



CALIFORNIA STATE SCIENCE FAIR 2013 PROJECT SUMMARY

Name(s) Tanner M. Elder	Project Number S1710
Project Title Natural Pesticides	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The problem of our experiment is to test and find out if there is an effective way to kill ordinary insects without harming the environment like DDT. Since DDT has been used, many animals, especially birds, have been devastated by the effects of it. DDT softens the shell of the birds, causing pre-mature hatchings and most likely, death. This chemical almost wiped out the bald eagle population. If we can find a substitute for these harmful chemicals, we can stop the harming of our environment and preserve our wildlife and prevent any man-made harm from destroying our ecosystem.</p> <p>Methods/Materials 6 Petco plastic containers, 60 Large Crickets, 5 Plastic spray bottles, Tea, Diatomeous Earth, Citrus, Apple Cider, Vinegar, Corn Starch, Water. 1. Gather Tea, Citrus, Diatomeous Earth, Corn Starch, and Apple Cider Vinegar. We are also using a Control Cage to make sure data is precise 2. Grind ingredients and place 2 oz. of ingredient along with 2 oz. of water and soak overnight in a spray bottle.3. Next day, place 10 crickets in each of 6 containers. 4. Note time 5. After 1 hour, look at all 18 containers and record how many crickets have died.6. After 2 hours look and record hourly for the first 12 hours. 7. Then record after 24, 36, 48 and 60 hours.</p> <p>Results 1. The first discovery was that the Tea was very powerful against the crickets. The Tea was the most powerful killer out of all of the materials used. Also, Tea, I think, is the easiest of all of the materials to use because it doesn't have a strong odor and is easy to spray. As a result, Tea is the most useful of all the supposed natural pesticides. 2. The second discovery we came to was that citrus was the least effective of all of the pesticides. It had some effect on the crickets, but only a couple died. If citrus was effective, it would be the easiest and most convenient of the materials because of its pleasant smell and the ability for a garden owner to grow their own citrus. Also, we were able to notice that spraying our materials only working for materials that were in a liquid already, or if substances that were already solids were highly soluble. In Diatomeous earth, the dirt would settle at the bottom of the bottle, making it difficult to spray.</p> <p>Conclusions/Discussion In conclusion, we found that after our experiment, we can say that there are eco-friendly alternatives to ridding the insect pesticide raid, DDT, and other harmful chemicals.</p>	
Summary Statement The reason for this experiment was to decide what Natural Pesticide is most effective in killing crickets.	
Help Received My mom purchased the materials and glued the information on the board.	