

# **RESPONSES OF *Diaphorina citri* TO VARIOUS TYPES AND CONCENTRATIONS OF KAOLIN IN HOST FINDING BEHAVIOR ON CITRUS PLANTS**

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## **ABSTRACT**

Citrus Vein Phloem Degeneration (CVPD), one of the most destructive citrus diseases in Indonesia, has caused severe economic losses due to significant yield reduction, poor fruit quality, and widespread tree mortality. Infected citrus plantations often suffer up to 60% yield loss, leading to increased production costs and threatening the sustainability of citrus farming in major producing regions. This research aimed to determine the responses of the application of different types of kaolin and the most effective concentration of kaolin on repelling effect against *D. citri*. A completely randomized design (RAL) was used, involving (Yukami®) and (Surround®WP) at concentrations of 3%, 5%, and 7%. Choice and non-choice tests were conducted, each with three replications. Observed parameters included the number of *D. citri* on leaves, the number of *D. citri* within the cages, index repellancy, leaf count, and leaf length. Data were analyzed using analysis of variance (ANOVA) at a 5% significance level, followed by Duncan's Multiple Range Test (DMRT) for post hoc comparisons and a T-test to compare kaolin types. The results showed that Yukami® 5% significantly reduced *Diaphorina citri* infestation ( $p < 0.05$ ), indicating its strong repellent effect compared to other concentrations. In the comparison of kaolin types, both Yukami® 5% and Surround®WP 7% were more effective than other, both in choice and non-choice tests. In terms of plant growth, Yukami® 3% and Surround®WP 3% showed the best results, as the corresponding concentrations did not cause leaf drop. This implies that kaolin-based treatments have strong potential to be integrated into citrus pest management programs to reduce vector activity and slow down the spread of CVPD.

Keyword: Citrus Plant, CVPD, *Diaphorina citri*, Host finding behavior, Kaolin