CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)

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Project Number

35290

Project Title

Can Chemically Altered Water Be a Drought Solution?

Abstract

Objectives/Goals

The purpose of my investigation is to find out if water from a pool or spa could be used to grow grass. If chemically treated water can be used to effectively grow grass, then people in California who are currently suffering from a drought could use the water from their pool or spa to water their lawn and save water. My hypothesis was that water treated with Bromine would grow the best.

Methods/Materials

For my project, I watered 3 pieces of sod for each of the different types of water I was testing (Bromine, Chlorine, hose water and salt water). The hose water was my positive control and the salt water was my negative control. I had four buckets filled with regular hose water and added the chemicals to three of them. I added nothing to one of the buckets of water and ¼ a cup of salt to another. I calculated the amount of Chlorine and Bromine in the third and fourth bucket by making sure that the level of Ph in the water matched the level on the bottle of the pool testing strips I used. Each day, for a total of 14 days, I watered the different squares of grass according to the type of water they were being tested with and recorded their growth rate.

Results

The grass watered with Chlorinated water averaged the highest growth with and average of .4 cm per day. Next came the hose water with a .3 cm average. Bromine had a .3 cm average and salt water had the lowest average of .1cm per day.

Conclusions/Discussion

In summary, my hypothesis was proved incorrect due to the fact that Chlorine had the highest growth rate. I believe this could be because Chlorine contains stronger purification elements that might stimulate grass growth. Overall, the Chlorinated water proved best for plant growth; however, hose water and Bromine water will still keep the grass healthy.

Summary Statement

My project was finding the effect of using chemically treated water on grass.

Help Received

My teacher gave me the basic outline for how to do a science fair project. My mentor (Ruth Finklestein, a professor at UCSB) helped me with suggestions for the set up of the experiment and my dad bought the materials and helped me set up the sod/experiment area. My mom helped me proofread my project.

Preliminary