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## SEMIOCHEMICALS APPLICATIONS FOR CITRUS PEST MANAGEMENT IN URUGUAY: TWO CASES OF STUDY

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Semiochemicals, such as pheromones and volatiles form plant hosts, provide sustainable and eco-friendly tools to be included in integrated pest management programs of many insects. Uruguayan citriculture is majorly aimed for the international trade of fresh fruit, where the allowed limits of pesticide residues are important limitations. Diaphorina citri (Hemiptera: Liviidae) and Diploschema rotundicolle (Coleoptera: Cerambycidae) are two citrus pests present in Uruguayan groves. Our group has been working in finding alternatives to the conventional control of these insects. For D. citri, a synthetic attractive blend to be used together with yellow-sticky traps has been preliminarily developed. To meet this objective, volatiles from two preferred citrus species (Citrus paradise and Citrus sinensis) were characterized. Based on the Grapefruit profile, its main compounds (limonene and methyl N-methylanthranilate) and a synthetic blend were tested in different concentrations as lures on yellow sticky traps. In two-choice greenhouse cage experiments, it was observed that the Grapefruit blend at lower concentration, as well as the limonene, enhanced the trap caches of D. citri adults. As for *D. rotundicolle*, the aim was the development of a synthetic pheromone-based trap for adults. To study the chemical communication in this system, volatile produced by field-caught males and females were studied. Males produce large amounts of (3R)hydroxy-2-hexanone and some minor compounds. Both, female and male antennae, responded to the natural compound in electroantennography studies, suggesting that the compound may function as an aggregation pheromone.

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