

Maybe bats would be better than DEET!



This dump truck has a load capacity of 220 tons.

Clearly this is a ridiculous quantity to try to compare with mosquito consumption of bats but that is exactly what we are going to do.

It must take a long, long time for bats to consume this weight of mosquitos.

1. What is the capacity of this truck in kilograms?

Contrary to myth, most bats eat insects ... not blood.



Mexican free-tailed bat

This Mexican free-tailed bat is found in the western U.S., Mexico, Central America and northern South America.

These bats weigh between 12 and 13 grams each and can consume 10 grams of insects in one night.

Consider how much food you would have to eat to consume the same proportion of food to body weight that these bats consume.

2. How much food would you have to eat?

Near San Antonio, Texas there is a cave called Bracken Cave, where it is estimated that 20 million Mexican free-tailed bats roost.

3. Estimate how much weight in mosquitoes those 20 million Mexican free-tailed bats can consume in one night.
4. How does that one night of San Antonio's Bracken Cave bat consumption compare with our dump truck's capacity?

One mosquito weighs, on average, 5 milligrams.

5. How many mosquitos must have been consumed in one night of the bats in Bracken Cave feeding?
6. Try to describe the quantity of mosquitos consumed by the bat inhabitants of Bracken Cave in one year's time.
7. Do you think that mosquitos are a problem in San Antonio, Texas?
8. Do some research and find out how hard it would be to attract some bats to your backyard.

Sources: https://batslive.pwnet.org/edubat/final_calculate_the_value_of_bats.pdf
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