

# Performance of Selected Insecticides Against the Sweetpotato Whitefly and Cotton Aphid

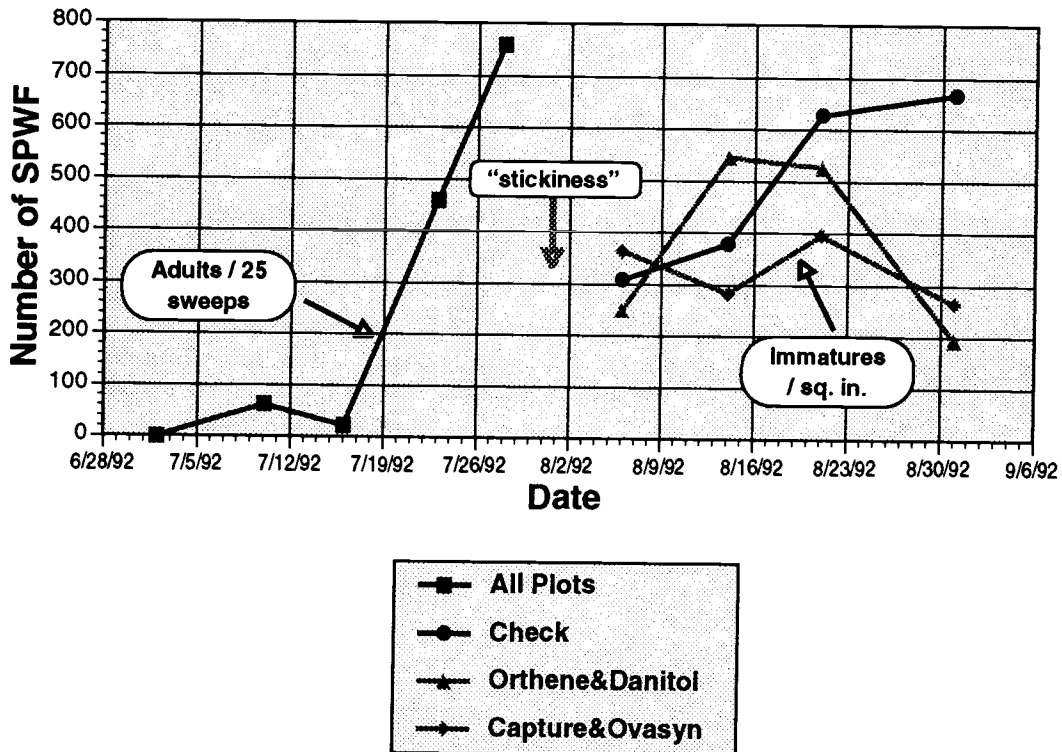
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## **Abstract**

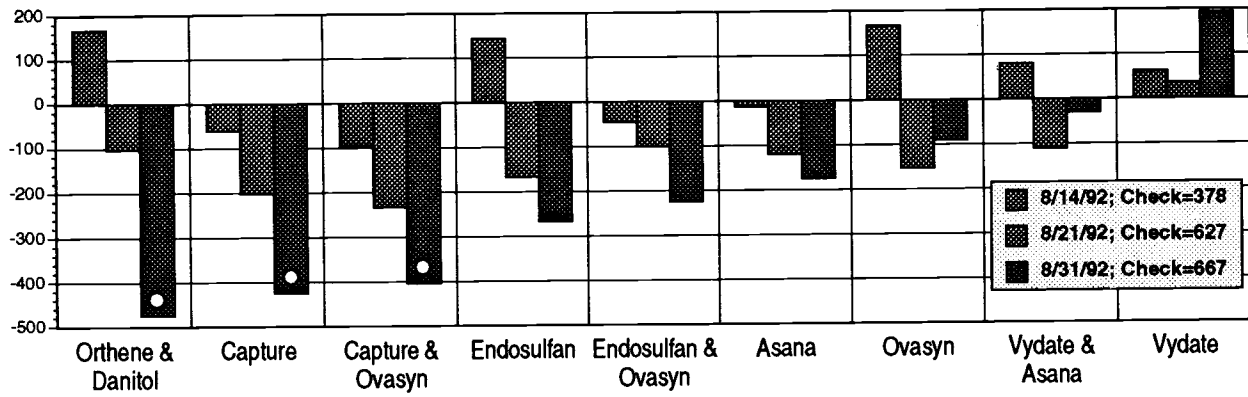
*Seven insecticides were evaluated in nine treatment combinations for efficacy against the sweetpotato whitefly (SPWF) and the cotton aphid (CA). Five different classes of chemistry were represented by these compounds, which were compared to an untreated check. The infestation was characterized as severe (>300 SPWFs/sq. in.) and included a substantial number of CAs at the beginning of the evaluation (>90/leaf). Three applications were made in August after the onset of "stickiness." For SPWFs, three treatments compared favorably with the check, but only after three applications: Orthene+Danitol, Capture alone, and Capture+Ovasyn. Intermediate control was achieved with Endosulfan+Ovasyn. Rankings for CA control were dissimilar with Vydate+Asana, Endosulfan+Ovasyn, and Ovasyn alone consistently performing better than the check. Vydate alone, Endosulfan alone, and Orthene+Danitol were intermediate in CA control, but also significantly different from the check. Capture alone and Capture+Ovasyn which performed well for SPWF control was not efficacious against CAs. Indeed the two single pyrethroid treatments (Capture: Asana) failed to achieve any degree of CA control.*

**Table 1:** Treatment list of compounds, formulations, and rates used.

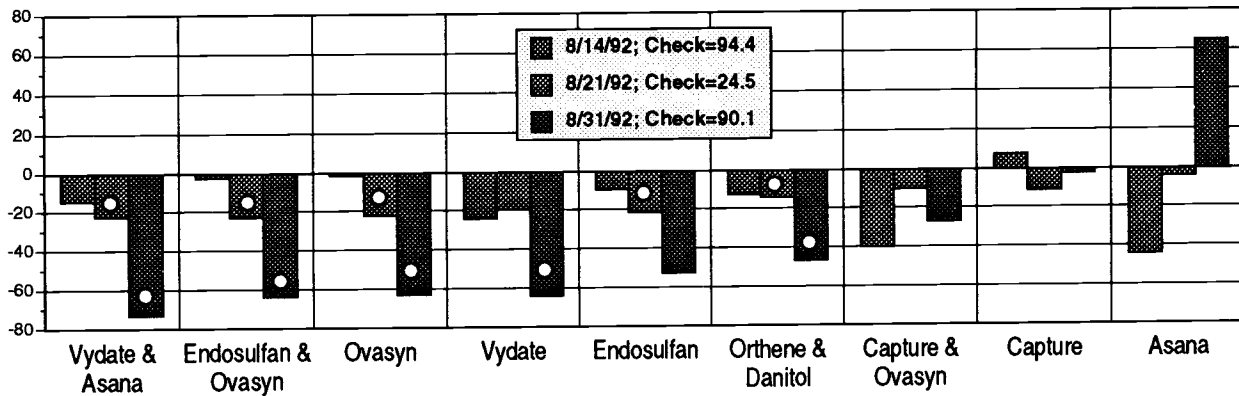
Treatment	Rate (ai/acre)	Product / Acre
Asana XL	0.05 lb	9.6 fl. oz.
Capture 2E	0.10 lb	6.4 fl. oz.
Capture 2E + Ovasyn 1.5E	0.10 lb + 0.25 lb	6.4 fl. oz. + 1 1/3 pt.
Endosulfan 3E	0.75 lb	2 pt.
Endosulfan 3E + Ovasyn 1.5E	0.75 lb + 0.25 lb	2 pt. + 1 1/3 pt.
Orthene 90S + Danitol 2.4E	0.5 lb + 0.2 lb	0.55 lb + 2/3 pt.
Ovasyn 1.5E	0.25 lb	1 1/3 pt.
Vydate C-LV	0.75 lb	25.5 fl. oz.
Vydate C-LV + Asana XL	0.75 lb + 0.05 lb	25.5 fl. oz. + 9.6 fl.
Check	—	—



**Figure 1:** Progression of the sweetpotato whitefly infestation including mean level of immatures for two of the better combinations and the untreated check. Adult whiteflies were first detected on 7/10 by sweeping but remained extremely low until 7/16. One week later, the adult population exploded over the entire field as a result of mass dispersal of adults. Visible stickiness was noted on 8/1. Over 300 immature SPWFs per square inch were noted at the precount (8/6), less than two weeks after the first significant numbers of adults were caught in sweep samples.



**Figure 2:** Relative treatment performance versus the untreated check for sweetpotato whitefly control. The baseline represents the level of the untreated check for each sample date. Each sample date occurred three days after application. Numbers reflect changes in total immatures (eggs plus nymphs) per square inch. ○ denotes treatment had significantly fewer SPWF immatures than the check within a sample date (Dunnett's, 0.05).



**Figure 3:** Relative treatment performance versus the untreated check for cotton aphid control. The baseline represents the level of the untreated check for each sample date. Each sample date occurred three days after application. Numbers reflect changes in total aphids (nymphs plus adults) per leaf. ○ denotes treatment had significantly fewer aphids than the check within a sample date (Dunnett's, 0.05).