which his strawberries had been sampled. The dependent variable (the left hand side) of this regression consisted of the level of Captan residues found in that grower's sample. There were instances where growers did not report applying pesticides that were detected in the laboratory samples. Conversely, there were also many cases where growers reported applying pesticides and none showed up in the laboratory samples. Obviously, observations of the former type could not be included in the analysis but those of the latter were. Regression procedures were then applied to each common-name data set using the specification given in equation (8c). Regressions were also performed on Specific Practices aggregated as either fungicides or insecticides. This was accomplished by simply stacking the appropriate data sets.

There were a variety of statistical problems encountered in implementing the Specific Practices regressions. These included no or very few positive observations for a particular dependent variable (residues), explanatory variables with zero variance, multicollinearity and singularity in the design matrix, and low degrees of freedom. After preliminary testing, it was decided to drop the Target Pest and Level of Infestation variables due to their potential functional relationship with other explanatory variables in the models and their relatively high proportion of missing values. Pre-harvest temperature and rainfall variables were also dropped to help preserve degrees of freedom and reduce multicollinearity.

The results of the Specific Practices regression are presented in Tables 12 and 13 for strawberries, and Tables 14 and 15 for tomatoes. Pesticides are grouped by type with Tables 12 and 14 representing fungicides, and Tables 13 and 15, insecticides. For strawberries, regressions were run on Captan, Iprodione, Vinclozolin, Methomyl, Diazinon, Mevinphos, aggregate fungicides and aggregate insecticides. All but one (Methomyl) of these eight regressions were significant at the 0.10 level. Adjusted $R^2$ statistics ranged from 0.088 for Methomyl to 0.997 for Mevinphos. The exceptional performance of the Mevinphos regression is questionable given its small sample size. It seems likely that a near linear dependency exists between the dependent and independent variables in this case.

**Strawberries**

Overall, there was little consistency in the results for different pesticide active ingredients in strawberries. Not surprisingly, regressions on aggregated insecticides and fungicides did not perform as well as those for the individual chemicals. The lack of consistent signs and significance for the weighted application rate variables was particularly discouraging. Although weighted rate was significantly positive for Iprodione and Diazinon it was negative for Captan, which was the most frequently applied pesticide for strawberries. Either this variable has been mis-specified or data on application rates and timing are inaccurate, or both. Dry product form was positively related to residues for Vinclozolin but negative for Diazinon. Significant results for method of spray application (broadcast verses banded) were positive with the exception of Vinclozolin. While it seems obvious that banded spray applications would introduce less pesticides into the environment, this does not appear to carry over for residues in strawberries. The addition of non-adjuvants to pesticide applications had a negative influence on Iprodione and Mevinphos residues.