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Mosquito control

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Quick Facts

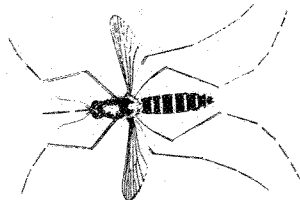
Several procedures will aid in the control of mosquitoes, including elimination of unnecessary standing water, good water management practices, use of organophosphate insecticides, emphasis on larval control programs and elimination of breeding sites, and use of personal repellents.

All insecticides are to be considered hazardous, and directions and precautions on labels should be read and carefully followed; all insecticides should be stored in their original containers; all insecticides should be kept out of the reach of children.

Chemical control of adult mosquitoes can be obtained by fogging, spraying or mist blowing, dusting, ultra low-volume ground applications, and aerial applications.

Chemical control of mosquito larvae can be done by ground or aerial applications to breeding areas.

Mosquitoes can be a vexing and a serious problem in Colorado. In the home, about the yard and in public parks, they can interfere with human chores and spoil enjoyment of leisure time. When mosquitoes are abundant, they reduce the efficiency of farm workers. Their persistent attack can cause farm animals to lose weight. Some mosquitoes transmit diseases, such as encephalitis.



There are several methods by which mosquitoes can be controlled. The general procedures listed below are significant in controlling mosquitoes:

—Unnecessary standing water and containers that will hold water on the premises should be eliminated.

—Good water management in irrigation practices should be exercised so as not to contribute to the amounts of standing water.

—Only properly registered insecticides, such as Baytex, Dibrom or Malathion, should be used in control programs. Malathion is most readily available and the least hazardous for individual home owners to use in ridding their yards of adult mosquitoes.

—Municipal or county control programs should emphasize larval control and the elimination of breeding areas. Mosquito control with insecticides is most effective and efficient when directed at the larvae. Adulticiding should be used only as a supportive measure to a larval control program.

—Personal protection can be gained by using any of the common commercial repellents. These repellents should be used carefully near the face. They can be applied to clothing for added protection. Repellents should be applied to children by an adult following the directions on the label.

All insecticides are to be considered as hazardous. Directions appearing on the label should be read and carefully followed, using caution when mixing or spraying insecticides. After using insecticides, a person should wash with soap and water and change clothes as soon as possible if skin and clothing have become contaminated. All insecticides should be stored in their original containers and kept out of the reach of children.

Pest mosquitoes are most closely associated with poor water management in irrigated areas. Areas that retain water one week after irrigation will produce large numbers of mosquitoes. The eggs of these species remain viable for several years in the soil. As these soils are flooded by irrigation or excessive precipitation, the eggs hatch.

Water management with close surveillance and treatment of breeding habitats are essential in controlling these species. Sprays and granular insecticides are best suited for this treatment. Insecticide restrictions listed above are applicable here.

Chemical Control of Adults

Fogging—Fogging will give temporary relief when mosquito populations are intense. It must be repeated often.

Dibrom 14 (Naled)*

1) Add 2 quarts of Ortho additive (anti-sludge agent) to empty mixing tank.

2) Add 1½ gallons (8 pounds) of naled concentrate and stir.

3) Add fuel oil to total volume of 100 gallons and stir for 5 minutes before using.

Fenthion 93% (Baytex)*

1) Add 3-6 pints of concentrate to 100 gallons of oil and stir.

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2) Do not store the mixed material.

Cythion 95% (Malathion)*

1) Add 2.6 gallons of 95% cythion (4 oz/gal strength) or 3.2 gallons (5 oz/gal strength) or 3.9 gallons (6 oz/gal strength) to 100 gallons of fuel oil.†

†Strength to use dependent on local recommendations and situations.

Spraying and mist blowing—

Dibrom 8 (Naled)*

1) Add one gallon to 8 gallons of water.

2) Apply at a rate of one gallon per acre.

3) Rate should not exceed 0.1 pound actual naled per acre.

Fenthion (Baytex 4 lb.)*

1) Add one gallon to 40 gallons of water.

2) Apply at a rate of one gallon per acre.

3) Rate should not exceed 0.1 pound actual Fenthion per acre.

Cythion (Malathion 57%)*

1) Add 2 gallons to 98 gallons water.

Warning: All concentrations should be diluted accordingly, if application rate cannot be controlled at one gallon per acre. All directions and precautions appearing on the label of the insecticide container should be followed carefully.*

*Dusting—*Premixed dusts are available for use against adult mosquitoes. All directions and precautions should be followed. Dusts of the following insecticides are available: Carbaryl (Sevin), Dibron (Naled), Fenthion (Baytex).

*Ground ULV †† application—*Several machines are manufactured and sold commercially for this kind of application. Malathion, Dibron, Pyrethrins, Dursban and Resmethrin (synthetic pyrethrin) are registered for use in these machines. Each machine must be calibrated and used as directed by the manufacturer and the insecticide label.

Aerial application (conventional)—

Dibrom 14 (Naled)*

1) Add 2 to 4 quarts of Ortho additive to each 100 gallons of diesel oil to prevent the formation of sludge.

2) Add 50 to 100 ounces (1.6 to 3.1 quarts) to 100 gallons of diesel oil. (Equivalent to 0.05 to 0.1 pound actual.) Mix thoroughly.

3) Apply at a rate of one gallon per acre.

Cythion 59% (Malathion)*

1) Add 2.6 gallons to 97.4 gallons of diesel oil.

2) Apply at a rate of one gallon per acre.

Fenthion 9 pound/gal. (Baytex)*

1) Add 2 gallons to 98 gallons of diesel oil.

2) Apply at a rate of ½ gallon per acre.

Aerial application (ULV †† application)—

Dibron 14 (Naled)*

1) Apply at a rate of 0.5 to 1.0 fluid ounce per acre.

2) The 1.0-ounce rate is to be used in areas with heavy vegetation.

Cythion 95% (Malathion)*

1) Apply at a rate of 3 to 6 fluid ounces per acre.

2) The 6-ounce rate will provide some larval control.

††ULV (Ultra Low Volume) technique is the application of insecticide only, with no oils or other carrier being used. It requires special equipment. ULV sprays, with prolonged exposure, may spot some car finishes.

Chemical Control of Larvae

The chemical control of larvae (larvaciding) can be obtained by applying by ground or aerial equipment up to 10 quarts of formulation per acre* depending upon the concentration used. Oil or water emulsion formulation can be used in areas with minimum vegetative cover. Where vegetative cover is heavy, granular formulations should be used.

Organophosphorus compounds, such as Dursban and Fenthion, provide prolonged effectiveness in contaminated water at dosages five to ten times those listed. They can be applied to cover water surfaces in catch basins or at a rate of 15 to 20 gallons per acre* in open water courses. With a spreading agent at the rate of 0.5 percent, the volume can be reduced to two to three gallons per acre.*

The following insecticides will provide chemical control of larvae:

Insecticide	Dosage (lb/acre)*
Abate	0.05-0.1
Altosid (Methoprene)	0.20-0.25
Dursban	0.0125-0.05
Fenthion	0.02-0.1
Malathion	0.20-0.5
Fuel oil	2 to 20 gal/acre

Warning: Fuel oils should not be used where vegetation or crops may be damaged. Abate and Dursban are not to be used in crop or pasture areas.

Chemical Control Around Homes

Mosquito control in individual yards or premises, especially where horses are kept, is important. Horse trailers, stalls and barns should be treated. Homeowners can provide some protection for themselves and their horses by spraying. Shrubbery and shaded areas should be treated. Sufficient water should be added to 57 percent Cythion (Malathion) to make the desired amount of spray:

—Five tablespoons plus water to equal one gallon of spray.*

—Thirteen ounces plus water to equal five gallons of spray.*

—Two gallons plus water to equal 100 gallons of spray.*

*NOTE: To convert to metrics, use the following equivalents: 1 quart = .95 liter; 1 gallon = 3.8 liters; 1 pound = .45 kilogram; 1 pint = .47 liter; 1 ounce = 30 milliliters; 1 acre = .4 hectare.