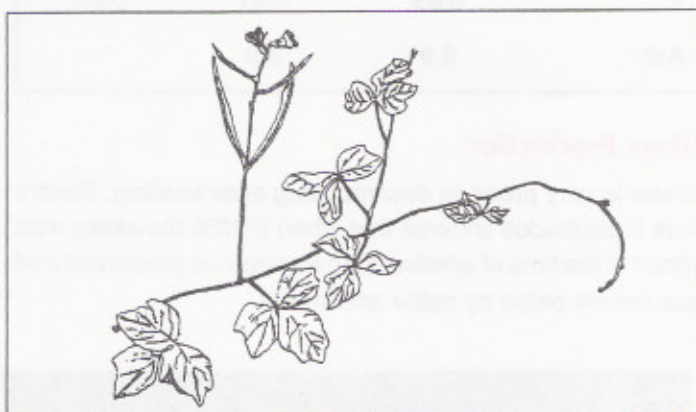


# Factsheet

## **SIRATRO** **A DROUGHT TOLERANT FORAGE LEGUME FOR** **DRIER PARTS OF THE CARIBBEAN**

Gerald A. Proverbs and Francis H. Asiedu



SIRATRO (*MACROPTILIUM ATROPURPUREUM*)

### Characteristics

Siratro (*M. atropurpureum*) is a deep and swollen-rooted, trailing, climbing and scrambling legume somewhat like Teramnus (*Teramnus labialis*). The overgrown stems can root at the nodes enabling the plant to spread and cover an area relatively quickly. Flowers are deep purple in colour with a reddish tinge near the base of the petals. These are replaced by many pods about 7.5 cm (3 in) long. It is a profuse seed producer and is one of the hardiest tropical legumes. CARDI recommends that siratro be mixed with glycine and Teramnus in a ratio of 2:2:1 and the mixture seeded at the rate of 5 kg per ha (6 lb per ac).

Its persistence under dry conditions and under steady grazing is very good. It produces under rainfall conditions as

low as 615 mm (24 in), however, it does best under wetter conditions, 900-1500 mm (36-60 in) rainfall annually. It does not thrive in high rainfall regions above 1800 mm (71 in). In prolonged droughts, large leaves are shed and small leathery leaves are produced until conditions are more favourable. It is not tolerant of flooding.

Results in Antigua, Barbados and the volcanic islands of Nevis and St. Lucia indicate that it will thrive on a wide range of soils except poorly drained soils and climatic conditions in the Caribbean. Siratro is one of the best tropical legumes for production under moderately saline conditions. It adds about 100-175 kg of nitrogen per ha (100-175 lb per ac), (this is equivalent to 475-875 kg sulphate of ammonia) per year.

### Establishment

Siratro establishes best in a well prepared seed-bed, though it may also be established in roughly prepared ground or even by over sowing under suitable conditions. The recommended seeding rate is 2-3 kg per ha (2-3 lb per ac). Seed should be scarified before sowing because of a high percentage of hard seeds. Best results are obtained when the seed is sown at a depth of 1.5 - 2.5 cm (0.75-1 in) into the prepared bed. It has the ability to develop on quite shallow soils and it is a good hillside legume.

Seedlings are quite vigorous and compete well with weeds once established. Siratro mixes well with many different grasses including Guinea, Antigua Hay grass, African

star, the Bermudas, Rhodes, buffel and elephant grass. Given an opportunity to produce ripe seed, it will produce a new crop of self-sown seedlings to replenish the stand.

Siratro may also be grown in pure stand to produce a high quality, high protein forage for grazing, hay, or green chop. However, because it loses a high proportion of its leaf when it is dried, much of the value of the hay is lost. It may be used for silage either alone or mixed with grass. For satisfactory results, molasses must be added at the rate 60 kg per tonne (60 lb per ton) to obtain good silage.

It is very susceptible to 2, 4-D and therefore should not be sprayed with this herbicide.

### Yield

Cutting trials in Antigua showed that siratro produced on average 2200 kg per ha (1965 lb per ac) dry matter per harvest or 11 tonnes per ha (10 tons per ac) per annum. Similar yields were recorded in Barbados when the crop was harvested five times annually.

### Grazing

When grazed moderately, it stands up well. Livestock will eat the runners back towards the crown which should be protected from overgrazing. Pastures should not carry more than 2 animal units per ha (1 animal unit per ac) year round. Heavier stocking is likely to kill the Siratro.



### Feeding Value

Siratro is quite palatable, and is readily eaten by livestock. Crude protein content has been found to range from 16.8-24.1%. Dry matter and crude protein digestibilities have been found to be 50.4% and 67.6% respectively.

### Nutritive value of Siratro from three different sites.

Country	Antigua	Barbados	Trinidad
	STAGE OF GROWTH		
	(Mature pod)	(Flowering)	(Mature pod)
Nutrient	%	%	%
Protein	18.7	21.3	18.8
Fibre	31.2	28.3	-
Fat	1.3	-	-
Ca	1.2	1.2	1.3
P	0.83	0.61	0.24
Ash	9.9	8.9	-

### Silage Production

Siratro is very prone to decomposing after ensiling. Card's work in Barbados showed that when 8-10% molasses was added at the time of ensiling then Siratro was preserved and was readily eaten by cattle and sheep.

