



## Nematode Management on Peanut

[www.ncagr.gov/agronomi/uynem.htm](http://www.ncagr.gov/agronomi/uynem.htm)

Plant-parasitic nematodes have long been associated with important yield losses of peanut in North Carolina. Key species of these parasites attacking peanut include the northern root-knot (*Meloidogyne hapla*), the peanut root-knot (*M. arenaria* race 1), sting (*Belonolaimus longicaudatus*), lesion (*Pratylenchus brachyurus*) and ring (*Mesocriconema ornata*) nematodes (Figure 1).

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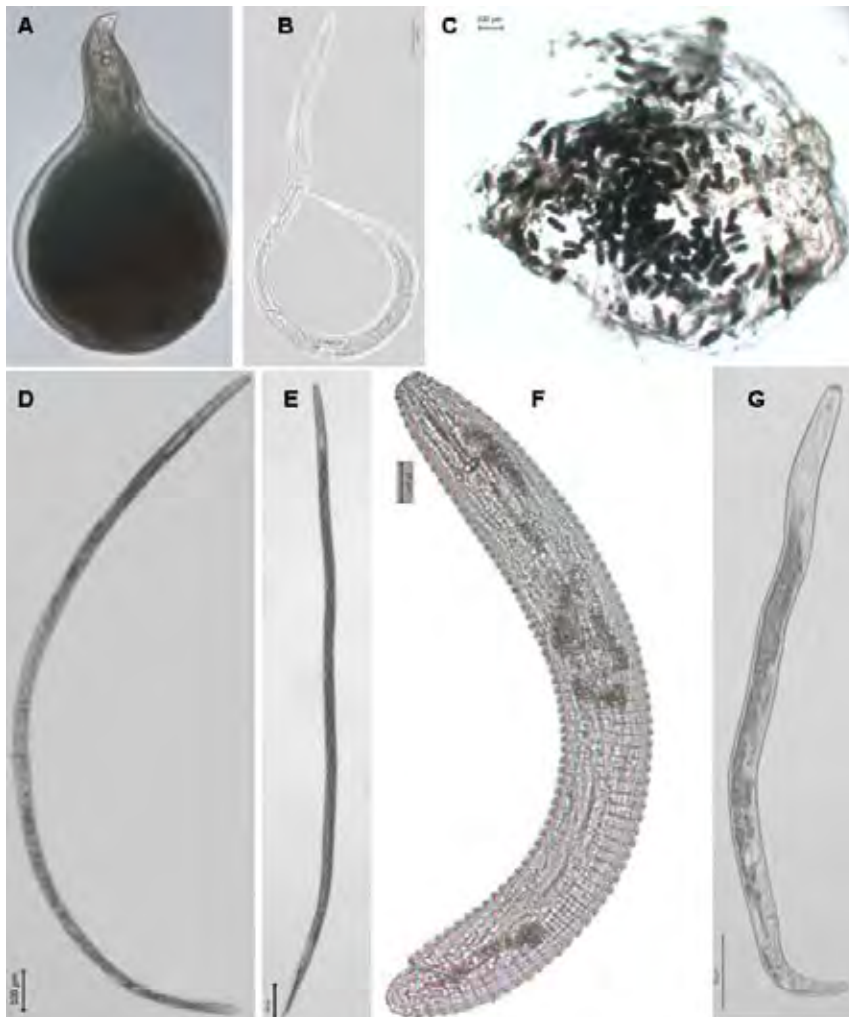


Figure 1. Micrographs of peanut nematodes: Root-knot (*Meloidogyne* sp.) **A.** female, **B.** second-stage juvenile, **C.** egg mass; Sting (*Belonolaimus longicaudatus*) **D.** female, **E.** male; **F.** Ring (*Mesocriconema* sp.); and **G.** Lesion (*Pratylenchus brachyurus*).

Root galls caused by *Meloidogyne hapla* are much smaller than those caused by *M. arenaria* (Figure 2). Roots attacked by the sting nematode have extensive lesions and restricted growth. Lesion nematodes cause small necrotic spots on the roots and pods. Above-ground, scattered areas of stunted plants may indicate a nematode problem, especially with sting nematodes and/or *M. arenaria*. Root-knot nematodes can also predispose peanut plants to infection by fungal diseases, including *Cylindrocladium* black rot.

Nematode control usually involves integrating a number of disease-management strategies within an appropriate cropping system. Specific tools include rotation with nonhost or poor host crops (cotton, bermuda grass, sorghum, winter rye and small grain), chemical soil treatments and resistant cultivars. In North Carolina, control of nematodes and *Cylindrocladium* black rot are closely linked.

Nematicides approved for use in peanut production are listed in the N.C. Agricultural Chemicals Manual. Before using a chemical control, however, growers should submit samples for nematode assay to the the NCDA&CS Agronomic Division. Results of an assay will indicate whether chemical treatment is necessary. Predictive sampling, especially in fall, helps guide the selection of appropriate management tactics.



Figure 2. *Meloidogyne arenaria* galls on peanut pods (photo provided by Dr. Ken Barker).

### For Additional Assistance

- Call your NCDA&CS regional agronomist or the Agronomic Division office in Raleigh (919-733-2655).
- Visit the NCDA&CS Agronomic Division Web site at [www.ncagr.gov/agronomi/](http://www.ncagr.gov/agronomi/).
- Visit your county Cooperative Extension office.
- Refer to one or more of the following online publications:
  - ***Peanut disease guide*** (N.C. Agricultural Extension Service, 2009)  
— [ipm.ncsu.edu/peanuts/diseases/guide/contents.html](http://ipm.ncsu.edu/peanuts/diseases/guide/contents.html)
  - ***Peanut nematode management*** (University of Florida IFAS Extension, 2009)  
— [edis.ifas.ufl.edu/NG016](http://edis.ifas.ufl.edu/NG016)
  - ***Root-knot nematode resistance in peanut*** (University of Florida IFAS Extension, 2009)  
— [edis.ifas.ufl.edu/NG046](http://edis.ifas.ufl.edu/NG046)