AFRIVET BUSINESS MANAGEMENT

Veld talk

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FEATURES

- Controling house flies
- Breaking the life cycle
- Chemicals used in fly control

Fly Control on Farms

House- and stable flies are the main species which are found around farmyards. Their populations can reach enormous numbers in summer when the temperature rises and there is plenty of moist organic material (manure and compost) available in which to lay their eggs. These two fly species are important in animal health because they cause annoyance and irritation which interrupts feeding and results in a loss of milk and meat production. Controlled experiments have shown a significant improvement in the production of animals which were treated for flies: dairy cattle showed R 8000.00 increase in milk production per lactation compared with untreated animals in one lactation and treated feedlot cattle showed a weight increase of R1000 per 100 animals. House and stable flies are also important because of their potential transmission of diseases such as brucellosis, mastitis, anaplasmosis, eye infections and lumpy skin disease.

The secret of effective fly control is to begin early in the season before fly numbers have built up and to use a combination of control methods which will effectively break their life cycle.

Photo1. The various stages of the housefly lifecycle showing clockwise from top left the pupae, eggs, adult flies and larvae (USDA extension services).

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Every kilogram of compost/ manure can contain up to 5000 fly larvae

The life cycle of the fly:
House and stable flies lay their eggs in organic matter like manure, compost and kitchen waste. In the warm moist organic matter the eggs hatch and the larvae feed until they are developed enough to crawl out and burrow into the soil where they become pupae. These develop further into adult flies which then emerge when mature. The whole cycle can be completed in 15 days, which means that 12 generations of flies can be produced in one season. The number of adult flies seen are only 15% of the total population on the premises, since the rest are in the form of larvae and pupae, which will develop into adult flies. Every kilogram of compost/ manure can contain up to 5000 fly larvae, which illustrates the enormous reproductive potential of flies and the important of targeting the immature forms as well as adult flies.
Adult house flies feed on liquid material of any sort including manure, discharge from eyes, nose or wounds of animals. They can spread microorganisms mechanically on their feet, mouth parts and by regurgitating their previous meals onto food.
Stable flies look similar to house flies but have rasping mouthparts which they use for biting animals and lapping their blood. Their bites cause tremendous irritation, resulting in less time spent by production animals feeding as they stamp and swish their tails to rid themselves of the flies. Stable flies transmit lumpy skin disease and anaplasmosis.

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To break the lifecycle of these flies one must target the different stages and this is always more successful if done early in the season before the fly numbers are high.

Photo 2. Stable flies lay their eggs in compost heaps especially those made of grass mowings (Dr Gerhard Verdoorn).

Manure and compost hygiene:
Because manure, kitchen waste, compost heaps (especially those containing mown grass) are the breeding sites of flies, the management of these is the key to fly control. Manure must be collected, turned over and spread out to allow drying. The eggs and larvae will be exposed and will die as a result of dehydration. If it is not possible to spread manure out to dry, manure piles can be treated with pyrethroid sprays or with insect growth regulators (IGRs) such as cyromazine. Although IGRs do not kill the larvae they prevent their development into pupae and adults.

Control on animals:
Pyrethroid containing dips and pour-ons (Decaspot 0,5% Pour-on, Clout Pour-on, Triatix Plus Pour-on, Decatix 3, Wipeout, ECObash) are effective against flies. They have repellent effect and prevent the bites of stable flies. The products must initially be applied regularly but as fly numbers reduce the frequency of application can be reduced. Pyrethroids are also effective against ticks.

Control in stables:
Powder formulations containing pyrethroids are available for environmental treatment. The powders are made up in water and sprayed onto walls of stables and other buildings where flies habitually rest –

these are usually walls that face into the afternoon sun. At night flies rest on top of walls so these places must also be treated. The products are specifically formulated to stay on the surface of walls instead of being absorbed. Paint-on products with a long residual action are also available for walls that are not regularly washed down. They can also be applied to rubbish bins.
Baits: poisoned baits in the form of coloured granules which are attractive to flies can be placed in certain areas. They must not be used in pig sties and poultry houses because these animals may feed on the poisoned flies. The bait can be used in households and restaurant kitchens but out of the reach of children and pets.
Traps: homemade or commercial traps can be used to trap adult flies and reduce

Photo 3. Management of manure is the key to the control of house flies (Schering Plough Animal Health).

their numbers. The traps usually contain strong smelling bait and are designed so that the flies enter through a funnel shaped tunnel which they cannot exit.

Control of other flies:
While stable and house flies tend to congregate around farmyards, the other flies of veterinary importance will follow animals in the veld or attack them when they approach water sources.
Face flies: these flies follow cattle around the veld, breeding in their manure and feeding around the eyes and wounds on the animals. They transmit the *Parafilaria* parasite, the worms which cause false bruising. To control these flies, animals can be treated with pyrethroid dips, sprays or pour-ons (Decaspot 0,5% Pour-on, Clout Pour-on, Triatix Plus Pour-on, Decatix 3, Wipeout, ECObash).

Horse flies: these are large bloodsucking flies with a painful bite, often found around horse stables or in areas where zebra occur. They can be controlled by treating horses with pyrethroid products registered for this species. Treatment usually results in control for a month or more because the flies are very susceptible to pyrethroids. It will also control the horse bot fly and the small house fly, which cause internal parasite infestations.
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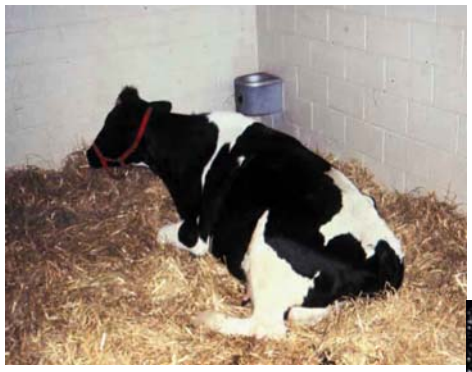
Photo 4. Control adults flies by spraying or painting stable walls where flies tend to rest with pyrethroid containing products (Schering Plough Animal Health).



Midges: midges are tiny flies that usually breed along water courses such as rivers, vleis and around dams. The application of pyrethroids will repel midge attacks and in cattle this will help prevent three-day stiffsickness infection. Midges transmit blue tongue, a viral disease of sheep but because the application of pyrethroids on a regular basis is not practical in these animals, prevention measures are the regular vaccination of sheep and avoiding grazing sheep in low lying vlei areas, from sundown to sunrise as this is the period of major midge activity.
Midges also transmit horsesickness and midge control is essential for controlling the disease especially in young horses that have only received one or two vaccinations. Valuable horses should be stabled from sundown to sunrise.

The bites of black flies (*Simulium*) can cause severe irritation in all livestock The application of pyrethroids on non-wooled areas such as the face and ears will help to repel the insects.
Tsetse flies occur in SA in focal areas of Kwa Zulu Natal. They are important because they transmit nagana or sleeping sickness. The flies and therefore the disease is easily controlled with the use of pyrethroid containing products (Decaspot 0,5% Pour-on, Clout Pour-on, Triatix Plus Pour-on, Decatix 3, Wipeout, ECObash).
Mosquitoes: they are also flies and are potential transmitters of Rift Valley fever in certain wet years. The most practical means of RVF prevention is vaccination. Mosquito numbers around homes and farmyards can be reduced considerably by eliminating stagnant water in containers such as drums, old tyres, etc.

Photo 5. The regular treatment of cattle in summer months with pyrethroid sprays, dips or pour-ons will reduce fly irritation and prevent fly-transmitted diseases.

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