Strawberry pallidosis associated virus

a. Virus/pathogen name, including accepted acronyms and synonyms
Strawberry pallidosis associated virus, SPaV– Genus *Crinivirus*, Family *Closteroviridae*

b. Host range, including resistance or tolerance within the crop hosts, alternate hosts
Fragaria spp., *Sibbaldia procumbens* - creeping sibbaldia, *Physalis wrightii* (sharpleaf groundcherry), *Malva parviflora* (cheeseweed), *Nicotiana benthamiana, N. clevelandii (laboratory hosts)*

c. Symptoms on crop host including varietal differences with images of symptoms when available
The virus does not cause symptoms in modern strawberry cultivars but causes distortion, chlorosis and dwarfing on *Fragaria virginiana* indicators 'UC-10' and 'UC-11'. The original description of the agent associated with the disease was its ability to cause symptoms on *F. virginiana* but not *F. vesca* indicators. As noted above SPaV remains asymptomatic in single infections whereas it can be part of the strawberry decline (SD) complex. The symptoms of SD vary but usually includes leaf discoloration, chlorosis, reddening, stunting of the root system and leaves. Plants have little or no marketable fruit and could die before harvest. In severe cases SD may lead to plant death.

d. Geographic distribution: SPaV has been detected in all strawberry producing areas in the U.S. as well as Mexico, China, Korea, Peru and Australia.

Means of spread: SPaV is transmitted efficiently by the greenhouse whitefly (*Trialeurodes vaporariorum*) the banded-wing whitefly (*T. abutilonea*). The virus was not transmitted mechanically or through seed.

e. Recognized diagnostic tests with cited references:
SPaV can be detected readily by RT-PCR (Tzanetakis et al., 2004). The antiserum developed by Tzanetakis et al. (2004) is not commercially available

f. Sampling recommendations for each pathogen including timing and tissue to be sampled
Leaf tissue collected in early season is ideal for sampling. Sampling during the hot summer months is discouraged as virus titer drops significantly during this period. As SPaV is phloem limited, the youngest fully mature leaves are needed for optimal detection.

g. Management strategies for the pathogen and the vector(s) of the pathogen
SPaV is widespread in the United States along the east coast, in the south and in Calfornia. The most important control measure is to start with SPaV-free planting stock, also if planting adjacent to alternative hosts in areas where the whitefly vectors are present, it is advisable to test these adjacent plants for the virus prior to planting to determine if they pose a risk of SPaV infection in the planned planting.

i. References

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