



Speaker:

Mark S. Hoddle

Ph.D. in Entomology

University of Massachusetts,
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Date: Monday, November 21, 2022

Time: 4:00 pm - 4:50 pm

Format: In-Person Seminar & Virtual Access

Location: Genomics Auditorium 1102A

Zoom: 938 1040 4405

Passcode: 833289

Title:

“Crushing the Curve: Amplifying Biocontrol of Asian Citrus Psyllid in California”

Abstract:

Asian citrus psyllid (ACP), *Diaphorina citri* (Hemiptera: Liviidae), is an invasive citrus pest in California that vectors a bacterium, CLas, that causes a lethal citrus disease, huanglongbing. ACP has been the target of a classical biocontrol program in California with natural enemies sourced from Punjab Pakistan, part of the presumptive native range of ACP.

Since the inception of the classical biological control program targeting ACP in California, populations of this pest have declined by >70% and natural enemies are responsible for decreases in ACP population densities. One outcome of reduced ACP populations has been a significant slowing in the spread of CLas in citrus in urban California as there are fewer vectors available to spread this disease causing bacterium.

However, the intensity of infestations of sap sucking pests (SSPs), including ACP, in citrus is exacerbated by the invasive Argentine ant (AA) which harvests honeydew, a sugary waste product that results from a sap diet rich in carbohydrates. In return for food, AA protects SSPs from natural enemies.

This presentation will discuss the long term impacts of natural enemies on ACP populations, infra-red sensors and use of the "Internet of Things" for automated monitoring of pest ants, novel approaches with liquid bait delivery systems to control AA, and insectary plantings to boost natural enemy activity in citrus orchards. These management approaches targeting AA, when combined with cover crops to enhance natural enemies in citrus orchards, aim to synergize the efficacy of ACP biological control in California citrus.

Refreshments will be served in the Entomology Building Courtyard at 3:30pm