



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jennifer E. Fox</b>	<b>Project Number</b> <b>J0806</b>
<b>Project Title</b> <b>Using Plants to Remove Pesticides from Storm Water Run-Off: A Continued Study</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My goal is to remove pesticides from farm run off water with plants and air. I hope to filter the chemical out of the run off water before releasing the water into rivers. <b>Methods/Materials</b> simulated a filter by using plants and an aquarium pump as an added air source. The variety of plants i used were all hollow stemmed like common Cattail. When they died they acted like straws adding oxygen into the ground and water. To see if the pesticides have been removed I took tadpoles and timed there death rate. The longer the tadpoles lived the more malathion has been removed. Another way to test the removal of pesticides is to check the pH level. the pH level of tap water is 7 the pH level of water and malathion is 6. the water is cleaner. <b>Results</b> My filter was effective in removing the pesticide Malathion. All my tadpoles died during the course of the experiment but the time it took them to die increased as the experiment went along. The best result was plant Smooth Scouring Rush with added air. On the last day of the experiment, the sample from that filter had the only tadpole in the experiment that didn't die and the pH changed from 6 to 7. <b>Conclusions/Discussion</b> Pesticides can be filtered from farm water run off. A mixture of hollow stem plants and air added from an outside source worked best in my experiment. This is a cheap way for farmers to clean there run off water with natural resources. all farmers have to do is channel his run off into a pond or basin. Plant a hollow stemmed plant and wait for about a week. Then just release the water into the river cleaner and safer for everyone..	
<b>Summary Statement</b> I made a filter and added plants and a air pump to the contaminated water to remove the pesticides.	
<b>Help Received</b> my teacher helped me check my papers	