

Mosquito BUCKET of DOOM



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MOSQUITO SEASON IS HERE!

Instead of spraying pesticides onto our entire yards – and onto fireflies, ladybugs, bumblebees, and butterflies – why not kill **ONLY** mosquitoes?

- BTi
- water
- weeds
- stick

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BY JO BRICHETTO

But wait, first: let's PREVENT mosquitoes from breeding in our yards. At right is an infographic to remind us of the free and easy common-sense ways to do this, like removing standing water in toys, saucers, gutters, and trash/recycling cans.

And THEN, why not try a **Mosquito Bucket of Doom**? It's cheap, it's safe, it works.

"Mosquito Bucket of Doom" is my name for the old Bti bucket trick, which I've known about for years. I finally made one last spring, after watching a 1-minute video from Doug Tallamy on his website HomeGrownNationalPark.org. (<https://www.youtube.com/watch?v=TqcDZDNtP-0>) In addition to the "catchy" name, I've added a crucial element: a stick, which I'll explain in a moment.

How It Works

The grass in the water rots – releasing carbon dioxide – and attracts mosquitoes ready to lay eggs, but the Bti dunk in the water kills the larvae after they hatch. No new adult mosquitoes will emerge.

Bti is a larvicide targeted for mosquitoes. It kills the larval stage (not the egg or pupal or adult stages).

Bti will not harm anyone else. Lightning bugs, bees, birds, butterflies, frogs, mammals, etc. are safe.

How long with a dunk last?

One dunk treats 100 square feet of water for at least 30 days, says the package. My bucket has fewer than 2 square feet of water, so I break one dunk into 4 parts. Each 1/4 dunk lasts longer than 30 days, but it is easier to simply add a new 1/4 on the first day of each month. (It's honestly easier to throw in a whole dunk. Sometimes, the lazy way is the best way.)

How much water?

Fill the bucket only half full. Some mosquitoes lay eggs above the water line, and they won't hatch until submerged with rising water. Some mosquitoes lay eggs directly on the water and are visible as small, black rafts.



(image from Florida Health)

A Mosquito Bucket of Doom
is just
**A BUCKET OF WATER +
HANDFUL OF GRASS +
A STICK +
A BTI DUNK**



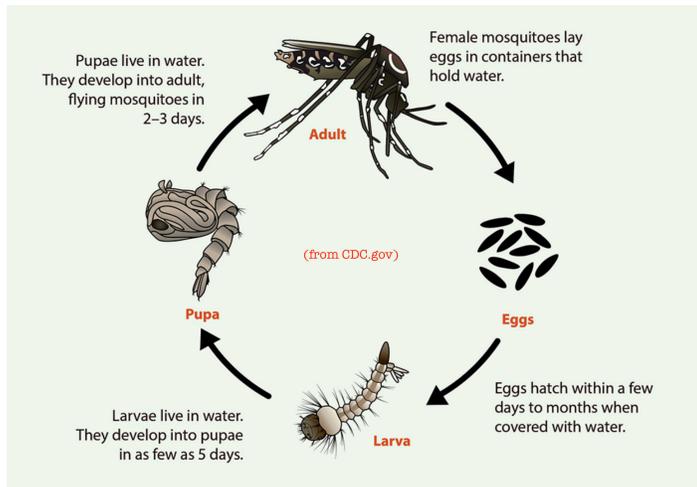
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How many buckets?

Start with one, increase as needed. Exposure, elevation, size, airflow and vegetation mean every yard is unique.

Does it work?

YES. At each check, I find newly hatched larvae/wrigglers, but no pupae/tumblers – the next developmental stage – which indicates that the mosquitoes die as larvae.



Where to Place a Mosquito Bucket of Doom

Ideal placement is where mosquitoes tend to hang out anyway: in moist shade where there isn't a lot of wind. If all you have is full sun, put it near an object (house, shed, trash can) that will cast shade at some point of the day.

How far from where people sit?

I keep them at least a few meters away from where people sit.

MODIFICATIONS

to maximize DOOM and minimize collateral damage:

Stick/Escape Ramp: I add a stick as an escape ramp in case anything other than a mosquito falls in. I don't want a chipmunk or bird or lightning bug or even an ant to drown. (See other side for Child Safety Warning.)

Floaters vs. Sinkers: Bti dunks float, but I want mine to sink. I don't want the dunk to get taken by a curious squirrel or crow or the dog. If you don't drill overflow holes in your bucket, the dunk might also float right out into the yard during a hard rain.



To make a Sinker: I take an old onion bag – the mesh that onions are sold in – and tuck my dunk inside along with a small rock. I twist-tie this to the bottom of my Escape Ramp Stick. When I need to check the dunk, I pull up the stick and look.

Cover Option: A layer of chicken wire or wide-mesh

hardware cloth can keep the dunk from disappearing. Don't use fine screening that mosquitoes cannot pass through.

Color Option: Colors attract mosquitoes AFTER they've detected the carbon dioxide that we exhale, and that our Buckets of Doom off-gas. The smell is enough, but adding color can help. But which color?

Black has long been considered an attractive color for mosquitoes, and a recent article (linked below) confirms this, but also tests other colors. Winners are **black, red, orange, cyan.** High contrast is also good.

"We find that CO2 induces a strong attraction to specific spectral bands, including those that humans perceive as cyan, orange, and red." (<https://www.nature.com/articles/s41467-022-28195-x>)

To me, this means that the obnoxiously orange Home Depot buckets could be ideal.

CHILD SAFETY

IF THERE IS THE REMOTEST POSSIBILITY THAT A SMALL CHILD WILL EVER BE NEAR YOUR BUCKET, YOU MUST SECURELY COVER THE BUCKET.

"The U.S. Consumer Product Safety Commission (CPSC) warns that buckets filled with water or other liquids, especially the large five-gallon size, present a drowning hazard to small children."

What If...

...every yard in a neighborhood stopped the expensive and deadly pesticide foggers/barriers/yard sprays to opt for a Mosquito Bucket of Doom?

Imagine how many more

*fireflies and butterflies and
bumblebees and birds*
we'd have!

Let's make a BUCKET of Doom BRIGADE!

Links

SidewalkNature post: "Doom-it-Yourself" (different STYLES of buckets) <https://sidewalknature.com/2022/06/12/doom-it-yourself-mosquito-bucket-styles/>

SidewalkNature post: "Don't Forget the Stick (Bucket of Doom)" <https://sidewalknature.com/2022/10/16/dont-forget-the-stick-bucket-of-doom/>

Video of Doug Tallamy on the BTi bucket trick: <https://www.youtube.com/watch?v=TqcDZDNtP-0>

Xerces Society: "Protecting Pollinators from Pesticides:" <https://xerces.org/blog/earth-week-start-now-to-prevent-mosquito-borne-disease-and-keep-pollinators-safe>

"What you need to know about BTi" from the CDC: <https://www.cdc.gov/mosquitoes/mosquito-control/community/bti.html>

Mosquitoes and colors study: <https://www.nature.com/articles/s41467-022-28195-x>

Child Safety quote about buckets in general is taken from this link: <https://www.cpsc.gov/Newsroom/News-Releases/1989/Large-Buckets-Are-Drowning-Hazards-For-Young-Children>

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