

Mosquito Control and Prevention for Your Farm and Home

Emily Zobel, Faculty Extension Assistant, Dorchester County

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There are over 60 species of mosquitoes found in Maryland. As well as being a major nuisance, 11 of these species are known to be possible vectors for disease in humans, pets, and livestock; including Eastern Equine Encephalitis, West Nile Virus, St. Louis Encephalitis and Dog Heartworm. Other possible imported diseases that could be transmitted by mosquitoes found in Maryland include Chikungunya and the Zika Virus.

To protect yourself and your family from mosquitoes, wear long trousers, long sleeves and use repellents when working or playing in areas known to have a lot of mosquitoes. Check to make sure screen doors and windows are intact to prevent mosquitoes from entering your home or work.

Mosquitoes go through complete metamorphosis with a four stage life cycle of egg, larvae, nymph, and adult. The first three stages occur in water, but the adult is an active flying insect. The larvae are microbial feeders eating plankton, algae, and other micro materials. Only the female mosquito bites and feeds on the blood of humans or other animals. She needs the protein found in blood for egg development. After feeding a female mosquito will lay either rafts or a line of eggs on or near the surface of water. One female mosquito can lay up to 200 eggs at a time.

Controlling adult mosquitoes by various insecticide sprays can be an effective way to temporarily control the population, however, adult mosquitoes killed by spraying can be replaced by newly emerged adults within a few days. Mosquitoes have a short developmental time, taking as few as four days for a mosquito to develop from egg to adult. The most effective method of controlling mosquitoes is to reduce or eliminate the areas and containers where mosquitoes lay their eggs, known as “breeding sites”.

All mosquito larvae are aquatic and prefer shallow stagnant pools of water. Moving bodies of water such as streams, creeks, large ponds, and lakes, are not typical mosquito breeding sites due to water movement as well as the predator fish and invertebrates found there. Mosquitoes have adapted to a wide range of aquatic habitats, including marshes, swamps, tree holes, ditches and weedy ponds. They have also adapted to a wide range of urban habitats which include clogged rain gutters, old tires, buckets, water troughs, pet food and water dishes, ornamental pools, birdbaths, pots, tarps, trash cans, their lids, flexible drain pipe, and wheelbarrows. Any ditch, puddle or low-land water collecting area in a field or pasture that could hold water for more than four days is a potential mosquito breeding site.

Tips for Reducing Mosquito Breeding Sites

- Check drainage and eliminate standing or stagnant water around your farm and in fields and pastures. Any water that is standing for four days can be a breeding site for mosquitoes.
- Make sure drainage pipes are properly attached to your gutter. In the spring clean out gutters. Attaching either thin netting or stocking to the open end with a rubber band will still allow water to flow out; but will prevent adult mosquitoes from entering the pipe and using it as a breeding site.

- Change water in animal troughs, pet dishes and bird bath twice a week.
- Prevent water from collecting by storing equipment inside or by keeping them upside down when not in use.
- Check for trapped water in plastic or canvas tarps used to cover boats, farm equipment, pools, etc. If possible arrange the tarp to drain the water.
- Remove and recycle old tires or drill drainage holes in their sides.
- Use mosquito dunks or mosquito torpedoes in ornamental garden ponds or rain barrels to prevent mosquito larvae development.
- Check holes in trees or stumps that may collect water; remove stumps or plug holes with sand, or cement or flush out with a spray of water at least twice a week.
- Fill in road ruts and potholes on your property. Potholes on public roads should be reported to your local Department of Public Works & Transportation to be repaired.
- DO NOT over irrigate. Water standing in fields for an excessive period of time reduces crop yields, encourages weed growth and will decrease soil quality, in addition to producing mosquitoes. Check and fix leaking irrigation piping.
- Prepare land so that slopes are uniform and drainage is good. Inspect and correct areas with poor drainage if possible.
- Regrade pastures as needed to eliminate ponding and muddy areas. There are often small areas of standing water that can be filled in by hand.
- Keep weeds well trimmed around fields, ponds, and ditches. Weeds are the perfect hiding place for mosquitoes during the daytime.
- DO NOT use excess fertilizer, which can seep into irrigation water and promote mosquito production in ditches and standing pools further downstream.
- Check to make sure your ditches are draining property. If your ditches do not flow and contain stagnant water for one week or longer, they can produce large numbers of mosquitoes. Report such conditions to a Maryland Mosquito Control Office (410-841-5870). Do not attempt to clear these ditches on your own because they may be protected by wetland regulations.
- Install fans in barns and stables to increase air movement. This hinders mosquito flight and prevent the build up of pleasing mosquito scents like manure and garbage.
- Dairy lagoons and separator ponds should have steep sides and weeds should be controlled around the edges. Solids should be separated out of liquid manure, spread and dried to eliminate fly production. Agitating pump and solids filter can be used to prevent the formation of surface crusts and algal mats, which can prevent insecticide treatments and several mosquito and fly breeding sites.
- Remove damp vegetation and animal bedding from barns and stables.
- Keep animals off the pasture when the soil is very soft. Horse and Livestock hoofs create the perfect mosquito habitat when they imprint into the soft earth. Allowing the soil to harden before releasing the animals into the pasture not only prevents mosquito habitats but also protects the roots of the forage crop.

To learn more about how to control mosquito population in your area go to the MDA Mosquito Control website (http://mda.maryland.gov/plants-pests/Pages/mosquito_control.aspx), contract the Maryland Mosquito Control Office (410-841-5870) or your local extension agent.