

## NEWS COLUMN

Jeff Lounsbery, Extension Educator/Livestock

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### **Controlling Mosquito at the Larval Stage**

Homeowners who live in areas where water sources can't be drained or refreshed should consider steps to deal with mosquitoes in the larval stage.

Fewer larvae means there will be fewer adult mosquitoes capable of transmitting West Nile Virus.

Following are some tips for successful larval control.

- Aerating the water or stocking insect-eating fish, such as fathead minnows, in backyard ornamental pools or nearby ponds is one strategy.
- Removing weeds in and around the pool also may help cut mosquito numbers in some locations. Clearing out the vegetation opens up the water to wave action by wind. Water that is agitated by waves will reduce the number of mosquito larva that survive. They will drown since the wave action makes it difficult for them to breathe air, which they normally do by attaching themselves to the water's surface.
- Some larval control products are available that produce a thin film over the water surface. These films either prevent the larvae from breathing or reduce the surface tension of the water, causing them to drown.
- Larval control pesticides are available. The most common products available to homeowners for controlling mosquito larvae contain proteins derived from *Bacillus thuringiensis* subspecies *israelensis*, or Bti. These products are commonly sold as granules or pre-formed blocks that release the Bti protein when placed in water. The Bti protein is toxic only to mosquito wrigglers and the larvae of certain aquatic flies such as midges and black flies. It has no harmful effects on humans, horses, fish, tadpoles, frogs, crustaceans, snails, or other non-target aquatic animals. Formulations of Bti are available that last from as little as three days to as long as 30 days. Products containing Bti are an excellent choice for stagnant water areas that cannot be drained.
- Larval products containing methoprene are also available. These products act as insect growth regulators and prevent the pupae tumblers from maturing into adult mosquitoes. Both methoprene and Bti products become less effective as mosquito larvae mature. The products are ineffective against adult mosquitoes.

Find more details in a publication from South Dakota State University Extension. SDSU Extension Fact Sheet 923, "Controlling Mosquitoes Around the Home and Yard," is available online in pdf format at <http://agbiopubs.sdstate.edu/articles/FS923.pdf>. Or ask for it at your county Extension Office.