KEEPING MOSQUITOES AWAY FROM YOU AND YOUR YARD

Mosquitoes are delicious food for fish and other aquatic creatures, but their buzzing and itchy bites make them a great annoyance to people. Mosquitoes can also carry a variety of diseases; so controlling them, especially by eliminating larvae development sites, should be a priority for everyone in our community.

The emergence of West Nile virus infections in humans (for more information, see inside) has focused public attention on mosquitoes. Fear may cause us to reach for a pesticide spray can, but this is most likely an ineffective control method. Small area applications of pesticide spray may reach relatively few mosquitoes, and if improperly used, they may harm beneficial insects. Residents can have a significant impact on the numbers of mosquitoes in urban areas. Follow the tips in this fact sheet to reduce mosquitoes in your yard.

The young (or larvae) of mosquitoes live in still or stagnate water and feed on microorganisms and organic matter. Just about any area or container that can hold water for three or more days can produce a large crop of mosquitoes. Only adult female mosquitoes bite humans and other animals to get the blood meal needed to produce their eggs.

PREVENTION

The most effective way to control mosquitoes is to find and eliminate their breeding sites.

- **Eliminate standing water in containers** around the homes, including water in cans, plastic containers, potted plant saucers, buckets, garbage cans, barrels, wheelbarrows, and any other container that holds water for more than a few days. Empty the water and then either: invert, cover, punch drainage holes in, or dispose of these containers.
- **Change water in birdbaths** and pet water dishes at least once a week, preferable every 2 to 3 days.
- **Fix leaky outdoor faucets and sprinklers,** and don't over water your yard. Any standing water can produce mosquitoes if left for 3 or more days.
- **Recycle tires or store them so they do not collect water.** Tires are extremely hard to drain, and each one can produce thousands of mosquitoes.
- **Keep roof gutters clean** so water drains; otherwise mosquitoes can breed in the leaf and water mixture.
- **Don't dump yard waste into street gutters, storm drains, or creeks.** It can impede the flow of water and create stagnate pools, allowing mosquitoes to breed. The decaying organic matter then provides food for dense numbers of growing mosquito larvae.
- **Drain plastic wading pools, landscape water features or fountains when not in use,** or cover tightly to deny access to mosquitoes. If the fountain is large enough, stock with fish or treat with larvicide (see below).
- **Keep swimming pools and hot tubs chlorinated and filtering.** When not in use for extended periods, cover pools or tubs tightly, stock with fish or treat with larvicide (see below). Keep pool covers dry and free of stagnate water. One untended pool or hot tub can breed enough mosquitoes to affect a whole neighborhood.
- **Use native fish or mosquito fish** (Gambusia affinis) in backyard ponds or water gardens, watering troughs, and stock ponds. The distribution of non-native fish such as the mosquito fish requires a permit from the Idaho Fish and Game to prevent them from entering fish bearing waterways. Contact your local mosquito abatement district or the Idaho Department of Fish and Game related to this issue.
- **Contact your local mosquito and vector control district** if you are aware of uncontrolled mosquito sources in your neighborhood, or if you need assistance with a mosquito problem on your property. Most district services are provided free of charge.

PRACTICES TO USE WITH CAUTION

- Propane powered traps are not recommended by the American Mosquito Control Association. Electric bug zappers will take out more beneficial insects than mosquitoes. Attractant devices serve to attract larger insect populations to an area and therefore may create a bigger problem.
- Automatic pesticide misting systems should be avoided or used with great care to prevent application of chemical control products during high winds, when people or animals are present or when there is no pest populations present.

PROTECT YOURSELF

- **Install screens on windows and doors** and keep them in good repair.
- **Certain species of mosquitoes are attracted to light, so keep outside lighting to a minimum near entry doors;** keep those doors screened and closed.
- **Wear long sleeves and long pants** when mosquitoes are biting. Learn the times of day when mosquitoes are most active in your area and avoid outdoor activity at those times.
- **Use insect repellents.** Studies show the DEET-based repellents are the most effective. Don't use a stronger or longer-lasting repellent than you need. The American Academy of Pediatrics says that repellents with a DEET concentration of 30% are safe for both children and adults, but that a concentration of 10% can be used on children if there is concern about potential risks and the threat of mosquito-borne disease is low.
- **Use a screen tent** for outdoor eating (it will keep yellow jackets out too).

THINGS TO AVOID AND WHY

These considerations will reduce the potential indiscriminate use of chemical control products and therefore reduce the potential exposure of pesticide residues to humans, animals and the environment.

- Use of pesticide products without:
  1. knowing what pest you are trying to control,
  2. consideration of alternative control options (IPM),
  3. selecting the most appropriate product for your situation, and
  4. reading and following the label directions.
- Automated aerosols and plant feeders: These devices may disperse chemicals in a way that can increase the risks of exposure to unintentional targets.
- Careless use of ground sterilants: These can leach; either use great care or alternative control methods to prevent damage to desired plants or water contamination.

ACKNOWLEDGMENT

The Central Contra Costa Sanitary District originally developed this Integrated Pest Management (IPM) outreach program for California. The Partners for Clean Water, with assistance from the Idaho Department of Agriculture and the University of Idaho Cooperative Extension, modified the information for Idaho.

WATER POLLUTION

Common household pesticides (a term which includes all chemical control such as herbicides, insecticides, rodenticides, etc.) can make their way into treated wastewater and local waterways, and may be at levels that can harm sensitive aquatic life. Pesticides can also get into ground water which may be used as drinking water. Water pollution prevention agencies have teamed up with participating retail stores, and professional pest control associations to reduce the risks associated with improper pesticide use.

Use pesticides according to label directions, paying close attention to surface and ground water advisories. Dispose of unwanted or leftover pesticides at a household hazardous waste collection facility or event; or through the Idaho State Department of Agriculture (ISDA) Pesticide Disposal Program (PDP). Clean, plastic pesticide and fertilizer containers may also be recycled through ISDA's Container Recycling Operation Program (CROP). Please call 208-465-8442 or visit: www.agri.idaho.gov for more information. For additional information on pesticide disposal, call 1-800-CLEANUP or visit: www.1800CLEANUP.org.

FOR MORE INFORMATION

Active ingredients are listed on the front of the product. Pesticide information profiles can be found on the Oregon State University hosted webpage http://extoxnet.orst.edu/pips. The University of Idaho's Extension Educators, located in most counties, can often assist in local pest management questions. No endorsement of specific brand name products is intended, nor is criticism implied of similar products that are not mentioned.

For more information, contact:

Partners for Clean Water
www.PartnersForCleanWater.org

Idaho State Department of Agriculture
www.agri.state.id.us/

University of Idaho IPM website:
www.extension.uidaho.edu/

University of Idaho Cooperative Extension Master Gardeners in your area
www.extension.uidaho.edu/idahogardens/

Western Integrated Pest Management Center
www.wripmc.org/

IPM Institute of North America
www.ipminstitute.org/

National Pest Management Association
www.Pest World.org