Implementation

Reducing Pesticide Use in California Walnuts: The San Joaquin Walnut BIOS Project

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Abstract: This study compared the effectiveness of Biologically Integrated Orchard Systems (BIOS) with conventionally managed walnut orchards in the northern San Joaquin Valley from 1999 to 2001. We found no significant differences between BIOS and conventional blocks in nut quality or yields. Codling moth was effectively controlled by pheromone mating disruption. Substantially fewer conventional insecticide applications were made in BIOS blocks, mainly as a result of replacing codling moth sprays with mating disruption. Webspinning mite and walnut aphid were similar in BIOS and conventional blocks. Key generalist predator species were more abundant in BIOS blocks.