



A small investment in time and money can yield big benefits for the farmer.

Biosecurity Fundamentals for Visitors to Livestock Facilities

Biosecurity at the farm level can be defined as the management practices enabling producers to prevent the movement of disease-causing agents onto and off of agricultural operations. This includes environmental contamination. Biosecurity therefore involves many aspects of farm management, such as disease control and prevention (e.g. closed herd, vaccinations), nutrient management and visitor control. Although controlling and limiting the movement of livestock is recognised as the most important biosecurity measure for most diseases, many important hazards can be carried on contaminated clothing, boots, equipment and vehicles. This Factsheet focuses on measures that reduce the biosecurity risks associated with visitors, particularly to livestock facilities.

Why The Concern

Biosecurity has become a major concern to the agriculture industry as a result of foreign and emerging disease issues, the globalization of agriculture and increasing public concerns over food safety. Individual farms are less isolated and inputs are entering the farms of today from further away, often from other countries. Issues such as bovine spongiform encephalopathy, foot and mouth disease, avian influenza and Newcastle disease have brought world concerns closer to the local farm level.

Ontario is also a province with a large urban-rural interface. With both a high farm density and population

density, the risks associated with agriculture take on added significance. Air and water quality concerns are more pronounced, animal and human movement among farms is frequent and the ability to control a foreign animal disease outbreak may be compromised.

The ongoing pressure on agriculture to reduce antimicrobial usage has led to increased emphasis on disease prevention and the role of biosecurity. As well, disease prevention is a critical component of overall quality assurance (QA) programs being adopted by many commodities.

Biosecurity, and an increased emphasis on disease prevention, is prudent. Practices do not have to be cumbersome, confusing or expensive, but a small investment in time and money can yield big benefits for the farmer, the industry, and for the consumer through improved food quality and safety.

Who Is Involved

All visitors need to understand the possible risk they present when entering a farm, what a farmer expects from them, and what precautions need to be taken between farms that are visited. This applies to anyone entering or leaving the premises who may be visiting other livestock operations, and not just those of the same species or commodity type. The list includes:

- neighbours and friends.
- agribusiness and service representatives

- veterinarians
- municipal/regulatory personnel, inspectors
- deadstock collectors
- custom manure/biosolids haulers and applicators.

Implications

Visitors can unknowingly bring harmful agents onto a farm via contaminated clothing and footwear, equipment and vehicles. Equipment used to repair buildings and machinery, to treat or handle animals, and to carry out testing or procedures are all potential sources of contamination. The risk is increased with visitors who regularly go from farm to farm as part of their employment or routine. Such individuals, businesses and organisations are encouraged to develop and follow a biosecurity plan.

All visitors, farm owners, and their employees have a shared responsibility in biosecurity. Visitors need to be aware of that farm's level of biosecurity and follow their recommendations. Visitors must be prepared to accept all reasonable directives from the farmer when visiting his or her operation. In many swine operations, for example, showering in and out of facilities is a requirement.

Farmers and their employees also have a responsibility to prevent hazards from leaving the premises. Wear clean clothing and footwear when leaving the farm, particularly if visiting other farms, feed supply agencies, veterinary facilities or auction markets.

All visitors should make an appointment so that both parties can make best use of their time. The visitor should ask the farm operator about his or her biosecurity protocol and any special measures that must be taken.

Assessing Visitor Risk And Controlling Access

Risk assessment is a method of determining the likelihood and severity of the risk posed by a visitor. By identifying key risk fac-

tors, appropriate procedures and protocols can be determined. Table 1 is a guideline for assessing the risk level of visitors to a livestock operation.

Biosecurity Guidelines for Visitor Control

- Provide a farm gate sign indicating biosecurity levels in effect on the farm. Place restricted entry notices on the doors to animal facilities.

- Keep service vehicles as far away from the animal facilities as feasible. Designate a parking area for vehicles entering the farm, away from traffic areas used by farm vehicles and away from feed and manure. Visitors' vehicles should be visibly clean of manure and organic matter.

- Establish one area of the farm for visitors to enter if required. All visitors should go directly to the entry point. Consider installing a bell or alarm system for visitors to indicate their arrival.

- Keep a visitor log or record of the names, dates and vehicles that visit.

- Determine if, when and what types of farms have been visited prior to your farm. As a precaution, 48 hours may be required between visits (1 week for foreign visitors).

- Restrict access to animal facilities to essential visitors only. Keep visitors out of animal pens and feed alleys, and do not allow direct contact with animals if not essential.

- Insist on clean clothing and/or supply clean boots and clothing at your farm.

- Do not allow foods of animal origin to be brought onto the premises.

- Provide a container or plastic bag for collecting dirty clothing or disposable items used by visitors.

- Ask visitors to wash their hands prior to leaving the premises, especially if in contact with animals. If hosting tours, provide hand-washing facilities or disinfectant hand gel. If food is to be served, do this away from the animal facilities and after handwashing.

Table 1. Guidelines for Visitor Risk Assessment

	Low Risk	Moderate Risk	High Risk
Number of farm visits per day	No other farm contact	One or occasionally more than one farm per day	Routinely visits many farms or auctions
Protective Clothing	Wears sanitized shoes or boots. One pair of clean coveralls per site.	Wears sanitized shoes or boots - if clean, may not change coveralls.	Does not wear clean or protective clothing.
Animal Ownership	Does not own and/or care for livestock.	Owens and/or cares for a different species.	Owens and/or cares for a similar species and production type.
Contact with animals	No animal contact	Minimal or no direct contact - exposure to housing facilities	Regular direct contact with animals
Biosecurity knowledge	Understands and promotes biosecurity for industry	Aware of basic biosecurity principles but is not an advocate	Little appreciation or understanding of biosecurity principles
Foreign travel	Does not travel out of Canada	Limited travel outside of Canada without animal contact	Travel to foreign countries with animal contact in those countries

- Provide a footbath and a container of an appropriate disinfectant solution with a scrub brush at the entrance to each facility. Maintain these with daily cleaning, remove accumulated organic matter and replenish disinfectant regularly. Footbaths alone are not an effective means of disinfecting footwear.

- Ensure all equipment used by visitors has been thoroughly cleaned and disinfected and stored appropriately before being used on your premises. Also clean and disinfect all borrowed equipment and tools prior to use on your farm and before returning them.

Proper use of disinfectants is a critical component of biosecurity. Use any disinfectants such as chlorhexadines, hypochlorates, phenols, oxidizing agents, iodine compounds and quaternary ammoniums according to product recommendations.

Manure And Its Concern

Many important diseases can be transmitted by manure, either directly or indirectly, via contaminated clothing and equipment. The pathogens responsible can be classified into 4 major types:

- bacterial (e.g., salmonella, E. coli, Johne's disease, tuberculosis)
- viral (e.g., hog cholera, foot and mouth disease, bovine viral diarrhoea)
- protozoal (e.g., coccidiosis, cryptosporidiosis)
- parasitic (e.g., ascariasis, sarcocystosis).

Fungal diseases, such as aspergillosis, are less likely to be shed in manure, but may be present in contaminated bedding and litter.

Manure Handlers And Haulers

As production costs increase, more producers are contracting professional handlers and haulers. However, there is a risk of disease being introduced by hiring custom labour. Improper sanitation procedures between farms can potentially spread a number of diseases. Ensure manure management equipment is properly maintained and cleaned, especially if being used at several farm sites. Wash all exterior surfaces of manure handling equipment; check that they are visibly free of organic matter before arriving on a farm.

Access To Premises

Part IV of Ontario's Nutrient Management Act outlines the "Inspection and Orders" related to identification and inspection by provincial officers involved in nutrient management legislation. A biosecurity protocol has been developed to minimise the risk of spreading disease-causing agents among and within agricultural operations by government personnel. The protocol applies to all situations involving personnel from the Ministry of Agriculture and Food, and the Ministry of the Environment. Biosecurity concerns cannot be used to restrict entry of government regulatory staff to agricultural operations.

Similarly, the Ontario Society for the Prevention of Cruelty to Animals (OSPCA), including affiliated local humane societies, have the powers of a police officer in order to enforce the OSCPA Act and the animal cruelty provisions of the Criminal Code of Canada. The OSPCA Act empowers inspectors or agents (such as a veterinarian or police officer) access to private property in cases where:

- a search warrant is issued by a Justice of the Peace
- the inspector/agent/officer observes an animal in immediate distress, or
- the owner grants permission to enter.

The OSPCA also have a biosecurity protocol for their inspectors/agents, who are expected to follow reasonable biosecurity measures when carrying out their duties.

Summary

The Importance of Biosecurity to Agricultural Production

Biosecurity provides:

- an essential component of many on-farm food safety programs
- greater consumer acceptability of the quality and safety of the food supply
- healthy animals that are more productive
- improved animal welfare and well-being

- improved efficiency and profitability for the farmer.

Whether it is the relatively controlled environment of a poultry production facility, or the more open pasture of a beef or dairy operation, biosecurity is critical. Over the past decade, food safety, public health and animal health have gained greater importance throughout the world. Quality assurance and HACCP (Hazard Analysis Critical Control Points) programs originate at the primary production level – the farm – with biosecurity planning a key role for the entire food production chain.

As the primary producers of food, farmers and all involved in agriculture are expected to do their part, using use new knowledge and technology to continuously improve the safety of the food supply, maintain and improve animal health and protect the environment. Greater focus on prevention through basic hygiene and biosecurity standards, closed production systems, detailed record keeping and animal identification will be required. A sound nutrient management plan will include biosecurity measures as part of the plan.

Because hazards and risks vary among species and types of operations, what works for one farm may not be appropriate or effective for another. Each farm needs to develop a specific, documented biosecurity plan in consultation with their veterinarian. Visitor control as presented in this Factsheet is just one component of the complete biosecurity plan.

The Fundamentals of Developing a Biosecurity Plan

- Identify possible risk factors.
- Identify critical control points for your operation.
- Set limits or standards for your farm.
- Set up a monitoring schedule and procedures.
- Keep effective records

Today's farmers rely on biosecurity to protect their land, their animals and their livelihood. All visitors must respect the requirements of a particular farm and the commodity guidelines. Current developments in most commodities at the local, provincial and national levels related to QA requirements should be adhered to and in visible evidence for all visitors.

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Figure 1. Restrict access to livestock facilities. Visitors should wear protective clothing and follow strict cleaning and disinfection protocols.

Resources

*OMAF Factsheet 01-043, Biosecurity: Health Protection and Sanitation
Strategies for Cattle and General Guidelines for Other Livestock
OMAF Factsheet 00-091, Biosecurity For Horse Farms*



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