Raspberry Leaf Blotch Virus

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

Raspberry leaf blotch virus, RLBV- Genus *Emaravirus*, Family *Fimoviridae,* Order *Bunyavirales*

b. Host range, including resistance or tolerance within the crop hosts, alternate hosts

Raspberries (*Rubus idaeus*) and tayberries (*Rubus* hybrids) are known hosts of raspberry leaf blotch virus. Wild raspberries can be natural reservoirs of the virus and may act as sources of the virus for infection of cultivated raspberries. Ornamentals such as *Rubus odoratus* could also serve as RLBV hosts (Dong et al., 2015).

b. Symptoms on crop host including varietal differences with images of symptoms when available

RLBV is close associated with the raspberry leaf blotch disease (RLBD) (McGavin et al., 2011). Typical symptoms of RLBD include yellow blotches or rings on leaves, leaf malformation, necrosis and reduced vigor of severely affected plants (Gordon and Taylor, 1976). Dong et al., (2015) showed that RLBV infects many different raspberry cultivars but is not always associated with the characteristic symptoms of RLBD; for example 'Glen Ample' plants showed only few yellow blotches. *Nicotiana benthamiana* is a systemic herbaceous host of the virus with symptoms including yellowing of the upper canopy (McGavin et al., 2011).

d. Geographic distribution:

RLBD has been reported in Netherlands (Dinther, 1951), Germany (Domes, 1957), France (Bouchery and Putz, 1972), Norway (Stenseth, 1973), Scotland (Jones and Badenoch, 1982; Jones et al., 1984), Serbia (McGavin et al., 2011), Finland (Bi et al., 2012), Bulgaria (Mavrič-Pleško et al., 2014), Bosnia and Herzegovina, and Poland (Cieslinska and Tartanus, 2014).

e. Means of spread:

RLBV may be distributed via the infected material within and between countries (Jevremovic et al., 2019). Mechanical transmission of the virus from raspberry to *Nicotiana benthamiana* was achieved on many occasions, and on several occasions from *N.*

benthamiana to *N. benthamiana* (McGavin et al., 2011). *Phyllocoptes gracilis*, is a common pest of raspberries and some studies indicate the mite may be the vector of RLBV (Dong et al., 2015).

f. Recognized diagnostic tests with cited references:

The preferred diagnostic assay is reverse transcription polymerase (RT-PCR) (Jevremović et al., 2019), and dot blot hybridization (Dong et al., 2015).

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

Samples should probably be taken from symptomatic material and different parts of the plant to increase chances of detection.

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

Propagation material should be tested for RLBV; whereas chemical control of the suspected vector should be implemented in the presence of the disease (Dong, L. et al., 2015)

i. References

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