

Keys points for safe use of pesticides:

1. Before using any pesticide, stop and read the precautions.
2. Read the label on each pesticide container before each use. Heed all warnings and precautions.
3. Store all pesticides in their original containers away from food or feed.
4. Keep pesticides out of the reach of children, pets and livestock.
5. Apply pesticides only as directed.
6. Dispose of empty containers promptly and safely.



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TYPES OF FLIES AND THEIR CONTROL IN FARM ANIMALS



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1. Introduction

A wide range of adult flies may feed on blood, sweat, skin secretions, tears, saliva, urine or faeces of animals to which they are attracted. They do this either by puncturing the skin directly or by scavenging skin surface, wounds or body orifices.

2. Problems associated with flies

- They are vectors of disease pathogens. The mode of transmission is either biological or mechanical. Examples include mosquito transmits Rift Valley Fever (RVF), tsetse fly transmits trypanosomiasis (nagana in cattle, surra in camels and sleeping sickness in humans), face/head flies transmit pink eye (bacterium *Moraxella bovis*) and Therazia.
- Cause irritation leading to disturbance and loss of productivity (reduced weight gain or milk yield). An example is non-biting flies like *Musca autumnalis*.
- Biting flies (like *Stomoxys calcitrans* and midges (*Culicoides*) and nuisance flies induce avoidance behaviours in hosts which disrupt normal grazing and resting patterns.
- Infestation by their larvae causes myiasis, seen on wounds or skin lesions.
- The biting activities of blood-feeding flies may provoke hypersensitivity reactions.

3. Types of flies affecting farm animals

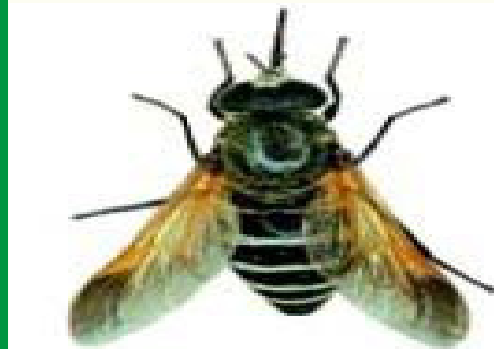
- Tsetse fly – *Glossina* species
- Biting fly – Midges
- Mosquito – *Anopheles* species
- Tropical bot fly – *Dermatobia hominis*
- Warble fly – *Hypoderma* species
- Horn fly – *Haematobia irritans*

- Stable fly – *Stomoxys calcitrans*

Tsetse fly



Biting fly



Stable Fly



Mosquito



Horn fly



4. Methods of controlling flies

- Selecting animals with phenotypes/breeds less affected by flies, like those with non-pigmented skin around the eyes and face.
- Breeding animals that appear to be innately resilient to fly attack
- Biological control using: fly parasites, parasitoids, entomophagous nematodes or fungi and genetically using sterile male technique.
- Use of fly traps like for tsetse fly that uses a fly attractant (available at KALRO BiORI).
- Chemical control using pesticides.

