Strawberry Chlorotic Fleck Virus

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

Strawberry chlorotic fleck associated virus (SCFaV), genus *Closterovirus*, family *Closteroviridae*

b. Host range, including resistance or tolerance within the crop hosts, alternate hosts
The only known hosts are *Fragaria* species (Tzanetakis and Martin, 2007).

c. Symptoms on crop host including varietal differences with images of symptoms when available
In indicators, chlorotic fleck disease is constituted by distorted and downward curling leaves as well as vein clearing and possibly chlorotic spots. The causal agent cannot be distinguished from other viruses based on symptoms in indicators. Yet, it is unclear whether SCFaV causes the homonymous disease. In any case the causal agent is latent in commercial cultivars. In 'Headliner' and 'Tangi' the disease reduced yield and runner production.

d. Geographic distribution:
The disease is only reported from Louisiana in the United States. No field isolates have been identified in the past 45 years with more than 800 samples collected from major production areas tested for the virus.

e. Means of spread:

The chrotic fleck agent can be transmitted by *Aphis gossypii* and grafting. The former has not been tested for SCFaV.

f. Recognized diagnostic tests with cited references:
Bioassays onto *Fragaria vesca* clones (Fulton, 1987) or by RT-PCR (Tzanetakis and Martin, 2007). Only a single isolate has been sequenced. It was obtained from a plant maintained as part of the strawberry virus collection at USDA-ARS NCGR in Corvallis, Oregon and has been held there for over 30 years.

g. 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.

h. 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.

References:

Fulton, J. P. 1987. Strawberry chlorotic fleck. Page 60, In: Virus diseases of small fruits. USDA Agriculture Handbook 631. U.S. Government Printing Office, Washington, D.C.

Tzanetakis, I. E. and Martin, R. R. 2007. Strawberry chlorotic fleck: Identification and characterization of a novel Closterovirus associated with the disease. Virus Research 124:88-94.

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