Root-Knot Nematode (Meloidogyne spp.)

- Microscopic endoparasitic plant parasites
- Causes roots to form galls or knots
- Causal agent of root-knot disease in many crops
- Extremely common in Florida
- Worldwide distribution
- Wide host range

**Microscopic view of mature female RKN with stained egg mass (red)**

**Root-knot nematode on hemp roots**

Cannabis sativa with less than 0.3% THC

- delta-9-tetrahydrocannabinol
- the psychoactive compound found in cannabis plants

What impact do root-knot nematodes have on hemp?

By conducting two separate greenhouse experiments that focused on the host status and susceptibility of 6 hemp cultivars to a mixed population of root-knot nematode (RKN):

**HEMP:**

- Is a good host for RKN
- Has tolerance to RKN
- Cultivar differences were seen

**HEMP:**

- Biomass is not negatively impacted*
  - *root weight reduced in some instances when compared to healthy, uninfected roots.
- Total THC is not affected by presence of root-knot nematode

**Roots stained with 12% red food-dye showing the stained juveniles (pink, arrows) within hemp roots one week after inoculation with RKN eggs. cv. Carmagnola Selezionata**

To support the future viability and sustainability of hemp, and considering the importance of nematodes in Florida, it is critical to assess the impact that root-knot nematodes may have on this crop.

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