Virus surveys of process vegetable crops: pea, beetroot and dwarf bean

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In a survey of 14 processing crops and 7 pea seed crops throughout Canterbury, *Cucumber mosaic virus* (CMV) was the most widespread with crop incidences of up to 20%, *Alfalfa mosaic virus* (AMV) up to 11%, *Pea seed-borne mosaic virus* (PSbMV) up to 9%, *Soybean dwarf virus* (SDV) up to 2%, *Turnip yellows virus* (TuYV) up to 2% and *Bean yellow mosaic virus* (BYMV) up to 3.5%. *Red clover vein mosaic virus* (RCVMV) was detected in peas for the first time in New Zealand, with incidences of up to 3.5%. *Pea necrotic yellow dwarf virus* (PNYDV), *Faba bean necrotic yellows virus* (FBNYV) and *Broad bean stain virus* (BBSV) were not detected. In a survey of 8 beetroot crops TuYV was detected in Auckland at 1% incidence but not in Hawke's Bay. *Beet mosaic virus* was detected at 1% incidence in both regions. Fungal leaf spotting pathogens appear a greater concern in beetroot. In 12 dwarf bean processing crops throughout Canterbury virus was only detected in early sown crops. AMV and RCVMV were most widespread with incidences of up to 9%; CMV with up to 7% incidence; then BYMV, TuYV and SDV each with 1% incidence. No *Bean common mosaic virus* was detected.

What is the host range of *Phytophthora agathidicida* in New Zealand?

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Phytophthora agathidicida is a virulent oomycete plant pathogen, which is currently known to only infect *Agathis australis* in New Zealand. *Phytophthora* species rarely have a single plant host, so other hosts for *P. agathidicida* are likely but unknown. *Phytophthora* species are also often cryptic and sometimes asymptomatic on their host plants, making it a challenge to identify their true host range. Once an exotic *Phytophthora* species is introduced to an area, it becomes virtually impossible to eliminate. A sound understanding of a *Phytophthora*'s epidemiology is needed to prevent its spread onto uninfected hosts. This study determined whether *P. agathidicida* has a wider host range than currently recognised. Plant community composition was compared between healthy and infected kauri forest to detect possible susceptible species, and detached leaf assays were utilised as a further screen of possible hosts. Results showed a significant difference in species abundances between sites infected with *P. agathidicida* and sites without *P. agathidicida* that was unrelated to other potential variables. Leaf assays also indicated several other native plant species other than *A. australis* as possible carriers or hosts, including *Knightia excelsa* and *Leucopogon fasciculatus*. Identifying the host range of *P. agathidicida* is important for optimising the design of future control strategies for this pathogen.