Interactive effects of fungicides and adjuvants on Phytoseiulus persimilis

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Lethal effects of six fungicides (the most–used in California strawberry production in 2023) and industry-recommended adjuvants on the predatory mite *Phytoseiulus persimilis* were evaluated under controlled laboratory conditions. For each combination, five *P. persimilis* nymphs were confined to a green-bean leaf disc and offered 20 two-spotted spider mites as prey and then sprayed with a Potter's tower at maximum field rates in a dilution equivalent to 150 GPA. Mortality was assessed after 48 hours and analyzed in R by fitting a bias-reduced logistic regression model to estimate percentage mortality for each fungicide–adjuvant combination. Estimated marginal means on the probability scale were calculated, and Tukey-adjusted pairwise comparisons identified which adjuvant treatments differed significantly in their lethal effects.

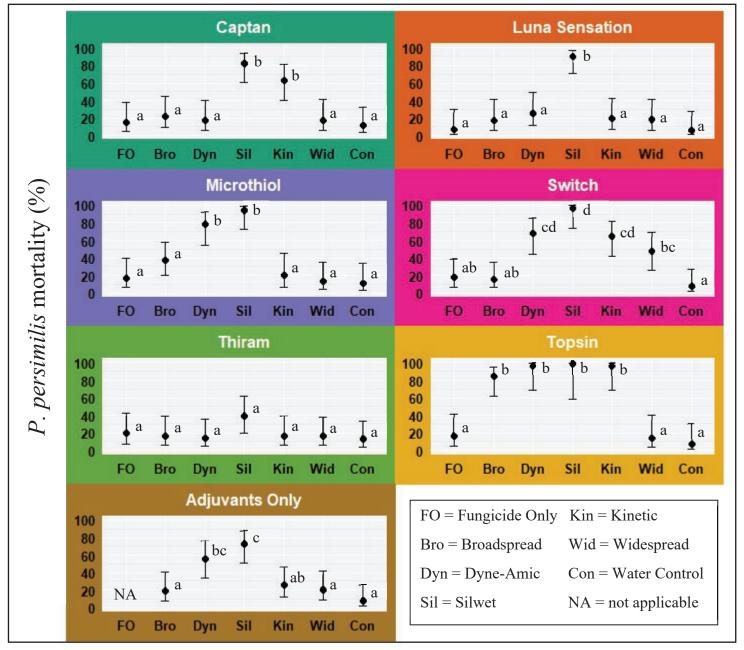


Figure 1. Predicted mortality probability of *Phytoseiulus persimilis* following application of fungicide and adjuvants combinations, estimated using a bias-reduced logistic regression. Each panel represents one fungicide or the no-fungicide control. Points show estimated marginal means \pm 95 % confidence intervals, and letters indicate Tukey-adjusted groupings. Treatments sharing the same letter are not significantly different (α = 0.05)



