CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY

Name(s)
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Project Number
J1428

Project Title
Snails: The Pest of the Ages

Abstract

Objectives/Goals
The purpose of my experment was to find a natural non-toxic material that can repel snails without killing them, and to see if the materials that prove effective will still work after 24 hours, and every day after that up to a week.

Methods/Materials
I put snails in different tubs with a plant and the test material separating them, and tested ten times for each material. If at least five of the ten snails crossed the material to the plant, I concluded it was ineffective against snails, and vice versa. The materials that did prove to be effective I tested the next day, until they became ineffective. I tested with 7 materials: the mineral lime, ash, cinnamon, bay leaves (sliced and fresh), eucalyptus leaves (whole and from the ground), sand, and human hair.

Results
Cinnamon, bay leaves, ashes, and lime all proved to be effective against snails after being freshly laid out. Sand, hair, and eucalyptus leaves proved to be of little effect against snails even when freshly laid out. After being out for 24 hours, only lime and the ashes worked well, so I tested them every day up to for a week, and they proved to repel most of the snails every time.

Conclusions/Discussion
Lime and ash would both be ideal for gardeners to use against snails.
However, I did not find any materials that are completely foolproof that commercial farmers could use, as I had hoped. The lime would be ideal to protect some commercial produce, but it depends on the pH of the soil. Lime increases the pH of the soil. Therefore, if the soil has a low pH, the lime would actually enrich the soil, but the lime would degrade the soil if it had a high pH.

I can now answer my question. Yes, there are natural non-toxic materials that can repel snails without killing them: lime, ash, chopped-up bay leaves, and cinnamon. However, ash and lime are the only materials which still proved effective after 24 hours, and every day after that up to a week.

Summary Statement
The purpose of my experment was to find a natural non-toxic material that can repel snails without killing them, and to see if the materials that prove effective will still work after 24 hours, and every day after that up to a week.

Help Received
My mother and teacher helped edit my report. Interviewed Doug O' Brian, a pest control consultant for organic farmers.