

The inoculum was multiplied on autoclaved sorghum grains (soaked in water for 24 h) in 1 L conical flasks. It was incubated at 25°C for 10 days. Alfisol and sand (3:1) were filled in plastic pots (diameter 15 cm), and eight surface-sterilized seeds of groundnut cultivar Robut 33-1 were sown in each pot. Each method of inoculation was tested in four pots, each representing one replication. The inoculation methods that were evaluated are listed in Table 1.

Ten-day-old groundnut seedlings were inoculated with 10-day-old inoculum according to each inoculation method. Five seedlings were retained in each pot at the time of inoculation. The inoculum (15 g) was spread on the soil surface in the pots in treatments 1 and 2. Five *S. rolfii*-infested sorghum grains were kept around the collar region of the plant in treatments 3 and 4. In treatments 5 and 6, 25 g of the inoculum was mixed in 1 kg of soil in which five surface-sterilized seeds were sown. Ten grams of dried groundnut leaves were spread on the soil surface after inoculation in treatments 2, 4, and 6. The plants were irrigated twice a day. This experiment was run twice. The minimum and maximum temperatures inside the greenhouse ranged from 16–18°C to 28–31°C and relative humidity ranged from 40–54.5%.

The plants were observed for 30 days after inoculation for stem rot development. Observations on dead plants

were recorded and mortality percentage and days to maximum mortality were calculated (Table 1). The maximum mortality (100%) due to stem rot was observed in treatment 2, in which inoculum was spread on the soil surface and covered with organic matter. So, it is concluded that treatment 2 is the most effective method for screening against *S. rolfii* under greenhouse conditions.

Parasitism of Groundnut by *Striga* sp in Mozambique

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Striga spp are root parasites of cereals and legumes. More than 60 species of *Striga* have been reported on different plant hosts. *Striga hermonthica* and *S. ges-*

Table 1. Effect of seven inoculation methods on stem rot development in groundnut under greenhouse conditions, ICRISAT Asia Center.

Treatment number	Inoculation method	Run 1		Run 2		
		Mortality (%)	Days to mortality	Mortality (%)	Days to mortality	
1	Inoculum spread on the soil surface	81	(65) ¹	30	78 (63)	30
2	Inoculum spread on the soil surface and covered with organic matter	100	(90)	10	100 (90)	10
3	Inoculum placed around the collar region of the plant	72	(58)	30	75 (60)	30
4	Inoculum placed around the collar region of the plant and covered with organic matter	78	(63)	30	81 (65)	30
5	Inoculum mixed in the soil	100 ²	(90)	30	100 ² (90)	3
6	Inoculum mixed in the soil and covered with organic matter	100 ²	(90)	30	100 ² (90)	30
7	Control (Noninoculated)	0		30	0	30
	SE	± 2.87	(1.98)	±0.11	± 3.41 (2.4)	±0.10
	CV (%)	7.6	(6.1)	0.8	8.9 (7.3)	0.7
	LSD (at <i>P</i> = 1%)	11.68	(8.04)	0.444	13.87 (9.68)	0.384

1. Figures in parentheses refer to angular transformed values.

2. Preemergence rotting.

nerioides have been reported on groundnut (*Arachis hypogaea*) in West Africa (Lagoke 1989, Favi 1989, Camara 1989). In March 1991, a *Striga* sp was observed on local groundnut cultivars Bebiano Encarnado and Bebiano Branco growing in a red sandy soil at Maputo, Mozambique. The soil adjacent to the *Striga* and the host plant was carefully removed and the attachment of *Striga* to the roots of the host plant was observed (Fig. 1). The *Striga* sp had a large haustorium connecting it to the groundnut root. Maize plants in adjacent plots were free of *Striga* infestation. The *Striga* sp, which had pink flowers, appeared to be related to *S. gesnerioides*. However, detailed studies are needed to identify the species. We have not been able to find any record of parasitism of groundnut by any species of *Striga* in Mozambique.

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References

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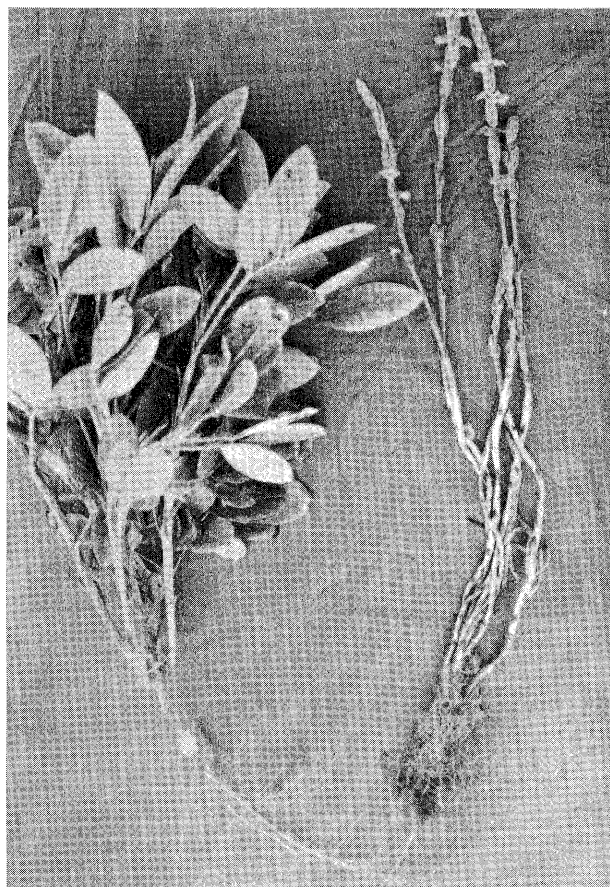


Figure 1. Attachment of *Striga* to the roots of a groundnut host plant.