

## Fly Control on the Farm

It is that time of year when all of us are working harder to control pesky flies. It is not easy to keep fly populations in check around the farm, but it is essential economically and for food safety. As the days get hotter fly control will become an even greater issue. As urban areas encroach into agricultural areas, an increasing number of complaints will likely be filed against livestock producers. Insects, odors and dust are all part of the production process, but we must make consistent efforts to control all three.

A key to success in fly control is to have a clear understanding of fly biology. The flies that plague us during the peak summer months all have complete metamorphosis. The life cycle of the fly can be as short as nine days. The eggs can hatch within a 24-hour period. The maggots, which require a warm, moist environment to survive, will seek out manure piles, spilled feed, or other environments ideal to grow and pupate. In three or four days, the maggots will enter the pupal stage and, if the temperature remains above 85 degrees, the new adult flies will emerge in three short days.

Effective fly control can be accomplished with a combination of control methods. Sanitation and a combination of residual and knock-down insecticides are the common methods used to control flies. Additional tools, such as biological control, insect growth regulators, ear tags, electric fly killers, and sticky fly strips, are also helpful.

Sanitation is the mainstay to fly control. Finding and eliminating breeding places is an important first step. The major fly breeding areas at feedlots and dairies are around bunks where feed spills, under fences, along mounds, in poorly drained basins or any other place where spilled feed or manure accumulations are allowed to become moist. It seems there is always an explosion in the fly population shortly after a summer rainstorm.

Calf housing areas are often heavily bedded with straw and cleaned out on an infrequent basis. Because of this, calf pens are one of the main sites for fly breeding. To evaluate calf pens, producers are encouraged to look at the bedding to see if there are maggots, which are flies in larval form. The best spots to check are around the water and along the fence edges. These areas are moist and get little traffic from the calves. If larvae are found, rid the area of manure. Freestall housing and loafing sheds can also be fly breeding areas if manure is allowed to accumulate. Cleanliness is perhaps the most important tool to control troublesome flies.

Programmed applications of residual fly sprays along with knock-down sprays to control surging adult populations are both important. Due to their relatively short life-cycle, and high reproductive rate, flies can develop amazing resistance to specific insecticides in a short period of time. For this reason, it is recommended that we use a different class of residual insecticides each time an application is made. One might, for example, select a pyrethroid for one treatment and switch to an organophosphate for the next treatment. Continue to rotate throughout the season to achieve maximum control and to keep resistance to a minimum.

Before using any insecticide, read and carefully follow directions on the label. Follow mixing directions (don't dilute to save money), precautions, restrictions, and storage instructions.

Residual sprays should not be allowed to contaminate feed or water. Sunlight, high temperatures and rain cause residual sprays to breakdown or wash away, so treatment may have to be repeated at regular intervals. Flies rest on sunny

places in the daytime, and tend to come inside buildings or under eaves to roost at night. Fly specks indicate where flies are roosting. These fly resting areas can be sprayed with residual or contact insecticides.

Space sprays (knockdown sprays) are applied in facilities with mist blowers, foggers, or hydraulic sprayers. Space sprays, since they have no residual value, may have to be applied at two or three day intervals during the fly season.

Pest strips, sticky traps and insect baits can also be used inside buildings. The baits should be distributed along walls, window sills or other areas where flies congregate inside buildings. Make certain the baits are inaccessible to animals or children. Liquid baits can be applied to burlap bags, papers or other removable surfaces. Baits by themselves seldom achieve fly control, but should be used in conjunction with other methods.

Some local producers are reporting impressive results with methods of biological control. This technique of managing pests, while reducing reliance on pesticides, is a method that deserves greater use. A recent trial on organic dairy farms in central Maine demonstrated the effectiveness of releasing beneficial wasps for fly management. A statistically significant level of fly control was demonstrated in three of five release barns. Highest levels of fly control were achieved in individual calf hutches where weekly fly control exceeded 80% from late July through August. Beneficial parasitic wasps are available locally for those who have an interest in pursuing this method of control.

Most agricultural producers take a great deal of pride in their operations and produce quality agricultural products. Since we live at our places of business, we certainly don't want flies moving from our barns to our homes. Local agricultural suppliers and professional applicators have products that will help in effective control. A combination of physical, chemical and biological control methods will help reduce fly populations to an acceptable level.