

ANIMAL HEALTH INFORMATION

Biosecurity for Backyard Poultry Facilities

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WHY EVERY FARMER SHOULD BE UTILIZING PROVEN BIOSECURITY MEASURES:

Biosecurity is the application of protections and practices against infectious biologic agents that endanger the food supply. These protections and practices exist at many points in the poultry handling process and limit the spread of disease causing organisms. When teamed with disinfection and sanitation procedures, biosecurity practices can eradicate or reduce pathogens to non-infectious levels. Serologic monitoring and vaccinations also insure flock health.

Inadequate biosecurity can contribute to industry wide epidemics of highly pathogenic or exotic disease, resulting in quarantine and possible condemnation of flocks. An infection by a non-virulent organism within a facility can be just as devastating economically, reducing production over the life of the facility without overt signs of disease. Once contaminated with pathogens, poultry facilities are extremely difficult and expensive to clean, sanitize and disinfect.

A further consideration related to biosecurity at all levels is the potential for terrorists to introduce pathogens into livestock and the food chain. This could cause significant direct and indirect economic loss. According to the Gilmore Commission "A concerted biological attack against an agricultural product offers terrorists a virtually risk-free form of assault, which has a high probability of success."

SOURCES OF DISEASE

Source contamination: Animals, feed or water that carry a biological agent and transmit it. People, clothing or vehicles can harbor a biological agent that when moved around can spread the agent.

Vector contamination: Efforts to minimize vectors can significantly reduce disease transmission. Rodents, wild birds, insects, fomites (such as fecal material, feathers and dust) can be wind or water transmitted etc.

Facility Contamination: A major source of disease transmission is people (employees, service personnel, truck drivers, vaccination crews). Facilities may also be contaminated by new flocks (chicks, pullets, breeding males, semen, etc.)

Intentional contamination: A bioterrorist event that is intended to inflict harm in multiple ways. Motives could include market destabilization, economic loss, disruption of trade and imposition of embargoes and social instability through loss of confidence in the food supply.

FLOCK MANAGEMENT

The most important first step is to obtain chicks from a reliable source. You can get a list of National Poultry Improvement Plan (NPIP) hatcheries from the MA Department of Agricultural Resources. Managing poultry facilities for maximum health and productivity requires a qualified facility manager trained to keep the birds as healthy as possible and able to respond quickly and forcefully to any disease condition. Many factors must be considered to achieve maximum health and productivity, including optimum disease and infection controls, along with environmental provisions and safeguards.

Bird Selection And Maintenance: Birds should be purchased only from S. pullorum clean sources from National Poultry Improvement Plan (NPIP) participants. Chicks must originate from S. pullorum clean stock. Sick birds should be evaluated at a lab or by a vet. The state Department of Agricultural Resources (DAR) can assist in this process.



FLOCK MANAGEMENT, continued

Stress Control: Provision of suitable housing, good quality feed and adequate, clean water minimize stress and generally increase flock health.

Feed and Water: Feed should be of high quality. It should be balanced, free from toxins and palatable. Toxins in a feed at very low level can affect productivity and general health. Water should be clean, cold in summer, warm in winter. Water and feed are important as far as disease prevention is concerned because many vaccines and medicines are administered by adding them in feed and water. Contaminated feed, lumpy feed or oxidized feed or feed, which has a bad odor, should be discarded.

ENVIRONMENTAL MANAGEMENT

Ventilation: Proper ventilation is necessary for control of various respiratory diseases.

Disinfection: Disinfecting a house is key to healthy flocks. After every flock change the house should be cleaned then disinfected. **Temperature:** Control measures should be taken to avoid temperature extremes thereby avoiding stressors.

Construction: Housing should be of sound quality and suitable to environmental conditions of the geographic area. It should, to the extent possible, be without access points for rodents or stray animals, crevices, free of leaks and damp floors, etc. Roads should be built of all weather materials to reduce the transport of organic material on tires.

Equipment: Farm equipment can be a source of disease transmission and should be cleaned and disinfected regularly. Dedicated equipment, for farm use only, is preferable.

Protection From Pests And Predators: Rats, mice, wild birds, flies and beetles can all cause contamination and spread disease such as salmonella. They should be kept away from buildings to the greatest extent possible and the buildings should have any access points boarded up. Flocks with outside access need protection from owls, hawks, coyotes, foxes, etc. Outside enclosures should be covered.

Sanitary Traffic Control: Control of human traffic is essential. Lock doors, ban all visitors and allow building access only to authorized and necessary personnel who are wearing properly sanitized footwear, coveralls and headgear. Human hands may also spread infection and should be sanitized before entering a poultry building and before leaving the farm. The use of disinfecting foot dips or footpads at entrances and exits is desirable. A footpad can be fabricated using rubber pans with carpet pads cut to fit the pan and saturated with disinfectant. Traffic control is not limited to humans. Any damage to a facility or open access should be screened or sealed to prevent animal, rodent and wild bird access. A possible exception would be cats, which can provide effective rodent control. Also, dogs can be trained and used to keep out intruders of all types.

BIOSECURITY MANAGEMENT for FOR SMALL FLOCKS (300 birds or less)

In general the management of small flocks revolves around the same principles of biosecurity as large flocks. It is simply a matter of scale and methods. The three major components are: isolation, traffic control and sanitation.

The greatest risks for disease in small flocks are the introduction of new birds and traffic to the farm. New birds are a problem because they may be diseased and not appear so. The sensible thing to do is isolate them in a separate pen as far from the resident birds as possible for a period of two to four weeks.

On farm traffic should be directed from the youngest birds to the oldest and from the resident area to the isolation area. A clear zone should be established around sheds or pens to discourage insect and rodent traffic.



For more information or to discuss the biosecurity situation on your farm, call the
Massachusetts Department of Agricultural Resources, Division of Animal Health: 617/626-1795.