Strawberry Crinkle Virus

a. Virus/pathogen name, including accepted acronyms and synonyms
Strawberry crinkle virus, SCV -- Genus *Cytorhabdovirus,* Family *Rhabdoviridae* (ICTV)

b. Host range, including resistance or tolerance within the crop hosts, alternate hosts:
No *Fragaria* species have been found to be immune to SCV. Tolerance varies depending on the species and cultivar with many remaining symptomless in single infections. In mixed infections with viruses such as SMoV or SMYEV symptoms can be severe. *Potentilla reptans,* a close strawberry relative has been reported to be an alternate host. Experimental herbaceous hosts in the genera *Physalis and Nicotiana* can be used to maintain isolates.

c. Symptoms on crop host including varietal differences with images of symptoms when available: Asymptomatic in single infections; yet yield losses have been reported in years after infection. Symptoms depend on isolate virulence and cultivar sensitivity. The virus caused 30% yield reduction in 'Hood'. *Fragaria vesca* clones 'UC-4' and 'UC-5', do show symptoms and are often used as indicators. Symptoms include chlorotic spots and leaf deformation to leaflet distortion, crinkling, leaflets of unequal size, and reduction in size of petioles and leaves. Infected Fragaria vesca 'UC-1' shows lesions in stolon tips and petiole segments. 'Marshall' shows chlorotic areas in leaflets of strawberry whereas *Fragaria vesca* var. semperflorans cv. 'Alpine' is stunted with abaxially curled leaflets; flowers exhibit petal streak symptoms. Symptoms are most pronounced from in late spring, and subside in high temperatures.

d. Geographic distribution: Worldwide, mainly where *Chaetosiphon* species, especially *C. fragaefolii* are present.

e. Means of spread:
Clonal propagation of infected plants by runners
Grafting
Transmitted by *Chaetosiphon fragaefolli,* in a persistent propagative manner. *C. jacobi* may also transmit but at a much lower efficiency. Other aphid species, when injected with purified virus, can transmit in an experimental setting, but cannot acquire the virus by feeding

f. Recognized diagnostic tests with cited references:
RT-PCR (Posthuma *et al.*, 2002, Mumford *et al*., 2004, Klerks *et al.*, 2004, Chang *et al.*, 2007)

g. Sampling recommendations for each pathogen including timing and tissue to be sampled:
During the lower temperatures of the growing season, sample from youngest fully developed trifoliate at the flowering/fruiting stage.

h. Management strategies for the pathogen and the vector(s) of the pathogen: The most effective method of control is use of clean propagation stock. Aphid management can be utilized, however will not stop the spread of the virus in the field.

i. References

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