

# UNDERSTAND MIDGES & FLIES:

CATCH THEM  
EARLY THIS  
SUMMER  
SEASON



*Midges* are small blood-sucking members of the fly family. They usually breed in water. Their bites can be very irritating and can lead to skin reactions around animals' eyes and ears. Animals are also seriously disturbed and do not want to eat, breed or let lambs drink. They are responsible for the transmission of various viral diseases.

#### DAY-BITING MIDGES

The black midges with white wings breed in dry areas with seasonal water. The females are voracious leeches and can feed on humans and animals. They are especially a problem during the warm spring months and have become a pest in the Walvis Bay area of Namibia.

#### RIVER MIDGES OR BLACKFLIES

They breed in fast flowing water such as the Orange River and are abundant in the summer. These flies are active during the day and the females are bloodsuckers. If the midges occur in large numbers, their bites can seriously disrupt livestock due to the irritation caused by their bites.

#### BITING MIDGES - *CULICOIDES* SPECIES

The midges are a problem in the hot summer months and females suck blood from horses, cattle or sheep during the late dusk or evening. They are the carriers of the viruses that cause bluetongue in sheep and horse sickness in horses. It is also suspected that they can transmit three-day sickness in cattle. In horses, the bite can cause an allergic skin reaction.

#### SAND FLIES

These small moth-like midges are active at night and bites can cause allergic reactions.

## Control of midges:

Several methods can be used to control midge numbers:

- Regularly spray or dip animals with products containing synthetic pyrethroids (eg. cypermethrin or deltamethrin). In times where mosquitoes are a big problem, animals must be treated weekly.
- Make sure your sheep are vaccinated against bluetongue, cattle against three-day stiff disease and horses against African Horse Sickness.
- Valuable animals can be stabled at dusk and animals must graze on the highest part of the farm at times when mosquitoes are a big problem.
- Mosquitoes prefer to feed on cattle. Let them graze near sheep.
- Drain and spray (chemical pesticides) breeding areas if day-biting midges are a problem.
- Apply pesticides at water breeding sites or lower the water level (to wipe out larvae) if river midges are a problem.



#### MOSQUITOES

The immature stages are always aquatic. After mating, the females must first ingest blood before laying eggs. The *Aedes* species transmit Rift Valley fever to animals. It is also suspected that mosquitoes can transmit three-day stiffness. Mosquito control relies on the use of pesticides to kill the larvae in the water and the adults in buildings.

*Flies* are probably one of the biggest pests for humans and animals. They are extremely annoying and can cause large production losses, mainly attributable to a loss of grazing time which can lead to reduced feed intake and a loss of body weight and milk production. Pathogens such as viruses and bacteria can also be transmitted by flies, examples of which are E.coli, Salmonella, rotavirus, coronavirus, bacteria causing mastitis, cryptosporidium etc.

The life cycle of flies is completed in 10 to 21 days in ideal environmental conditions (summer months). Flies seek warmth, moisture, and organic matter where they can feed and lay eggs. This habitat provided by e.g. dung, feed residues and moist hay are necessary for the immature stages (eggs, larvae and pupae) to survive.

#### FACE FLIES

They usually feed on the moisture around animals' eyes, noses, and mouths. They cause irritation and spread the bacteria responsible for the "pink eye" syndrome in cattle and sheep which can cause inflammation and in severe cases blindness.

#### BITING FLIES

They are vectors of blood-borne diseases, such as tick-borne gall disease (anaplasmoses) and anthrax. They are bloodsucking and animals are repeatedly bitten. It is accompanied by pain and blood loss. The following are examples of biting flies: stable-, horn- and horse flies.



### Control of flies:

Control is rarely successful by addressing only the adult flies. For adequate fly control, immature stages (eggs, larvae, and pupae) as well as adult flies must be addressed, as well as their potential breeding sites.

Flies seek warmth, moisture, and organic matter where they can feed and lay eggs.

Manage and control these breeding places, these are the places where maggots and pupae are visible. Manure piles, manure runoff zones, areas around feed troughs, silage and rotting hay are examples of potential breeding sites. This material should preferably be removed on a regular basis. Ensure good drainage, limit leaking water, and remove wasted feed.

#### ADULT FLY CONTROL:

- Adult flies can be caught in various physical traps that contain bait.
- Spray or pour-on dips containing synthetic pyrethroids eg. cypermethrin or deltamethrin has a good knockout effect on adult flies. Spray dips can be applied to animals or e.g. walls and ceilings. The after-effect of the chemical agents is short-lived and must be used every 1-2 weeks because pyrethroids are broken down by sunlight.
- Adult flies can also be controlled by the active thiamethoxam which kills flies if they ingest or come into contact with it. Pheromones that attract flies are usually part of the formulations. It can be strategically spread or watered down and applied to e.g. walls. The control of adult flies results in fewer fly eggs being laid in the environment.

#### IMMATURE FLY CONTROL:

- An insecticide for immature stages such as cyromazine which prevents the maggots from developing to the next pupal stage by preventing chitin development can also be sprinkled or sprayed on breeding sites.
- Biological control can also be applied by the natural enemy of the fly in its immature stages, e.g. the wasp species that lay their eggs in fly pupae and thus lead to the death of the pupae. These fly parasites (wasps) must be deliberately released into the environment.

### In closing:

Integrated control involves combining several methods. Optimal midge and fly control, limits unnecessary weight losses as well as the spread of diseases and leads to optimal production and profit.

For more information on fly and midge control, please contact your Kyron Agri representative.