Animal Biosecurity and Disease Reporting

Effective Date: May 2007

Applicable Legislation:

Animals for Research Act
Dead Animal Disposal Act
    Regulation 263
Health of Animals Act
    Health of Animals Regulations
    Reportable Diseases Regulations

Intent: to promote awareness and appropriate due diligence for animal biosecurity; to implement best practices for operational performance that prevents the transmission of infectious agents to animals, between animals, and between animals and humans.

Scope: includes all animal-related clinical, teaching and research activities of the University (on-site and off-site) that involve client-owned domestic and agricultural animals, laboratory animals, livestock, captive wild animals, and wild animals in their natural environments.

Definitions:

biosecurity involves protocols and procedures to prevent the entry of a pathogen into a facility, individual or population.

CFIA Canadian Food Inspection Agency.

control area all infected places within which movement restrictions and eradication measures are authorized by CFIA.

disease abnormal or unhealthy condition caused by an infectious agent; any reportable or notifiable disease or other serious epizootic disease to which an animal or germplasm is susceptible, and which can be transmitted by the animal or germplasm.
disinfection the elimination of most, but not necessarily all, infectious agents; the application after thorough cleaning of procedures to destroy the infectious or parasitic agents of animal diseases including zoonoses. The level of disinfection required of premises, vehicles and objects, (directly or indirectly contaminated) will depend on the specific situation [Bennet and Brachman, Hospital Infections, 4th Edition].

emergency an abnormal situation requiring prompt action beyond normal procedures in order to prevent injury or damage to people, plants, livestock, property or the environment.

Foreign Animal Disease (FAD) a reportable disease or immediately notifiable disease that does not exist in Canada, or any other disease prescribed as such, and for which there is a management strategy; also referred to as an exotic animal disease. See the Reportable Diseases Regulations at http://laws.justice.gc.ca/en/H-3.3/SOR-91-2/132116.html.

germplasm semen, male or female germ cells, or genetic material taken from a male or female germ cell for the purpose of producing a zygote and includes embryos but does not include a hatching egg.

infection the presence of the pathogenic agent in the host.

infection control refers to appropriate proactive initiatives to prevent the transmission of disease between animals and to minimize the risk of disease outbreaks via early detection (surveillance) and effective control measures.

prohibited material anything that is or contains any protein that originated from a mammal other than a porcine or an equine. It does not include milk, blood, gelatin, rendered animal fat or their products.

regulated animal a hatching egg, turtle, tortoise, bird, honeybee or mammal, but does not include germplasm.

**specified risk material** SRM, the skull, brain, trigeminal ganglia, eyes, tonsils, spinal cord and dorsal root ganglia of cattle aged 30 months or older, and the distal ileum of cattle of all ages.

**toxic substance** a substance prescribed as toxic by the Minister of Agriculture and Agri-Food; see http://www.inspection.gc.ca/english/anima/heasan/man/crrc/crrce.shtml and http://www.ec.gc.ca/npri-inrp-comm/Environmental_and_Health_Issues/Toxic_Substances-WSBA4EBD70-0_En.htm

**vector** an animal (frequently an invertebrate animal such as an insect) that has the potential to transmit a disease directly or indirectly from one animal to another.

**Veterinary Inspector** A veterinarian appointed or designated as an inspector under Section 32 of the *Health of Animals Act*.

**Guidelines**

1. Biosecurity programs are in effect at the Veterinary Teaching Hospital (VTH), at Campus Animal Facilities, at the Ontario Agricultural College (OAC) Regional Campuses, at the OMAFRA agricultural research stations, and at other facilities managed by the University where animals are housed for research, teaching and/or service (*e.g.*, see list of facilities at http://www.uoguelph.ca/research/stations/index.shtml).

2. Biosecurity programs are station, building or facility-specific depending on the species at risk, the type of operations and activities, and environmental factors. Background information from CFIA is found at http://www.inspection.gc.ca/english/anima/heasan/fad/biosecure.shtml. Recommended *operational biosecurity precautions* are summarized explicitly in this document. Animal facility management personnel are responsible for implementing facility-specific biosecurity initiatives, maintaining records, and managing incidents.
3. Research station or building-specific visitor reception areas must be conspicuously identified. All visitors (including employees from off-site, students, service providers and contractors) must sign-in and sign-out at the designated visitor reception areas.

4. Employees and visitors must be asked to self-identify whether they present any concerns regarding biosecurity (e.g., recent return from a foreign country, earlier same-day visit to another farm, personal illness, etc.) A briefing about appropriate biosecurity precautions must be provided to all visitors admitted to any animal facility.

5. University personnel and visitors who have recently returned from countries with reportable disease outbreaks (as noted by alerts posted at http://www.oie.int/eng/en_index.htm or at http://www.inspection.gc.ca/english/toce.shtml), and where they may have had contact with infected animals or animal products in that country, must consult with their supervisors and/or animal facility or research station managers about potential contacts with susceptible species at University or client facilities. Contact with animals may be prohibited for a time based on an assessment of risk.

6. Hand hygiene protocols are mandatory for employees and visitors upon admittance to and upon leaving animal facilities. Personnel may be required to wear protective footwear and coveralls (if contact with animals is likely) at the discretion of the animal facility supervisor.

7. Facility or station managers, supervisors or designates exercise authority about the nature (e.g., escorted, un-escorted) and extent of employee and visitor access to University animal facilities. Appropriate facility-specific biosecurity precautions will be required, even for compliance inspections and performance audits.

8. Tours of university owned or managed animal facilities must be pre-arranged with the respective facility or station manager. Facility management personnel exercise authority to permit or deny third party visits and to dictate mandatory biosecurity precautions.

9. Any issues about biosecurity, biosecurity protocols or third-party concerns about facility access restrictions should be referred to the Executive Director of the VTH, the Director of Research Facilities Management, the Directors of the OAC Colleges, and/or to the Director of Research Risk Management, Office of the Vice-President Research.
10. University service personnel visiting non-University farm properties must exercise precautions for biosecurity (see Appendix 1 herewith). CFIA recommended farm visit protocols identify biosecurity practices for farm visits that involve livestock handling, and not (see http://www.inspection.gc.ca/english/anima/heasan/disemala/cpm-mpc/cpm_1-3_attachment_iie.shtml and http://www.inspection.gc.ca/english/anima/heasan/disemala/cpm-mpc/cpm_1-3_attachment_ie.shtml).

11. Entry into University owned or managed facilities by government authorities, agricultural officials, and veterinary inspectors or their agents, shall be permitted. Unannounced visits or inspections should be reported to the facility supervisor, the Director of Research Facilities Management and/or to the Director of Research Risk Management, Office of the Vice-President Research.

12. No person shall obstruct an inspector or peace officer that is engaged in the performance of his/her duties. Orders from a veterinary inspector shall be obeyed forthwith.


14. Ruminant and non-ruminant feeds and feed ingredients shall be stored separately to avoid cross-contamination; feed supply documentation (name and address of supplier, date of purchase and amount) and all invoices shall be retained for two years.

15. Employees who have possession, care or custody of a ruminant shall keep (in a separate file) copies of all invoices for any animal food that contains prohibited material.

16. No person shall feed prohibited material to a ruminant.

17. No person shall import, manufacture, package, label, store, distribute, sell or advertise for sale any animal food for ruminants that contains prohibited material.

18. No person shall import, manufacture, package, store, distribute, sell or advertise for sale, any animal food for equines, porcines, chickens,
turkeys, ducks, geese, ratites, or game birds that contains prohibited material, unless it is conspicuously and indelibly labeled “do not feed to cattle, sheep, deer or other ruminants”, and documentation is maintained as per the Health of Animals Regulations, Part XIV.


20. Every person who slaughters, cuts up or de-bones cattle for human consumption as food shall ensure that the specified risk material has been removed from the cattle.

21. Every person who has possession, care, or control of an animal or carcass of an animal shall ensure that an approved tag identifies it before it is moved from its farm of origin, pursuant to the Health of Animals Regulations, Part XV. There are enhanced CFIA requirements for disposing of cattle material including specified risk material. See the Deadstock Disposal section herein and the CFIA web page http://www.inspection.gc.ca/english/anima/heasan/disemala/bseesb/enhren/diselie.shtml.

22. Veterinarians who have or take possession, care or control of an animal at a University animal facility, shall notify the nearest CFIA veterinary inspector of the presence of a reportable disease or toxic substance, or any fact indicating its presence in or around the animal (i.e., firm suspicions), immediately after becoming aware of the presence or fact. (The veterinarian shall remain at the suspect premises until relieved by a CFIA-appointed veterinary inspector or provincial District Veterinarian. Persons and equipment must not be permitted to leave the premise.) University authorities shall also be notified including the University Staff Veterinarian, the Facility Manager, the Director of Research Facilities Management, and the Director of Animal Care Services. (CFIA district offices are listed at http://www.inspection.gc.ca/english/anima/heasan/offbure.shtml#A6)

23. A disease-specific notice forbidding entry shall be posted immediately at locations quarantined in accordance with the Health of Animals Act, Part X. No person shall leave the vicinity of an infected place until so authorized by a veterinary inspector.
24. In respect of a disease agent, animal or thing quarantined pursuant to the *Health of Animals Regulations*, Part X, no person shall do or permit to be done any of the following actions, without the authorization of a veterinary inspector:

(a) remove the disease agent, animal or thing from the place of quarantine;

(b) allow the disease agent, animal or thing to come into contact with an animal that is not quarantined under the same quarantine order;

(c) destroy the disease agent, animal or thing; or

(d) treat or test the disease agent, animal or thing for a communicable disease.

25. Every person who has the possession, care or control of an animal quarantined pursuant to the *Health of Animals Regulations*, Part X, shall immediately notify a veterinary inspector of any quarantined animal that appears sick.

26. Every person in charge of animals in a control area shall, when requested by a veterinary inspector, permit tests for communicable diseases to be conducted on the animals and shall permit the animals to be marked or tagged.

27. Diseased animals shall be destroyed and carcasses shall be disposed in the manner specified by a veterinary inspector.

28. When so directed, cleaning and disinfection of premises, vehicles and equipment shall be performed as per instructions of a veterinary inspector pursuant to the *Health of Animals Regulations*, Part X.

29. The import and export of animals, regulated animals, animal products, animal by-products, animal pathogens, organisms carrying animal pathogens, animal blood, animal serum, animal embryos, animal semen, animal food, and veterinary biologics shall be arranged pursuant to the *Health of Animals Regulations* (i.e., with prescribed permits and certifications) and in consultation with the University Staff Veterinarian. (See applicable sections of the Regulation at [http://laws.justice.gc.ca/en/H-3.3/C.R.C.-c.296/index.html](http://laws.justice.gc.ca/en/H-3.3/C.R.C.-c.296/index.html).)

30. No person shall import into Canada any animal by-product from an animal affected with anthrax, foot-and-mouth disease, rinderpest or bovine spongiform encephalopathy (BSE), or any reportable disease or any other serious epizootic disease, and which can be transmitted by the animal by-product. The University Staff Veterinarian should be consulted for advice.
31. The University shall provide counseling, services and occupational health surveillance (e.g., for zoonotic diseases) for employees and students in accordance with Safety Policy 851.13.03 (see http://www.uoguelph.ca/ehs/policies/13-03.pdf.) Occupational illnesses must be reported to Occupational Health Services.

**Additional Information**

Biosecurity is an on-going concern to Canada’s agricultural sector because of foreign and emerging contagious diseases, the diverse origin (near and far) of essential farm inputs, and compliance with prescribed requirements for protective activities and food safety. Sources of disease-causing agents (bacteria, viruses, prions, parasites) include wild birds, rodents and other animals, contaminated people (hands, footwear, and clothing), contaminated farm equipment (vehicles, crates, feed carts, feed and water troughs, hand tools) and contaminated water sources. See http://www.inspection.gc.ca/english/anima/heasan/fad/biosecure.shtml; http://www.omafra.gov.on.ca/english/livestock/vet/facts/04-003.htm.

The benefits of biosecurity protocols include healthier animals, quality in research, improved operational efficiencies, public confidence, and reduced likelihood of costly consequences due to disease outbreaks. Incidents of disease are most effectively prevented and controlled at farm and operations sites using defensive strategies that involve ‘multiple barriers’.

Effective biosecurity is based on three concepts, *strategic vaccination programs* or other programs that boost the host’s specific immunity, *exclusion* (i.e., keeping the disease from entering on-site) and *containment* (i.e., preventing the spread of a disease within a premise or spread off-site). Key components of containment strategies include isolation, traffic control, cleaning, disinfection, hygiene and eradication.

Recommended operational biosecurity precautions are based upon Canadian Food Inspection Agency (CFIA) biosecurity protocols. (See http://www.inspection.gc.ca/english/anima/heasan/disemala/cpm-mpc/cpm_1-3_attachment_ie.shtml.) For further advice, consult the University’s Staff Veterinarian (ext. 58856), the Director of Animal Care Services (ext. 54305), the Manager of Campus Animal Facilities (ext. 54304), or the Director of Research Risk Management (ext. 52048).

Selected OVC VTH policies are summarized in the *Undergraduate Manual* http://www.ovc.uoguelph.ca/vth/documents/HospitalUndergradManual_2005

The biosecurity performance levels for University farm-site, animal building or animal housing will be progressively rigorous depending on current risks to human and animal health, risks to on-site operations, and risks to off-site operations. These progressive levels of performance may be described conveniently as **operational biosecurity precautions, enhanced biosecurity precautions, and emergency biosecurity precautions**. Operational procedures are subject to compliance audit. Typical precautions (or equivalent) for each level of biosecurity are summarized.

**Operational Biosecurity Precautions**

Where appropriate and where possible, the following *operational biosecurity precautions* are reasonable day-to-day performance standards:

**Farm Access**

- Driveways signed with the message (or equivalent) “*Access restricted to authorized persons. Biosecurity programs in effect. Visitors must register at Reception. Visitor parking in designated areas only.*“
- Delivery and service vehicles proceed in accordance with pre-arranged instructions from the station or facility manager.
- Traffic of incoming people, products and vehicles that could bring disease is limited and controlled.
- Perimeter gates are secured after-hours.

**Barn or Building Access**

- Buildings are signed with the message (or equivalent) “*Access restricted to authorized persons. Biosecurity programs in effect. For further information, contact the Station Manager.*“
- Traffic of incoming people, products and vehicles that could bring disease is limited, and controlled by the animal facility manager.
• The animal facility manager determines (and usually provides) the types of protective clothing required for operational biosecurity (e.g., coveralls, appropriate gloves, non-slip rubber safety boots).
• Hand-washing and/or hand-sanitizing stations (with appropriate posted instructions) are situated near entryways and/or exits.
• Entryway footbaths with scrub-brushes (or equivalent, e.g., dedicated footwear, boot-washing stations) are situated at or in animal facilities. Footbath solutions are refreshed as recommended.
• Buildings are locked whenever un-attended and after-hours.

Hand Hygiene

• Hands should be washed with soap and warm running water (or rubbed with and alcohol-based sanitizer if not visibly soiled) for at least 30 seconds.
• Wash hands frequently, including before putting on and removing personal protective clothing and equipment.
• Avoid touching the face, particularly the mouth, nose and eyes.
• Hand hygiene is likely the most important measure for successful operational biosecurity.

Pest Control

• Rodents, birds, pests and wildlife are excluded from closed feed storage facilities and closed buildings.
• Openings are sealed or screened to prevent nesting.
• Buildings are rodent-proofed where feasible; flies are controlled.
• Rodent and pest control programs are implemented; see http://www.omafra.gov.on.ca/english/livestock/dairy/facts/07-009.htm

Care, Watering, Feeding and Transportation of Animals

• Feed is obtained from known reputable sources.
• Feed storage and feed delivery systems are watertight.
• Water quality is checked in accordance with prescribed regulations (see [http://www.ene.gov.on.ca/envision/water/sdwa/legislation.htm](http://www.ene.gov.on.ca/envision/water/sdwa/legislation.htm)).

Manure and Nutrient Management

• Manure and farm nutrients should be composted and runoff should be directed away from animal housing and watercourses (see [http://www.ene.gov.on.ca/envision/land/nutrient_management.htm](http://www.ene.gov.on.ca/envision/land/nutrient_management.htm)).

Equipment

• Separate tools are used for feed and manure.
• Hand tools (e.g., trimmers, knives, grooming tools) are cleaned and disinfected after use on individual animals.
• Water troughs, bowls and feed mangers are cleaned regularly.
• Syringes are used only once and discarded in orange biohazardous waste bags.
• Needles are used once only and discarded in a sharps container.

New Animals

• Research station herds and flocks are closed to new additions and returning animals whenever possible. This means that no new animals are introduced. New genetics are introduced only from germplasm collected at CFIA accredited facilities pursuant to regulations.
• If new animals are to be introduced or if animals are to be returned, the herd/flock veterinarian and the University Staff Veterinarian must be consulted about where to source such animals, and what diagnostic tests and criteria are needed to screen animals before and after arrival.
• New and returning animals are transported in sanitary vehicles/trailers (preferably those of the University); use of University halters and ropes (not those of the supplier) is required.
• Newly acquired animals (from third-party sources) are isolated (separate housing and feeding areas) for the period recommended by the attending veterinarian; health status is closely and regularly monitored during this period.
• New animals are cared for after resident animals to minimize risks of any biological cross-contamination.
• Signs of illness are reported to the facility veterinarian when first suspected;
• All unexpected deaths are reported forthwith to the principal investigator and to the facility veterinarian; a post mortem
examination is performed on mortalities and the Director of Animal Care Services is consulted about an Animal Incident Report (see http://www.uoguelph.ca/research/acs/acs/forms/word/incident_report.doc);

- Species-specific animal care SOPs are developed as required.

Visitors including Agribusiness and Service Personnel and Veterinarians

- All visitors must sign-in and sign-out at the designated visitor reception area (which may be station or building-specific). Date, contact information and the purpose of the visit must be recorded.
- Visitors must be asked to self-identify if they have come directly from another farm, just returned from overseas, or if they should be restricted from contact with animals for any reason.
- All personnel must wash or sanitize their hands before entering animal facilities.
- Visitors may be required to don clean (i.e., laundered) protective clothing (e.g., coveralls) and clean (i.e., disinfected) footwear (e.g., safety boots) as required by the station or facility manager or designate, before entering animal facilities.
- Visitor access to facilities is limited to the areas of immediate interest; unnecessary contact with animals is prohibited.
- All personnel must wash or sanitize their hands upon exiting animal facilities.
- Visitors unprepared to follow reasonable biosecurity precautions are to be denied access to University animal facilities.
- Incidents are to be reported to the appropriate Manager and Director for the animal facility, and/or to the Director of Research Risk Management.

Facility managers may implement additional or alternative operational biosecurity precautions as needs and circumstances dictate.

**Enhanced Biosecurity Precautions**

University authorities, provincial veterinary or public health inspectors or agents, peace officers or CFIA officials may recommend or order the need for enhanced biosecurity precautions. These precautions may require that:

**Barn and Building Access**

- Quarantine areas for at-risk animals are established and posted.
• Visitor access to the animal facility is restricted or prohibited.
• Access to the quarantine areas is controlled.
• People (including certain employees if necessary) who own or have contact with other animals (certain species) are excluded from coming in contact with animals owned or cared for by the University.
• Hand-washing and/or hand-sanitizing stations (with appropriate posted instructions) are provided near quarantine areas.
• Dedicated clothing (impervious coveralls and gloves, rubber boots) is worn in designated buildings and/or quarantine areas as prescribed; this clothing would be laundered or collected for disposal on-site.
• Respiratory protection (e.g., fit-tested N95 filtering face-pieces) may be required when in close contact with potentially infected animals, beddings and/or manure.
• Entryway footbaths (or equivalent, e.g., dedicated footwear, boot-washing stations) are provided and scrub-brushes are used.
• Special handling and disposal precautions are mandated for mortalities.
• Vehicles, trailers and other equipment are cleaned and disinfected after each use.

Equipment

• Movement of equipment between quarantine and non-quarantine areas is restricted.
• Cleaning and disinfection protocols are implemented for equipment entering and exiting quarantine areas thereby excluding and containing the biological agent(s) of concern.
• Manure handling equipment and manure haulers are cleaned and disinfected before being taken off-site.

Vehicles

• Vehicle cleaning and disinfection protocols are implemented when entering and leaving the premise. (See, for example, http://www.antecint.co.uk/main/vbpmenu.htm).
• Special arrangements with suppliers and service providers are necessary to control access and prevent disease transfer.

Additional safeguards for enhanced biosecurity precautions may be implemented on a case-by-case basis commensurate with the specific biosecurity risk or biological agent to be managed. For example, movements of personnel between infected and non-infected facilities (or farms) may be restricted.
Emergency Biosecurity Precautions

The CFIA Emergency Response Team and/or provincial agricultural authorities can order emergency biosecurity precautions to eradicate disease outbreaks in a declared control area. Veterinary supervision of the quarantine area is mandatory. Precautions specified by CFIA Director of Field Operations may require that:

- Notices are posted at the perimeter of the control area and on the premise as directed by a veterinary inspector. (The control area would include the infected zone, a surrounding security zone, and a perimeter buffer zone.)
- Shower facilities are erected in the control area.
- Employee and visitor site access is suspended and access to the control area is restricted to essential emergency response personnel.
- Dedicated protective clothing (i.e., no street clothing) is worn in the control area (see www.osha.gov/dsg/guidance/avian-flu.html); street clothing and footwear is donned after showering, before departing from the controlled area.
- An identification system for response personnel is implemented and an access/action log is created to record initiatives that mitigate the emergency in the control area.
- Quarantine areas for diseased and/or at-risk animals are established and posted as directed.
- Vehicle cleaning and disinfection protocols are implemented for traffic entering and leaving the control area (see, for example, http://www.antecint.co.uk/main/vbpmenu.htm). Movement restrictions between infected and non-infected locations will be enforced.
- Animal-specific tracking records may be necessary.
- Animals suspected of being diseased, being vectors of the causative agent(s) of disease, or susceptible to disease, are destroyed pursuant to instructions from a CFIA veterinary inspector.
- A veterinary inspector oversees special precautions and procedures for containment and disposal of all dead animals, bedding and manure (usually by incineration, burial or composting).

Additional situation-specific emergency biosecurity precautions must be implemented as directed by a CFIA veterinary inspector, provincial veterinary authority, or peace officer.
Deadstock and Dead Animal Disposal


Consult the Director of Research Risk Management (519-824-4120 ext. 52048) about the CFIA permits issued to the University.

The Dead Animal Disposal Act is found at http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90d03_e.htm, and Regulation 263 pursuant to this legislation is found at http://www.e-laws.gov.on.ca/DBLaws/Regs/English/900263_e.htm.

The OMAFRA link to information about dead animal disposal options is http://www.omafra.gov.on.ca/english/livestock/deadstock/index.html.

Disinfectants and Disinfection

Disinfectants are chemicals used to destroy viruses and microbes (germs) such as bacteria and fungi on surfaces that cannot be autoclaved. However, workplace applications can only partially sterilize these surfaces. Cleaning and disinfecting are nevertheless important routines for biosecurity. For disinfectants to be effective, objects must be cleaned first to eliminate soil and organic debris. Disinfectants may be applied using brushes, sponges or sprayers; ensure the recommended contact time.

Examples of agricultural disinfectants and their preparations are:

  Accelerated Hydrogen Peroxide – e.g., Bayer Peroxigard™, is a disinfectant appropriate for equipment and surfaces. Contact time is 5 minutes.
**Acetic Acid** - a 2% solution *(e.g., equal parts of household vinegar and water)* – is suitable for non-porous surfaces *(e.g., rubber, metal)* if rinsed thoroughly with water. Contact time is 30 minutes.

**Citric Acid** (powder) – recommended dilution is 2 g/L; non-corrosive and suitable for disinfecting paint, metal, wood, concrete, textiles, protective clothing and skin; may be used in power sprayers but do not mix with ionic detergents. Contact time is 30 minutes.

**Germ Kill®** - 1:100-200 dilution – a corrosive iodophor disinfectant for use on buildings, equipment, vehicles and animal pens; excellent virucidal agent and good bactericide and fungicide. Contact time is 20 minutes; rinse with water after use.

**Sulphamic Acid** - 28.5 g/13.5 L – is safe for metals, paints, rubber and plastic. Contact time is 5 minutes; rinse with water.

**Virkon©** (powder) 2% solution (dilution is 20 g/L of water) – a non-corrosive oxidizing disinfectant active against a wide spectrum of viral, bacterial and fungal agents; suitable for footbaths and cleaning equipment *(e.g., wheel dips)*. Contact time is 10 minutes. Effective for about one week.

Information about agricultural disinfectants and disinfection is found at [http://www.omafra.gov.on.ca/english/livestock/vet/facts/05-033.htm#table2](http://www.omafra.gov.on.ca/english/livestock/vet/facts/05-033.htm#table2)

Further information may be found in the reference [http://www.oie.int/eng/publicat/rt/a_rt14_1.htm](http://www.oie.int/eng/publicat/rt/a_rt14_1.htm).

---

**Canadian Food Inspection Agency (CFIA) Feed Ban**

The CFIA feed ban was introduced in 1997 to prevent bovine spongiform encephalopathy (BSE) from entering the animal and human food chains. This feed ban prevents rendered protein products *(e.g., nutrient-rich meat and bone meal)* derived from cattle, sheep and other ruminants from being fed to susceptible ruminant animals. Since prohibited protein materials may be used in feeds for poultry, swine and other non-ruminant species, physically separate storage space is required and the use of dedicated equipment for mixing and distribution is justified. Record keeping is prescribed by regulation. Information about the feed ban may be found at [http://www.inspection.gc.ca/english/anima/feebet/rumin/enhrene.shtml](http://www.inspection.gc.ca/english/anima/feebet/rumin/enhrene.shtml) and [http://inspection.gc.ca/english/anima/feebet/rumin/enhqueste.shtml](http://inspection.gc.ca/english/anima/feebet/rumin/enhqueste.shtml).
Foreign Animal Diseases (FAD) and Reportable Diseases (RD)

Border and import restrictions and on-farm biosecurity controls are used to prevent the introduction of foreign (exotic) animal diseases and indigenous diseases onto Canadian farms. The consequences of FAD and communicable disease outbreaks are minimized by early identification, containment and eradication. See Appendix 1 for a summary of university FAD/RD protocols.

The World Organization for Animal Health (formerly known as the OIE) coordinates international animal disease surveillance and prevention initiatives (see http://www.oie.int/eng/en_index.htm). The Organization posts alert messages chronologically, by country and by disease (see http://www.oie.int/eng/info/hebdo/a_info.htm).

The OIE disease information database is found at http://www.oie.int/eng/maladies/en_alpha.htm.

The diseases (identified pursuant to the Health of Animals Act) that are immediately reportable to the Canadian Food Inspection Agency (Ontario) District Veterinarian (519-837-9400) and to the Provincial Veterinarian (519-826-3127) are identified in a listing at http://laws.justice.gc.ca/en/H-3.3/SOR-91-2/132116.html#rid-132128

Explanations from CFIA about reportable diseases (i.e., by animal owners, veterinarians and analytical laboratories), immediately notifiable diseases and annually notifiable diseases (i.e., by analytical laboratories) are found at http://.inspection.gc.ca/english/anima/heasan/disemala/guidee.shtml.


The Ontario Animal Health Surveillance Network is described at http://www.omafra.gov.on.ca/english/livestock/vet/facts/ahsn.htm#OAHSN.

The role of the private veterinarian in diagnosing foreign animal diseases is explained at http://www.inspection.gc.ca/english/anima/heasan/fad/privete.shtml.

Biological agents that are recognized threats to public health and safe agriculture are identified in an OMAFRA datasheet at http://www.omafra.gov.on.ca/english/livestock/vet/facts/info_bioterrorism.h
Public Safety and Emergency Preparedness Canada (PSEPC) is the lead federal government agency for public safety, emergency preparedness and response. The web site is http://www.psepc.gc.ca/index-en.asp.

The National Animal Health Program of the Canadian Food Inspection Agency (CFIA) protects livestock and poultry from domestic and foreign animal diseases that threaten human and animal health and agricultural enterprise. For more information, see http://www.inspection.gc.ca/english/animal/eahan/import/importe.shtml.

**Canadian Animal Health Network (CAHNet)**


**Canadian Cooperative Wildlife Health Centre (CCWHC)**

The CCWHC is dedicated to wildlife conservation and management and coordinates Canada’s wildlife health surveillance programs (e.g., for west nile virus, avian influenza, chronic wasting disease). The CCWHC web site is a helpful source of information about wildlife health topics. See http://wildlife1.usask.ca/en/CCWHC_home.php.

**Care and Use of Wildlife**

Emergency Preparedness at Animal Facilities

Situation-specific emergency response plans (ERPs) and related plans for business continuity should be developed and/or updated at each animal holding facility. Situations to anticipate include emergency evacuation of animals, quarantine for disease, euthanasia, security of feed and water supplies, and other foreseeable emergency circumstances. This planning will require consultation with and input from a number of colleagues and stakeholders. Issues to consider include health and safety precautions for responding personnel, communication and internal reporting protocols, whether and where animals must be relocated, equipment and supplies needed, on-going provision of safe food and water, provision of essential services, veterinary needs, adequate staffing and support for animal care, etc.

A template for emergency response planning, and assistance in this undertaking, is available from the Director of Research Risk Management, Office of the Vice-President Research, extension 52048.

Occupational Health Protection

Proactive exposure-specific medical assessment and surveillance programs are designed to help identify workplace health protection precautions and to detect the occurrence of occupational illnesses at early treatable stages. Personnel in contact with animals or animal materials must be particularly cognizant about zoonotic diseases (e.g., highly pathogenic avian influenza, bovine tuberculosis, histoplasmosis, Newcastle disease, Q-fever, rabies, tularemia) and the appropriate precautionary measures including medical surveillance. See Safety Policy http://www.uoguelph.ca/ehs/policies/06-15.pdf about due diligence for agricultural work and research activities that present potential for zoonoses.

As a further example concerning proactive due diligence, agricultural workers and students who are directly involved with poultry should receive the current season’s influenza vaccine to reduce the possibility of concurrent infection with avian and human influenza viruses. This strategy reduces the likelihood of further viral antigenic shift changes that would be detrimental to avian or human health.

For more information about health surveillance programs and confidential services for employees, please see University Safety Policy 851.13.03 at
Public Health at the Ontario Veterinary College

For information about public health research at the Ontario Veterinary College, see http://www.ovc.uoguelph.ca/public_health/.

Prion Disease Agents

The CFIA has prescribed unique requirements for facilities where know prion disease agents (e.g., TSE infected materials and animals) are handled. The document is titled Containment Standards for Laboratories, Animal Facilities and Post Mortem Rooms Handling Prion Disease Agents, July 1995; see http://www.inspection.gc.ca/english/sci/bio/anima/consult/prionindexe.shtml. Consult the Director of Research Risk Management (ext. 52048) for more information.
References

CFIA - Overview of Canada’s Emergency Management Framework

CFIA: Farm Biosecurity ... A Common Sense Guide

CFIA: On-Farm Biosecurity: Key Avian Influenza Protection

OMAFRA: Office of the Chief Veterinarian for Ontario

OMAFRA: General Biosecurity Information

OMAFRA Livestock (portal)
http://www.omafra.gov.on.ca/english/livestock/index.html

OMAFRA Fact Sheet: Biosecurity Fundamentals for Visitors to Livestock Facilities,
http://www.omafra.gov.on.ca/english/livestock/vet/facts/04-003.htm

OMAF Fact Sheet: Biosecurity – Health Protection and Sanitation for Cattle and General Guidelines for Other Livestock,
http://www.omafra.gov.on.ca/english/livestock/vet/facts/05-033.htm

OMAFRA: Horses – Health Management and Biosecurity
http://www.omafra.gov.on.ca/english/livestock/horses/health.html

OMAFRA Fact Sheet: Biosecurity for Horse Farms
http://www.omafra.gov.on.ca/english/livestock/horses/facts/00-091.htm

OMAFRA: Sheep – Health Management and Biosecurity
http://www.omafra.gov.on.ca/english/livestock/ceanor/2006/dec06a15.htm
OMAFRA: Biosecurity in the Sheep Flock

OMAFRA: Goat – Health Management and Biosecurity
http://www.omafra.gov.on.ca/english/livestock/goat/health.html

OMAFRA: Swine – Health Management and Biosecurity
http://www.omafra.gov.on.ca/english/livestock/swine/health.html

OMAFRA: Poultry – Health Management and Biosecurity
http://www.omafra.gov.on.ca/english/livestock/poultry/health.html

OMAFRA Fact Sheet: Biosecurity Recommendations for Small Flock Poultry Owners,
http://www.omafra.gov.on.ca/english/livestock/poultry/facts/05-079.htm

Ontario Veterinary College Veterinary Teaching Hospital Undergraduate Manual

Veterinary Teaching Hospital Infection Control Manual

Canadian Animal Health Network
http://www.cahnet.org/welcome.htm

Ontario Animal Health Surveillance Network
http://www.omafra.gov.on.ca/english/livestock/vet/facts/ahsn.htm#toc

Government of Canada
http://www.pandemicinfluenza.gc.ca

US Government - Pandemic Influenza and Avian Influenza
http://www.pandemicflu.gov/

World Health Organization (WHO) Epidemic and Pandemic Alert and Response
http://www.who.int/csr/en/
FOREIGN ANIMAL DISEASE / REPORTABLE DISEASE PROTOCOLS

1. Areas of Risk for Foreign Animal Disease (FAD) or Reportable Disease (RD):
   a. Research stations and facilities on campus housing species at risk\(^1\) of contracting an RD including a FAD;
   b. Researchers and research assistants visiting farms in Ontario that contain species at risk of FAD or RD;
   c. Visitors from foreign countries or personnel returning from foreign countries attending the research stations;
   d. Veterinary Teaching Hospital servicing VTH client animals at risk\(^1\) as well as research and teaching animals;
   e. Researchers handling wildlife in the field.

2. Protocols for researchers and research assistants that are in contact with at risk species\(^1\) and university employees who care for at risk\(^1\) research animals:
   a. Returning from a foreign country
      i. Regardless of the disease status of the country in question, the employee / researcher / research assistant must not come in contact with (research) animals at risk of any FAD or RD\(^1\) for up to two weeks after returning to Canada, or until the CFIA recommended wait time has elapsed. Consult with your supervisor and/or facility manager.
   b. If an employee or researcher or research assistant suspect that a research animal may be suffering from a FAD/RD, they must:
      i. Immediately notify the station manager or their designate, and notify the University Staff Veterinarian;
      ii. Not leave the research facility nor allow any vehicles, equipment or other personnel to leave the facility;
      iii. Contact the veterinary service responsible for providing health care to that facility/species (e.g. for ruminants such as cattle, sheep and goats - Ruminant Field Service; for equine - Large Animal Medicine; for swine - Swine Health Management). If the attending veterinarian suspects a FAD /RD then he/she must comply with the regulations in the Health of Animals Act and contact the District Veterinarian (Edward H. Creighton D.V.M., District Veterinarian, Guelph District Office, Canadian Food Inspection Agency, 519-826-2832, fax 519-837-9774, creightone@inspection.gc.ca).

3. If an employee, researcher or research assistant is attending farms off campus that contain any of the species listed in footnote 1, he/she must comply with the following protocols regarding biosecurity:

\(^{1}\) These species include, but may not be limited to all species of ruminants (wild and domestic), camelids, equine species, avian species and swine.
This protocol is based on the Farm Visit Protocol provided to OMAFRA and MOE staff, [http://www.omafra.gov.on.ca/english/tco/200619/TC200619.html](http://www.omafra.gov.on.ca/english/tco/200619/TC200619.html).

(1) **When arriving on site:**
   
   (a) Park vehicle away from sources of contamination:
       ▪ not adjacent to livestock housing facilities and animal traffic areas;
       ▪ not underneath ventilation exhausts and inlets;
       ▪ no visible contamination (e.g. manure) on the ground;
       ▪ so that it does not interfere with conduct of business;
   
   (b) If owner / operator is present, determine if a local biosecurity protocol is in place. Respect any posted protocols and / or barriers at the facility;
   
   (c) Wear boots clean of any visible contamination or wear disposable boot covers. Boots should be washed with disinfectant soap prior to entering the facility;
   
   (d) Wash hands and exposed arms with a hand cleanser prior to entering the facility.

(2) **When leaving the operation:**

   (a) Leave disposables on the farm or bag them in a sealed container so that they do not contaminate the contents of the vehicle;
   
   (b) Wash and disinfect any equipment used to handle or treat livestock;
   
   (c) After each farm visit, boots should be scrubbed with an effective soap and rinsed with clean water in order to remove all evidence of manure - include the bottom of the boots and pay particular attention to the treads;
   
   (d) Wash hands and exposed arms with a disinfectant hand cleanser;
   
   (e) If outerwear is soiled with manure or animal products during the visit (e.g. coveralls, coat, hat), remove and bag clothing so that no contamination of the vehicle and its content will occur.

(3) **Additional recommendations:**

   (a) If visiting poultry or swine operations, try to leave 48 hours between visits. Arrange visits so you proceed from highest health status to lowest;
   
   (b) Dust masks should be worn when entering poultry or swine facilities to decrease risk of transmission of respiratory viruses such as influenza; consult Health and Safety about respirators;
   
   (c) Do not walk on feeding areas or feed storage areas - or contaminate feeding areas with manure;
   
   (d) Coveralls must be worn if in contact with livestock or housing / feeding equipment;
   
   (e) Boots and hands should be cleaned and disinfected between visits to facilities with different disease status on the same premise.

(4) **Equipment list for visits to farms:**
- Washable rubber boots or disposable plastic boots (heavy gauge 6 mm thickness). To be worn over CSA approved footwear unless rubber boots are already CSA approved;
- Launderable or disposable coveralls (minimum of 2 pair);
- Pail;
- Boot brush;
- Chemical disinfectant (e.g. Virkon);
- Container of water (5 to 10 L);
- Spray bottle of disinfectant solution;
- Germicidal hand soap (e.g. chlorhexadine soap);
- Disposable gloves;
- Paper towels or clean laundered hand towels;
- Garbage bags;
- Approved filtering facepiece (for swine and poultry visits).

i. If an employee or researcher or research assistant suspects animals at any of the farms visited off campus may be suffering from a FAD/RD, he/she must:
   (1) not leave the farm nor allow their vehicle or equipment or personnel to leave the farm;
   (2) request that the farm manager / owner contact their veterinarian responsible for providing health care to that farm, for the purposes of determining whether the animals may be suffering from a FAD/RD;
   (3) Follow the recommendations of that veterinarian;
   (4) Report to the University Staff Veterinarian if the District Veterinarian confirms that a FAD/RD likely exists on that farm;
   (5) Follow the recommendations of the District Veterinarian.

4. Considerations for station managers in the event that a Research Facility is declared infected with an FAD/RD or is located in a quarantine region:
   a. Develop strategies to cope with personnel-related issues;
      i. Increased level of biosecurity requirements imposed on employees that care for at risk animals and for researchers / research assistants attending to these animals;
         • This may involve requiring employees to declare any off-campus contact they may have with at-risk species (e.g. their own animals or relief milking or farm labour) so that their risk to research animals can be accurately assessed;
      ii. Excluding personnel or movement of personnel deemed to be at risk or who pose an unnecessary risk;
      iii. Developing a list of alternate employees that could be recruited to care for the animals if the regular employees cannot do so.
   
   b. Develop strategies to cope with disruptions to normal research facility
function if a quarantine is imposed on animal, personnel and/or vehicular movement, including:

i. Feed supply if a quarantine on vehicular traffic interrupts timely feed delivery from regular sources;

ii. Temporary or alternate manure storage if quarantine prevents off-site movement of manure or other nutrients;

iii. Overcrowding of animal facilities if a quarantine and restricted animal movement is imposed;

iv. Disposal of milk if timely pick-up and transport of milk is discontinued.

5. Considerations related to Veterinary Teaching Hospital operations:

An emergency response protocol for FAD/RD within the clinical or research animal populations would disrupt day-to-day operations;

- A plan would be needed to isolate infected or at-risk animals and to provide continuity of care to clinical and/or research animals.

- The Director of the VTH would notify the Vice-President Research if a FAD/RD is suspected at the VTH (including Ruminant Field Service clients). Discretion would be necessary if the RD is not highly contagious and risk of transmission is considered low (e.g. rabies). The University Staff Veterinarian would work with the District Veterinarian to implement a plan to protect VTH animals from contact with the FAD/RD.
HEALTH OF ANIMALS ACT
Reportable Diseases Regulations
SCHEDULE (Section 2)
REPORTABLE DISEASES

1. African horse sickness
2. African swine fever
3. Anaplasmosis
4. Anthrax*
5. Bluetongue
6. Bovine spongiform encephalopathy*
7. Bovine tuberculosis (M. bovis) *
8. Brucellosis (B. melitensis and B. abortus*)
9. Chronic wasting disease of cervids*
10. Contagious bovine pleuropneumonia
11. Contagious equine metritis
12. Cysticercosis *
12.1 and 12.2 [Repealed, SOR/2003-163, s. 1]
13. Equine infectious anaemia *
14. Equine piroplasmosis (B. equi and B. caballi)
15. Foot and mouth disease (FMD)
16. Fowl typhoid (Salmonella gallinarum)
16.1 [Repealed, SOR/2003-163, s. 2]
17. Highly pathogenic avian influenza
18. Hog cholera (classical swine fever)
19. Lumpy skin disease
20. Newcastle disease ?
21. Peste des petits ruminants
22. Pseudorabies (Aujeszky's disease)
23. Pullorum disease (S. pullorum)
24. Rabies *
25. Rift Valley fever
26. Rinderpest
27. Scrapie *
28. Sheep and goat pox
29. Swine vesicular disease
30. Trichinellosis *
31. Venezuelan equine encephalomyelitis
32. Vesicular stomatitis

* These are not considered FAD since they do occur in Canada but are reportable diseases so - to varying degrees - should be considered as potentially as disruptive as many of the FAD.