

Surfactants had a significant influence in all fungicide regressions for strawberries, but its sign flip-flopped between chemicals. Sticker had a positive effect on insecticide residues with the exception of Diazinon. Stickers appear to negatively influence fungicide residues although this was only significant in the aggregate. Overhead irrigation applied post-application was significantly negative for Vinclozolin, but was positive for both Diazinon and Mevinphos. These last two positive signs were counter to expected results, as it was postulated that the use of this type of irrigation after pesticide applications would wash off residues. Significant results for using economic thresholds to decide when to apply pesticides were consistently negative. This provides some confirmation that basing spray decisions on IPM criteria can help reduce residues. Significant coefficients for harvest temperature and rainfall were all positive which was consistent with the results for these weather variables in the attributes and general practice regressions for strawberries.

Tomatoes

Tables 14 and 15 present the Specific Practices results for tomatoes. These include regressions for Chlorothalonil, Endosulfan, Methomyl, Methamidaphos, Chlopyrifos, aggregate fungicides including Maneb, and aggregate insecticides. Maneb could not be implemented alone because there were no Maneb residues detected in samples collected from the growers who reported applying this product. All tomato Specific Practices regressions were significant above the 0.10 level with the exception of Methomyl, which was also the only insignificant regression for strawberries. This was probably due to fact that only one of the 31 observations that had Methomyl applied to them, contained any residues of this pesticide. For the remaining significant regressions, adjusted R^2 statistics ran from 0.060 for aggregate fungicides to 0.337 for Methamidaphos. Weighted active ingredient rate was significant and positive for Endosulfan and aggregate insecticides, but negative for aggregate fungicides. This counter intuitive result for fungicides could be due to Maneb data set having all zero residue levels. Dry product form was significantly negative for Endosulfan, Methomyl and insecticides. Use of banded spraying methods was negative for Methamidaphos. The Methamidaphos regression was also the only one for which Non-adjuvant was significant. Its sign was also negative. Significant negative coefficients for Surfactant were generated in the fungicide and Endosulfan regressions, but positive estimates were obtained in the regressions for Methamidaphos and Chlopyrifos. Chlorothalonil and Methamidaphos regressions both produced negative coefficients for Stickers. No tomato growers indicated using overhead irrigation after pesticide treatments so this variable was dropped from these models. The use of economic thresholds as a decision criteria for pesticide applications was significantly negative for Chlorothalonil and fungicides but marginally positive for Endosulfan. Signs for significant weather variables were not wholly consistent with prior results. Higher temperatures during the harvest month were found to reduce residues, which was consistent with the prior results. Harvest period rainfall was found to contribute to Chlorothalonil and fungicide residues. This was in contrast to insignificant results for this variable in the other tomato models. Temperature during the harvest season was significantly negative for Methamidaphos and aggregate insecticides which was consistent with prior results.