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plant disease

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Disease Notes

First Report of Columbia Root Knot Nematode (*Meloidogyne chitwoodi*) in Potato in Texas

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Columbia root-knot nematode, *Meloidogyne chitwoodi* Golden et al. (1) was identified from potatoes, *Solanum tuberosum* L., collected from Dallam County, Texas in October 2000. Seed potatoes are the most likely source for this introduction. This nematode is currently found infecting potatoes grown in California, Colorado, Idaho, New Mexico, Nevada, Oregon, Utah, and Washington. Some countries prohibit import of both seed and table stock potatoes originating in states known to harbor *M. chitwoodi*. Lesions on the potatoes had discrete brown coloration with white central spots in the outer 1 cm of the tuber flesh. Female nematode densities averaged 3 per square centimeter of a potato section beneath the lesions. Nematodes were morphologically identified as *M. chitwoodi* based on the perineal pattern of mature females and the tail shape of juveniles per Golden et al. (1). Using polymerase chain reaction-RFLP of the rDNA ITS1 region and the mtDNA COII-16S rRNA region (2), individual juveniles were identified as *M. chitwoodi* based on their restriction fragment patterns. This is the first report of Columbia root-knot nematode infecting potatoes in Texas. The distribution of this nematode in potato fields throughout central United States should be determined.

References: (1) A. N. Golden et al. J. Nematol. 12:319, 1980. (2) T. O. Powers and T. S. Harris. J. Nematol. 25:1, 1993.