



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Madison Russell; Kathryn Smith	Project Number J0929
Project Title Fators that Affect Pesticide Toxic Longevity Levels in Soil	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our objective was to determine how long pesticide will remain toxic in different soils and in different environments. We also looked at how advertising can be misleading on the pesticide label when the company states how long pesticide will last. How long will pesticide help farmers? How long is the environment safe for humans and animals?</p> <p>Methods/Materials We used a Triazicide, an over the counter pesticide. We mixed the recomended amount and sprayed into three different soil types. Clay loam, Sandy loam, and a "regular soil". We then created a summer, winter, and spring environment. We did this with the use of heat lamps, thermometers, and outdoor temps. (project was done in Jan. where average temp was 45-55 degrees). We placed samples of all three soil types into all three environments. We then placed crickets into the soil samples in the different environment to test for toxicity. Continued to place and record cricket death rate until pesticide was no longer active.</p> <p>Results Soils: Clay Loam- Pesticide did not last very long average of only 3.6 days Sand- Pesticide remained toxic for 7.6 days Regular- The pesticide remained longest in this soil. 12.6 days Environments: Spring - remained toxic in longer in sand and soil. evaporated very quickly in the clay loam. huge gap depending on type of soil. 2 weeks for sand and soil. 3 days for clay Summer- remained toxic for very short period of time. 3 days for sand and soil. 2 for clay. evaporated very quickly. Winter- results were fairly consistent with Spring for sand and soil. There was a big difference however for the clay. Pesticide lasted twice as longin this environment. From 3 to 6 days</p> <p>Conclusions/Discussion We believe that the advertising labels are very misleading. The brand we tested said it would last for two months. Maybe in perfect conditions with right soil. Farmers need to be aware that environment and the type of soil they have can effect pesticide longevity. Also, if you are spraying around schools, where there are children, or animals, you need to be aware of how long the pesticide will remain toxic. Are tests show that environment and soil type defintley effect toxic logevity</p>	
Summary Statement Our project is about determining how long pesticide last in different soils and in different environments.	
Help Received Mr. Russell helped supervise and display project	