

CALIFORNIA STATE SCIENCE FAIR 2006 PROJECT SUMMARY

Name(s)

Daniel C. Reilly

Project Number

J0923

Project Title

Is Xeriscaping a Fire Risk?

Abstract

Objectives/Goals

Xeriscaping is the use of drought resistant plants for landscaping. The purpose of my project was to see if certain dry plants used in xeriscaping may burn easily and be a risk to your property during a wildfire.

Methods/Materials

I tested plants that grow on the Oak Park hillsides such as: California Walnut, Chamise, California Barberry, and Annual Grass. I compared these plants to the plants recommended for xeriscaping. Some of these include: Thyme, Sumac, Sage, Lavender, and California Bay. To test my plants I used a home-made calorimeter made of an aluminum water basin and a Chimney Charcoal Starter. I measured two things. First I recorded how long it took for the shrubs to catch on fire. I lit the plants on fire with matches. I poured water in the basin and measured the water temperature in the bowl before and after the burning. The independent variable of my project is the different types of plants. The dependant variable is the rate at which the plants burn.

Results

My results showed that some of the xeriscaping plants burn as hot as Chaparral plants. My hypothesis was partly supported because some xeriscaping plants are a significant fire risk.

Conclusions/Discussion

This experiment showed that xeriscaping is a good idea and that it is possible to have a drought-tolerant and fire resistant plant. But some xeriscaping plants are a fire risk, and you should think before choosing what goes in your garden.

In the future, I could test many more plants. I could also build a more complex and accurate calorimeter. One other thing I could do is to test exactly how much water the plants save.

Summary Statement

The purpose of my project was to see if certain dry plants used in xeriscaping may burn easily and be a risk to your property during a wildfire.

Help Received

My dad helped me gather my plants and shrubs used for burning. He also supervised the experiment.