

# Combination of Essential Oils and Kaolin to Control Asian Citrus Psyllid

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## Take Home Message:

- Kaolin colored with red food colorant is more repellent against ACP than white kaolin.
- Kaolin and thyme oil mixed have an additive effect against ACP.
- Combination of kaolin with colorant and/or essential oils may provide alternative control strategy for organic and conventional growers.

**Summary:** Despite intensive control efforts, the Asian citrus psyllid (ACP), the vector of *Candidatus Liberibacter asiaticus* (CLAs), the bacteria causing

citrus greening, remains the most devastating pest of citrus. Asian citrus psyllids typically relies on tactile, visual, and odor cues to detect their host. By combining an irritant, a visual masking, and a true repellent, we aim to significantly repel ACP from citrus. We tested the use of kaolin with food colorant as irritant and visual masking, and the combination of essential oils as odor repellents with kaolin. When ACP were given a choice between uncoated and kaolin-coated plants, a significant number of ACP chose the uncoated plants over

those coated with kaolin. We found fewer ACP settled on plants coated with red kaolin than on those coated with kaolin. In contrast, the number of ACP settled on blue and white kaolin-coated plants was not different. Subsequently, we observed an additive effect of thyme and kaolin as we found fewer ACP on plants coated with thyme and kaolin than on plants coated with kaolin only. Our findings suggest the possible use of red-colored kaolin and/or the combination of thyme and kaolin as a means of reducing ACP infestation in citrus.

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