Testing calcium in a commercial apple orchard for control of bitter rots caused by *Colletotrichum acutatum*

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Previous laboratory and field tests have indicated that calcium shows promise for control of bitter rots on apple caused by *Colletotrichum acutatum*. This year, a replicated fungicide spray trial was conducted on a commercial orchard in Rukuhia, Waikato, on a block planted with 'Royal Gala' apples. Chemicals were applied at 10-14 day intervals from October to February. Calcium chloride applications were as effective as fungicides for control of bitter rots on fruit at both high and low rates, but high rates damaged apple leaves. Calcium chloride is already applied to some apple cultivars, but not often to 'Royal Gala'. It is a generally regarded as safe (GRAS) chemical, and residues are not tested. Calcium chloride at low rates is suitable as an alternative to fungicides for use in residue-free growing programmes to control bitter rots in the orchard.

Survey for viruses and viroids in apple and pear trees in New Zealand

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Surveys to determine the phytosanitary status of apple (*Malus*) and pear (*Pyrus*) trees in New Zealand were conducted from 2005 to 2006. A total of 188 symptomatic and non-symptomatic trees from various geographical locations were tested for the presence of a number of viruses and viroids by RT-PCR. All *Malus* samples were tested for Apple chlorotic leaf spot virus (ACLSV), Apple stem grooving virus (ASGV), Apple stem pitting virus (ASPV), Apple mosaic virus (ApMV), Apple scar skin viroid (ASSVd), Apple dimple fruit viroid (ADFVd), Cherry rasp leaf virus (CRLV) and Tomato ringspot virus (ToRSV). ACLSV was detected in 48%, ASGV in 36%, ASPV in 61% and ApMV in 45% of samples tested. ASSVd, ADFVd, CRLV, ToRSV were not detected in any of the 165 sampled *Malus* plants, which provides evidence that they are not present in New Zealand. All *Pyrus* samples were tested for ACLSV, ASGV, ASPV, ApMV, Pear latent virus (PeLV) and Pear blister canker viroid (PBCVd). ACLSV was detected in 17%, ASGV in 13%, ASPV in 17% and ApMV in 4% of sampled *Pyrus* trees. PeLV and PBCVd were not detected in any of the 23 sampled symptomatic *Pyrus* trees, which provides evidence that PeLV and PBCVd are not present in New Zealand.