

## **Not Just a Fly on the Wall**

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We have all heard a great deal about biosecurity. ProAction requires all dairy farms to perform a biosecurity risk assessment questionnaire with their herd veterinarian, something I have reviewed well over 100 times in the last few years. At this point I can recite it from memory. ProAction's intentions are good, and it forces good discussion on eliminating areas of risk on farm.

Recently there is one small detail that I have added into these discussions. This detail can turn even the most bio-secure calf barns into a hot stinking mess of calf diarrhea. This nuisance shows up every year in early June. It harasses employees and turns milking into an unbearable chore. The common house fly (and its extended family) has got to be the most annoying, terrorizing pieces of biology ever created. It is nearly impossible to quantify the financial effect these flies have on a farm. There are numerous impacts had on the health and productivity of animals and people.

The house fly is the most common species of flies. It is built to spread disease and is designed with sponging-lapping mouthparts that suck up debris in the manure pit and regurgitate it onto your sandwich. The face fly is slightly more sophisticated and chooses only to do the exact same thing on the faces of livestock. This one is most often responsible for eye infections, such as pinkeye. The horn fly and stable fly both differ in that they have a piercing mouthpiece. These flies feed on blood meals from mammals. The discomfort these flies cause is significant.

These varieties of flies are all closely related and have similar life cycles. They all have what is called a complex metamorphosis. Simply, what this means is they start as eggs, mature into larva, larva mature into pupae in soil, which mature into adult flies.

The common denominator of all these flies is that they prefer to lay their eggs in wet, hot organic material, of which there is no shortage of on a dairy farm. A few years ago, I had the opportunity to walk around a farm with a few specialists from a pest management company. It was fascinating to see all the areas we were able to find fly eggs and larva. After walking through with a trained eye, it became very easy to identify clusters of eggs. Some of the most notable locations were leftover feed, straw pack pens, feed storage areas, and in the long grass along the barn and manure pits. Poorly managed silage bunk faces or piles of leftover feed were major havens for fly eggs and larva.

Modern insecticides are remarkable technology. However, they cannot be expected to work optimally if the reproduction rates are not limited. There are several different pesticides available at the farm level. By a quick poll of farms in our clinic area, there was a variety of

different combinations of products in use. Below is a categorization of many available products:

**Residual sprays:** Typically applied to the interior and exterior of buildings, applied to any surface flies land on (walls, ceilings). This is one of the more important steps. There are many of these products available all different in length of residual effect and application method.

**Larvicide/manure treatments:** Control mechanism that prevents fly larva from developing in manure.

**Topical Bait:** Applied to landing surfaces, most have attractants to entice flies to feed on them.

**Pour-on treatment:** For topical application onto animals to prevent landing and biting of flies.

**Space treatments/Aerosols:** Very effective to immediately reduce an out-of-control adult fly population within an enclosed space.

Insecticides by nature are toxic in some way, therefore great care must be taken to avoid unintended toxic effects on animals or people.

The success or failure of any combination of these products is related to the level of fly pressure. Best results are obtained by using some form of control mechanism early in the season. An unending number of products and strategies exist to control fly populations. The list above is not an exhaustive list. Consult a pest management expert to build a plan. As part of this plan, take time to consider the use and storage of these products. Great care must be taken to ensure no contamination of bulk tank milk, or ingestion by children or animals. It is not uncommon for vets to field panicked calls regarding the unintended intoxication of a group of calves or a farm dog. A bit of planning early on pays back dividends.