INSPECT! INSPECT! INSPECT!

© Amy Murillo, Univ of Calif. Riverside

House Fly (Musca) larva. Treatment is recommended to avoid potential problems.

Manure inside a poultry barn with various stages of fly lifecycle present. If this litter is spread or stockpiled outside without treatment, a fly explosion in neighboring areas will mostly likely occur.

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PENNSYLVANIA AGRICULTURAL OMBUDSMAN PROGRAM

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FLY MANAGEMENT IN PENNSYLVANIA

…when spreading manure!

Avoid Transporting and Spreading Unwanted Guests!

What is the Issue?

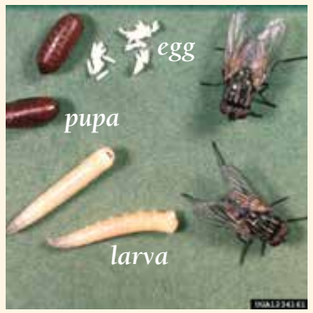
Flies can be a common pest on all types of farms. Poultry operations often encounter problems with house flies (Musca domestica) and the Lesser House Fly (Fannia canicularis).

Poultry manure is prime material for fly reproduction because of the high moisture content.

Poultry manure is a fertilizer commonly distributed on farms across Pennsylvania. But, when fly laden manure is delivered, the receiving farm now has a potential pest issue.

© Beth Futrick

This chicken manure has unacceptable levels of fly pupa that need to be addressed.



A fly lifecycle can take approximately 20 days—from egg to adult. It doesn't take long for adult flies to emerge from stockpiled manure and travel to nearby homes.

© Crawford Conservation District

Inspect manure prior to spreading. Tarp the manure if a problem is found. The Ombudsman Program recommends weekly inspection of the piles to catch post-delivery fly infestations.

House flies (Musca) can easily travel up to one mile from stockpiled or improperly spread manure into nearby residential areas. This can cause an unacceptable number of flies invading family picnics, entering homes, and leaving dirty black spots on neighbors' houses.

Lesser house flies (Fannia) gather in large numbers to swarm around porches and breezeways. Their flight pattern hovers around 5 to 6 feet above the ground and is slow and aimless.

A fly's life cycle is dependent on temperature, so warmer weather can trigger "population explosions". Flies quickly become unwelcome guests.

Many people who live in the country realize there will be flies. But when explosions of fly numbers occur, even the most "farm-friendly" neighbors can become angry enough to organize neighborhood groups, contact their legislators, and threaten law suits. With proper management, these outbreaks can be greatly reduced.

Before the manure leaves the farm, consider:

1. Does the farmer employ Integrated Pest Management (IPM) for fly control?

If fly control is needed, farmers can contact their local Penn State Extension office. Or visit the Penn State IPM website:

- http://extension.psu.edu/pests/ipm

The stacking shape of manure can indicate its moisture content.

2. Visually assessing the moisture level of the manure, based on the stacking shape.

Will it stack high in a cone shape or does is spread out?

Dry manure that maintains a cone shape is likely below 50% moisture level. This deters fly larval development.

3. Inspecting it visually and thoroughly for fly larva and pupa.

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Notice how tiny the pupa are, therefore, thorough inspection is critical.

Egg: The white egg, about 1.2 mm in length, is laid singly which is very hard to see, but eggs are piled in small groups.

Larva: Larva are 3 to 9 mm long, creamy white in color, cylindrical but tapering toward the head.

Pupa: The pupa case is about 8 mm long and varies in color from yellow, red, brown, to black. The pupa is bluntly rounded at both ends.

© Alec Gerry, Univ of Calif Riverside

Fannia eggs and larva. The brown color and spines are telltale indicators of the type of fly larva.

The lesser house fly is more difficult to manage. Their larva can survive in drier (less hospitable) manure than the larva of the house fly. The lesser house fly larva are brown and flat with spines, making them more difficult to see, and harder to realize that treatment is needed.

When imported manure arrives, and larva or pupa are found, here are some recommended immediate action for fly controls:

- Tarp piles as soon as possible.
  - Manure in a windrow or tight heap make covering easier.
  - Compost fleece, black or clear plastic or other impervious material works well.
  - Staking or weighing down the tarp tightly anchors it—there should be no gaps at the edges.
  - Leaving the tarp in place for two weeks is most effective.
- Apply a fly larva growth regulator (IGR) to the pile.
- Consider composting
  - Aerate the pile by scooping and restacking to enhance composing.
  - Mix in organic matter to accelerate composting.
    - Straw, feed refusals, wood chips, bedding and other materials commonly found on the farm can be used as compost amendment.
- If the fly-laden manure absolutely must be applied, consider:
  - Spreading the manure thinly in the field to accelerate drying.
  - Applying away from neighboring houses and businesses
  - Applying during cooler weather when the fly life cycle is slower.

GOOD NEIGHBOR RELATIONS

If you haul or spread manure for yourself or as a service to others, manure must be spread as directed in a written Manure Management Plan, or Nutrient Management Plan, or Nutrient Balance Sheet. While fly monitoring and fly reduction techniques are not required by nutrient management planning regulations, these practices are encouraged and can greatly reduce conflicts with neighbors.

A fly outbreak in a neighborhood can damage the relationship between a farmer and their neighbors. The negative experience for neighbors can put a “black eye” on all of agriculture. This makes an already difficult business even harder on farmers. If farmers decide they do not choose to spread or import manure anymore, that can make it tougher on those who haul and spread manure as a business.

Taking the attitude that “farmers were here first” or “people living in the country need to expect flies” does NOT cut it. Intolerable, excessive outbreaks of flies are not normal or acceptable. Fly minimization techniques on farms and in manure are available, and effective, when properly followed.

Neighborhood fly outbreaks should NOT be considered normal or acceptable when there are ways to minimize the numbers. This amount of flies can annoy even the most tolerant and supportive neighbors.

Neighborhood conflicts = TOUGH FUTURE for FARMERS