CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY

Name(s)
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Project Number
J1127

Project Title
Let's Go Native! Habitat Restoration in the San Dieguito River Valley

Abstract

Objectives/Goals
In the state of California, the native plant population has been overwhelmed by invasive plant species. Today, societies like the San Dieguito River Valley Conservancy (SDRVC) would like to discover the most effective way to replace invasive grasslands with native California plants.

Methods/Materials
To test various methods of native plant restoration, I marked off eight quadrants and treated each plot with one of the following methods: no treatment with and without seeding, manual removal with and without seeding, herbicide with and without seeding, and manual removal and herbicide with and without seeding. After marking the quadrants and executing the plan, I mixed the native seeds and sprinkled them evenly across four of the squares. I then monitored, measured, and watered when necessary.

Results
In each quadrant, I documented the germinating plants. I counted hundreds of plants in my plots, then estimated the number for the entire quadrant. Of the eight quadrants tested, only three showed any signs of native growth, Quadrants 1, 3, and 7. Quadrant 1 was an area that had not been treated, but had been seeded and Quadrant 3, was an area that had been manually removed of all plants, then seeded. Both of these quadrants contained many native sprouts. Quadrant 7 was a plot that had been cleared, treated with herbicide and seeded. This quadrant produced some native sprouts as well, but not nearly as many as in Quadrants 1 & 3. The estimated percentage of area covered by native plants was 8.6%.

Conclusions/Discussion
According to the results of this project, the most effective method of introducing native grassland was to manually remove the unwanted plants, then seed. Unfortunately, this is also the most difficult and time intensive method. Still, moderate success was observed through just the addition of native seeds.

Summary Statement
The goal of this project was to discover the most effective way to replace invasive grasslands with native California plants.

Help Received
Field biologist Leslie Woollenweber (SDRVC) assisted in the development of the project