MANAGEMENT OF KAURI DIEBACK

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Kauri ill-thrift, commonly known as Kauri dieback, has been identified as an increasing problem affecting kauri (*Agathis australis*) across the Auckland region. A water and soilborne pathogen, *Phytophthora* taxon Agathis (PTA), has been identified as a causal agent of Kauri dieback at some locations, particularly within the Waitakeres Ranges Regional Park and Great Barrier Island. PTA is associated with a collar rot causing large bleeding basal lesions, yellowing foliage and tree death. A range of other causal agents, including *Phytophthora cinnamomi* and environmental stress factors, were also associated with symptoms at many sites. In 2008, Auckland Regional Council implemented a range of standard operational procedures to manage the disease across the region. Surveillance surveys are underway to assess overall tree health as well as the potential distribution of PTA in Auckland's kauri forests. Survey sites were prioritised in areas with high conservation value, iconic trees, or high levels of soil disturbance, such as tracks intersecting kauri root zones. Risk management of the suspected primary vectors of the PTA, including people and feral pigs, is underway.

TOWARDS UNIVERSAL DETECTION OF LUTEOVIRIDAE

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Luteoviridae is a plant virus family of 26 species, which causes yield losses in cereals, potatoes and other economically important crops worldwide. Accurate detection is an important component of controlling the spread of luteoviruses and reducing yield losses. PCR-based detection is often the method of choice for *Luteoviridae* as it is more sensitive than serological methods, which frequently fail to detect infection due to the low concentration of luteoviruses in plants. Since the currently available luteovirus primers are mostly species-specific and work under different PCR conditions, universal primers are desirable. Seven primers were tested that were designed to target the most conserved regions of the *Luteoviridae* genomes and that possess high homology to over 75% of *Luteoviridae* species. Thirty luteovirus isolates representing 15 species were obtained from New Zealand and overseas: these included all five species from the *Luteovirus* genus, eight of the nine species from the *Polerovirus* genus (except CYDV-RPS), PEMV-1 (the only species from the *Enamovirus* genus) and CtrLV (which is not assigned to a genus). Between them the three combinations of primers detected all 13 of the *Luteovirus* and *Polerovirus* species tested.