

Phytophthora asparagi



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***Phytophthora asparagi* Saude & Hausbeck, sp. nov.**

Etymology. Named after the host from which it was isolated, *Asparagus*.

Water-soaked lesions on shoots slightly above or below the soil line, which may elongate and result in curved growth of the spear (Shepherd's crook) under conditions favourable for the pathogen. Water-soaked lesions on the storage roots cause roots to shrivel as lesions expand. Yellow to brown discoloration of the internal tissue of the storage roots may occur. *Oospores* abundantly produced on V8 agar, oogonia 25–45 µm diam, antheridia amphigynous, homothallic. *Sporangia* sparsely produced on V8 agar and abundantly produced on dilute V8 agar, non-caducous, non-papillate, ovoid or obpyriform; 20–60 µm long × 10–35 µm wide. *Sporangial proliferation* external and internal. *Chlamydospores* not observed. *Hyphae* coenocytic, hyaline, 1.25–1.5 µm diam. Radial growth rate on V8 agar in the dark at optimum (25 °C) was ~11 mm/d, no growth at 5 and 30 °C (Saude et al. 2008).

Culture characteristics — (in light, 25 °C, after 7 d): Colony morphology on V8 agar stellate to rosaceous, white mycelia appressed to medium with aerial hyphae.

Typus. USA, Southwest Michigan, *Asparagus officinalis*, Spring 2006, C. Saude & M.K. Hausbeck, holotype SP326 (Cornell herbarium), culture ex-type SP326 = ATCC MYA-4826 = CBS 132095, ITS sequence GenBank EF185089 and LSU sequence GenBank JX069843, MycoBank MB511931.

Additional specimens examined. USA, Northwest and Central Michigan, *Asparagus officinalis*, Spring 2004 and 2005, C. Saude, 48 isolates (Saude et al. 2008).

Notes — *Phytophthora asparagi* causes spear and root rot of asparagus. The pathogen may be readily isolated from diseased spears and isolated with more difficulty from diseased crowns and storage roots (Saude et al. 2008).

Colour illustrations. Diseased asparagus spear in a commercial grower's field in Michigan; dark lesions on storage root tissue; sporangia; oogonium with oospore and amphigynous antheridium. Scale bars = 10 µm.

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