Postharvest decay of apples and pears in the Netherlands

M. Wenneker, J. Köhl

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Abstract

Postharvest diseases are a major problem in long storage of apples and pears in The Netherlands. Despite intensive preharvest spraying programs significant losses occur (over 60% of fruit losses are recorded). Over 125 heavily affected lots of apples (mainly 'Elstar') and pears (mainly 'Conference') from packing houses in different regions of The Netherlands were evaluated for decay symptoms and causal organisms in the 2011/2012 season. Results showed that the most important pathogens were *Neofabraea* spp. (apples and pears) and *Cadophora* spp. (pears). Other pathogens such as *Botrytis* spp., *Pencillium* spp., *Fusarium* spp., *Alternaria* spp., and *Cladosporium* spp. were isolated at low frequencies and are considered of minor importance. Also new problems with sooty blotch and lenticel rot of apple were noticed, most likely caused by other, not yet identified pathogens. Pathogenicity testing and characterization of isolates are on-going. For major pathogens, qPCR assays are developed. Samples of substrates (e.g., leaves, cankers, soil) were monthly taken from 10 apple and 10 pear orchards in 2102. Samples will be assessed using the qPCR assays for presence and dynamics of pathogen populations. This information on the pathogen life cycles is needed for the development of innovative strategies (e.g., sanitation practices) to prevent postharvest losses.