

Walnut Response to Multiple Exposures to Simulated Drift of Bispyribac-Sodium Mariano F. Galla, UCCE, Glenn, Butte and Tehama Counties, Kassim Al-Khatib and Bradley D. Hanson, University of California, Davis

A field study was established to evaluate symptoms, growth, yield and nut quality of walnut trees subjected to multiple exposures of simulated bispyribac-sodium drift. Because tissue differentiation for future fruiting positions occurs almost a year earlier, nut yield the year following simulated drift was also evaluated. Bispyribac-sodium was applied four times, at weekly intervals, at 0.5% and 3% of the use rate in rice (45 g ai ha⁻¹). Injury from the 0.5% rate exceeded 5% after three applications. In general, the severity of the symptoms peaked 14 d after last application (23% and 40% injury for 0.5% and 3% rate, respectively) and subsequently remained nearly constant over the duration of the study. Growth of shoots treated with the 0.5% rate was initially delayed during the treatment regime but recovered after treatments ended; however, walnut shoots exposed to the higher rate had fewer internodes than nontreated trees at the end of the season. No measurable reduction in walnut yield or average nut weight either in the year of exposure or in the subsequent year were observed. However, both rates negatively affected walnut kernel color in the year of drift exposure.