CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY

Name(s)
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Project Number
S0811

Project Title
Comparing Nitrate Runoff on Organic and Conventional Fertilizer: Can We Reduce Excess Nitrate Runoff?

Abstract

Objectives/Goals
In my project, I am trying to determine which fertilizer (conventional or organic), used on festuca elatior, results in the greater amount of nitrate runoff. In doing so, I hope to discover which fertilizer is the least harmful for the environment.

Methods/Materials
In the experiment, I have set up three containers containing grass, including reservoirs to catch unutilized water. I will only be using fertilizer on two containers, and one container will be my control. A lab will test the water and the grass for nitrate regularly.

Results
In my experiment, I have discovered that the conventional fertilizer had the most nitrate runoff.

Conclusions/Discussion
The results of my project agreed with hypothesis, because I said that the conventional fertilizer would have the most nitrate runoff because the nitrogen is refined, so the nitrogen would break down and become nitrate more easily, thus causing more runoff.

Summary Statement
My project will determine whether organic or conventional fertilizer has a greater runoff, thus deciding which one is least harmful the environment.

Help Received
I talked with a farmer with experience in using organic fertilizer to grow crops, and a teacher to determine the best method to test for nitrate. I also used a lab to perform the tests.