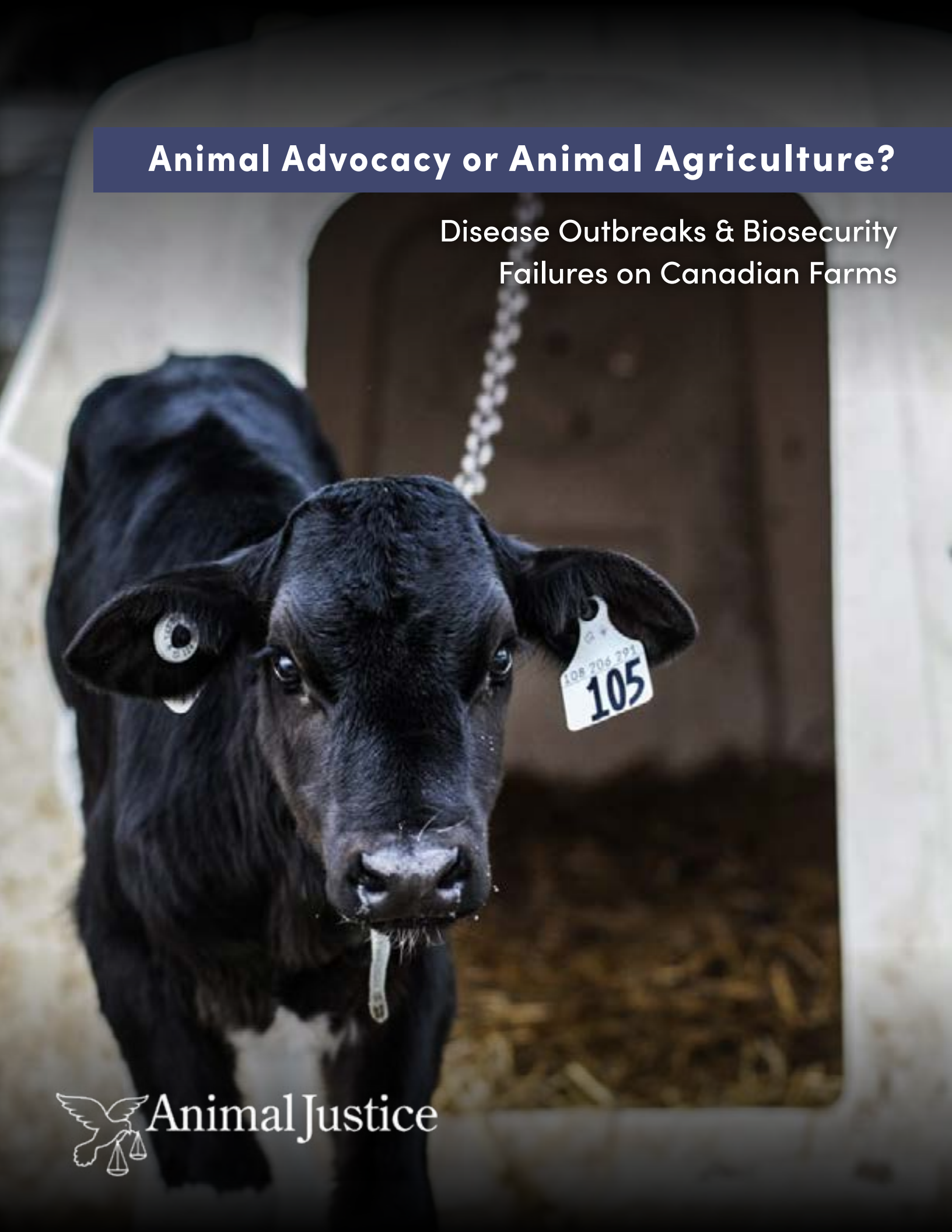
Animal Advocacy or Animal Agriculture?

Disease Outbreaks & Biosecurity Failures on Canadian Farms



Animal Justice

Banner image by Jo-Anne McArthur / We Animals

Background

Since late 2019, some Canadian legislators have expressed concerns about protests and advocacy initiatives by citizens who are troubled by poor animal welfare conditions inside farms, slaughterhouses, and animal transport trucks. These include protests by animal advocates near agricultural facilities or trucks transporting animals to slaughter, undercover footage gathered by whistleblowers and employees, and rare instances where animal advocates have entered farms to document conditions inside.

This has resulted in legislation aimed at prohibiting protest and documentary activities, collectively known as agricultural gag laws, or "ag gag" laws. Ag gag laws are commonly presented to the public as necessary to protect biosecurity, and to prevent disease outbreaks among farmed animals. The stated concern is that animal advocates or any individuals approaching animals may introduce pathogens that will harm animals, farmers, food safety, and the economy.

Biosecurity is undoubtedly important. There are legitimate and credible biosecurity concerns that arise due to the industrial production of animal products, the production of which involves extreme confinement in highly stressful conditions, long distance transport, and slaughter of animals. However, the biosecurity concerns raised by industry and legislators with respect to animal advocacy activities are largely misplaced. There is not a single verified case of animal advocacy activities causing harm to biosecurity in Canada. Ag gag bills introduced in Alberta, Ontario, Prince Edward Island, and Manitoba have focused on extreme punishment for trespassers and protestors, instead of addressing the evidence-based risks to biosecurity and the public health threats that are posed by standard practices in industrial animal agriculture.

Throughout the animal farming supply chain, there are numerous opportunities for infectious diseases to emerge and proliferate: from the crowded warehouses containing thousands of immunocompromised animals, to farm machinery that can become contaminated with fecal matter and moves between farms, spreading dangerous pathogens to new animals and new environments.

While animal advocates and protesters have never caused a disease outbreak in Canada, outbreaks caused by standard agricultural activities or biosecurity failures by producers are numerous and well-documented.

Ag gag bills are not rooted in evidence. Rather, the rhetoric of "biosecurity" and "keeping our food supply safe" has been used to support and pass draconian ag gag bills that silence and punish individuals for documenting and speaking out about the conditions of animals in Canada's agricultural sector, without any meaningful action to improve biosecurity.

Ag Gag Laws in Canada

Province	Status
Alberta	Passed (2019)
Ontario	Passed (2020)
Prince Edward Island	Passed (2020)
Manitoba	Introduced
Québec	Under consideration
Canada	Introduced

Analysis: Disease Outbreaks in Canadian Farming

This report summarizes information gathered and made public by the Canadian Food Inspection Agency (CFIA), which monitors and investigates reportable disease outbreaks in Canada. Reportable diseases are "usually of significant importance to human or animal health or to the Canadian economy." The Reportable Diseases Regulations (SOR/91-2) list the various diseases that fall under this category, and the Health of Animals Act (S.C. 1990, c. 21) includes mandatory reporting requirements for persons who possess, care, or control animals and discover the presence of a reportable disease or toxic substance.

Many of the diseases identified, particularly the larger disease outbreaks, have been thoroughly investigated by CFIA officials to determine the source and contributing factors of the outbreaks. Animal advocacy or protests on or near farming facilities have never been identified as causing a disease outbreak, nor are such protests identified as risk factors. The biosecurity concerns identified in many outbreaks were related to poor farming practices, and many can be directly traced back to the actions of farm owners and operators. For instance, minks at two fur farms in British Columbia's Fraser Valley recently tested positive for COVID-19, with at least one of the outbreaks being traced to infected personnel.[1]

Despite the risk to farms, animals, and the economy posed by disease outbreaks, biosecurity on farms is not comprehensively regulated at the federal level. The CFIA publishes voluntary biosecurity guidelines for some animal farming sectors, developed in cooperation with industry and government.[2] Adherence to these standards is not a legal requirement. Provincial legislation varies, and tends to empower officials to respond to existing biosecurity hazards instead of prescribing rules that farmers must follow to prevent disease outbreaks.

Scientific research has shown that Canadian farms demonstrate poor adherence to these voluntary biosecurity protocols. In a 2019 study, researchers found poor adoption of infection spread reduction measures on Canadian dairy farms, with a majority of farms not adopting sanitary practices. Less than 15% of farms had measures in place to limit or control visitors coming to farms, with only half requiring visitors to adhere to infection minimization processes like changing boots and clothing. The researchers concluded that many important biosecurity practices are not being implemented on Canadian dairy farms.[3] A study examining biosecurity practices on Ontario rabbit farms amid a province-wide disease outbreak of enterocolitis found a lack of consistent adherence to on-farm biosecurity practices, which was a likely contributor to disease transmission within and between farms.[4]

A study using hidden cameras to evaluate biosecurity protocol adherence on dozens of Quebec chicken farms has also shown poor compliance.[5] Personnel regularly disregarded biosecurity measures, including disrespecting clean vs. contaminated areas, inadequate handwashing, and failing to properly change boots and clothing. The researchers concluded that the nature and frequency of errors suggest a lack of understanding of biosecurity principles.

[1] BC Government News Release. (2020, December 24). Mink on second farm test positive for COVID-19. https://news.gov.bc.ca/releases/2020AFF0067-002145

[2] Canadian Food Inspection Agency. National Biosecurity Standards and Biosecurity Principles. Government of Canada. https://inspection.canada.ca/animal-health/terrestrial-animals/biosecurity/standards-and-principles/eng/1344707905203/1344707981478

[3] Denis-Robichaud, J., Kelton, D.F., Bauman, C., Barkema, H.W. (2019) Biosecurity and herd health management practices on Canadian dairy farms. Journal of Dairy Science. 2019 July 102(10). https://www.researchgate.net/publication/334660417_Biosecurity_and_herd_health_management_practices_on_Canadian_dairy_farms

[4] Kylie, J., Brash, M., Whiteman, A., Tapscott, B., Slavic, D., Weese, J.S., Turner, P. V. (2017) Biosecurity practices and causes of enteritis on Ontario meat rabbit farms. Canadian Veterinary Journal. 2017 Jun; 58(6): 571-578. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5432143/

[5] Racicot, M., Venne, D., Durivage, A., Vaillancourt, J. (2011) Description of 44 biosecurity errors while entering and exiting poultry barns based on video surveillance in Quebec, Canada. Preventative Veterinary Medicine. 2011 July 1;100(3-4): 193-9. https://pubmed.ncbi.nlm.nih.gov/21605922/

In the absence of a comprehensive regulatory regime, the CFIA has developed a biosecurity guide to assist producers in developing on-farm biosecurity plans and adhere to standards to prevent the emergence and spread of diseases. The guide provides a list of possible sources (or vectors) for infectious organisms.

These include:

- live animals;
- dead or sick animals;
- animal products;
- family, staff, and visitors;
- clothing;
- equipment;
- vehicles and transportation;
- feed and water;
- feces and urine;
- birds, wildlife, and other animals;
- pests; and
- air (aerosols or particulates).[6]

While visitors to farms are possible sources of infectious organisms, most of the vectors identified are inherent risks that are unique to animal agriculture as a food production system. That is, a visitor will generally only pose a significant risk to biosecurity if that visitor has recently been at another animal agriculture facility. Considering the number, frequency, and severity of disease outbreaks in the Canadian animal agriculture sector that have posed significant risks to animals, producers, food safety, and the public, prudent regulatory measures to address biosecurity should focus on the gaps and failures within the sector that have historically caused these outbreaks. Ag gag laws that harshly punish whistleblowers and animal advocates are a distraction from the true biosecurity vulnerabilities in the animal agriculture system.


Image by Jo-Anne McArthur / We Animals

[6] Canadian Food Inspection Agency. (2013, July 22). National Farm-Level Biosecurity Planning Guide Proactive Management of Animal Resources. Government of Canada.

Reportable Diseases in Canada Since 2000

Disease	Date of Reported Incidents	Location of Outbreak	Number of Incidents	Animals Affected
Avian influenza	2004–2006, 2007, 2009–2010, 2014 –2016	BC, SK, MB, ON, QC, PEI	45+	Ducks, turkeys, chickens, geese
Anthrax	2006	SK, MB	146	Cows, horses, bison, sheep, goats
Bluetongue	2015	ON	2	Cows
Bovine spongiform encephalopathy (BSE)	2003, 2007- 2011, 2015	AB	19	Cows
Bovine tuberculosis	2011, 2016, 2018	BC, AB, SK	3	Cows
Chronic wasting disease	2000–2004, 2006–2021	AB, SK, QC	119	Deer, Elk
Cysticercosis	2013, 2015, 2018	AB, ON, QC	3	Cows
Equine infectious anemia	2011–2019	BC, AB, SK, MB, QC, YK	210	Horses
Scrapie (TSE)	2009–2019	AB, SK, MB, ON, QC, NS	65	Sheep, goats
Trichinellosis	2013	ON	1	Pigs

Other Notable Diseases in Canada

Disease	Date of Reported Incidents	Location of Outbreak	Number of Incidents	Animals Affected
Aleutian disease pavovirus	2007	NFLD	1	Minks
Anaplasmosis	2013, 2016, 2019, 2021	ON	4	Cows
Infectious Laryngotracheitis (ILT)	2020–2021	ON	7	Chickens
Porcine Epidemic Diarrhoea (PED)	2014–2021	AB, MB, ON, QC, PEI	370+	Pigs
SARS-CoV-2	2020	BC	2	Minks
Swine Influenza	2009 (H1N1), 2020 (H1N2)	AB	2	Pigs

Notes

- Information sources used for all tables are located at the end of this report
- Some reportable disease data prior to 2011 missing as not accessible on the CFIA website
- Reportable diseases unrelated to the production of animals for agricultural purposes are excluded
- Unless otherwise specified, 'incidents' refers to the number of herds, farms, or unique disease outbreaks, rather than the number of animals infected by the disease

Notable Disease Outbreaks

Porcine Epidemic Diarrhoea (PED)

Disease information	Coronavirus that infects the cells lining the small intestine of a pig, causing porcine epidemic diarrhoea, a condition of severe diarrhea and dehydration
Number of outbreaks	370+ (AB, MB, ON, QC, PEI)
Probable cause, risk factors	Contaminated trailers, contaminated feed products
Transmissible to humans	No
Result of outbreak	Nationwide outbreaks, interprovincial and transborder transmission, high piglet mortality, animal culls
Transmission by animal advocates	No

"PED virus is highly infectious and can be easily spread to farms through contaminated trailers . . . Abattoir contamination can result in the transmission of PED virus to farms from livestock trailers that have been at those facilities."

Ontario Ministry of Agriculture, Food, and Rural Affairs website

Avian Influenza

Disease information	Variety of influenza caused by viruses adapted to birds
Number of outbreaks	45+ (BC, SK, MB, ON, QC, PEI)
Probable cause, risk factors	Contact with farming personnel, wild birds
Transmissible to humans	Yes
Result of outbreak	Mass extermination of tens of millions of animals, significant economic impact
Transmission by animal advocates	No

"The likely source of infection for this premises was a breach in biosecurity. CFIA staff on site reported significant numbers of small rodents within the barns as well as at least seven wild birds observed in one of the barns following destruction. Additionally, there were reports of wild waterfowl on the property in the weeks preceding infection."

CFIA investigation into an avian influenza outbreak in Ontario, 2015

Bovine Spongiform Encephalopathy (BSE)

Disease information	Progressive, fatal disease of the nervous system of cows
Number of cases	19 (AB)
Probable cause, risk factors	Feeding animals to animals, contaminated feed products, rendering, carcass disposal
Transmissible to humans	Yes (Creutzfeldt-Jakob Disease)
Result of outbreak	Extermination of cows, significant economic impact
Transmission by animal advocates	No

"The Investigation revealed that the truck used to transport grains on farm was also used to pick up poultry feeds containing prohibited material from the commercial supplier."

CFIA investigation into BSE Case #17, dairy cow in Alberta, 2015

Disease Outbreaks on Farms: Causes & Results

Date	Location of Outbreak	Affected Animals	Nature of Oubreak	Result of Outbreak	Transmissible to Humans	Cause	Caused by Animal Advocates
Feb 2021	2 in SK	Elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
Dec 2020- Jan 2021	Multiple farms in ON	Chickens	Infectious Laryngeotracheitis (ILT)	High mortality - 187,000 birds so far	No	Farm biosecurity gaps	No
2020 - various	9 in AB, 5 in SK	Deer, elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
Dec 2020	2 in BC	Minks	SARS-CoV-2	Culls	Yes	Farm biosecurity gaps	No
2020 - various	Multiple farms in ON	Birds	Infectious Bronchitis Virus (IBV)	Bird mortality	No	No definitive source	No
2020 - various	3 in MB	Pigs	Porcine Epidemic Diarrhoea Virus (PED)	Piglet mortality	No	Possible infected trailers	No
2019 - various	1 in BC, 6 in AB, 5 in SK	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
2019 - various	82 in MB	Pigs	Porcine Epidemic Diarrhoea Virus (PED)	Piglet mortality	No	Possible infected trailers	No
Jun 2019	2 in AB	Sheep	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
2019 - various	Multiple farms in ON	Birds	Infectious Bronchitis Virus (IBV)	Bird mortality	No	No definitive source	No
2019 - various	3 in AB	Deer, elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No

Date	Location of Outbreak	Affected Animals	Nature of Oubreak	Result of Outbreak	Transmissible to Humans	Cause	Caused by Animal Advocates
Nov 2018	Southern Interior, BC slaughtered in AB	Cows	Bovine Tuberculosis	1,050 cows killed, $3.8m in compensation	Yes	No definitive source	No
2018 - various	1 in BC, 8 in AB, 1 in SK	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
Jan 2018	2 in MB	Goats	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
May 2018	ON	Cattle	Cysticercosis	Killing and disposal	Yes	Tapeworm, human feces	No
2018 - various	4 in SK, 1 in QC, 1 in AB	Deer, elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
2017 - various	6 in AB, 4 in SK, 7 in MB, 2 in QC	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
2017 - various	90 in MB	Pigs	Porcine Epidemic Diarrhoea Virus (PED)	Piglet mortality	No	Possible infected trailers	No
2017 - various	6 in SK	Deer, elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
2017 - various	6 in MB, 1 in AB, 1 in SK, 1 in QC	Sheep, goats	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
2016 - various	3 in ON	Pigs	Porcine Epidemic Diarrhoea Virus (PED)	Piglet mortality	No	Possible infected trailers	No
Sep 2016	Jenner, AB	Cows	Bovine Tuberculosis	12,000 cows killed, $39m in compensation	Yes	No definitive source	No
2016 - various	2 in QC, 1 in ON	Sheep, goats	Scrapie (TSE)	Killing and disposal	No	Prion disease	No

Date	Location of Outbreak	Affected Animals	Nature of Oubreak	Result of Outbreak	Transmissible to Humans	Cause	Caused by Animal Advocates
Jul 2016	St. Catharines, ON	Ducks	H5N2 Avian Influenza	14,000 ducks killed	Yes	No definitive source	No
2016 - various	5 in SK, 1 in AB	Deer, elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
2016 - various	1 in AB, 9 in SK	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
2015 - various	1 in QC, 2 in ON	Sheep, goats	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
Apr 2015	Woodstock, ON	Turkeys, chickens	H5N2 Avian Influenza	Depopulation	Yes	Migratory waterfowl, wind transmission	No
2015 - various	4 in SK, 2 in AB	Deer, elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
Aug 2015	QC	Cows	Cysticercosis	Killing and disposal	Yes	Tapeworm, human feces	No
2015 - various	10+ in ON	Pigs	Porcine Epidemic Diarrhoea Virus (PED)	Piglet mortality	No	Possible infected trailers	No
Aug & Sep 2015	ON	Cows	Bluetongue	No treatment	No	Insects	No
2015 - various	3 in YK, 5 in AB, 9 in BC, 11 in SK	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
Feb 2015	AB	Cow	Bovine Spongiform Encephalopathy (BSE) case #19	Control of SRM (Specified Risk Materials) in animal feed	Yes	Feeding animals to animals	No

Date	Location of Outbreak	Affected Animals	Nature of Oubreak	Result of Outbreak	Transmissible to Humans	Cause	Caused by Animal Advocates
2014 - various	1 in QC, 6 in ON	Sheep, goats	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
Dec 2014	Fraser Valley, BC	Chickens, turkeys	H5N2 Avian Influenza	Depopulation (13 farms)	Yes	Contact with wild birds, spread by personnel	No
2014 - various	1 in AB, 20 in SK	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
2014 - various	5 in SK	Elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
Jan 2014	ON (60+ farms), MB, PEI, QC	Pigs	Porcine Epidemic Diarrhoea Virus PED)	Piglet mortality	No	Possible infected trailers	No
2013 - various	ON, MB	Cows	Anaplasmosis	Unknown	Possible	Ticks	No
2013 - various	5 in BC, 6 in AB, 27 in SK	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
Apr 2013	AB	Cows	Cysticercosis	Killing and disposal	Yes	Tapeworm, human feces	No
2013 - various	3 in QC, 1 in ON	Sheep, goats	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
Jan 2013	ON	Pigs	Trichinellosis	Slaughtered, consumed	Yes	Roundworms	No
2013 - various	4 in SK	Deer, elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
2012 - various	6 in ON, 4 in QC, 1 in AB	Sheep, goats	Scrapie (TSE)	Killing and disposal	No	Prion disease	No

Date	Location of Outbreak	Affected Animals	Nature of Oubreak	Result of Outbreak	Transmissible to Humans	Cause	Caused by Animal Advocates
2012 – various	2 in SK	Elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
2012 – various	4 in YK, 2 in BC, 7 in AB, 29 in SK	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
May 2011	Lumby region, BC	Cows	Bovine Tuberculosis	200 cows killed	Yes	Feeding animals to animals	No
2011 – various	3 in QC, 3 in ON, 1 in NS	Sheep, goats	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
2011 – various	4 in SK	Deer, elk	Chronic Wasting Disease (CWD)	Killing and disposal	Possible	Prion disease	No
Feb 2011	AB	Cow	Bovine Spongiform Encephalopathy (BSE) - case #18	Control of SRM (Specified Risk Materials) in animal feed	Yes	Feeding animals to animals	No
2011 – various	4 in AB, 2 in BC, 3 in QC, 15 in SK	Horses	Equine Infectious Anemia	Killing and disposal	No	Shared needles, equipment	No
Nov 2010	Near Winnipeg, MB	Turkeys	H5N2 Avian Influenza	In-barn biologic heat treatment & disposal on farm	Yes	Contact with wild birds	No
2010 – various	6 in QC, 2 in ON, 2 in AB, 1 in SK	Sheep	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
Feb 2010	AB	Cows	Bovine Spongiform Encephalopathy (BSE) - case #17	Control of SRM (Specified Risk Materials) in animal feed	Yes	Feeding animals to animals	No

Date	Location of Outbreak	Affected Animals	Nature of Oubreak	Result of Outbreak	Transmissible to Humans	Cause	Caused by Animal Advocates
May 2009	AB	Cows	Bovine Spongiform Encephalopathy (BSE) - case #16	Control of SRM (Specified Risk Materials) in animal feed	Yes	Feeding animals to animals	No
2009 - various	2 in QC, 2 in ON, 1 in SK, 1 in AB	Sheep	Scrapie (TSE)	Killing and disposal	No	Prion disease	No
Apr 2009	Central AB	Pigs	H1N1 Swine Influenza	Herd culled, disinfection	Yes	No definitive source	No
Jan 2009	Fraser Valley, BC	Turkeys	H5N2 Avian Influenza	Depopulation & burial on site	Yes	No definitive source	No
Dec 2007- Aug 2008	AB	Cows	Bovine Spongiform Encephalopathy (BSE) - cases #11-15	Control of SRM (Specified Risk Materials) in animal feed	Yes	Feeding animals to animals	No
Sep 2007	Regina Beach, SK	Chickens	H7N3 Avian Influenza	Depopulation & burial on site	Yes	Contact with wild birds	No
2007	NFLD	Minks	Aleutian Disease Parvovirus	Unknown	No	No definitive source	No
Aug 2007	BC and AB	Cows	Bovine Tuberculosis	470 cows killed	Yes	No definitive source	No
Aug 2006	129 in SK, 17 in MB	Cows, horses, bison, sheep, goats	Anthrax	> 146 farms affected	Yes	Anthrax spores	No
Feb 2004	Fraser Valley, BC	Chickens, turkeys	H7N3 Avian Influenza	Depopulation (19 million birds)	Yes	Contact with wild birds, spread by personnel	No
2003- 2007	AB	Cows	Bovine Spongiform Encephalopathy (BSE) - 10 cases	Control of SRM (Specified Risk Materials) in animal feed	Yes	Feeding animals to animals	No

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