



## Views from VanDeWalle

Brandy VanDeWalle, Extension Educator in Fillmore/Clay Counties

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### Mosquitoes

Mosquitoes are a huge irritation in the summer months. Mosquitoes are a type of insect that is in the same order as flies, which means they are closely related to flies and gnats, which all tend to bother us. Mosquitoes are also vectors of many different diseases. Because of these factors, we need to do what we can to eliminate the problem and reduce mosquito populations.

The best way to avoid any pathogens transmitted by mosquitoes is to prevent being bitten. Like any pest management program, IPM is the strategy that works best to prevent mosquito bites at home in the yard. Sanitation is a must to eliminate breeding sites and harborage locations of mosquitoes. Female mosquitoes lay eggs on the surface of standing water and the larvae (“wigglers”) require water to survive before pupation. Removal of stagnant water in a variety of containers such as flowerpots, buckets, gutters, pool covers, used tires, and dog bowls will break the mosquito life cycle. A general rule is to dump any water that has been standing for more than five days.

Culex mosquitoes are active biters in the evening, so it is important to wear long sleeves and pants or permethrin-treated clothing when outdoors between dusk and dawn. The effective insect repellents applied to skin include those with the active ingredients: DEET, picaridin, or the oil of lemon eucalyptus.

As far as chemical control, Mosquito Dunks contain the active ingredient bacterium, *Bacillus thuringiensis israelensis* (Bti), which is toxic to mosquito larvae when consumed, but non-toxic to humans, pets, pollinators, fish, and other wildlife. They are sold in hardware stores and will dissolve in standing water such as water troughs, fishponds, rain barrels, and birdbaths. They are effective immediately and can last for a month. (*We have mosquito dunks in our Extension office free from Public Health Solutions.*)

It is not recommended to use foggers or adulticide treatments by homeowners. These treatments are not effective for more than a couple of days and should only be used a few days ahead of a large outdoor get-together if necessary.

It is best to utilize IPM to reduce your exposure to mosquitoes because they spread many diseases including West Nile Virus and the Zika virus. Most people who get West Nile Virus have no symptoms or have flu-like symptoms. However, from 2001 to 2009 1,100 deaths in the U.S. were attributed to West Nile Virus. Most of the deaths occurred in people ages 65 and older.

As for the Zika Virus, it has been known about since 1947, but has just recently hit the news as it spreads more. Zika does appear to have minimal impacts on adult humans, but if a pregnant woman becomes infected, her fetus may suffer from developmental abnormalities such as microcephaly. The good news is that the main mosquito that transmits Zika isn't in Nebraska. The mosquito that most commonly transmits Zika to humans is the yellow fever mosquito, *Aedes aegypti*. We are not on high alert for Zika in Nebraska, but it is still a good idea to protect yourself from mosquito bites to reduce the chance of West Nile and other mosquito vectored diseases.

*Information for this article came from Nicole Stoner, Drs. Jody Green and Jonathan Larson, Nebraska Extension Educators.*