CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)
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Project Number
J1218

Project Title
Effect of Pesticides on Decomposition

Abstract

Objectives/Goals
The objective of this experiment is to observe the effects of pesticides on the decomposition of leaves in soil.

Methods/Materials
For this experiment, I filled 12 jars with soil from an organic garden. Half of the jars had pesticides added to them. The other half just had water added. One leaf was placed into each jar. Every week (for 12 weeks) I weighed the leaves to see if they decomposed or lost mass.

Results
After 12 weeks, the leaves in the control jars lost 3.5g overall. The leaves in the pesticide jars lost 4.3g overall. The average amount of mass lost for the leaves in the control jars was 0.5g. The average mass lost for the leaves in the pesticide jars was 0.7g. The leaves in the pesticide jars lost more mass overall.

Conclusions/Discussion
The leaves in the pesticide jars lost more mass than the leaves in the control jars. It was observed that the pesticides did not seem to kill sow bugs. In fact, the sow bugs multiplied. Sow bugs skeletonize leaves. The pesticide jars had more sow bugs than the control jars. I believe that the sow bugs had a direct effect on the decomposition of the leaves.

Summary Statement
I observed the effect of pesticides on the decomposition of leaves in soil.

Help Received
I designed and conducted this experiment by myself. My mother reviewed my results and assisted with photography.