

Abstract

Winter pears (*Pyrus communis*) in the United States are produced primarily in the Pacific Northwest. *Potebniomyces pyri* (anamorph *Phacidiopycnis piri*) is the causal agent of Phacidiopycnis rot, a recently reported postharvest disease on pears in the United States. Infection of fruit by *P. pyri* occurs in the orchard, and symptoms develop during storage. *P. pyri* was observed to be associated with cankers, dead bark, and twig dieback of pear trees. *P. pyri* was isolated from 40 to 50% of the twig samples exhibiting dieback symptoms from three commercial d'Anjou pear orchards, and 35% of dying bark samples from one orchard. However, little information is available regarding pathogenicity of *P. pyri* on pear trees. To determine the distribution of *P. pyri*, dying and dead bark samples were collected from pear orchards in various pear-producing areas in Oregon and Washington, and examined for presence of fruiting bodies (pycnidia or apothecia) of *P. pyri*. In the orchard, 2-year-old twigs were wounded using a sterile cork borer with or without spraying with a commercial aerosol tissue-freezing product at the wound sites. Wounds were then inoculated with either mycelial plugs from an agar medium or conidial suspensions of *P. pyri*. In a separate experiment, freshly made pruning wounds were inoculated with conidial suspensions of *P. pyri*. Canker development was monitored approximately monthly for up to 6 months after inoculation, at which time reisolation of *P. pyri* was attempted. *P. pyri* was found to be widespread in the Pacific Northwest. Incidence of trees infected by *P. pyri* based on presence of viable pycnidia in pear orchards ranged from 0 to 100%. Monthly tree inoculations in the orchard indicated that *P. pyri* in general did not cause cankers on non-cold-injured, wound-inoculated twigs, but apparently became established on cold-injured, wound-inoculated twigs and caused small cankers. Minor dieback developed on twigs inoculated at pruning wounds. At 6 months after inoculation, *P. pyri* was recovered from the majority of inoculated twigs. Thus, *P. pyri* appears to be a weak canker-causing pathogen on pear trees.