NemaNote 11

Nematode Management in Cotton

www.ncagr.gov/agronomi/uyrnem.htm

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Your nematode assay report indicates a potential nematode hazard. Cotton-yield losses to nematodes are usually more severe in sandy soils than in heavy-textured soils. A number of nematode species attack this crop, but southern root-knot nematode (*Meloidogyne incognita*) is the most widespread and important. This pathogen not only causes root galling but also increases the severity of *Fusarium* wilt. The incidence of southern root-knot nematode on cotton has increased significantly as the acreage allocated to this crop has grown.

Root-knot nematodes can be managed with a combination of crop rotation, nematicides and resistant cultivars. Rotation crops include alfalfa, grasses, peanut, sorghum, and root-knot resistant cowpea, soybean or tobacco. Cultivars with moderate resistance include Deltapine 458RR, Deltapine 451BRR and Stoneville ST5599BR.

Other nematode species that attack cotton in North Carolina include lance (*Hoplolaimus* spp.), lesion (*Pratylenchus brachyurus*), reniform (*Rotylenchulus reniformis*), sting (*Belonolaimus longicaudatus*) and stubby root (*Paratrichodorus minor*). The sting nematode, like root knot, also enhances *Fusarium* wilt on cotton.

Lesion, sting and stubby root are controlled largely by rotation and nematicides. There are no resistant cultivars. Good rotation crops include grasses, corn, peanut, small grain, sorghum, mustard, pepper and soybean (resistant) for ***reniform nematodes***; watermelon, clover (excluding white clover), alfalfa, grain and tobacco for ***sting nematodes***; and grasses, peanut, tobacco, small grain and milo for ***Columbia lance***.

The use of a green manure crop such as rye and/or the addition of poultry litter may limit damage caused by root-knot and lance nematodes. Destruction of cotton roots after harvest reduces nematode survival as this crop is a perennial. Subsoiling in areas where there is a hardpan helps limit losses to nematodes.

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/.
- Visit your county Cooperative Extension office.
- Refer to one or more of the following online publications:
  - ***Cotton information*** (N.C. Cooperative Extension Publication AG-417; published annually)
  - ***How to manage pests. Cotton nematodes*** (University of California, 2005)
    — www.ipm.ucdavis.edu/PMG/r114200111.html
  - ***Nematodes: hidden enemy of cotton*** (Delta Farm Press, 2001)
    — deltafarmpress.com/mag/farming_nematodes_hidden_enemy/
  - ***N.C. agricultural chemicals manual*** (NCSU Publication AG-1; published annually)

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