

Scott Rosas

*Agricultural Runoff and How It Affects Algae in Wetlands Habitats*

The purpose of the research project was to determine the effects of agricultural chemicals in irrigation runoff such as pesticides and herbicides on unicellular algae (*Oedogonium foveolatum*, and *Oscillatoria*) native to our wetlands. The purpose of the experiment was not to hinder the farmer from using chemicals to improve their yield, but to allow scientists to produce chemicals that benefit the farmer and don't impact the environment. The researcher hypothesized Glyphosphate, a broad spectrum herbicide, would have the most evident effects on the algae and 2,4-D, a specialized herbicide, would affect the algae but not to the extent of the Glyphosphate. To test the experiment, the researcher cultured algae plates with 1 mL of each algae suspension and allowed them to mature. Then a calculated amount each chemical was added to the test plates and left for 1 week. Results were calculated by determining the dry biomass of the algae cultures which could be compared to the control group. No conclusive data based on quantitative results could be made because of small differences between biomass of the control and test groups. However, visual evidence supported the hypothesis that the chemicals would be detrimental to the algae because of their broad target qualities.