Mealworm Beetle

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Background Information

Scientific Name: Tenebrio Molitor

Size: 2 cm

Life Cycle: 4 months to a year

Diet: Foods with high water content

Environment: Dark and moist areas, underneath rocks and logs.

Introduction

Preliminary Experiment:

Mealworm beetles were presented with a potato and banana in unchanged chamber.

Prediction: If the mealworm beetles are presented with a banana and a potato, they will go to the potato.

Environmental Experiment:

Mealworm beetles were presented with a carrot, potato, onion, and cucumber in dark, moist chamber.

Hypothesis: The mealworm beetles will go towards the cucumber and potato over other food sources in search of water.

Prediction: If you present a beetle with a carrot, potato, onion, and cucumber then it will go towards the potato and cucumber.

Methods

https://www.youtube.com/watch?v=db--p1Cp908

For this lab we decided to test which item, of the ones placed in the chambers, would the beetles be drawn towards more. We focused mainly on whether or not they would find the item to be a good water source.

In our first two chamber observation we compared a banana to a potato in dry and light chambers.

In the second observation we had a potato, carot, cucumber and onion on a piece of damp brown paper.

2- Chamber Experiment

Potato and Banana

Minute 1

Minute 5

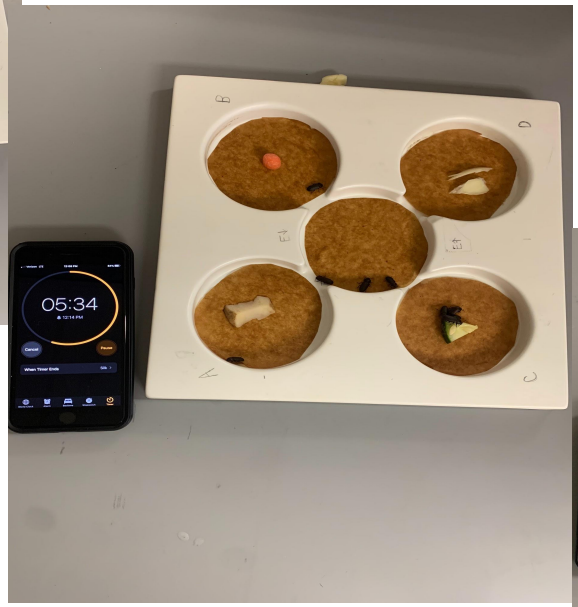
Minute 10

5-Chamber Experiment

Potato, carrot, cucumber, onion and empty. (All have brown moist paper

Minute 1

Minute 5



Minute 10

Results

Our hypothesis was halfway correct the beatles mainly were interested in the cucumber over any other option in the chambers

The beatles continued to stay active for longer when in the moist and dark chambers in the second observation. The onions smell clearly played a part in the beatles interest. The cucumber has the greatest water source for them.

Many of the bugs became stagnant around the midway mark of the ten minutes.The bugs that were by themselves were uninterested in what was in their chamber. Bugs that were around other beatles crawled on top of each other and clustered together.

Discussion/Conclusion

Our hypothesis was halfway correct. The beatles were very intrigued by the cucumber, however they did not like the potato. They were also more active for longer in the most and dark chambers vs. the dry and white chambers that were used in the 2-chamber experiment. Smell was also clearly a factor, they would enter the chamber and then immediately run out. They were mainly drawn to the cucumber because it has the biggest water supply. For both experiments, when the midway mark hit, they stayed where they were. Bugs by themselves were inactive and uninterested in what was in the chamber.

References

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