



Fly Familiarity and Food Safety

SERVICE SPECIALISTS SINCE 1904

By Patricia Hottel, BCE, Technical Director, McCloud Services



Filth flies are one of the most recognizable insects, and because of that familiarity, people tend to have a greater tolerance for them. However, based on their physiology and behaviors, they are exceptionally capable of delivering pathogens. Our response should be the opposite of acceptance as filth flies carry more food borne pathogens than the reviled German cockroach. Flies as a group comprise 12 out of the 22 spots on FDA's dirty 22 list of pests to avoid near food.

In addition to a body equipped with lots of hairs for transporting pathogens, filth flies travel long distances to and from sanitary and unsanitary places. They move from breeding sites such as feces, animal carcasses and garbage receptacles to our tables. They regurgitate and defecate on our food and spread their filth.

As fly season approaches this summer it is time to ready our defenses for controlling these public health menaces. A variety of non-chemical and chemical tools are used in managing these pests. This article will provide an update on several new tools.

Chemical Controls

There are two significant new bait introductions into the urban fly control market, BASF's Alpine Fly Bait and Syngenta's Zyrox. These two products were launched in mid-2014 to the pest management industry but their introduction came a bit late for most of the fly season. Both products have shown great promise in the battle against filth flies and offer some new label flexibility. In addition to providing new active ingredients for fly baits, a pest which has high pesticide resistance potential, these products are labeled for use inside food areas of commercial food handling establishments. Maxforce Fly Spot bait, a very effective bait, which preceded Zyrox and Alpine Fly Bait, may be applied in food service areas only inside food handling facilities. The new baits expand the use to food preparation and storage areas as well. In addition, the Alpine Fly Bait has shown good efficacy against some of the small pest flies in addition to house flies. Both new products have some very specific label directions regarding how the products may be applied in food areas and as always, read and follow the label directions.

Mechanical Control: Light Traps and Exclusion

A common tool for fly management is the insect light trap. There are several light traps available in the market today, including:

- Glue board based, where the insect is attracted to the light and captured on a sticky board.
- Electric grid trap, where the insect is killed with a low voltage electrical charge and drops into a tray for collection.
- A hybrid of the glue and electrocuting traps, where a low voltage charge is delivered to immobilize the insect which then falls onto a glue board. I refer to these traps as "stun and stick" and can be found in the Vector Classic model of light traps.



Regardless of the kill mechanism, all of these traps use light to attract insects to the trap in a light spectrum most attractive to insects.



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Recently, there are some changes in the bulb technology which can affect trap performance. In a drive to increase energy efficiency, many lights are being replaced with more energy efficient lamps. For the insect light trap industry, this means a move from T12 bulbs to T8 bulbs. The T8 bulbs are narrower in diameter and more energy efficient. For some lights, like overhead light fixtures, T12 bulbs will no longer be available. Because the bulbs used in insect light traps are considered specialty lighting, the T12 bulbs will remain available and replacement to the T8's is not required but may be preferred for energy savings. The problem comes when in an attempt to save energy, T8 bulbs are used in traps designed for T12 bulbs. Sometimes these traps will not work with the more energy efficient T8 bulbs. There may also be issues with voiding UL approval if the unit and bulb have not been tested together. Should there be a desire to go to the more energy efficient bulbs; trap owners may be faced with replacing the ballast (the part that regulates the current to the lamp) or purchasing a new trap.



From a mechanical exclusion standpoint, there are some new tools for use in excluding access to the structure by flies through floor drains. These devices would be used in small filth fly prevention programs where flies like phorid or moth flies are emerging from drains. These specially designed devices are typically constructed of plastic with a silicon valve that permits water to movement downward but does not permit insect movement upward. The Green Drain by Liquid Breaker is one such commercially available device. They can easily be inserted into the drain and easily cleaned.

Sanitation and exclusion are critical components of any filth fly management program and should be used in conjunction with chemical control. From a sanitation standpoint, this means removal of food debris which is supporting fly development. Exclusion efforts are primarily aimed at keeping doors and windows closed or properly screened. The new fly baits are welcomed supplemental tools and provide the option of using baits in food areas of commercial food handling establishments. This labeling flexibility will allow us greater ability to control flies when sanitation and exclusion efforts are not satisfactory. The use of the new floor drain caps add new exclusion options for sewer based small flies entering the facilities. Prevention is always a better alternative.

About the Author

Patricia Hottel is a technical director at McCloud Services and has over 35 years of pest management industry experience. In addition to her work in the Midwestern United States, she also has worked for pest management firms in New York, Florida and Bermuda. Hottel is a board certified entomologist and a member of the National Pest Management Association's Commercial and Fumigation Committees. She is also a former member of the board of directors of the National Pest Management Association (NPMA) and the Illinois Pest Control Association (IPCA). She has served on the board of directors for the professional pest management fraternity, Pi Chi Omega. Pat is a past chair and current member of the Copesan Technical Committee. She is a past chair NPMA's exam review board, and the NPMA Technical Committee. She is certified in pest management in the states of Illinois, Indiana, Arkansas, Kentucky and Iowa. Hottel holds a bachelor's degree in entomology from the University of Georgia and a master's degree in instructional technology from the University of Central Missouri.

About McCloud Services

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