

## What do mosquito traps look like?

By Elizabeth Teaford

Meigs County Mosquito Control Program Intern

The Meigs County Health Department uses two different types of mosquito traps: Gravid Traps and Sentinel Traps. Each type of trap is used to select for different species of mosquitos, and they have different features that draw in specific species of mosquitos.

**Gravid Traps:** We use two different gravid traps, including the Upright Gravid Trap and the Toolbox Gravid Trap. Gravid traps select for *Culex spp.* mosquitoes, which are vectors for West Nile Virus. These types of mosquitoes like to stay around stagnant pools of water, which is why we use a tub of grass-infused, stagnant water to draw them to these traps.

### Upright Gravid Trap:



The Upright Gravid Trap consists of a collection net that sits on top of a tube with a fan inside that brings mosquitoes up from the tub of stagnant water beneath the trap. In the tub, we have made a water solution that attracts mosquitoes to the trap. Jugs are filled with grass clippings and unchlorinated water and allowed to sit for 5-7 days. This creates a nutrient-rich solution that mosquitoes use to lay their eggs, which is what draws them to the trap. When a mosquito lands on the surface of the water in the tub, it is pulled up into the trap before it can lay any eggs, and is collected in the net.

### Toolbox Gravid Trap:



The Toolbox Gravid Trap looks exactly like a toolbox. Below the trap is a tub of the grass-infused water that was described above. Inside the trap, there is a collection net and a fan that pulls mosquitoes into the net from the tub of stagnant water beneath as the mosquitoes try to lay their eggs, just like the Upright Gravid Trap.

**Sentinel Traps:** These traps are used to select for *Aedes spp.* mosquitoes, which are vectors for Zika Virus. These types of mosquitoes are attracted to the scent of chemicals in human skin, so we use a lure that imitates that smell to draw them to the trap.



Sentinel Traps use a synthetic lure that smells like the chemicals in human skin (or body odor). Just like the other traps, there is a fan that pulls the mosquitoes in to the trap where they are collected in a net below the fan. When they smell the lure that is placed in a hole on the trap cover, the mosquitoes will get closer to the trap where the fan will bring them into the trap where they are collected in a net inside. Unlike gravid traps, sentinel traps do not require the stagnant water.

After the traps have been set out for roughly 24 hours, we go back to collect the mosquitoes that were caught. The collection nets are then brought back to the Meigs County Health Department where we put them in a freezer to preserve them. After 24 hours in the freezer, we sort out the mosquitoes from the rest of the insects that were caught and place them in labeled vials that are sorted by date and location of where they were collected. The vials are then sent to the Ohio Department of Health's facility in Columbus, OH where they test the mosquitoes for mosquito-borne diseases such as Zika Virus, West Nile Virus, La Crosse Virus, and more.