

Disposal of Bird Mortalities

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Dealing with mortality is a common problem that every farmer or hobbyist has to manage. Birds can die from a disease, accident, culling or natural causes. Whatever the cause, such mortality has to be disposed of as part of good housekeeping and biosecurity. See [Biosecurity Principle I](#) factsheet (2.2). Most importantly, a dead bird must be removed from the general population because it is a perfect medium for the further proliferation or spread of bacteria, viruses, moulds, and protozoa.

Carcasses may harbour many potentially pathogenic agents that can infect people or birds by direct contact. Improper disposal can also result in contamination of the environment, including your water supply. An example of this would be botulism. The bacteria that causes botulism thrives in rotting flesh. The bacteria produces a toxin that bioaccumulates in maggots or darkling beetles. The birds are attracted to the insects that infest the carcass. All domestic fowl and most wild birds are susceptible to the toxin's effect. The toxin can remain in the environment for long periods of time.

Scavengers can transmit diseases such as Avian Influenza viruses. Organisms like enteric coliforms, *Campylobacter* and *Salmonella sp.* are other examples of agents that can cause environmental contamination and are a risk to human safety.

Stopping scavengers will reduce the risk of disease.



General Guidelines for Removal of Dead Birds:

- Remove dead birds a.s.a.p.
- Protect yourself
- Store dead birds properly
- Research an appropriate disposal method
- Seek help if a contagious disease is suspected

- 1 All dead birds should be picked up and removed from the barn immediately. Do not pick-up dead birds with your bare hands. Use gloves (disposable ones are preferred), plastic bags, or a shovel.
- 2 Store all mortalities in a solid container with a lid to prevent scavengers and flies. If disposal takes longer than 48 hours the carcasses should be frozen. The storage area should be at least 100 meters from the poultry house. Do not throw dead carcasses on the manure pile! They will not compost properly without using the right compost recipe and will attract scavengers as they decompose and become infested with bacteria.
- 3 If there is suspicion that the bird has died of a disease that can infect people, spray it with disinfectant before handling and wear disposable gloves.
- 4 Dead carcasses should be sent for diagnosis immediately if a contagious disease is suspected. See the [I Think My Birds are Sick](#) factsheet (1.3). If they are not sent for diagnosis they should be disposed of as soon as possible.
- 5 Wash your hands, gloves, boots, tools, vehicles, equipment and anything else that contacted the carcass thoroughly with soap, water and disinfectant. Change into clean clothing if a contagious disease is suspected.



A dead bird improperly tossed into the manure pile.

General Guidelines for Disposal of Dead Birds:

The disposal of deadstock on farm is regulated in Ontario by the Nutrient Management Act, 2002 (NMA). For the small to medium sized poultry holder, acceptable methods that make the most sense legally, operationally and financially for carcass disposal include rendering, burial, incineration, or composting.

- 1 Rendering.** LDACs (licensed dead animal collectors) collect dead poultry and animals 25 kg and over that have rendering value. They do not collect dead stock for free. To make this method cost efficient, you will need proper on-farm storage for carcasses (a freezer), to reduce pick up costs. The process of rendering includes the pick-up of the dead animals, followed by a cooking and hydrolysis process to convert the product to commercial tallow and protein products like feather meal, meat and bone meal, blood meal, etc. An important consideration with this method of disposal is to recognize that rendering vehicles entering your farm may compromise your biosecurity... after all they are going from farm to farm picking up deadstock.
- 2 Burial.** Burial is only feasible during the warmer months (April to November). In the winter, dead birds have to be kept frozen until it is possible to dig in the ground. The site selection will depend on the environmental (ground water) contamination potential. Areas with sand base or high water table are unsuitable for carcass burial. The province of Ontario recommends having your area tested for ground water contamination potential. Depending on the results (from high to low), it is possible to bury 1000 - 5000 kg of dead animals per hectare per year. The hole should be at least 1-1.2 m deep and allow for 0.6 m depth of soil coverage. See OMAFRA factsheet [Proper Burial Techniques for Small Farm Animals and Poultry Mortalities Under 25 kg.](#) in the Suggested References.
- 3 Incineration.** Incineration is a biologically safe method that produces a small amount of waste and there is no problem with pests (flies and scavengers). However, there could be concerns with odour and emissions. The process of burning carcasses is slow and expensive to do properly. Check with your municipalities for specific guidelines or regulations. See OMAFRA Factsheet [Incineration of Dead Farm Animals](#) under Suggested References.
- 4 Composting.** Composting is a biological process that uses micro-organisms to degrade the organic materials and turn them into compost. Compost is a humus-like material that is safe to handle and can be used as a soil amendment. Composting involves the use of water and alternating layers of straw/saw dust/litter and the carcasses. However building a compost pile properly takes skill and knowledge. The correct and balanced amount of air, water, carcass and substrate is required to initiate and finish a composting procedure. Composting should produce enough heat (55-60 degrees °C for minimum of 3 days) to kill pathogens in the pile. The pile should be turned every 2 weeks to mix oxygen and maintain the decomposition process. Composting can be done outside or inside the barn depending on the circumstances surrounding the mortalities. Effective composting minimizes odour and flies and can be performed year round.

- Keep out scavengers
- No dead birds on the manure pile
- Bacteria and moulds will flourish in decaying carcasses

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Your choice of disposal method should take into consideration the cost, environmental safety, biosecurity, and practicality. Each operation should determine the method most suitable to their type of operation, management ability, environmental conditions, and budget.



A compost pile with shavings, wood chips and dead birds.

TAKE HOME MESSAGE

- Remove dead birds A.S.A.P.
- Protect yourself.
- Store dead birds properly in a sealable container.
- Research an appropriate disposal method.
- Seek help if a contagious disease is suspected.

SUGGESTED REFERENCES

Composting Poultry Mortalities on Farm. PIC factsheet No.150.
http://www.poultryindustrycouncil.ca/factsheets/fs_150.pdf

Proper Burial Techniques for Small Farm Animals and Poultry Mortalities Under 25 kg. OMAFRA factsheet # 03-049.
<http://www.omafra.gov.on.ca/english/engineer/facts/09-029.htm>

Environmental Protection Act (EPA)
http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90e19_e.htm

Ontario Dead Animal Disposal Act (DADA)
<http://www.canlii.org/on/laws/sta/e-19/20080215/whole.html>

Incineration of Dead Farm Animals
<http://www.omafra.gov.on.ca/english/engineer/facts/09-019.htm>



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