CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY

Name(s)
Serena J. Soh

Project Number
J1021

Project Title
Air for the Microbes

Abstract

Objectives/Goals
Objective: To find the most effective method of aerating compost

Methods/Materials
Materials and Methods: 12 plastic bins were filled with equal amounts and types of waste. They were split into groups of three, and in each group, a different technique of aerating compost was used. Group 1 was the control group, Group 2 was the turning method, Group 3 used the piling method, and Group 4 used the mixing method. Composts were mixed and tested in the lab for nitrate levels.

Results
Results: The #mixing# method proved to be the most effective because it showed the lowest level of nitrate, which indicates higher maturity of the compost.

Conclusions/Discussion
Conclusion: The mixing method introduced the largest amount of air to the microbes in the compost, which sped up their decomposition activity.

Summary Statement
My project tested the most effective way of aerating composts by measuring the nitrate level in composts that were aerated with different methods.

Help Received
Used lab equipment at university of California Santa Barbara