

# FLIES INFLUX TREATMENT MANUAL

## FLIES

CONTROL MANUAL



Fly

Bite people, livestock.  
Carry pathogens.  
Cause sound and visual  
pollution.

### *Abstract*

We deliver pragmatic household pest control solutions including; understanding their evolution, their life cycles, types of formulations appropriate for their control, and methods of application that avoid contamination of food, damage and contamination of habitat and exposure of people and pet.

### **PESTMAESTRO**

**HOUSEHOLD PEST MANAGEMENT AND  
CONTROL**



## 1.0.INTRODUCTION

PestMaestro through its media outlets and personal encounter with clients will increase their knowledge-base on household pests and their adverse effects to life. Client will demonstrate a practical knowledge of a wide variety of pests, including their life cycles, types of formulations appropriate for their control, and methods of application that avoid contamination of food, damage and contamination of habitat and exposure of people and pets. Since human exposure, including babies, children, pregnant women, and elderly people, could likely be a potential problem, clients must demonstrate practical knowledge of the specific factors that could lead to some harmful conditions associated with the application of household pesticides, including continuous exposure in the various situations of their usage. At times health related pest control could involve outdoor applications, applicators/clients must also demonstrate practical knowledge of environmental conditions, particularly related to the application of a particular pesticide.

### 1.1.0.How Pests Affect Man

Pests have a long history through many geological periods. They appeared in the world long before man; yet bugs remnants from coal, amber and limestone deposits differ little from their present-day descendants of hundreds million years. As man appeared on earth and changed, his parasites and pests evolved with him. For centuries man has fought pests as, carriers of disease and destroyers of his food and habitat. This combat had continued until today, for humans have never eradicated a single species of pests. Today, many of the most species are even showing increasing resistance to insecticides. Consequently, other methods of control, either alone or in combination with insecticides, are necessary.

Insects are often thought of as man's most formidable competitors. Not only do they damage crops, but pests such as cockroaches, flies, fleas, lice and mosquitoes directly attack man and domesticated animals. Others attack indirectly by transmitting dangerous diseases to man and animals.

### 1.2.0.Transmission Of Human Disease

Although insect bites or stings occasionally cause severe illness or are fatal to humans and animals, their disease-laden saliva or contaminated bodies are responsible for many illnesses or deaths over the world.

➤ **Mechanical or passive transmission of disease occurs**, for example, when the housefly merely transports organisms such as dysentery bacteria on its feet, body, hairs and other surfaces from filth to humans. Other examples include cockroaches and vinegar gnats that visit sewers and liquid excrement and then move to human habitations.



- Biological transmission of disease occurs when an insect, such as the bedbug or flea, mite or tick, is essential for the completion of the life cycle of the disease or parasite. Certain Anopheles mosquitoes, for example, are essential carriers and vectors of the malaria parasite. This parasite undergoes a portion of its life cycle in the Anopheles carrier and another portion in the human host. Disease is also transmitted through the host-vector relationship. Such transmission is often further complicated by more than just the direct carrier of the disease from one host to another. Some other hosts called “reservoirs” are not affected by the disease but are able to perpetuate the disease organism by providing safe harborage for the disease organism. Some birds, for example, are reservoirs of mosquito-borne encephalitis (sometimes called “sleeping sickness”). The birds are apparently unharmed by the encephalitis virus, but when the mosquito sucks blood from the bird and then bites man or horses, the virus may produce serious or fatal results. Insects generally cannot transmit disease unless they have already bitten a diseased host. For example, an Anopheles mosquito cannot transmit malaria unless it has first bitten a person with the malaria parasite (in addition, there is often an “incubation period,” a period between when the disease is picked up by the insect and the time when it is able to transmit the disease). Some ticks and mites, however, are able to transmit disease-causing organisms, such as the rickettsia causing Rocky Mountain spotted fever, directly to their offspring through the egg.
- Myiasis is the infestation of man or animals by living larvae (maggots) of flies. Maggots mostly infest dead tissue. An example of the other type is the “true screwworm” which attacks the living tissue of livestock and rarely man. The maggots of some flies, including the rat-tailed maggots of flower flies, may be accidentally swallowed and cause intestinal upsets.

### **1.3.0. Poison, Irritation and Allergy.**

Many insects and some spiders, scorpions and centipedes have developed poisoning mechanisms for self-defense or for paralyzing their prey. Stings and bites may be intensely irritating to humans but seldom cause death in these days. Probably the most dangerous are the bites of the black widow spider, *Latrodectus mactans*, and the sting of a small scorpion, *Centruroides vittatus* found in the Northern Ghana. Even the stings of bees and wasps may be serious or even fatal to persons highly allergic to their venoms. Some insects, such as the dermestid beetle larvae, have stiff hairs that when touched feel like stinging nettles. Cantharidin, present in the blood of blister beetles, causes painful blistering of the skin when the insect is crushed. Mosquitoes, fleas, chiggers and other pests have done much to irritate man. Another, more recent finding concerning insects and allergy is the relation between cockroaches and asthma. Studies have shown that with increased weather-tight buildings, indoor air quality has been lowered and, in structures where roaches are present, cockroach dust will increase the likelihood of childhood asthma.



## 2.0.GENERAL INSECT PESTS

The basics of controlling household pests which attack man or his possessions include pest recognition, understanding its life habits, determining the need for treatment or environmental/ structural modifications, pesticide selection, proper timing and application of pesticides and determining the need to treat again (follow-up treatment). The following information deals with the most common pests in most household, factories, offices, schools, hospitals, churches, restaurants etc. that are likely be encountered on daily basis.

### 2.1.Flies

The order Diptera (flies) is one of the largest and most diverse in the class Insecta. There are close to 17,000 species of flies in North America. Most of these flies are rarely encountered by man and are of little concern. A rather small group, referred to as domestic flies, have evolved to live in close association with man. These flies are typically found around or within structures and can become extremely annoying by their constant presence and ability to bite and transmit diseases. They also leave deposits of regurgitated food and excrement on walls, furniture, draperies, paintings and other belongings. Flies are also pests in outdoor eating areas, open-air markets and home yards. Although there are several thousand species of flies, only a few are persistent pests in or around buildings. These include the house fly; little house fly; green, blue, and black blow flies; stable fly; vinegar/fruit fly; false stable fly; and flesh flies.

#### 2.1.1.Identification of Flies and Biology



**Figure 2.0. Life cycle of the fly**

It is extremely difficult to identify domestic flies in their egg or pupal stage. The larval stage may be used for identification, but this is frequently difficult. Table 2-2 provides a guide for identification of the common adult domestic flies. The life cycle of each species of the domestic flies is quite similar. The immature stages are found in moist, solid organic matter that is usually associated with man's activities. The female deposits small (approximately 1/25 inch long), white eggs in or upon the host material. The eggs typically hatch in a day or less and are extremely susceptible to desiccation. The white, legless carrot shaped larvae (maggots) may reach 1/2 to 3/4 inch in length. When preparing to pupate, the larvae move to drier areas of the host material.



The pupa can be recognized by the hard, brown pupal case in which the larva transforms into an adult. Empty pupal cases may be found in the host material long after an infestation has ceased and are not necessarily a sign of an active infestation. The development period of domestic flies is relatively short compared to other insects. The house fly, under favorable environmental conditions, is capable of developing from egg to adult in as few as 7 days. The cycle of the other domestic flies may be completed in as short as 8 to 18 days depending on the species. This short life cycle coupled with the ability of female flies to lay large numbers of eggs gives these pests tremendous reproductive potential. Under favorable conditions, large numbers can appear in a very short period. The specific biologies of domestic flies are presented in Table 2.0.










### 2.1.2. Management Guidelines of Flies

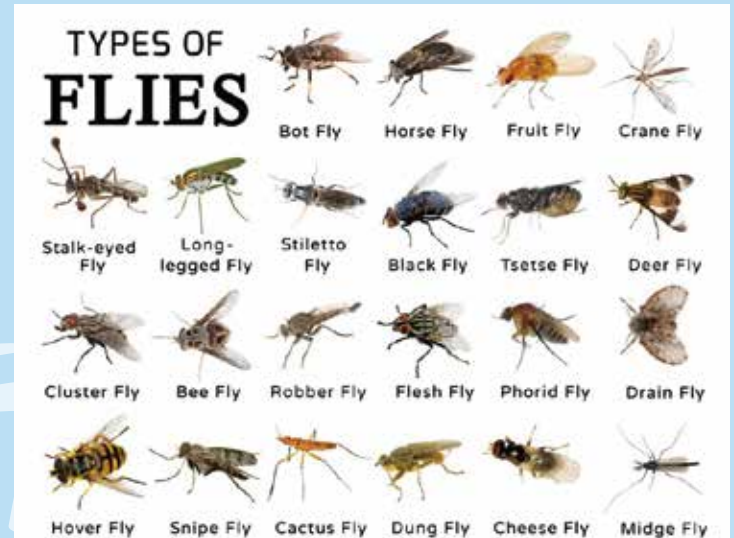
The basis for domestic fly control is the elimination or prevention of favorable habitats for fly production. If suitable habitats exist and environmental temperatures are favorable, a domestic fly problem will undoubtedly result. The use of insecticides is only secondary to sanitation and other practices in fly control. Habitats where flies breed cannot effectively be reached or penetrated by insecticides. Insecticide treatment at locations other than the site of breeding and development is at best only a temporary means of control. Some of the fly problems in urban areas and most of the problems in rural areas originate at sites other than in the immediate vicinity of homes, restaurants and similar structures. However, most flies live within a half mile of where they hatch. Rarely do large numbers of flies travel more than two miles. Nevertheless, if a large population exists around a structure, it is advisable to consider all possibilities of their origin. Common agricultural areas where large fly populations may breed include chicken ranches, dairies, beef feed lots, hog ranches, horse stables and areas of crop production where manure is used or fruits and vegetables are culled. Fly control in the urban areas follows the same principles as that in rural areas. That is, locate the breeding place or places of the population and eliminate the breeding site. The first step is to identify the pest species. In many instances this will limit the potential breeding localities. If large numbers of blue blow flies are present, the operator should first expect some animal carcasses in the vicinity. Once a breeding site has been eliminated, corrective steps should be taken to prevent a recurrence of the problem. Possible breeding areas for domestic flies are outlined in the following discussion.

- Garbage cans and dumpsters are probably the single most important source of domestic fly production. Tight-fitting lids may be of some value. Also, twice a week garbage collection and a thorough cleaning of the cans/dumpsters are very helpful.
- Grass clippings may be an important source of fly production if piles of grass are allowed to accumulate and decompose until the inner areas reach a slimy stage. If clipping piles are removed every other week, there should not be a fly problem.





Image	Species	Breeding Sources
	House Flies	Food and animal faeces in dumpsters, garbage, and compost piles.
	Flesh Flies	Animal faeces, dead animals and meat scraps.
	Blow Flies	Dead animals, meat scraps and wet garbage.
	Cluster Flies	Lays eggs in earthworm burrows in the lawn.
	Fruit Flies	Decomposing fruit, fermenting beer, vegetables, rags, pet food, or leaks from appliances.
	Phorid Flies	Decomposing plants and animals such as buried animals, garbage, or broken sewer lines.
	Fungus Gnats	Decaying vegetation found mostly in moist soil in flower pots.
	Moth/Drain Flies	Gelatinous material found in sink drains, traps, sewers. Also breeds in decomposing matter.
	Midges	Water, especially still water, soil where garbage leaks or garbage cans are rinsed.



# FLIES

fly species



### 2.1.3. PestMaestro's Flies Management Solution

- PestMaestro offers a no odor, no color, no staining, safe to use, easy to use, quick to kill, and no foul smell **Mr. Zhao Fly Bait**. Our ready to use, fast killing fly bait with attractants kills all dangerous flies within seconds of contact. A single fly carries 28 million bacteria. Flies like crawling and foraging in human or animal feces, urine, sputum, vomit, and corpses. They eat, vomit and pull while adhering to a large number of pathogens, which is harmful to human health. PestMaestro's Mr. Zhao Fly Bait is made with a Health Safe Environment Reliability standard in mind.

**Product Composition:** Mr Zhao Fly Bait contains 0.05% (Z)-9-Tricosene (Inert). This is an insect pheromone found in dipteran flies such as houseflies. The females produce this chemical to attract males to mate. This has low toxicity to mammalian species that may come in contact with this pesticide in the environment. It contains Dinotefuran 0.5% (Active) which binds irreversibly to insects of acetylcholine, resulting in continuous nerve stimulation, incoordination, tremors, and death of the insect.

**Direction for Use:** Apply bait away from air currents to prevent drying. Avoid placement on paper, cardboard, or other porous surfaces such as unsealed concrete. Don't apply bait to areas where the temperature 55 degrees Celsius, bait may melt and run.

- **PestMaestro's Ultima Aerosol Insecticide:** Our 0.5% Tetramethrin and 0.1% Beta-cypermethrin Lemon-flavored Ultima Aerosol Insecticide is a multipurpose insect killing insecticide that knocks dead every flying and crawling insect. For both Indoor and outdoor usage. Spray directly on flies for approximately one second from a distance of 18 inches. This multi-purpose spray is a fast killer and gives you the maximum protection. Protect your home and immediate ambience with Ultima Aerosol Insecticide. Ultima! Live Pest Free Life.





### 3.0. FOR ENQUIRIES AND DISTRIBUTION

PestMaestro is looking for a nationwide distributors and wholesalers. Visit [www.pestmaestro.com](http://www.pestmaestro.com) for more product details. Contact us by [blackchinese@pestmaestro.com](mailto:blackchinese@pestmaestro.com) or [manager@pestmaestro.com](mailto:manager@pestmaestro.com) +233546177777 or +233244724397



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Ayigya Adjacent CCC, Behind KNUST Police Station. Ak-046-6609  
+233546177777 +233244724397 [manager@pestmaestro.com](mailto:manager@pestmaestro.com)