CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)
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Project Number
J1212

Project Title
The Impact of Fertilizer on Water Quality

Abstract

Objectives/Goals
The objective of my experiment was to test how different types of fertilizers affect water quality and aquatic microorganisms.

Methods/Materials
To conduct this experiment, I filled 7 cups with pond water and 1 cup with distilled water, and put different fertilizers in each cup. The fertilizers were Lawn Fertilizer, Lawn Starter, and Compost. Each day, I would test the pH, Total Dissolved Solids (TDS), Electric Conductivity (EC), and Temperature of each cup and record my results.

Results
After experimentation, the most relevant data was the slope of the pH graph, and my results were: a 0.97% decline for Lawn Fertilizer, a 0.31% decline for Lawn Starter, a 0.17% decline for Compost, a 0.47% decline for the No Fertilizer, and a 0.74% decline for Distilled.

Conclusions/Discussion
My experimentation shows that the Lawn Fertilizer caused the fastest decline in pH, and the Compost caused the slowest decline. This data proves the hypothesis that Compost is the best fertilizer for the water ecosystem, and that the Lawn Fertilizer is the worst for the water ecosystem.

Summary Statement
I proved that the lawn fertilizer with the most nitrogen had the most harmful effect on the water ecosystem, and the compost had the most beneficial effect.

Help Received
I conducted the experiment by myself. Mrs. Bertram, a retired science teacher, let me borrow equipment and gave me guidance. Mrs. Wangnoo let me use her classroom for my experiment and checked my math. Soil Born Farms let me use their compost. Chrissi Brewer let me interview her for research.