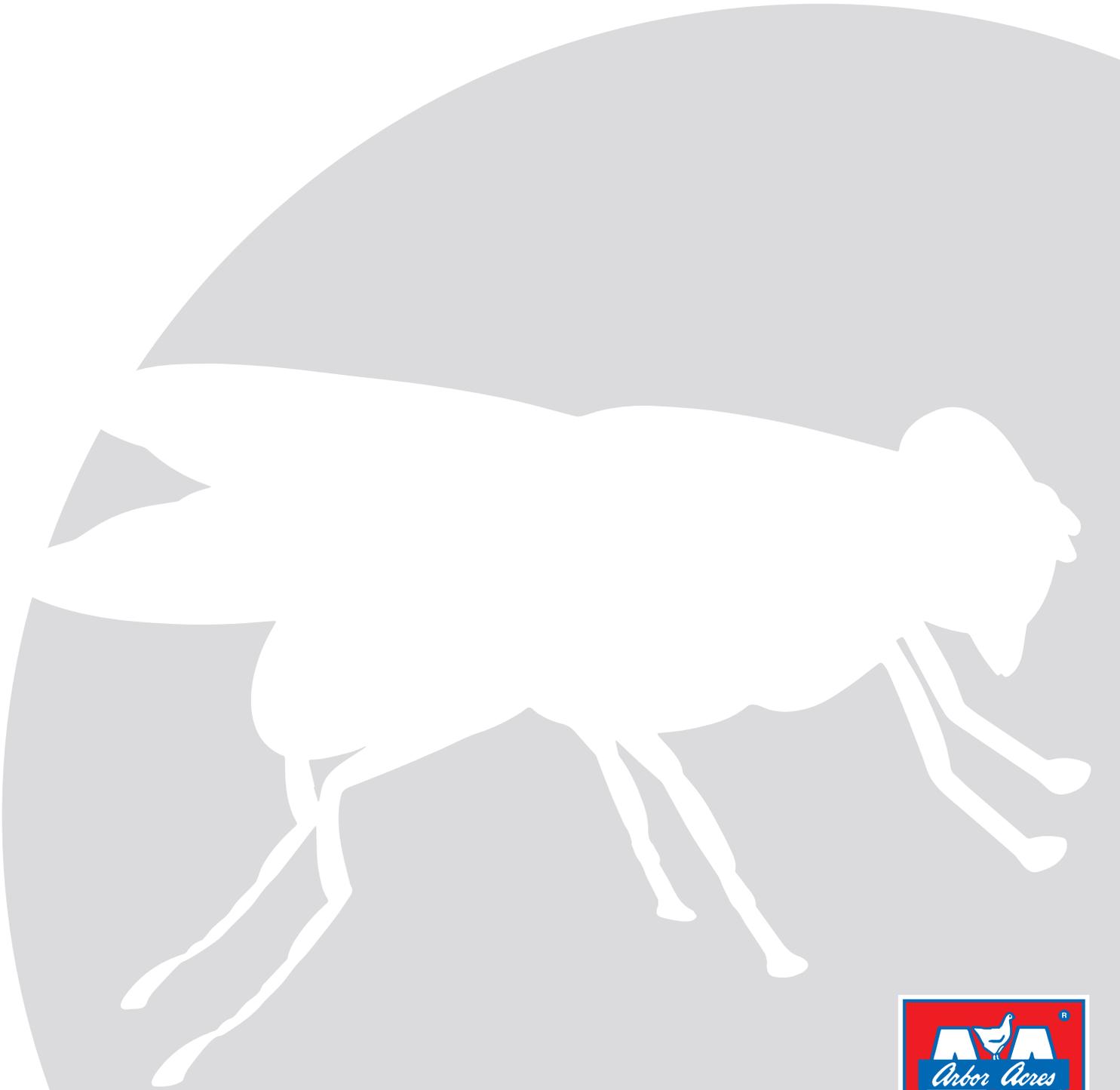


# Best Practice

on the Farm



**Fly Control**

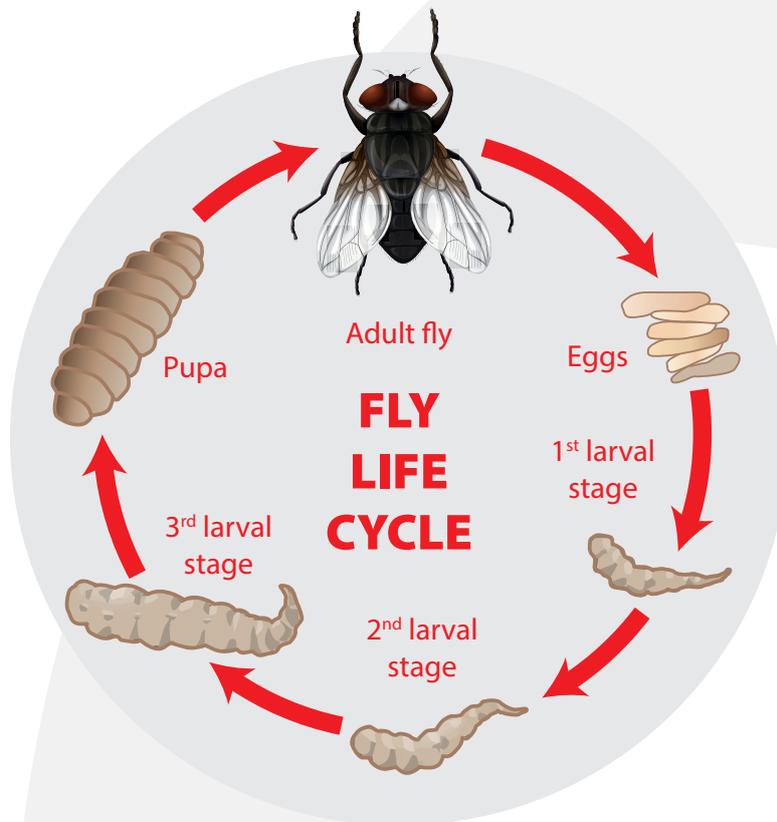


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## Introduction

- 1 Flies pose a health risk for humans and poultry. They are carriers of Salmonella, Pasteurella, Campylobacter and E.coli, which can have a negative impact on poultry flocks and farm personnel. The speed of fly reproduction can vary depending on environmental conditions such as warmth, moisture and food sources, but it is not uncommon to have 5 - 6 generations during a single summer breeding season.



## Best Practice for Fly Control

- 1 The key to avoiding fly infestations is managing water and moisture in the litter. Farms which keep litter dry rarely experience serious fly infestations.
- 2 A successful fly control program ensures moisture is controlled within the house and fly breeding sites are eliminated. Insecticides can help to provide temporary reduction of fly populations but cannot be the only method of effective fly management.
- 3 Use an integrated fly management program involving techniques such as:
  - Sanitation and exclusion
  - Chemical methods of fly control (insecticide)
  - Fly traps



## Sanitation and Fly Exclusion

1 **Sanitation is the first measure of defense against flies in the poultry house.** Whenever possible, feed, litter, broken eggs and mortalities on which the flies lay their eggs must be removed.

- Litter remaining on the farm should be managed so that it remains dry and friable.
  - Managing the height of drinking systems and checking water flow rates will help to reduce the incidence of wet litter.
  - Drinking systems should be checked regularly to ensure there are no leaks.
- Litter removed at depletion should not be stored on the farm or spread on land adjacent to the farm. It must be removed in a trailer covered with a tarpaulin to a distance of at least 3.2 km (2 miles) away from the farm, and disposed of in accordance with local government regulations.
- Feed spills should be cleaned up immediately.
- Flock mortalities should be removed from the houses as soon as they are discovered.
- Any broken eggs from the breeder house should be cleaned up immediately to prevent attracting flies.

2 **Flies can also be excluded from the house with the use of screens and fans.**

- Extraction fans that direct an outward air flow will keep flies from entering the house.
- Screens should be placed in entrance doors, windows and inlets.
  - Mesh screening is commonly made from materials such as stainless steel, coated steel, PVC and aluminium.
  - The screen hole size should be between 0.88 and 1.22 mm (0.03 - 0.05 in) to effectively exclude flies.



1 *Dry, friable litter.*



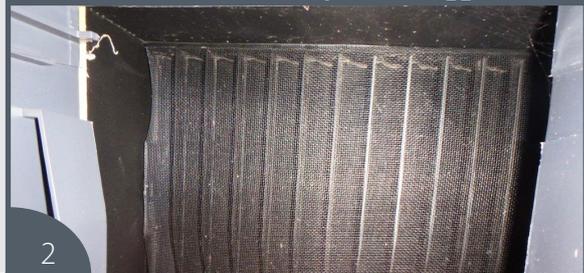
1 *Manage drinking systems to reduce wet litter.*



1 *Removing litter from the farm.*



1 *Clean up feed spills. Remove flock mortalities. Clean up broken eggs.*



2 *Screening in an air inlet.*



### Chemical Methods of Fly Control

**1 Insecticides are an effective method of reducing initial fly burden and are a key component of a good biosecurity program.** Insecticide baits typically consist of a mixture of insecticide, sugar and pheromone attractants. There are two types of insecticides used for poultry, residual and non-residual.

- Residual insecticides
  - Residual insecticides should be applied in empty houses only.
  - Houses should be thoroughly cleaned and disinfected before insecticides are applied.
  - Protective clothing, face mask, gloves, hat and eye protection should be worn while applying insecticide.
  - Mix the insecticide concentrate with clean water according to manufacturer's recommendations and use only clean sprayers to apply the insecticide.
  - Apply to non-absorbent house surfaces such as hard wood, painted or coated walls.
  - Leave the area and allow insecticide to dry thoroughly (2 - 3 hours).
  - After drying, these products are harmless to poultry and humans.
  - Insecticides remain effective for 2 - 3 months.



*Apply insecticides to empty houses only.*



## Chemical Methods of Fly Control

- 1 • Non-residual insecticides
  - Non-residual insecticides are only useful at the time of application and have no long term effectiveness. They are best used in situations where the initial removal of a large adult fly population is necessary. In this case, a non-residual insecticide should be used before the application of a longer lasting residual insecticide.
  - As with residual insecticides, this application is only suitable to treat the inside of an empty house.
  - Thermal fogging machines can be used to distribute the non-residual insecticide throughout the house.



1

*Non-residual insecticide application.*

- 2 **Larvicides are also an effective method of chemical fly control.** Larvicides control only the fly larvae and are usually applied as a spray or distribution of granules on the manure beneath the slats in the breeder house or directly onto the litter in broiler houses. Some things to consider when applying larvicides are:
  - They are more effective on the younger larvae than older larvae so timing is important. The best time to apply the first treatment is 2 weeks after birds are placed into the house.
  - Larvicides are slow acting and can take 1 - 2 weeks to take effect.
  - Due to the risk of flies developing resistance, only two full treatments of litter within the life of each flock are recommended.



2

*Larvicide granule application.*



## Chemical Methods of Fly Control

### 3 Use insecticide products in rotation.

- Rotation of insecticides with a different mode of action or active ingredients will reduce the risk of resistance.
- Unless otherwise directed, switch to an insecticide with a different mode of action about every 2 - 3 fly generations (approximately every 6 - 9 weeks).

### 4 Paint on fly attractants.

- Contain attractants that encourage flies to land on the application site.
- Kills flies within minutes of contact, including flies that are resistant to other chemicals.
- Paint on attractants cannot be used in areas where birds can access them, but may be used inside the house outside of bird pens.
- Apply attractant to clean surfaces where flies rest.
  - Walls
  - Window ledges
  - Fixtures
- Paint attractants can also be painted onto bags, cardboard or fabric and hung in areas of heavy fly infestation.
- Avoid applying in cool or windy locations, such as near fans or cool cells, because flies generally prefer warmer locations with less air movement.
- Paint on fly attractants should be re-applied every 3 - 5 days, depending on the level of infestation.



## Other Methods of Fly Control

### 1 Hanging fly paper with adhesive.

- Placed mainly in amenity buildings and not in production houses.
- Fly paper is coated with a sweetly fragrant, extremely sticky, non-toxic substance that traps flies when they land on it.
- Fly paper loses its effectiveness over time when it dries or becomes covered with dust, and should be replaced regularly. Depending on the fly population size, fly paper may last from a few days up to 2 weeks.

### 2 Ultraviolet fly zappers.

- Used in reception areas, processing plants, egg rooms, and other non-bird areas.
- Electric fly zappers attract flies with long-wavelength ultraviolet light and then eliminate them by electrocution.
- Depending on the machine specifications, ultraviolet fly zappers are suitable for indoor and outdoor use.
- Electric fly zapper units are both effective during the day and night and draw insects in from a coverage of up to 150 m<sup>2</sup> (1615 ft<sup>2</sup>).



1

*Fly paper.*



2

*Ultraviolet fly zapper.*

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