

CARIBBEAN STYLO

Verano, Lucy Julia

Stylosanthes hamata

Fabaceae

ECHO® PLANT INFORMATION SHEET

Description

Caribbean stylo is a tropical, nitrogen-fixing, short-lived perennial, semi-erect or prostrate herbaceous plant, that can withstand grazing and is tolerant of poor soils. It is usually grown in native or established permanent pastures and provides nutritious forage for livestock.

Origin

Caribbean Stylo is indigenous to semi-arid sites in islands of the West Indies basin. It is presumed native also in southern Florida and coastal regions of South America and Central America close to the Caribbean. It is reported from Venezuela, Colombia and portions of Brazil. The species is highly variable, consisting of diploid (2N=20) and tetraploid (2N=40) races. Two cultivars, Verano and Amiga, have been developed and released in Australia from New World tetraploid Caribbean stylos.

Uses

Verano and Amiga cultivars have been used successfully as pasture legumes in dry pasture regions in northern Australia, not only, but also in India, Thailand, Nigeria and other portions of West Africa. Harvests of fruiting Caribbean Stylo may be used as a protein supplement for cattle during dry seasons as Caribbean Stylo fruits early and the seeds have a high protein content. The Verano cultivar has proven useful as a cover crop within cash crops such as cassava, kenaf, sorghum and maize. The legume cover crop provides weed suppression, erosion control, and soil nitrogen enrichment. In northeast Thailand, Verano special purpose pastures such as those on roadsides and on rice paddy banks have proven successful. Low nutrient feed obtained from rice stubble grazing was greatly enhanced by the use of supplemental stylo pastures on paddy banks.

Common Names

- Spanish
 - Tebeneque

Cultivation

Verano Caribbean Stylo is best suited to the hot tropics with 600-1,700 mm (24-66 in) rainfall in a growing season of 15-25 weeks. Cultivation of Verano is limited to low altitude regions as it is subject to top damage from frosts. It is drought tolerant, dropping its lower leaves in response to moisture stress. Amiga Caribbean Stylo is adapted to a broader range of environmental conditions than the Verano cultivar. Its yields are better in higher altitudes, above 300 m (985 ft), and under drier conditions, under 760 mm (30 in) rainfall, than the Verano cultivar. It has high seed production and re-seeds readily allowing it to attain full pasture production quickly. The Amiga cultivar also exhibits a higher degree of perenniality in low rainfall environments than the Verano cultivar, allowing it a better chance to survive 'false breaks' in the dry season.

The Amiga cultivar can be grown on soils ranging from sands to clay loams but performs poorly on heavier clays. Caribbean Stylos are capable of growing on acidic soils with comparatively low phosphate content. Caribbean Stylos are short-lived perennials propagated from seed. Survival of first-year plants may be high, greater than 90%; however, during subsequent seasons they typically are annuals. Caribbean Stylo cultivars normally self-seed. Hard-seededness of harvested seeds may be broken by seed scarification or the use of a hot water treatment. Seeding rate often is 2-3 kg/ha (2/3 lb/acre). In semi-arid regions, broadcast sowing works well following pasture burning. A Stylo mixture, combining the Caribbean Stylo with shrubby Stylo (*Stylosanthes scabra*, cultivars Seca or Siran) is recommended in semi-arid regions. In wetter regions, the Caribbean Stylos may be mixed in equal proportions with legumes suited to higher rainfall such as American jointvetch (*Aeschynomene americana* 'Glenn') or Brazilian lucerne (*Stylosanthes guianensis* 'Cook').

In the higher rainfall regions seeding into prepared seedbeds is preferred if the Stylo is sown mixed with improved grass strains. Early grazing of newly seeded stylo/grass mixtures may be necessary to keep the more palatable grass species in check. Generally, the tetraploid cultivars, Verano and Amiga, nodulate readily with cowpea rhizobia and do not require rhizobial inoculation.

Harvesting and Seed Production

Depending upon soil moisture availability and soil fertility, Caribbean Stylos may produce from 1-7 t/ha in mixed pastures. The Caribbean Stylo mixed pastures may be continuously grazed or used in rotational grazing. Heavy grazing favors Stylo dominance in mixed Stylo/grass pastures. If soil phosphorus levels are low, at 8 mg P/kg soil or less, some phosphorus fertilization (for example, 10-20 kg/ha) may be needed periodically to provide forage with sufficiently high phosphorus content for cattle health. Caribbean Stylo normally is harvested by grazing, however, it may be harvested as a green feed or as a hay crop to be used during the dry season as a protein supplement.

Pests and Diseases

Caribbean Stylo lacks serious pest species and the cultivars described have been selected for resistance to anthracnose disease caused by *Colletotrichum spp.* Web blight, caused by *Rhizoctonia solani*, has stunted vegetative growth during the wet season in Queensland.

Cooking and Nutrition

The Caribbean Stylos are known for their uses as forages and pasture legumes, not as human foods.

References

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