

**CELLULAR ALTERATIONS IN BLACK MULBERRY ROOTS  
FOLLOWING INFECTION BY *MELOIDOGYNE INCOGNITA*  
AND *ROTYLENCHULUS RENIFORMIS***

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**Abstract**

Cellular alterations in *Meloidogyne incognita* or *Rotylenchulus reniformis*-infected black mulberry (*Morus nigra*) roots revealed that infection with root-knot nematode, *M. incognita* induced pronounced alterations in the cortical, endodermal and stellar regions. The nematode formed giant cells in the stellar region. The giant cells tended to be prolonged along the stele region occupying a considerable area. Cell alterations as a result to *R. reniformis* infection showed that an immature female penetrated the cortex perpendicular to the endodermis and stele forming a permanent feeding site and/or syncytium associated with nematode infection.