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## COMPARISON OF MORPHOLOGICAL CHARACTERS OF DIFFERENT POPULATIONS OF *LONGIDORUS AFRICANUS*

by  
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*Longidorus africanus* Merny, 1966 has been reported to be widely distributed in the USA in association with many kind of crops (Radewald *et al.*, 1969). Lamberti (1969) showed that *L. africanus* caused stunting and distortion of the roots of lettuce, sorghum and sugar beet. In Coimbatore, South India, *L. africanus* caused damage to the commercially-grown flowering plant *Crossandra undulaefolia* Salisb. Attacked plants had stunted root systems and growth of the plants was retarded.

Measurements of *L. africanus* from Coimbatore were close to those of populations from Egypt, Israel and Zimbabwe (formerly Southern Rhodesia) (Table I). However, the lengths of the odontostyle and the odontophore were greater in the Coimbatore specimens than in the other three populations.

### LITERATURE CITED

- ABOUL EID H.Z., 1970 - Systematic notes on *Longidorus* and *Paralongidorus*. *Nematologica*, 16: 159-179.  
COHN E. and MORDECHAI M., 1968. A case of intersexuality and occurrence of males in *Longidorus africanus*. *Nematologica*, 14: 591-601.  
LAMBERTI F., 1969 - Pathogenicity of *Longidorus africanus* on selected field crops. *Pl. Dis. Repr.*, 53: 421-424.  
MERNY G. 1966 - Nematodes d'Afrique tropicale: un nouveau *Paratylenchus* (Criconematidae), deux nouveaux *Longidorus* et observations sur *Longidorus laevicapitatus*. *Nematologica*, 12: 385-395.

MUTHUKRISHNAN T.S., VADIVELU S. and RAJENDRAN G., 1977 - *Longidorus africanus* Merny, 1966  
and its pathogenic effect on *Crossandra undulæfolia*. *Ind. J. Nematol.*, 7: 69-72.

RADEWALD J.D., OSGOOD J.W., MAYBEMY K.S., PAULUS A.O. and SHIBUYA F. 1969 - *Longidorus africanus* a pathogen of head lettuce in Imperial valley of South California. *Pl. Dis. Rept.* 53: 381-384.

Table I - Comparative measurements of *Longidorus africanus* from Coimbatore (S. India), Zimbabwe, Egypt and Israel

	Coimbatore	Zimbabwe Type locality (a)	Egypt (b)	Israel (c)
n	8 ♀ ♀	3 ♂ ♂	14 ♀ ♀	3 ♂ ♂
L (mm)	3.73-4.48	4.2-4.5	2.65-3.84	3.10-5.32
a	86-108	101-103	72-107	81-136
b	9.6-13.8	13-14.6	8.5-12.2	7.4-15.8
c	57-102	66-86	68-106	81-136
V	40-48	—	45-50	42-52
G1	—	—	—	4.7-8.4
G2	—	—	—	4.5-10.1
Odontostyle length (µm)	100-132	100-112	68-101	79-92
Odontophore length (µm)	50-59	53-59	49-54	41-57
Tail length / anal body width	1.2-1.8	1.2-1.5	1.3-1.8	1.2-1.7
				1.3-1.6

a = Data from Merny (1966);

b = Data from Aboul Eid (1970);

c = Data from Cohn and Mordechai (1968).