



Fly Control in Poultry Operations

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Refer to the factsheet 'Integrated Fly Management for Livestock Farms' for additional information on fly management techniques.

Introduction

Managing fly populations in poultry operations is a constant concern for most farm managers. High fly populations may transmit disease within the flock and among other flocks, cause increased stress to the animals and workers, and create difficulties with neighbours and surrounding businesses. Therefore it is critical to have a comprehensive approach that uses all available techniques to manage flies. This factsheet outlines some activities that can be used in poultry operations.

Poultry Layer Operations (deep or shallow pit)

Monitoring Techniques

A fly monitoring program must start in early spring and be continued to be effective. In barns, use bated jug traps and spot cards. Nuisance thresholds are 250 house flies per jug trap per week and 50 fly specks per card per week. The moving sticky tape method may also be used. This method involves holding a one metre sticky tape in one hand at shoulder height and walking a measured distance in the barn, two consecutive times. The result can be calculated and compared to the nuisance threshold which is 100 house flies per 300 m total walking distance. Monitor fresh uncovered manure stockpiles for adult house flies as well as maggots.

Physical Management of Flies

Fresh infested layer manure that is going to be used as a field application must be piled and tarped for a minimum of 5 days immediately after it is removed from the barn. When stockpiling fresh manure, for any length of time, it must be tarped whether it is infested with maggots or not. If the manure doesn't have maggots in it initially, it will attract adult flies and become a breeding ground and potentially cause a fly outbreak. These tarped piles must have the bottom edges sealed tightly with soil or other suitable material. Composting (i.e. thoroughly turning piles every 3-4 days) is an effective option for fly control. The manure may be too wet to compost or pile so adding sawdust or broiler litter to the wet manure will decrease moisture and will aid in forming stockpiles and promote the composting process. This same procedure helps manure form a windrow so it can be tarped. This tarping method kills existing house fly maggots and pupae in the manure and keeps adult flies from breeding in the material. Non-toxic traps around the barn will also help control small fly populations (e.g. wide barn sticky tapes and electric zapper traps).

Cultural Management of Flies

Carefully plan manure removal and disposal activities so flies are not transported outside the barn. One strategy is to leave the infested manure in the barn during the fly season. These stockpiles need to be kept dry through adequate ventilation. The last clean-out should occur before May 1st and the next clean-out should be after November 1st. Every effort should be made to dry manure below 50% moisture while it is stored in the pit. If the manure moisture goes above 50%, fly breeding will take place and flies will reach nuisance levels very quickly.

Layer cage systems with a belt manure removal system, and a 2-3 day clean-out schedule normally do not require fly control measures if the manure is properly stored after removal. New cage systems which dry manure on a belt are very effective and also reduce smell. Recirculation fans, above the cage rows, in deep pit layer barns will help dry manure. Nipple watering systems spill less water than cup systems. Nipple systems mounted above a water spillage trough are preferred

If a weekly clean-out schedule is followed for layers, the manure should be inspected at each clean-out for the presence of house fly maggots and pupae. If the manure is infested, it should be placed in a stockpile and tarped. It is not advisable to plow or harrow maggot or pupa infested manure into the soil as these life stages will emerge from the soil and potentially cause a fly outbreak.

Remove dead birds daily and do not drop mortalities into the pit. Spilled feed and broken eggs should be cleaned up daily and not disposed of in the pit area. Keep grass and weeds mowed outside the barn to allow for good air flow through the fans and to eliminate resting areas for adult house flies.

Biological Management of Flies

Check with suppliers of biological parasites for availability and follow the use instructions. Encourage natural enemies of house flies by composting and using selected cultural techniques. Refer to the factsheet 'Integrated Fly Management for Livestock Farms' for information on biological control techniques.

Chemical Management of Flies

Use residual sprays (e.g. permethrin) inside as well as outside the barn as a last resort to control a serious fly outbreak. These sprays should only be applied to fly resting areas. Monitor house fly populations to determine need and timing of spray. Scatter baits and bated traps placed throughout the barn will control small fly populations. Manage pesticide resistance by switching product chemical families and reducing frequency of use to a minimum. Refer to the factsheet 'Integrated Fly Management for Livestock Farms' for information on available pesticides and their use. Always follow the individual pesticide product label for application instructions and allowable uses.

Poultry Broiler or Roaster Operations

Monitoring Techniques

A fly monitoring program must start in early spring and be continued to be effective. In barns, use bated jug traps and spot cards. Nuisance thresholds are 250 house flies per jug trap per week and 50 fly specks per card per week. The moving sticky tape method may also be used. This method involves holding a one metre sticky tape in one hand at shoulder height and walking a measured distance in the barn, two consecutive times. The result can be calculated and compared to the nuisance threshold which is 100 house flies per 300 m total walking distance. Monitor fresh uncovered manure stockpiles for adult house flies as well as maggots.

Physical Management of Flies

Fresh broiler manure that is infested with house fly maggots and pupa should not be used as a field application from May 1st through November 1st. Fresh infested manure that is going to be used as a field application must be piled and tarped for a minimum of 5 days immediately after it is removed from the barn. When stockpiling fresh manure, for any length of time, it must be tarped whether it is infested with maggots or not. If the manure doesn't have maggots in it initially, it will attract adult flies and become a breeding ground and potentially cause a fly outbreak. These tarped piles must have the bottom edges sealed tightly with soil or other suitable material. This tarping method kills existing house fly maggots and pupae in the manure and keeps adult flies from breeding in the material. Non-toxic traps around the barn will also help control small fly populations (e.g. wide barn sticky tapes and electric zapper traps).

Cultural Management of Flies

Flies are very rarely an issue in broiler and turkey barns. It is critical to maintain dry litter and adequate air circulation that keeps the litter dry. Manure cleanout and sanitation is usually done before a new flock is put in the barn. When stockpiling fresh manure, for any length of time, it must be tarped whether it is infested with maggots or not. If the manure doesn't have maggots in it initially, it will attract adult flies and become a breeding ground and potentially cause a fly outbreak. Composting (i.e. thoroughly turning piles every 3-4 days) is an effective option for fly control.

Keeping excess water out of the barn is key to good fly management. Check for water leaks on watering systems on a daily basis, have good site drainage away from the barn and repair any foundation cracks. Also essential are exhaust fans in the barns for temperature. If the broiler manure and litter becomes wet, it could become a breeding site for flies.

Biological Management of Flies

Biological control is generally not necessary during the growing cycle in the pens but may have some use in manure storage piles. Refer to the factsheet 'Integrated Fly Management for Livestock Farms' for information on biological control techniques.

Chemical Management of Flies

Chemical sprays should be avoided during the growing cycle in the pens. If required, sprays could be used in the entry-ways, outside the barns in warm weather or when the barn is empty **Always follow the individual pesticide product label for application instructions and allowable uses.**

Additional Information

Refer to the OFFSAP program for detailed pest management on all pests.

For more information:
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