CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY

Name(s)
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Project Number
S0602

Project Title
What Barrier to Wind Eriosion Is Most Effective?

Abstract

Objectives/Goals
The purpose of our project was to see which of the three diffrent plants we used as barriers would work the best against wind erosion. Since over 2.6 million acres used as crop fields are damaged by wind erosion in the United States alone, our goal was to successfully determine the best barrier that could possibly be used by crop growers to aid in protecting their crops from loss in soil productivity because of wind erosion.

Methods/Materials
We created a scene representing a crop field being affected by wind erosion. In half of the box we placed soil and the other half we placed coarse sand. To seperate the two types of sand and soil we placed the three barriers. The plant barriers were Foxtail Fern, Leatherleaf Sage, and Boxwood Shrubs. We placed a fan at the end of where the coarse was located to simmulate the wind and compared the results of each plant barrier, by weighing in grams the amount of coarse sand that pass throught the barrier to the opposite side containing the soil.

Results
Boxwood Shrub, avergae weight(in grams):29.2
Leatherleaf Sage, avergae weight(in grams):48.8
Foxtail Fern, average weight(in grams):12

Conclusions/Discussion
As a conclusion our hypothesis was partially correct. The Foxtail Fern plant was the best plant barrier; however, the Boxwood Shrub worked better than the Leatherleaf Sage plant. We live in the Southern San Joaquin Valley, the richest agricultural area in the United States, and by conducting this experiment, we were able to provide local farmers with knowledge about how they can protect their crops and increase crop and soil productivity.

Summary Statement
The purpose of our project is to determine which plant barrier to wind erosion is most effective.

Help Received