sericea* (Willd.) Link** silky sesban
FABACEAE

Synonyms: *Coronilla sericea* Willd.

General Description.—Silky sesban, also known as papagayo in Spanish, is a short-lived woody shrub of frequently disturbed areas. Its mature height may vary from 1 to 6 m with basal diameters reaching as much as 10 cm under the most favorable conditions. A single stem is usually developed unless the plant sprouts after damage. Robust low side branches develop on open-grown individuals. Secondary branches on stems are usually unbranched. The species is unarmed or may occasionally have weak prickles. Stems are green when young, turning gray. There may or may not be a well-developed taproot, depending on the aerated rooting depth. The white lateral roots are relatively thick (3 to 5 mm) and support many nodules with reddish centers and abundant fine roots. The pinnately compound leaves are 5 to 25 cm long and support 10 to 20 leaflet pairs. The leaflets are oblong, rounded at both ends, mucronate at the apex, with a silky pubescence below. The racemes have two to eight yellow, greenish-yellow, or orange flowers. The brown pods that develop after flowering are 10 to 20 cm long, 3 mm broad, and contain 20 to 30 seeds (Howard 1988, Liogier 1988, Nelson 1996). The species has 2n = 24 chromosomes (Long and Lakela 1976).

Range.—There is confusion about the native range of silky sesban. Howard (1988) states that it is a native of Sri Lanka. Others refer to tropical Asia (Long and Lakela 1976) or Africa and the Caribbean (Evans and Rotar 1987) as the native ranges. It is clear that the species has been widely introduced. The current New World range covers southern Florida, the Bahamas, the West Indies, Trinidad, Surinam, the Guianas, Venezuela, and Central America (Liogier 1988).

Ecology.—Silky sesban is highly intolerant of shade and must have disturbed soil in which to germinate. Once established, it competes aggressively with grass and herbs, but it must dominate all its life or die. Stands of silky sesban vigorously self-thin. The species develops best on moist alluvial soils. It will grow on soils with low fertility, particularly when poorly or very poorly drained. Modest amounts of salts in the soil are tolerated. Apparently, the northern extent of the range is limited by cool weather and frost.

Reproduction.—A collection of 45 air-dry pods of silky sesban weighed an average of 0.378 $\pm$ 0.0008 g/pod. The seeds separated from them averaged 0.0053 $\pm$ 0.0001 g each or 189,000 seeds/kg. Sown without any pretreatment on commercial potting mix, these seeds germinated at 99 percent between 3 and 24 days after sowing. Germination is epigeal. Although the original mode of seed dispersal has not been documented, in the Caribbean it seems to be opportunistic, disbursing by wind, water, grazing animals, and farm machinery. Seedlings may be abundant in the presence of a seed source on moist bare soil. However, relatively few of the seedlings progress past the early seedling stage.

Growth and Management.—Plants of silky sesban grow rapidly. Seedlings are about 10 cm tall at the end of 1 month and reach 2 to 6 m in height in about 6 months. Silky sesban was reported to yield 26.8 Mg/ha (fresh weight) in a 84-day growing period (Evans and Rotar 1987). After flowering, height growth of silky sesban ceases. Plants live from about 8 months to a little over a year, depending on conditions. When their seeds mature, the plants die. The species may grow and die in an annual cycle timed with wet and dry seasons, or it may simply grow in response to favorable soil conditions as they occur. If land managers find it necessary to establish silky sesban, sowing into a moist, prepared seedbed should be sufficient.

Benefits.—The species of *Sesbania*, including silky sesban, are used as green manure in India. Silky sesban is readily consumed by cattle in pastures. The closely related *S. sesban* (L.) Merr. has been shown to have moderately good nutritional values. Some of the species of *Sesbania* have toxic saponins and canavanine in their seeds. So far, the seeds of silky sesban have not been reported to be toxic. Crushed seeds of this species were fed to chicks at 1 percent of body weight each day for 3 days without any signs of toxicity (Evans and Rotar 1987). Silky sesban can be weedy but usually causes few problems. It was experimentally intercropped with maize and resulted in no depression in maize yield. In Guyana, the species grows in upland rice fields but does not occur in flooded rice paddies (Evans and Rotar 1987). The stemwood of silky sesban is brash, has a relatively low specific gravity, and offers few prospects for commercial use.

References

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