Root-knot nematode species identification using mitochondrial DNA

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Short summary: Root-knot nematodes are damaging pests on a wide range of California crops. In recent years, control options have been greatly reduced by increased restrictions on fumigant pesticides. Host resistance and crop rotation remain valuable tools for control, but, for their use, it is important to identify the root-knot nematode species. This project will carry out sequence analysis of the mitochondrial DNA, which preliminary studies indicate is the most appropriate target, from the root knot nematode species commonly found on tomato in California (M. incognita, M. javanica, M. arenaria, M. hapla) and develop a robust assay to identify these as well as invasive species such as M. enterolobii and M. floridensis.

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