

W122

Geographical Distribution of Cacao Swollen Shoot Virus Molecular Variability in West Africa

Date: Sunday, January 12, 2014

Time: 1:55 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. Typical symptoms of the disease on cocoa trees are red vein banding of young leaves, mosaic on older leaves and swelling of the orthotropic shoots. 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 economical 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. The knowledge of the viral biodiversity in the different outbreaks will in turn help to provide a better understanding of the development of the epidemics, and of the evolution of viral populations and may permit to retrace the emergence and dispersal of CSSV.

CSSV diversity is genetically structured in at least eight different species according to ICTV recommendations. Only group B was detected in the three countries and in most of the outbreaks, whereas the other groups have a more restricted geographic repartition. To understand such extend of CSSV variability compared to its very short evolutionary history on cocoa trees, we used BEAST software. The results suggest the existence of many emergences from native hosts to cacao trees in the various countries of West Africa.

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Meeting Information**When:**

January 10 - 15, 2014

Where:

San Diego, CA

