

Laboratory 10 Study Guide (video: 43 minutes)

Study Questions

1. Compare and contrast *Meloidogyne* and *Heterodera* with respect to a) the shape of mature females, b) where their eggs are located, c) their position within the host, and d) their relative host ranges.
2. Are any of the common soil-inhabiting rhabditoid nematodes plant pathogens? If not, why not? Are all the common tylenchoid and dorylaim nematodes plant pathogens?
3. What type of above-ground symptoms do nematodes generally cause? Are there any exceptions? If so, specify.
4. Do any plant parasitic nematodes facilitate infection by bacteria and fungi? If so can you provide an example?
5. Compare and contrast the stylets of dorylaim and tylenchoid nematodes. Which group has members that can acquire and transmit plant viruses?
6. What are ecto- and endoparasitic nematodes? Give an example of each.
7. What nematodes generally induce distinctive galls and distortions of roots? How can galls induced by nematodes be distinguished from root nodules induced by nitrogen-fixing bacteria (*Rhizobium*)?

Key Words

Aphelenchoides (foliar nematode)
Buccal cavity
Corky ringspot disease of potato
Dorylaimida
Ectoparasites (e.g. *Trichodorus*)
Endoparasites (e.g. *Pratylenchus*)
Giant cells (*Meloidogyne*)
Golden nematode of potato (*Heterodera* sp.)
Heterodera (cyst nematode)
Meloidogyne (root knot nematode)
Odontostylets
Pratylenchus (lesion nematode)
Rhabditida
Rhizobium nodules
Root knot nematodes (*Meloidoyne* spp.)
Sopybean cyst nematode (*Heterodera* sp.)
Stomatosylets
Syncytia (*Heterodera*)
Tobacco rattle virus
Trichodorus/Paratrichodorus (stubby root nematodes)
Tylenchida