

CALIFORNIA STATE SCIENCE FAIR 2004 PROJECT SUMMARY

Name(s)

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Project Number

S1612

Project Title

An Environmentally Friendly Method to Suppress Weeds

Abstract

Objectives/Goals

To find the most effective environmental friendly way to eradicate perennial weeds at Ulistac Natural Area.

Methods/Materials

The materials we used were black plastic, clear perforated plastic, cardboard, string, stakes, mulch, and a measuring tape. We approached this experiment in four different ways; using black plastic, mulch only, clear perforated plastic, and cardboard. We first separated out six plots. We left plot 1a and 1 b like it is (no mulch/cardboard/any type of plastic), as two control plots. Second, we covered plot 2 with a layer of black plastic and mulch. Plot 3 was covered with mulch only, and plot 4 was covered with strips pf perforated clear plastic and mulch. Lastly, we covered plot 5 with pieces of cardboard and mulch.

Results

In a matter of about 2-3 months, the two control plots were covered with weeds. The mulch plot also had many weeds, just not as much as the control plots. The black plastic plot, clear plastic plot, and the cardboard plot had a weed quantity of few to none.

Conclusions/Discussion

From the data that we gathered, we saw that both plastics and the cardboard were most effective. However, since our purpose was to find the most environmental friendly method to suppress weeds, the cardboard turned out to fit those criteria best. This experiment was done on the south facing side of Ulistac and on a slope, therefore getting more sun and less water. Neverless, the cardboard withstood these conditions. The soil was more loose and moist, unlike the clay-like quality of the plastic#s soils, allowing many diverse insects to inhabit it. The cardboard resulted as being the most effective and beneficial way to eradicating weeds, since cardboard is also cheap and biodegradable.

Summary Statement

To show that there is an environmental friendly method to replace the other harmful ways of eradicating weeds.

Help Received

Mr. Dowling and Stanford Tran helped spread the mulch over the plots.