



Réunion annuelle conjointe ESA, SEC et SECB 2018
Au-delà des frontières: l'entomologie dans un
monde en changement
11-14 novembre | Vancouver, Colombie-Britannique, Canada

2018 ESA, ESC and ESBC Joint Annual Meeting
Crossing Borders: Entomology in a Changing World
11-14 November | Vancouver, BC, Canada

PRESENTATION



0952: Characterization of the sugarcane aphid microbiome in the continental U.S.

Monday, November 12, 2018

09:20 AM - 09:30 AM

Vancouver Convention Centre - Meeting Room 220

The sugarcane aphid (*Melanaphis sacchari* Zehntner) has been present in the continental United States (US) on sugarcane since 1977. It was not until 2013 however, that this insect became a pest in US sorghum. What could have caused this sudden pest outbreak in US sorghum after over 35 years of the sugarcane aphid (SCA) being established in sugarcane? The insect microbiome can play an important role in allowing populations of an insect species to consume different host plants. We examined the bacterial microbiome of SCA in agroecosystems across the continental US on grain sorghum and sugarcane. Both Illumina MiSeq and PCR were used to characterize the SCA microbiome. Sugarcane aphids were found to predominately harbor the primary aphid symbiont *Buchnera aphidicola*, while containing few other bacteria. Our study found differences in bacterial composition that may be associated with the two genetically distinct lineages of SCA present in the US (one mostly on grain sorghum and the other one on sugarcane). This study characterizes the SCA microbiome and provides a foundation for understanding the potential role of endosymbiotic bacteria in the SCA pest outbreak on US sorghum.

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