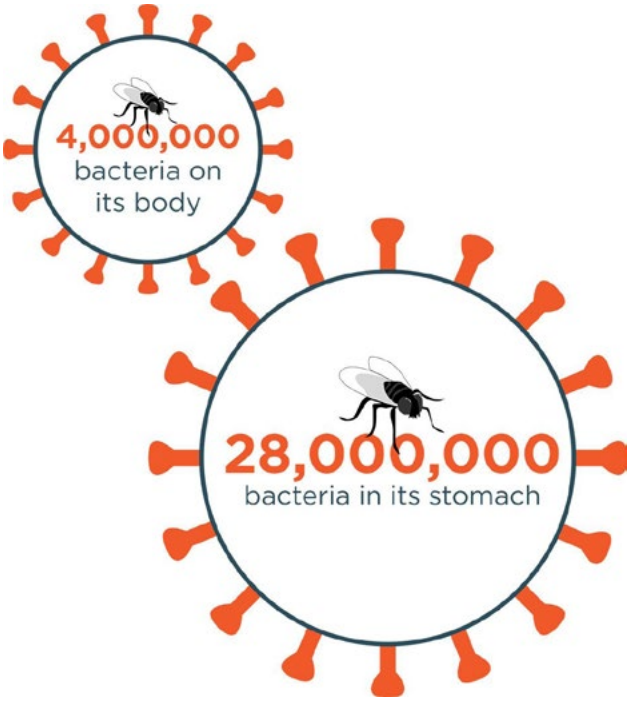
Achieving effective fly control

Intemax

An effective fly control campaign is essential

Flies can be a major vector of disease on the farm. We all know that they are unpleasant creatures, feasting on trash, rotting carcasses and faeces, then landing somewhere else and throwing up enzymes to dissolve the food so they can slurp it up. But even more concerning than this, and the fact that they defecate everywhere, is that they transport pathogens on their legs and on the hairs of their body.

Essentially, they are carriers of bacteria, such as Salmonella, Pasteurella, Campylobacter and E. coli, which all pose a health risk for humans and livestock. A heavy infestation can also cause stress to animals, leading to poor performance and reduced production. It can also lead to heavy fines if not dealt with adequately. An effective fly control programme is an absolute must on any intensive farm.



Know your enemy!

A basic understanding of the life cycle of flies is useful for developing strategies to reduce their impact:

- Flies breed quickly, with female flies laying between 100 and 150 eggs per cluster. A female fly can lay up to 20 batches of eggs in a lifetime.
- These eggs will then begin to hatch within hours, producing grey/white larvae that start to feed on any available organic matter. These larvae are highly mobile and grow rapidly.
- Within as little as four days, they are seeking out cool, dry areas to pupate. In warmer conditions, this stage can take just 3-6 days.
- A fully grown, sexually mature adult fly emerges, seeking out areas of moist matter and decay to begin the breeding process.
- The females will lay eggs and repeat the cycle over the next 2-20 days, causing the fly population to multiply exponentially, if left unattended.

Good shed management

The first line of defence against flies is good shed management. This includes limiting sources of food that attract flies and areas of moisture where they like to lay eggs:

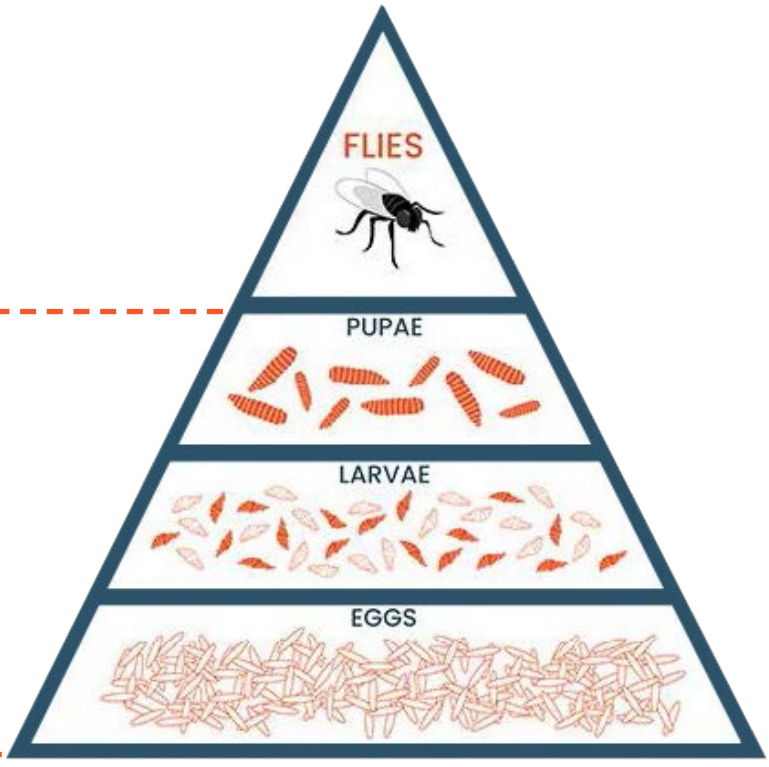
- Keep manure as dry as possible by maintaining good ventilation
- Eliminate feed spills
- Minimise leaks from drinkers, roofs, blocked gutters, and water ingress.

Monitoring flies and larvae is essential

It is tempting to wait until you have issues with adult flies before starting a fly control programme, but by this time, the flies will already have the upper hand. For every adult fly you see, there will be another six following close behind it in the form of eggs, larvae or pupae.

To prevent this from happening, monitoring of adult fly and larval populations should be undertaken at least twice a week during the fly breeding season – between the beginning of April and the end of October, and once between November and March.

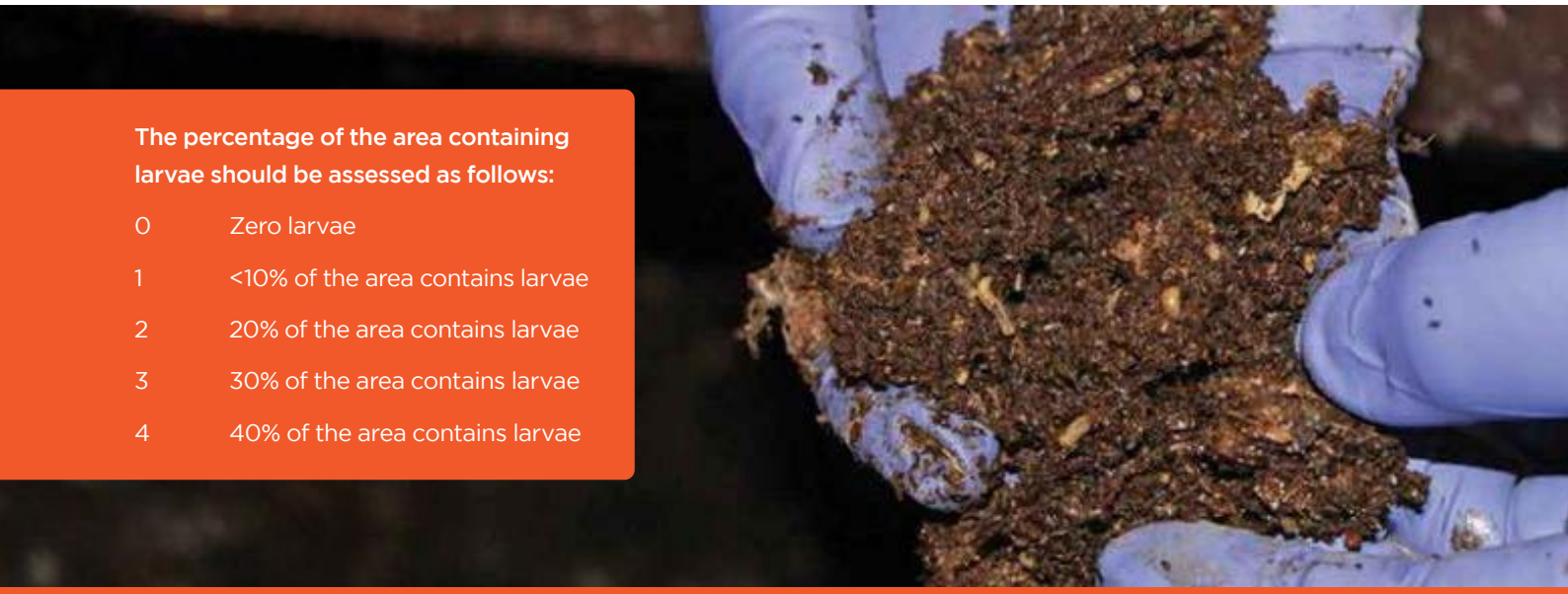
Only 15% of the population is adult at any one time



85% of the problem is in the muck

Fly larvae monitoring

The top 10cm of the manure in the shed should be investigated on a regular basis because this is where the larvae sit. There should be several designated areas within the manure, around 0.5m^2 in size, in which larval activity is monitored. Areas should be chosen where larval activity is more likely, or other areas where the manure is moister. The same areas should be used throughout the season, where practical. The data collected should be used to measure the effectiveness of a fly control campaign.



The percentage of the area containing larvae should be assessed as follows:

0	Zero larvae
1	<10% of the area contains larvae
2	20% of the area contains larvae
3	30% of the area contains larvae
4	40% of the area contains larvae

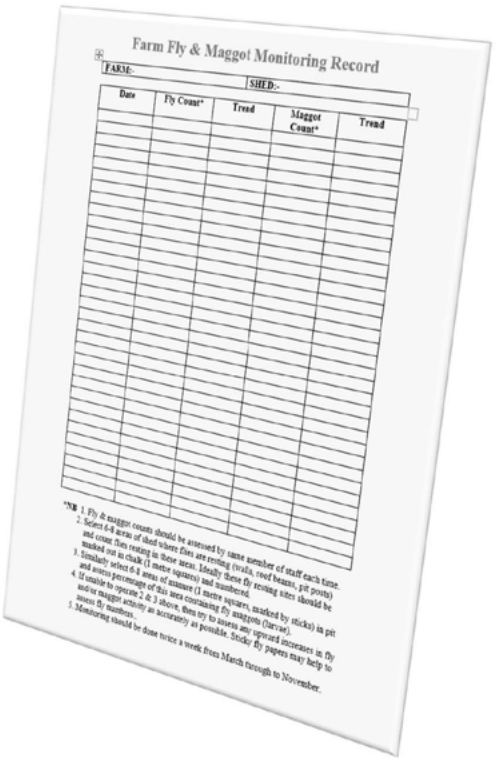
If you are conducting a campaign but still experiencing significant issues, please feel free to get in touch with one of our experts for advice.

Adult fly monitoring

Monitoring the adult fly population helps to establish what is a 'normal' amount of flies, and makes it easier to spot when things are about to get out of hand.

Where there are more flies, there are six times that amount waiting to hatch!

- A number of 1m^2 monitoring squares, (6 for large sheds) should be marked out along the inside walls and undersides of walkways in areas where flies are known to rest.
- The number of flies resting within the squares should be counted on a regular basis.
- Results should be recorded on a simple document as shown below. Monitoring data can be used to measure the extent of a problem, and how successful a control programme is.



Farm Fly & Maggot Monitoring Record

FARM:- SHED:-

Date	Fly Count*	Trend	Maggot Count*	Trend

*NB 1. Fly & maggot counts should be assessed by same member of staff each time.
2. Select 6-8 areas of shed where flies are resting (walls, roof beams, pit posts) and count flies resting in these areas. Ideally these fly resting sites should be marked out in chalk (1 metre squares) and numbered.
3. Similarly select 6-8 areas of manure (1 metre squares, marked by sticks) in pit and assess percentage of this area containing fly maggots (larvae).
4. If unable to operate 2 & 3 above then try to assess any upward increases in fly and/or maggot activity as accurately as possible. Sticky fly papers may help to assess fly numbers.
5. Monitoring should be done twice a week from March through to November.

Larvicide treatments

A larvicide is an insect growth regulator, which controls the development of fly larvae. The most common and effective fly larvicide is an ingredient called Cyromazine – it works by affecting the nervous system during the immature larval stage of the fly. A product such as Zero Fly Granular, which contains 2% Cyromazine, can be used to target larvae. It should be applied directly under the slatted area onto the muck.

There are three application methods:

- Watering can (500g/5L water)
- Knapsack sprayer (500g/5L water)
- Dry scatter the product through the slats

The key to application is even distribution of 500g of Zero per 20m^2 floor area. Do not be tempted to skimp on product. We recommend the watering can method, because it provides a generous amount of liquid to help soak through the top 10cm of muck.

Timing of larvicide treatments

We recommend carrying out the first larvicide treatment when the floor area under the slats is covered in muck. Start monitoring the muck levels by using a simple measuring stick, with 10cm marks pre-marked on the stick. Re-apply Zero every 10cm of muck build-up OR every eight weeks.

If livestock is present and you do not have a proactive fly control program already in place, the first treatment should be no later than February, then follow the programme above.

It can take 2-3 weeks to see an indent in the fly population after the initial application, as it does not work on the later pupae stage – these will continue to hatch into adult flies.

Adulticide treatments

Adult flies can be targeted in anticipation of a problem with adulticides, such as LD100A, which can be applied as a paint or spray to shed walls and areas where flies tend to congregate. LD100A contains 10% of the active ingredient, azamethiphos, which is the only approved organophosphate on the market. LD100A is the fastest working adulticide on the market, killing instantly on contact or ingestion.

Flies are often found at the ends of sheds, so the end walls (ideally clean and dust-free) should be sprayed from approximately 1.5m upwards. The product can also be painted onto smaller areas where flies congregate, such as windowsills.

Useful tip: LD 100A can be painted on squares of cardboard in lines and hung around the shed and under slats.

Adulticide granular bait

Another mode of adulticide delivery is granular bait. A bait such as Fly Select, which contains 1% azamethiphos, can be spread around areas where flies congregate, such as on window sills or door frames, but out of the way of livestock. A thin layer can also be sprinkled on boards or paper and hung up around the livestock house. The bait contains a pheromone, which further attracts flies.

Spray with water or even cola to give an added attractant and improve efficacy of the product.

Place the bait on as many boards as possible and hang under the slats before the house is re-stocked, ensuring that the total floor area is covered. Others should be placed above the slats, for example hanging from support beams – they can also be hung in egg rooms.

All monitoring data and treatments should be recorded

By recording data on populations and subsequent treatment, it is easier to establish a rhythm of regular control activity, and track what works and what doesn't. Besides this, having a full record of treatments demonstrates to any inspection authorities that the correct procedures are in place, should there be a problem. It is not uncommon for units to be blamed for a fly problem, when the source actually lies elsewhere. If fly numbers recorded in the shed are low at the time of a complaint, this can help set the record straight.

Farm: Northdale	**Shed:** 3A		
Treatment date:	**Product used:**	**Quantity:**	**Applied by:**
13/12/21	Zero Larvicide	10Kg	Max Interley
31/01/22	Zero Larvicide	10Kg	Max Interley

Rotation of insecticides

Over-use of insecticides over the years has led to the development of resistance amongst fly populations.

For this reason, it is best to rotate products, ensuring that it is the active chemical class that is changing (eg organophosphate or pyrethroid) rather than the brand.

Physical methods

The final line of defence against flies is physical control, a really important part of any campaign. No matter how vigilant you are with treatments, there will always be flies hanging around somewhere.

Physical traps hanging around the farm are visual evidence that flies are being dealt with proactively. They are a natural method of control and carry no risk of resistance build-up.

RedTop flytraps

RedTop flytraps are incredibly effective at attracting flies (particularly female ones) away from the shed – they should be placed 10m away from where you are trying to limit them.

Sticky sheets

Sticky sheets are handy because they can be hung quickly in an area to monitor flies. They can also be placed in egg-rooms. They can be wrapped around feed pipes or in any area where flies congregate – a very versatile product.

Fly populations are a significant challenge for intensive farmers, causing livestock disease, discomfort and distress. If left unattended, they can multiply exponentially, so a fly control programme is an absolute necessity to keep them under control. Addressing the larvae and the adult population simultaneously in a consistent and measured campaign will deliver the best results.

For advice on specific products or issues, contact one of our experts at sales@intemax.com.

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