

# Stem Gall Nematode on *Desmodium ovalifolium* in Colombia

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## ABSTRACT

Lenné, J. M. 1983. Stem gall nematode on *Desmodium ovalifolium* in Colombia. Plant Disease 67:557.

A stem gall nematode is reported for the first time on the promising tropical pasture legume *Desmodium ovalifolium* CIAT 350 in Colombia. Stem galling was usually associated with damage caused by animal trampling. The nematode has been identified as a new genus of the family Anguinidae.

*Desmodium ovalifolium* Wall. CIAT 350 (syn. *D. heterocarpon*) is a perennial subshrub with stems rooting freely at the lower nodes (1). Its potential as a productive pasture legume in association with various grasses has been shown in Colombia (1).

A root-knot nematode, *Meloidogyne javanica* (Treub.) Chitwood, was first recorded on *D. ovalifolium* CIAT 350 in Colombia in 1978 (2). The nematode caused characteristic stunting, chlorosis, and wilting of plants, with large confluent galls formed on affected roots only. Since the original report (2), the nematode has been found on *D. ovalifolium* in Brazil, Colombia, and Peru (*unpublished*).

In December 1981, dying and dead patches of *D. ovalifolium* CIAT 350 were again observed in 3-yr-old pastures at the CIAT (Centro Internacional de Agricultura Tropical) Research Station, Carimagua, in the Llanos Orientales of Colombia. In this case, galls were found on stems of all affected plants, being more common at stem nodes (Fig. 1). They caused considerable disruption of the

vascular system, resulting in dieback and plant death.

Microscopic examination of stem galls showed numerous nematodes and egg

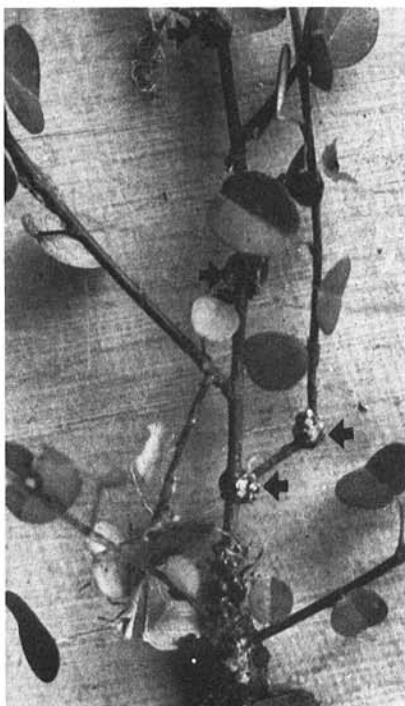


Fig. 1. Galls formed by a stem gall nematode on stems of *Desmodium ovalifolium* CIAT 350.

masses. The nematode was readily distinguished from *M. javanica*, previously recorded on *D. ovalifolium*, and has been identified as a new genus of the family Anguinidae by M. R. Siddiqi of the Commonwealth Parasitology Institute, United Kingdom. This is the first report of stem gall nematode on *D. ovalifolium*.

During 1982, extensive surveys of *D. ovalifolium* CIAT 350 pastures in the Llanos Orientales of Colombia found stem gall-inducing nematodes associated with dying and dead plants at several sites. Galls were more common and damage more severe in pastures 2 yr or older that had been intensively grazed. In many cases, galls were associated with abrasions, cuts, and breakages of stems caused by animal trampling. Preliminary greenhouse inoculation experiments have confirmed that nematodes rapidly colonize stems of *D. ovalifolium* CIAT 350 with resulting gall formation in association with wounds (*unpublished*).

Field survey data to date have shown that shorter accessions including CIAT 3666, 3784, and 3793 are less affected by the stem gall nematode than taller accessions. The shorter accessions also show less damage from animal trampling. Systematic screening of the CIAT *D. ovalifolium* germ plasm collection of 70 accessions for resistance to both nematodes is in progress.

## ACKNOWLEDGMENT

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## LITERATURE CITED

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