Raspberry Latent Virus

a. Virus/pathogen name, including accepted acronyms and synonyms

Raspberry latent virus (RpLV)

b. Host range, including resistance or tolerance within the crop hosts, alternate hosts
RpLV infects multiple *Rubus* spp. that have been tested, including *R. occidentalis*, *R. idaeus* and blackberries.

c. Symptoms on crop host including varietal differences with images of symptoms when available
RpLV was symptomless in the commonly used *Rubus occidentalis* virus indicator and in red raspberry and blackberry cultivars where it has been found. However, this virus did interact synergistically with raspberry bushy dwarf virus (RBDV) and raspberry leaf mottle virus to increase the severity of crumbly fruit symptoms and induced stunting in red raspberry (Quito-Avila and Martin (2012).

d. Geographic distribution:
RpLV has been detected in the Pacific Northwest (Oregon and Washington in the U.S. and in British Columbia, Canada) (Quito-Avila et al., 2011).

e. Means of spread:

RpLV is transmitted by the aphid, *Amphorophora agathonica*, and is the first member of the family *Reoviridae* to be transmitted by aphids (Quito-Avila et al., 2012).

f. Recognized diagnostic tests with cited references:
RpLV can be detected by RT-PCR (Quito-Avila et al., 2011) and qRT-PCR (Quito-Avila et al., 2012).

Sampling recommendations for each pathogen including timing and tissue to be sampled

The youngest fully expanded leaves collected early in the growing season or in the autumn should be used for detection. Three leaves per plant should be used for detection by RT-PCR.

g. Management strategies for the pathogen and the vector(s) of the pathogen

The use of virus-indexed planting stock is the most critical step in virus management. Avoid planting adjacent to older raspberry or blackberry fields since they likely are a source of inoculum and potential vectors.

Quito-Avila, D. F. 2011. Impact of *Raspberry bushy dwarf virus*, *Raspberry leaf mottle virus* and *Raspberry latent virus* on plant growth and fruit crumbliness in red raspberry (*Rubus idaeus* L) 'Meeker'. Ph.D. dissertation, Oregon State University.

Quito-Avila, D. F., Jelkmann, W., Tzanetakis, I. E., Keller, K. E. and Martin, R. R. 2011. Complete sequence and genetic characterization of *Raspberry latent virus*, a novel member of the family *Reoviridae*. Virus Research 155:397-405.

Quito-Avila, D. F., Lightle, D., Lee, J. and Martin, R. R. 2012. Transmission biology of *Raspberry latent virus*, the first aphid-borne reovirus. Phytopathology 102:547-553.

Quito-Avila, D.F. and Martin, R.R., 2012. Real-time RT-PCR for detection of Raspberry bushy dwarf virus, Raspberry leaf mottle virus and characterizing synergistic interactions in mixed infections. J. Virol. Meth. 179: 38-44.

Names of reviewers: Ioannis E. Tzanetakis

Date of last update: July 2026