



GAT TRAP BASICS: Setup, Maintenance, and Troubleshooting

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Mosquito Trap Basics: Setup, Maintenance, and Troubleshooting

These pages explain the basics of how the Gravid Aedes Traps (GAT) work, and how to set them up, maintain them, and troubleshoot them. A few sources are given at the end for those who want more information.

How GATs Work

The GAT targets Asian Tiger mosquitoes seeking to lay eggs. The trap has a black plastic base filled with water, a few blades of grass, and $\frac{1}{4}$ of a mosquito dunk. The clear plastic top has a funnel to let the mosquito in, and oil or a sticky card to trap the mosquito inside.

The grass in the water gives off carbon dioxide, which attracts gravid female mosquitoes seeking fresh, still water next to which they can lay their eggs. The mosquito follows the scent into the trap. Once inside, when it seeks to exit, it flies toward the clear plastic, where the sticky card or oil traps it. If it laid eggs (50-70 at a time), and the eggs hatch, the larvae are killed by the mosquito dunk. And all the subsequent generations that might have followed are also wiped out.

How to Set Up a Trap



1. Prepare the black base

- a). Make sure you have everything you need: All six parts of the trap (black base, clear top, mesh net, plastic ring, plastic hook (*optional*), and black funnel); a nearby water spigot; a few blades of grass; and $\frac{1}{4}$ of a mosquito dunk.
- b). Put the base on the ground and fill it with of water up to the slits in the sides.
- c). Add about 3 blades of grass to the water. Also add $\frac{1}{4}$ of a mosquito dunk.



2. Prepare the clear top and put it on the base

- a). (*If using oil*) Coat the inside of the top lightly with oil.
- b). Set the clear top on a stable surface, upside-down.
- c). Put the mesh net on the bottom. Tighten the drawstring. Place the ring over the net. Set the top right side up.
- d). (*If hanging a sticky card from a hook*) Put the hook in the punched-out hole in the top. Hang the sticky on the hook inside the clear top.
- e). Place the funnel in the top and turn in half a turn so that it catches the clear top.
- f). (*If you have a slotted funnel*) Put the sticky card in the slot.
- g). Test: pick up the funnel. If the clear top lifts with it, you've done it right.
- h). Place the top in the base. Make sure the net is snug against the inside of the base. The trap is ready for use.



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3. Deploy the trap.

- a. Place the trap outside in your yard. Put it wherever the mosquitoes are thickest or most annoying. If you are not sure, pick a spot that seems humid and shaded—mosquitoes prefer warm, still, humid air.

How to Maintain a Trap

Maintenance is crucial. After a month the water is stagnant, the sticky card is full, and the mosquito dunk has dissolved. You have a nice lawn ornament, not a mosquito trap. To keep your trap effective:

1. **Put traps out around May 1** (when the daytime temperatures go above 60 degrees)
2. **Check your sticky cards every 2-4 weeks.** When they are covered with mosquitoes (or anything else) and no longer sticky, remove the old card and put in a new one.
3. **Put in fresh water and grass monthly, or whenever it looks gross.**
4. **Add a new ¼ mosquito dunk monthly.**
5. If you need to wash a trap, use unscented soap. Traps can be washed in the dishwasher, using the hot water setting and the air dry (not heat dry) setting.
6. **Winter storage:** Bring in the traps around Nov 1 (when the daytime temperatures go below 60 degrees)

Troubleshooting Traps: What Could Possibly Go Wrong?

1. **Not catching any mosquitoes:** Try moving the trap to a different place in the yard.
2. **Water is gross** (algae, oily sheen, dead slug): Dump it and put in fresh water.
3. **Trap has a lot of black flies in it:** Something is making the water smell like carrion to the flies (possibly too much grass). Dump the water (and the flies); put in fresh water.

For more information:

About the GAT: <https://us-shop.biogents.com/collections/frontpage/products/the-flexible-and-low-cost-bq-gat-against-tiger-mosquitoes-package-of-12>

GAT Effectiveness in University Park: Brian J. Johnson et al. “Neighbors help neighbors control urban mosquitoes”. *Nature Scientific Reports*. **Volume 8**, Article number: 15797 (2018) .

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