



# Poultry - Disease Prevention

## How to Prevent Poultry Disease at the Village, Small Farm or Yard Level

Maintaining a healthy poultry flock requires daily practices that prevent diseases from being brought into your flock from sources such as feed, manure, or recently purchased live birds.

### Why is disease prevention important?

Small-farm, village-level, and yard poultry production is an often underappreciated component of food security and household income for people living in poor rural communities. **Diseases**, lack of poultry housing and adequate feed are the top three factors typically limiting village poultry production.

### The four components of disease prevention\* are:

\*Note: Poultry producers use the term "biosecurity" which refers to isolation, traffic control, and sanitation.

**1. Isolation.** Keep poultry isolated from potential sources of infection such as persons from another farm or village.



Chickens feeding on harvested termites.

**2. Traffic control.** Limit movement of vehicles, equipment, people, birds, and eggs into and around the area where poultry are kept.

**3. Sanitation.** Clean poultry cages, egg cartons and vehicles etc. immediately after being taken to a market. People handling poultry should wear clean clothes (that have not been around other animals) and wash their hands before and after handling birds. To clean surfaces, first wash with water (and detergent if available) and then scrub with a disinfectant (use a locally available household disinfectant at the appropriate dilution).

**4. Vaccination.** Newcastle disease commonly kills 50-80% of small-farm and free-ranging chickens. Regular vaccination (usually 2-3 times per year by eye-dropper) for Newcastle disease is probably the single most important action to improve chicken production on small farms. Consult local veterinary authorities regarding which Newcastle vaccine is locally available and how often to apply it.

### How poultry disease transmission occurs?

The main strategy for preventing disease is to **prevent the introduction** of diseases from outside sources. For disease prevention purposes, free-ranging poultry at the village level is considered as part of one large connected flock (even though the birds may belong to different households and roost near different houses at night). If each household keeps their poultry in separate coops then each household has a flock. When one bird becomes sick, the disease may rapidly spread through the flock. To guard against the entry of disease into a flock, it's important to know the possible sources of diseases, which include:

1. **New birds.** New birds, such as those purchased at a live market. These birds should never be added directly to a flock. New birds may appear healthy but could be hosts of diseases.
2. **Market materials.** Materials coming from a market (such as feed bags, egg containers, crates etc.) can be a source of disease when returned to the farm. They should be cleaned and sanitized.
3. **Clothing.** Shoes and clothing of people who have been handling poultry from another farm or have walked in poultry manure at a live bird market can spread disease.
4. **Dead animals.** Carcasses of dead birds can be a source of disease.
5. **Pests.** Rodents, wild animals and birds (often attracted to poultry feed and water) can spread disease.
6. **Contaminated vehicles.** Delivery trucks, motorcycles, wheelbarrows, etc.
7. **Soil and litter.** Premises can be contaminated through soil and old litter

### How do you implement poultry disease prevention?

Steps for assessing poultry disease prevention and developing a plan for preventing disease transmission:

1. **Assess current practices.** Interview farmers, village leaders or the persons in the home (usually women) that raise poultry (See Table).

**Prepared by David Bunn with Mark Bell, January, 2012.**

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# Poultry - Disease Prevention (Continued)

**Table.** Observations to assess current poultry practices.

Observation	Implication(s)
1. What are the major causes losses of poultry?	Knowing the major causes of poultry losses - Disease? Predation? Theft? - helps to focus prevention efforts.
2. What percent of birds die of disease each month?	If a high percent of birds die of disease then disease prevention should be a priority. If chickens die in large numbers (>50%) in less than two weeks during one or two periods of the year, then recurring Newcastle disease outbreaks are likely. In this case, find a local source of Newcastle vaccine and train on its use. (See FAO guide on controlling Newcastle Disease).
3. What is done to prevent disease from entering their flock?	How this question is answered indicates the level of understanding of disease prevention and will identify opportunities to improve disease control.
4. How are birds fed (free-ranging or a combination of free-ranging and supplemental feeding)? Where is any supplemental feed bought?	Supplemental feeding can increase productivity and egg production. The cost of feed may be a limiting factor. Purchased feeds can also be a source of disease if bought from farms that also have poultry.
5. Is there a poultry house or coop or do birds roost in trees and lay eggs in the open?	Poultry housing prevents predation and theft at night. Poultry housing also permits better monitoring of the flock for productivity and health status, and for better management of egg production.
6. Where are birds bought and sold and do they take birds to and from markets?	Live bird markets in small towns, where people sell their birds, are a major source of disease exchange. Birds not sold by the end of a market day should not be returned to the village flock. Purchased birds or return birds should be kept separate from other birds in the village for 2 weeks to monitor for disease. If the birds are healthy after 2 weeks they may join the flock.

**2. Identify better practices and plan.** Based on current practices, identify ways that disease might enter the local flock. For example, birds purchased at a market and released with the local flock are a potential source of disease. For each listed route of disease transmission, talk with leaders and the household poultry producers about how to prevent or reduce those disease sources contacting their flock. Create a plan based on these discussions.

**3. Standard practices.** Implement Basic Disease Prevention Measures:

- **Cleanliness**
  - **Wash hands.** Wash hands before and after handling poultry.
  - **Special clothing.** Poultry handlers should have separate clean clothing that they use when working with their poultry. They should store their clothes near the work area. Hired workers should change into dedicated clothing when they arrive at the farm and change back to their regular clothes before leaving.
  - **New animals.** Buy only healthy birds and keep them in a separate coop away from other poultry for two weeks and only release them with the flock if they are healthy after the two-week quarantine.
- **Isolation**
  - **Movement.** Prevent domestic flocks from mixing with wild ducks and other birds.
  - **Movement.** Restrict the movement of animals, manure, eggs, equipment, and people between farms and outside markets.
  - **Quarantine.** In a village with free-ranging poultry, encourage the village leadership to build a quarantine coop where new birds are kept for two weeks before introducing them into flocks.
  - **Dead or sick animals.** Remove sick or dead birds from the flock immediately.
- **Monitoring**
  - Monitor your flock daily for signs of disease. Immediately isolate sick animals.



Photo Project Wet

**Prepared by David Bunn with Mark Bell, January, 2012.**

**Reference:** FAO Small-Scale Poultry Production Technical Guide, 2004.

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