

Experiment: which
bait attracts the most
mosquitoes?



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Which Bait Attracts the most Mosquitoes

Abstract

The main question of this experiment was to find out which type of bait would attract the most mosquitoes. If we use the bait called Den Garden, then the trap will collect the most mosquitoes because it has the least amount of ingredients. There were three if the same style traps made and three different baits in each trap. It was found that the bait ThriftyFun, collected the most amount of mosquitoes. Through all the data collected, the results showed that out of all the baits tested, ThriftyFun caught more mosquitoes than Den Garden and Ask A Prepper (the websites the baits came from). By the end of the experiment, I found that my prediction that Den Garden wanted to collect the most mosquitoes, came to be false. This was because the ThriftyFun bait had cold water and no hot water.

Introduction

To start off, this project was done to find which bait would be the best product for trapping mosquitoes. By conducting this experiment, more mosquitoes can be caught to prevent people from being bitten and spreading diseases. Finding the best bait to use can also help to prevent more breeding grounds from forming. These breeding grounds can harm many people including farmers which can decrease crop production. " Good health enhances agricultural productivity, and the intake of nutritious plant-based foods supports good health", as it says in a GBCHealth article. It has been shown that this bait does work as proven on the article by ThriftyFun. This bait is most useful because of the yeast which reacts to the sugar. When <https://assignbuster.com/experiment-which-bait-attracts-the-most-mosquitoes/>

going more into facts about these mosquitoes, there are very many things that definitely make you want to learn more about them. For example, like the fact that males only live for a week and their main job is to mate with female mosquitoes. The females job is to produce the offspring and protein from a blood meal that feeds the eggs ()

Literature Review

It was found by other people that the homemade traps used in this experiment work well. This was said by people on the Ask a Prepper website which also made this trap. Many people on this website have also said that the bait was very efficient and lasts about 2 weeks until having to be replaced. For a bait, that is very good. For this experiment, you will need 1 cup of sugar, 2 tsp. of active dry yeast and 1 ml of regular dry yeast. You will also need $\frac{1}{4}$ cups and 60 ml of brown sugar, three 2 liter bottles, tape, a sharp knife, candy thermometer, black paper, scissors, and 4 cups and 200 ml of water. In recent studies conducted by other people, it was found that the Den Garden bait didn't work well for them either. Many people have said the only thing they have caught with the bait is a few cockroaches and some fruit flies. On the other side of things, it was said by people who have used the ThriftyFun bait that the bait has worked very well many times and that it has worked well because " that's their job". When looking more into mosquitoes, you can find that there are as many as " 3, 500 species of mosquitoes"(Altoenna, 2003). You will also find that only the females spread viruses like Zika, West Nile, Chikungunya, etc. because the women have the proboscis to feed with.

Materials and Methods

The materials consist of 1 cup of sugar, 2 tsp. of active dry yeast and 1 ml of regular dry yeast. You will also need $\frac{1}{4}$ cups and 60 ml of brown sugar, three 2 liter bottles, tape, a sharp knife, candy thermometer, black paper, scissors, and 4 cups and 200 ml of water. So, if we use the bait from the website Den Garden, then the trap will collect the most mosquitoes because it has the least amount of ingredients. To conduct this experiment, you will first need to collect all of the materials. Then, you will need to cut off the top of a 2 liter bottle and turn the top upside down. You will need to put the top part of the bottle that was cut off into the body of the bottle to make a funnel. Do this with all three bottles. Then, add $\frac{1}{4}$ cups of brown sugar to 1 cup of boiling water and mix it until its completely dissolved. Allow this mixture to cool until it is between 120-130 degrees. When the mixture comes to the correct temperature, add in the yeast and then put it into the bottle and seal closed. Next, add 1 cup of sugar and 1 cup of water to boil and dissolve the sugar. Add 2 cups of cool water and let the mixture cool to 90 degrees to then add 1 tsp. of active dry yeast. Pour this mixture into the second homemade trap and seal. For the last bait, add 60 ml of brown sugar and 200 ml of hot water and dissolve it. When that is cooled, add into the third bottle. Then add 1 ml of yeast without mixing and wrap all the traps in black cloth. Set the traps and then collect the data of how many mosquitoes were collected every day.

Results

In this experiment, it was found that the bait ThriftyFun collected the most mosquitoes. I believe that is because the other baits required hot water

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which increases the chances of the yeast from the baits deactivating. This is what could have made the Ask a Prepper and Den Garden baits deactivate. This is why they caught fewer mosquitoes than the ThriftyFun bait. It was found throughout this experiment that from the first trial and second trial of the results changed drastically. For example, bait 1 went from collecting 5 mosquitoes in the first trial to collecting 12 in the second trial. Adding on, if you look at the second bait, it went from collecting 1 mosquito to collecting 11 mosquitoes. Having said this, even though bait 2 rose dramatically in catching mosquitoes in the first trial, afterward, the trap only caught 3 more mosquitoes going from trial 2-5. This resulting in there being a pattern in the collection of mosquitoes in bait 2 after catching 11 mosquitoes.

Baits	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Ask a prepper (Bait 1)	5	12	17	21	24
Den Garden (Bait 2)	1	11	13	16	19
Thrifty Fun (Bait 3)	6	40	42	49	54

Discussion and Conclusions

In conclusion, the ThriftyFun website bait caught the most mosquitoes because the materials didn't include hot water. The baits deactivated which caused them to catch fewer mosquitoes. Looking back to the data, it was found that the Ask a Prepper bait caught 24 mosquitoes while Den Garden got 19 and ThriftyFun caught 54 mosquitoes. When looking at the beginning of the table, you can see that Den Garden only caught 1 mosquito which indicates that the yeast was deactivated in the process of making the bait. This was probably because other than the Ask a Prepper bait, Den Garden didn't have another source of liquid to cancel out how much hot water was in it which led it to deactivate. So, going back to the hypothesis, my prediction was incorrect because the Den Garden bait caught the least amount of mosquitoes. So, by conducting this experiment, I found that if you want to catch mosquitoes, you should use the bait listed on the ThriftyFun website. This will be the best at catching mosquitoes and will help to keep agricultural productivity high so that we can increase crop production.

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