

W112

Study on the Origin of Cacao Swollen Shoot Virus and Its Dispersal on Cacao Trees in West Africa

Date: Sunday, January 11, 2015

Time: 1:35 PM

Room: Royal Palm Salon 3-4

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Cacao swollen shoot virus (CSSV) is a member of the family *Caulimoviridae*, genus *Badnavirus* naturally transmitted to *Theobroma cacao* by several mealybug species. The virus, restricted to West Africa whereas the cacao tree originates from the Western Hemisphere, could therefore most probably have an indigenous origin on the West African subcontinent. The disease has caused enormous economic damage in Ghana since the 1930s but was only restricted to small areas in Togo and Côte d'Ivoire until recently. Now, renewed outbreaks in the main producing areas in Côte d'Ivoire, Ghana and Togo cause serious problems.

CSSV populations in West African countries are genetically structured in twelve groups according to the diversity in the first part of ORF3 and the 20% threshold of nucleotide divergence. However, according to ICTV recommendations taking into account the nucleotide diversity in the RTase region, we could describe seven different species.

The high variability observed within CSSV populations compared to its very short evolutionary history on cocoa trees, suggests the existence of many emergences from native hosts to cacao trees in the various countries of West Africa. Moreover, based on the geographical dispersal of the different species, we could propose the existence at different times of parallel emergences in each of the West African countries. As a perspective of this work, a newly accepted project funded by European Cocoa Association will be presented.

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Meeting Information**When:**

January 10 - 14, 2015

Where:

San Diego, CA