

How to prevent ants from infesting garbage cans?



Two approaches :Raising student awareness and repelling ants

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Abstract

The damage caused by ants is increasing around the world.



First hypothesis is that...

Are ants attracted to leftover drinks from plastic bottles?

➔ Raising student awareness

Second hypothesis is that...

Wouldn't it be possible to use a garbage bag with a smell that ants don't like ?

➔ Repelling ants

Introduction

In our school...

ants infesting garbage cans

Overseas...

Argentine ants invading and damaging houses

We want to solve these issues!



used poster in ①-c



installed trash can in ①-f

Methods and Results

Hypothesis①...The percentage of plastic bottles that were washed.

Methods A	a	b	c	d	e	f
Hypothesis①	Normal conditions	Verbal influence	Poster influence	Verbal and poster influence	Normal conditions	Putting garbage can in a washing area
Percentage	26%	74%	68%	53%	53.5%	76%

Hypothesis②...Count the number of times ants avoid using smell which ants hate (n=4).

Method B	a	b	c	d	e	f
Hypothesis②	sugar only	baking soda	rubber band	vinegar	limonene	peppermint oil
Number of times ants came	5.3	2.0	3.5	0.3	1.3	0.3

Results and Discussions

Hypothesis①

- Hypothesis①-f is highest percentage of bottles that were washed.
- The approach was effective.
- We checked garbage cans, but a few ants were found.
- ➔Hypothesis① was not sufficient for repelling ants.

Hypothesis②

- Among Hypothesis②, Hypothesis②-d and Hypothesis②-f didn't keep ants away.
- The results showed that they are suitable for keeping ants away.
- ➔used Hypothesis②, there is a possibility:ant numbers should decrease

Conclusion

- Washing plastic bottles doesn't repel ants.
- We found a smell that ants don't like.
- To help people around the world suffering from damage caused by ants.
- ➔Make a garbage bag or a trash can with an ant-repelling smell with insect control companies.

References,Acknowledgement

Thanks by Kinki Regional Environment Office Wildlife Division, Mr.Suehiro.

<https://www.env.go.jp/press/104182.html>,<http://sustainably.jp/ant/>,https://www.seikatsu110.jp/library/vermin/vr_ant/13965/,<https://lifepal.biz/ant-2020.html>,<https://tokk-hankyu.jp/articles/shopping/37651/#1-2>
<https://www.nies.go.jp/biodiversity/invasive/DB/detail/60090.html>,<https://www.homify.jp/diy/15093/%E3%82%A2%E3%83%AA%E3%81%AE%E9%A7%86%E9%99%A4%E3%81%AB%E6%9C%89%E5%8A%B9%E3%81%AA%EF%BC%96%E3%81%A4%E3%81%AE%E5%A4%A9%E7%84%B6%E7%B4%A0%E6%9D%90> and so ...