APPENDIX 1
Animal Health Hazards
Associated with Imported Animals

NOTE: Hazard identification tables are derived using the criteria stated under Import Risk Analysis Process (page 22).

Index

APPENDIX 2

Animal Health Hazards Associated with Imported Animal Products

NOTE: Hazard identification tables are derived using the criteria stated under Import Risk Analysis Process (page 22).

Index

APPENDIX 3

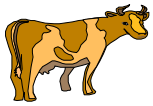
Animal Health Hazards Associated with Imported Germplasm

NOTE: Hazard identification tables are derived using the criteria stated under Import Risk Analysis Process (page 22).

Index

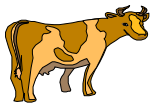
Bovine

Hazards associated with imported Bovine



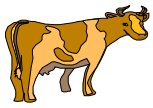
DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, airborne, vehicle-borne	cloven hoofed animals
VESICULAR STOMATITIS	Virus New Jersey Virus Indiana	A020	parts of Central and South America, USA	direct, vehicle-borne, vector-borne	cattle, horses, donkey, swine, camelids
RINDERPEST	morbillivirus	A040	Asia, Middle East and tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild)
CONTAGIOUS BOVINE PLEUROPNEU-MONIA	Mycoplasma mycoides (SC)	A060	Eastern Europe, Asia, Africa, parts of Western Europe	direct, vehicle-borne	cattle
LUMPY SKIN DISEASE	Capripoxvirus	A070	sub-Saharan Africa, Egypt, Israel, Kenya	direct, vehicle-borne, vector-borne	cattle, camelids
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa	direct, vehicle-borne, vector-borne (mosquitoes)	cattle, sheep, humans
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA, Canada	vector-borne	ruminants
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep (goats, horses, camelids, humans)
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct, airborne, vehicle-borne, vector-borne	cattle, sheep, goats, horses, dogs, cats, fur-bearing species (swine secondary hosts)
ECHINOCOCCO-SIS/ HYDATIDOSIS	Echinococcus granulosus	B053	worldwide (uncommon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants

Hazards associated with imported Bovine



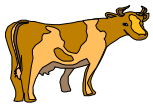
DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
HEARTWATER (cowdriosis)	Cowdria ruminantium (rickettsia)	B055	Africa, Madagascar, parts of West Indies	vector-borne	ruminants
LEPTOSPIROSIS (foreign serovars)	L pomon, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals
SCREW-WORM	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and subtropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds
ANAPLASMOSIS	Anaplasma marginale (rickettsia)	B101	South Africa, Australia, Russia, South America, USA	vector-borne	ruminants
BABESIOSIS	Babesia bovis (B. argentina, B. berbera, B. bigemina, B. major, B. divergens)	B102	B. bigemina: South America, West Indies, Australia, Africa B. bovis :South and Central America, Australia, Asia, Southern Europe, Africa B. divergens: North-west Europe, Spain, Eire, UK B. berbera: Mediterranean Europe, North Africa B. major: UK, Europe	vector-borne	ruminants
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
CYSTICERCOSIS	Cysticercus bovis	B106	worldwide	vehicle-borne	cattle, reindeer, humans
THEILERIASIS	Theileria parva (East Coast fever) T. mutans T. orientalis T. taurotragi T. buffeli T. annulata (Mediterrannean Coast Fever)	B111	parva: Africa mutans: Africa orientalis: all continents taurotragi: Africa buffeli: Australia annulata: Mediterranean	vector-borne (T. mutans transmitted by Amblyomma spp only)	ruminants, European hare

Hazards associated with imported Bovine



DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
TRYPANOSOMIA-SIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
BOVINE SPONGIFORM ENCEPHALOP-ATHY (BSE)	prion	B115	UK, Switzerland, Ireland, France, Portugal	vehicle-borne	cattle, kudu, cheetahs, sheep?
MELIOIDOSIS	Pseudomonas pseudomallei	C613	Australia, Papua-New Guinea	direct	dogs, cats, domestic livestock, rodents, rabbits, pigeons, humans
FILARIASIS	Parafilaria bovicola Elaephora poeli	C622	Sweden, France, Eastern Europe, Asia, South Africa	vector-borne	cattle
BOVINE EPHEMERAL FEVER	bovine ephemeral virus	-	Africa, Australia, Asia	vector-borne	ruminants
AINO VIRUS INFECTION	rhabdovirus	-	Africa, Asia, East Indies, Australia	vector-borne	cattle, buffalo
BOVINE PETECHIAL FEVER	Ehrlichia ondiri	-	Kenya	vector-borne	cattle
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)
BESNOITIOSIS	Besnoitia besnoiti (protozoan)	-	tropical and subtropical areas - world	vector-borne, vehicle-borne	cattle, goats, cervids (caribou in particular)

Hazards associated with imported Bovine



DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean	vector-borne	deer, cattle, sheep con-troversial, camelids
IBARAKI DISEASE	orbivirus	-	Japan	vector-borne	cattle
MALIGNANT CATARRHAL FEVER	alcephaline herpesvirus 1	-	Africa, United States, Canada, Australia, New Zealand, Europe, Scandinavia, East Indies	direct	cattle, farmed deer reservoir in free living ruminants
TICK-BORNE FEVER	Cytoecetes phagocytophila (rickettsia)	-	UK, Scandinavia, Switzerland, Spain	vector-borne	sheep, cattle, deer, goats
WESSELSBRON DISEASE	group B arboviruses	-	Southern Africa	vector-borne	cattle, sheep
	Ticks and other integumentary arthropods (foreign)	-	worldwide	direct	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, some may be vehicle-borne	

Additional hazards for imported Bulls destined for artificial insemination centres

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
LEPTOSPIROSIS	L pomon, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
PARATUBERCU-LOSIS (Johne's disease)	Mycobacterium paratuberculosis	B059	worldwide	direct, vehicle-borne	ruminants, swine, horses
BOVINE GENITAL CAMPYLOBAC-TERIOSIS	Campylobacter foetus var. venerealis	B104	worldwide	direct	cattle
ENZOOTIC BOVINE LEUCOSIS	retrovirus	B108	North and South America, parts of Europe	direct, vehicle-borne (possibly vector-borne)	cattle
INFECTIOUS BOVINE RHINO-TRACHEITIS / INFECTIOUS PUSTULAR VULVOVAGINITIS	bovine herpesvirus 1	B110	worldwide	direct	cattle
TRICHOMONIA-SIS	Trichomonas foetus	B112	worldwide	direct (venereal)	cattle
BOVINE VIRAL DIARRHOEA / MUCOSAL DISEASE	togavirus	C652	worldwide	direct, vehicle-borne	cattle, sheep

Diseases not considered as hazards due to their presence in Canada:
actinomycosis (C618), clostridial infections (C616), bovine malignant catarrh (B114), coccidiosis (C620), dermatophilosis (B107), distomatosis (C621), haemorrhagic septicemia (B109), listeriosis (C611), other pasteurelloses (C617), Q fever (B057), salmonellosis - intestinal (C619), toxoplasmosis (C612), vibrionic dysentery (C653), and warblefly infestation (C654).

Other diseases not considered as hazards:
eperythrozoonosis.

Ovine and Caprine
both domestic and wild

Hazards associated with imported Ovine / Caprine

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, vehicle-borne, airborne	cloven hoofed animals
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	ruminants, swine, (mild disease in small ruminants)
PESTE DES PETITS RUMINANTS	morbillivirus	A050	West and sub-Saharan Africa, Arabian peninsula, India, Asia, Pakistan	direct	sheep, goats, cervids
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa	direct, vehicle-borne, vector-borne (mosquitoes)	cattle, sheep, goats, humans, wild herbivores, monkeys, rodents
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA, Canada	vector-borne	ruminants
SHEEP AND GOAT POX	poxvirus	A100	North and East Africa, Middle East, India, Asia, Iberian peninsula	direct	sheep, goats
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, (goats, horses, camelids, humans)
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct, airborne, vehicle-borne, vector-borne	cattle, sheep, goats, horses, dogs, cats, fur-bearing species (swine are secondary hosts)
ECHINOCOCCOSIS / HYDATIDOSIS	Echinococcus granulosus	B053	worldwide (uncommon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants

Hazards associated with imported Ovine / Caprine

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
HEARTWATER OR COWDRIOSIS	Cowdria ruminantium (rickettsia)	B055	Africa, Madagascar, parts of West Indies	vector-borne	ruminants
LEPTOSPIROSIS (foreign serovars)	L pomon, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals
SCREW-WORM (myiosis)	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and subtropical areas of Africa, Asia, Central and South America	vector-borne	warm-blooded animals and birds
ANAPLASMOSIS	Anaplasma ovis (rickettsia)	B101	widespread in Africa, sporadic in Eastern Europe, USA, Argentina, Lebanon, Israel, Jordan, Iran	vector-borne	ruminants
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
THEILERIOSIS	Theileria lestoquardi (was hirci)	B111	North Africa, Middle East, India, Sudan	vector-borne	sheep, goats
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa Surra - Africa, South America, Asia Chagas disease - Central and South America	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored, Surra - mechanically vector-borne) Chagas disease - vector-borne	Nagana - warm-blooded animals Surra- equine, camelid, ruminants, cervids, swine, elephants Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
BOVINE SPONGIFORM ENCEPHALOPATHY (BSE)	prion	B115	UK, Switzerlan, Ireland, France, Portugal	vehicle-born, direct?	cattle, kudu, cheetahs, sheep?

Hazards associated with imported Ovine / Caprine

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
CAPRINE AND OVINE BRUCELLOSIS	Brucella melitensis	B152	Africa, Europe, Israel, USA	direct, vehicle-borne	sheep, goats, camelids
CONTAGIOUS AGALACTIA	Mycoplasma agalactiae	B154	Europe, Balkans, Africa, Asia	direct, vehicle-borne	sheep, goats
CONTAGIOUS CAPRINE PLEUROPNEUMONIA	Mycoplasma mycoides capri, M. mycoides mycoides (LC), M. mycoides capricolum	B155	North Africa, Spain, Mediterranean litoral, Asia Minor, India	direct	goats, camelids
NAIROBI SHEEP DISEASE	bunyaviridae	B158	East and Central Africa	vector-borne	sheep, goats
SALMONELLOSIS	Salmonella abortus ovis	B159	worldwide	direct, vehicle-borne	sheep, humans
SCRAPIE	prion	B160	Europe, India, North and Central America, Iceland, Israel, Japan	direct, vehicle-borne	sheep, goats
MELIOIDOSIS	Pseudomonas pseudomallei	C613	Australia, Papua New Guinea	direct	dogs, cats, domestic livestock, rodents, rabbits, pigeons, humans
FILARIASIS	Elaeophora schneideri	C622	North and Central Europe, New Zealand, parts of Russia, parts of North America	vector-borne (biting flies)	mule deer (reservoir host), moose, caribou, reindeer, wapiti, white tail deer, sheep
SHEEP MANGE (scab)	Psoroptes ovis	C706	Parts of Europe, Middle East, Africa, South America	direct, vehicle-borne	sheep, goats, cattle, horses, camelids, rabbits
BESNOITIOSIS	Besnoitia besnoiti (protozoan)	-	tropical and subtropical areas - world	vector-borne, vehicle-borne	cattle, goats, cervids (caribou in particular)
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)

Hazards associated with imported Ovine / Caprine

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
LOUPING ILL (ovine encephalomyelitis)	flavivirus	-	UK, Ireland, Norway, Spain, Bulgaria, Turkey	vector-borne (ticks)	sheep, cattle, horses, deer, dogs, humans; wildlife reservoirs include cervids rodents and red grouse
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean	vector-borne	deer, cattle, sheep controver-sial, camelids
MURRURRUNDI DISEASE (segmental axonopathy)	inherited degenerative disease	-	Australia	direct (vertical)	sheep
TICK-BORNE FEVER	Cytoecetes phagocytophila (rickettsial)	-	UK, Ireland, Scandinavia, Switzerland, Spain	vector-borne	sheep, cattle, deer, goats
BORNA DISEASE	unclassified RNA virus	-	Germany, Switzerland (may be more widespread than yet reported)	direct, vehicle-borne	horses, sheep, camelids
WESSELSBRON DISEASE	group B arboviruses	-	South Africa, Zimbabwe, Mozambique	vector-borne	cattle, sheep
	Ticks and other integumentary arthropods (foreign)	-	worldwide	direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)		worldwide	direct, vehicle-borne	

Additional hazards for imported Rams destined for artificial insemination centres

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
LEPTOSPIROSIS (foreign serovars)	L pomon, L. sejroe, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
PARATUBERCULOSIS (Johne's disease)	Mycobacterium paratuberculosis	B059	worldwide	direct, vehicle-borne	ruminants, swine, horses
OVINE EPDIDYMITIS	Brucella ovis	B115	Australia, New Zealnd, United States, South America, Central Asia, South Aftica and Europe	direct, vehicle-borne	sheep (rams more than ewes)
MAEDI-VISNA	lentivirus	B161	North America, India, Middle East, Russia, parts of Europe, Africa	direct	sheep (goats)

Additional hazards for imported Bucks destined for artificial insemination centres

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
LEPTOSPIROSIS (foreign serovars)	L pomon, L. sejroe, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
PARATUBERCULOSIS (Johne's disease)	Mycobacterium paratuberculosis	B059	worldwide	direct, vehicle-borne	ruminants, swine, horses
CAPRINE ARTHRITIS-ENCEPHALITIS	lentivirus	B153	worldwide, patchy	direct	goats

Diseases not considered as hazards due to their presence in Canada:
actinomycosis (C618), border disease, dermatophilosis (B107), bovine malignant catarrh (B114), clostridial infections (C616), coccidiosis (C620), caseous lymphadenitis (C705), contagious ophthalmia (C703), contagious pustular dermatitis (C701), distomatosis (liver fluke, C621), enzootic abortion of ewes (EAE, ovine chlamydiosis, B156), enterotoxaemia (C704), footrot (C702), haemorrhagic septicemia (B109), listeriosis (C611), pasteurellosis (C617), pulmonary adenomatosis (jaagsiekte, B157), Q fever (B057), salmonellosis - intestinal (C619) and toxoplasmosis (C612).

Bison, Buffalo, Yak, Wisent, Musk Ox

Hazards associated with imported Bison, Buffalo, Yak, Wisent, Musk Ox

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, airborne, vehicle-borne	cloven hoofed animals
VESICULAR STOMATITIS	Virus New Jersey Virus Indiana	A020	parts of Central and South America, USA	direct, vehicle-borne, vector-borne	bovine, horses, donkeys, swine, camelids
RINDERPEST	morbillivirus	A040	Asia, Middle East and tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild)
CONTAGIOUS BOVINE PLEUROPNEUMONIA	Mycoplasma mycoides (SC)	A060	Eastern Europe, Asia, Africa, parts of Western Europe	direct, vehicle-borne	cattle
LUMPY SKIN DISEASE	Capripoxvirus	A070	sub-Saharan Africa, Egypt, Israel, Kenya	direct, vehicle-borne, vector-borne	cattle, camelids
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa	direct, vehicle-borne	cattle, sheep, humans, goats, wild herbivores, monkeys, rodents
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Isalnds, Australia, South and Central America, USA, Canada	vector-borne	ruminants
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep (goats, horses, camelids, humans)
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct, vehicle-borne, vector-borne	cattle, sheep, goats, horses, cats, dogs, fur-bearing species (swine are secondary hosts)
ECHINOCOCCOSIS / HYDATIDOSIS	Echinococcus granulosus	B053	worldwide (uncommon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants

Hazards associated with imported Bison, Buffalo, Yak, Wisent, Musk Ox

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
HEARTWATER (cowdriosis)	Cowdria ruminantium (rickettsia)	B055	Africa, Madagascar, parts of West Indies	vector-borne	ruminants and wildlife reservoirs
RABIES	rhabdovirus	B058	worldwide, except for Finland, Norway, Sweden, Japan, UK, Ireland, Uruguay, Australia, New Zealand	direct (biting)	warm-blooded animals
SCREW-WORM	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and sub-tropical Africa, Asia, Central and South America, USA	direct	warm-blooded animals and birds
ANAPLASMOSIS	Anaplasma marginale, centrale (rickettsia)	B101	South Africa, Australia, Russia, South America, USA	vector-borne	ruminants
BABESIOSIS	Babesia bovis (B. argentina, B. berbera, B. bigemina, B. major, B. divergens)	B102	B. bigemina: South America, West Indies, Australia, Africa B. bovis :South and Central America, Australia, Asia, Southern Europe, Africa B. divergens: North-west Europe, Spain, Eire, UK B. berbera: Mediterranean Europe, North Africa B. major: UK, Europe	vector-borne	ruminants
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
CYSTICERCOSIS	Cysticercus bovis	B106	worldwide	vehicle-borne	cattle, reindeer, humans
THEILERIASIS	Theileria parva (East Coast fever) T. mutans, orientalis, taurotragi, buffeli, lawrenci, barnetti. T. annulata (Mediterrannean Coast Fever)	B111	parva: Africa mutans: Africa orientalis: all continents taurotragi: Africa buffeli: Australia annulata: Mediterranean	vector-borne (T. mutans transmitted by Amblyomma spp only)	ruminants, European hare

Hazards associated with imported Bison, Buffalo, Yak, Wisent, Musk Ox

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
BOVINE SPONGIFORM ENCEPHALOPATHY (BSE)	prion	B115	UK, Switzerland, Ireland, France, Portugal	vehicle-borne	cattle, kudu, cheetahs, sheep?
MELIOIDOSIS	Pseudomonas pseudomallei	C613	Australia, Papua-New Guinea	direct	dogs, cats, domestic livestock, rodents, rabbits, pigeons, humans
FILARIASIS	Parafilaria bovicola Elaephora poeli Setaria cervi	C622	Sweden, France, Eastern Europe, Asia, South Africa	vector-borne	cattle, buffalo
BOVINE EPHEMERAL FEVER	bovine ephemeral virus	-	Africa, Australia	vector-borne	ruminants
AINO VIRUS INFECTION	rhabdovirus	-	Africa, Asia, East Indies, Australia	vector-borne	sheep, cattle, goats, many wildlife species including buffalo
BOVINE PETECHIAL FEVER	Ehrlichia ondiri	-	Kenya	vector-borne	cattle
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean	vector-borne	deer, cattle, sheep con-troversial, camelids

Hazards associated with imported Bison, Buffalo, Yak, Wisent, Musk Ox

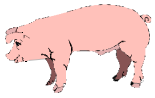
DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
IBARAKI DISEASE	orbivirus	-	Japan	vector-borne	cattle
TICK-BORNE FEVER	Cytoecetes phagocytophila (rickettsia)	-	UK, Scandinavia, Switzerland, Spain	vector-borne	sheep, cattle, deer, goats
WESSELSBRON DISEASE	group B arboviruses	-	Southern Africa	vector-borne	cattle, sheep
SARCOSPORIDIOSIS (Besnoitia and Sarcocystis spp.)	Besnoitia besnoiti Sarcocystis fusiformis and buffalonis	-	tropical and subtropical areas - world	vector-borne, vehicle-borne	cattle, goats, cervids
TISSUE WORM	Elaphostrongylus cervi	-	Norway, Sweden	vector-borne (molluscs)	cervids, camelids
SCHISTOSOMIASIS	Schistosoma bovis S. mattheei S. japonicum S. nasalis S. spindale	-	S. bovis - Africa, Middle East, Asia, Southern Europe S. mattheei - Africa S. japonicum - Far East S. nasalis - India, Pakistan, SE Asia S.spindale - Far East	via snail intermediate host	ruminants and humans (S. japoni-cum - most domestic animals and humans)
	Ticks and other integumentary arthropods (foreign)	-	worldwide	direct	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, some may be vehicle-borne	

Diseases not considered as hazards due to their presence in Canadae:
actinomycosis (C618), bovine malignant catarrh (B114), clostridial infections (C616), coccidiosis (C620), dermatophilosis (B107), distomatosis (C621), leptospirosis, listeriosis (C611), other pasteurelloses (C617), Parelaphostrongylus tenuis (except for importation into the Provinces of British Columbia, Alberta and Saskatchewan), Q fever (B057), salmonellosis - intestinal (C619), toxoplasmosis (C612), vibrionic dysentery (C653), and warblefly infestation (C654).

Diseases not considered as hazards are:
eperythrozoonosis, haemorrhagic septicemia (B109)

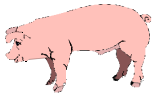
Swine

Hazards associated with imported Swine



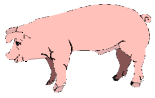
DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, vehicle-borne, airborne	cloven hoofed animals
VESICULAR STOMATITIS	Virus Indiana Virus New Jersey	A020	USA, Central and South America	direct, vehicle-borne, vector-borne (mosquitoes, biting flies)	cattle, horses, donkeys, swine, camelids
SWINE VESICULAR DISEASE	enterovirus	A030	parts of Europe and Japan	direct, vehicle-borne	swine
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	ruminants, swine, (mild disease in small ruminants)
AFRICAN SWINE FEVER	arbovirus	A120	Africa, parts of Europe	direct, vehicle-borne, vector-borne	swine
HOG CHOLERA (classical swine fever)	pestivirus	A130	South and Central America, Africa, Asia, parts of Europe	direct, vehicle-borne	swine
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, (goats, horses, camelids, humans)
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct, airborne, vehicle-borne, vector-borne	cattle, sheep, goats, horses, dogs, cats, fur-bearing species (swine are secondary hosts)
ECHINOCOCCOSIS / HYDATIDOSIS	Echinococcus granulosus	B053	worldwide (uncommon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants
LEPTOSPIROSIS (foreign serovars)	L pomon, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals

Hazards associated with imported Swine



DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
SCREW-WORM	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and subtropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa Surra - Africa, South America, Asia Chagas disease - Central and South America	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored, Surra - mechanically vector-borne) Chagas disease - vector-borne	Nagana - warm-blooded animals Surra- equine, camelid, ruminants, cervids, swine, elephants Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
CYSTICERCOSIS	Cysticercus cellulosae	B252	worldwide	direct	humans, swine
PORCINE BRUCELLOSIS	Brucella suis	B253	Europe, South America, Africa, India, Central and Southeast Asia, Australia, Pacific Islands	direct, vehicle-borne	swine
TRICHINELLOSIS	Trichinella spiralis	B255	worldwide	vehicle-borne	warm-blooded animals
ENTEROVIRUS ENCEPHALOMYELITIS	enterovirus Teschen virus	B256	worldwide	direct	swine
MELIOIDOSIS	Pseudomonas pseudomallei	C613	Australia, Papua New Guinea	direct, vehicle-borne	dogs, cats, domestic livestock, rodents, rabbits, pigeons, humans
FILARIASIS	*Suifilaria suis*	C622	South Africa	vector-borne	swine
NIPAH VIRUS	paramyxovirus	-	Malaysia	direct	swine, humans

Hazards associated with imported Swine



DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Additional hazards for imported Boars destined for artificial insemination centres

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
LEPTOSPIROSIS	L pomon, L. sejroe, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
TRANSMISSIBLE GASTROENTERITIS (TGE)	coronavirus	B254	all major swine producing areas	direct, vehicle-borne, perhaps vector-borne (mechanically)	swine

Diseases not considered as hazards due to their presence in Canada:
actinomycosis (C618), atrophic rhinitis (B251), clostridial infections (C616), coccidiosis (C620), haemorrhagic septicemia (B109), multisystemic wasting disease, pasteurellosis (C617), porcine reproductive/respiratory syndrome (B257), Q fever (B057), salmonellosis - intestinal (C619), swine erysipelas (C801), and toxoplasmosis (C612).

Wild Swine and Peccaries

Hazards associated with importation of Wild Swine and Peccaries

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, vehicle-borne, airborne	cloven hoofed animals
VESICULAR STOMATITIS	Virus Indiana Virus New Jersey	A020	USA, Central and South America	direct, vehicle-borne, vector-borne (mosquitoes, biting flies)	cattle, horses, donkeys, swine, camelids
SWINE VESICULAR DISEASE	enterovirus	A030	parts of Europe, Japan	direct, vehicle-borne	swine
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	ruminants, swine, (mild disease in small ruminants)
AFRICAN SWINE FEVER	arbovirus	A120	Africa, parts of Europe	direct, vehicle-borne, vector-borne	swine, but peccaries are resistant
HOG CHOLERA (classical swine fever)	pestivirus	A130	South and Central America, Africa, Asia, parts of Europe	direct, vehicle-borne	swine
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, (goats, horses, camelids, humans)
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct, airborne, vehicle-borne, vector-borne	cattle, sheep, goats, horses, dogs, cats, fur-bearing species (swine are secondary hosts)
ECHINOCOCCOSIS / HYDATIDOSIS	Echinococcus granulosus	B053	worldwide (uncommon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals
SCREW-WORM	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and subtropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses

Hazards associated with importation of Wild Swine and Peccaries

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
THEILERIASIS	Theileria parva (East Coast fever) T. mutans T. orientalis T. taurotragi T. buffeli T. annulata (Mediterrannean Coast Fever)	B111	parva: Africa mutans: Africa orientalis: all continents taurotragi: Africa buffeli: Australia annulata: Mediterranean	vector-borne (T. mutans transmitted by Amblyomma spp only)	ruminants, European hare
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa Surra - Africa, South America, Asia Chagas disease - Central and South America	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored, Surra - mechanically vector-borne) Chagas disease - vector-borne	Nagana - warm-blooded animals Surra- equine, camelid, ruminants, cervids, swine, elephants Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
JAPANESE ENCEPHALITIS	flavivirus	B212	Malaysia, Japan, Eastern Soviet Union, Korea, China, Taiwan, the Philippines, Indonesia, Singapore, Hong Kong, Vietnam, Laos, Bangladesh, Nepal, Thailand, Burma, Sri Lanka, India, the Pacific Islands	vector-borne (mosquitoes)	humans, horses, swine, cattle, sheep, goats, rabbits, rats, pigeons, dogs, ducks, chickens, wild birds, reptiles
CYSTICERCOSIS	Cysticercus cellulosae	B252	worldwide	direct	humans, swine
PORCINE BRUCELLOSIS	Brucella suis	B253	Europe, South America, Africa, India, Central and Southeast Asia, Australia, Pacific Islands	direct, vehicle-borne	swine
TRICHINELLOSIS	Trichinella spiralis	B255	worldwide	vehicle-borne	warm-blooded animals
ENTEROVIRUS ENCEPHALOMYELITIS	enterovirus Teschen virus	B256	worldwide	direct	swine

Hazards associated with importation of Wild Swine and Peccaries

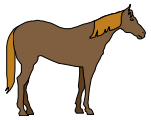
DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
MELIOIDOSIS	Pseudomonas pseudomallei	C613	Australia, Papua New Guinea	direct, vehicle-borne	dogs, cats, domestic livestock, rodents, rabbits, pigeons, humans
FILARIASIS	Suifilaria suis	C622	South Africa	vector-borne	swine
BESNOITIOSIS	Besnoitia besnoiti, bennetti	-	France, Israel, Korea, Russia, Africa, Portugal, Venezuela	vehicle-borne, vector-borne	cattle, horses, zebras, donkeys, mule, goats, carnivores are natural host
VENEZUELAN EQUINE ENCEPHALOMYELITIS	alphavirus	-	South and Central America, USA	vector-borne (arthropods)	horses, humans, camelids (asympto-matic in wild swine)
BABESIOSIS	Babesia spp, including B.trautmanni	-	B. trautmanni - swine babesiosis, Russia, Africa	vector-borne	ruminants and swine
NIPAH VIRUS	paramyxovirus	-	Malaysia	direct	swine, humans
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)
AINO VIRUS INFECTION	rhabdovirus	-	Africa, Asia, East Indies, Australia	vector-borne	cattle, buffalo, asymptoma-tic in wild suidae
SWINE INFLUENZA (foreign strains)	orthomyxovirus	-	worldwide	direct	swine (avians, humans)
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis (C618), atrophic rhinitis (B251), bordetellosis, clostridial infections (C616), coccidiosis (C620), corynebacterial infections, Glassers' disease, haemorrhagic septicemia (B109), leptospirosis (endemic serovars), listeriosis, multisystemic wasting disease, necrobacillosis, pasteurellosis (C617), porcine reproductive/respiratory syndrome (B257), Q fever (B057), salmonellosis - intestinal (C619), swine erysipelas (C801), and toxoplasmosis (C612).

Diseases not considered as hazards:
echinococcosis, foreign serovars of leptospira

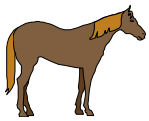
Equine

Hazards associated with imported Equine



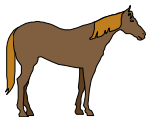
DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
VESICULAR STOMATITIS	Virus Indiana Virus New Jersey	A020	USA, Central and South America	direct, vehicle-borne, vector-borne	cattle, horses, donkeys, swine, camelids
AFRICAN HORSE SICKNESS	orbivirus	A110	Africa, Spain, Portugal	vector-borne	horses, mules, donkeys
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experi-imentally)	cattle, sheep (goats, horses, camelids, humans)
HYDATIDOSIS / ECHINOCOCCOSIS	Echinococcus granulosus	B053	worldwide (uncommon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants, horses
LEPTOSPIROSIS (foreign serovars)	L pomon, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals
SCREW-WORM	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and subtropical areas of Africa, Asia, Central and South America	direct	warm-blooded animals and birds
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
CONTAGIOUS EQUINE METRITIS	Haemophilus (now Taylorella) equigenitalis	B201	Morocco, Japan, parts of Europe	direct (venereal)	horses
DOURINE	Trypanosoma equiperdum	B202	Africa, Asia, South America, parts of Russia, Burma	direct (venereal), vector born	horses, donkeys
EPIZOOTIC LYMPHANGITIS (pseudoglanders, equine blastomycosis, equine histoplasmosis)	Histoplasma farciminosum	B203	Asia, Africa, the Mediterranean littoral	direct, vehicle-borne	horses
EQUINE INFECTIOUS ANAEMIA	retroviridae	B205	worldwide	direct, vector-borne, vehicle-borne	horses

Hazards associated with imported Equine



DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
EQUINE PIROPLASMOSIS (BABESIOSIS)	Babesia (Piroplasma) equi and caballi	B207	Southern Europe, Asia, Americas, Russia	vector-borne	horses
GLANDERS	Actinobacillus mallei	B209	Eastern Europe, Asia, North Africa, parts of China and Mongolia	vehicle-borne (ingested)	humans, small carnivores, equids
JAPANESE ENCEPHALITIS	flavivirus	B212	Malaysia, Japan, Eastern Soviet Union, Korea, China, Taiwan, the Philippines, Indonesia, Singapore, Hong Kong, Vietnam, Laos, Bangladesh, Nepal, Thailand, Burma, Sri Lanka, India, the Pacific Islands	vector-borne (mosquitoes)	humans, horses, swine, cattle, sheep, goats, rabbits, rats, pigeons, dogs, ducks, chickens, wild birds, reptiles
HORSE MANGE	Psoroptes equi	B213	Great Britain	direct, vehicle-borne	horses, donkeys, mules
SURRA and MURRINA	Trypanosoma evansi and equinum	B215	Africa, north of the Tsetse belt, Middle East, Asia, Central and South America	vector-borne	camelids, horses, buffalo, cattle
VENEZUELAN EQUINE ENCEPHALOMYELITIS	alphavirus	B216	South and Central America, USA	vector-borne (arthropods)	horses, humans, camelids
MELIOIDOSIS	Pseudomonas mallei	C613	Australia, Papua New Guinea	direct	cats, dogs, humans, rabbits, pigeons, farm animals
FILARIASIS	Elaeophora bohmi Parafilaria multipapillosa	C622	parts of Europe, China, South America, North Africa	vector-borne (biting flies)	horses
SALMONELLOSIS	Salmonella abortus equi	C754	rare	direct, vehicle-borne	horses
BORNA DISEASE	unclassified RNA virus	-	Germany, Switzerland (may be more widespread than yet reported)	direct, vehicle-borne	horses, sheep, camelids
WEST NILE FEVER	West Nile virus	-	French Mediterranean, Morocco	vector-borne	humans, horses
HENDRA VIRUS	paramyxovirus	-	Australia	direct	humans, horses, cats, ginea pigs (reservoir in bats and rabbits)

Hazards associated with imported Equine



DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
dermatophilosis (B107), equine monocytic ehrlichiosis (Potomac Fever), clostridial infections (C616), eastern and western equine encephalitis (B204), equine coital exanthema (genital horsepox C751), equine influenza (B206), equine rhinopneumonitis (B208), equine viral arteritis (B211), haemorrhagic septicemia (B109), Q fever (B057), listeriosis (C611), paratuberculosis (B059), toxoplasmosis (C612), salmonellosis - intestinal (C619), and strangles (C753).

Other diseases not considered as hazards:
horse pox (B210) and ulcerative lymphangitis (Corynebacterium pseudotuberculosis) (C752).

Wild Equids

Zebra (Grant's, Grevy"s, mountain and Burchell's), Przewalski's horse (Mongolian wild horse), wild ass, wild horse

Hazards associated with Wild Equids					
DISEASE	**AGENT**	**OIE LIST**	**DISTRIBUTION**	**MODE OF TRANSMISSION**	**HOST RANGE**
VESICULAR STOMATITIS	Virus Indiana Virus New Jersey	A020	USA, Central and South America	direct, vehicle-borne, vector-borne	cattle, horses, donkeys, swine, camelids
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild), perissodac-tylae (odd-toed ungulates)
AFRICAN HORSE SICKNESS	orbivirus	A110	Africa, Spain, Portugal	direct, vehicle-borne, vector-borne	cattle, horses, donkeys, swine, camelids, zebras (asympto-matic)
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, goats, horses, camelids, humans, elephants, hippos, rhinos
ECHINOCOCCOSIS / HYDATIDOSIS	Echinococcus granulosus	B053	worldwide (uncommon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants, horses
RABIES	rhabdovirus	B058	worldwide except for some island countries	direct (biting)	warm-blooded animals
SCREW-WORM	Cochliomya hominivorax, Chrysomyia bezziana	B060, B061	tropical and subtropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds

Hazards associated with Wild Equids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa Surra - Africa, South America, Asia Chagas disease - Central and South America	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored, Surra - mechanically vector-borne) Chagas disease - vector-borne	Nagana - warm-blooded animals Surra- equine, camelid, ruminants, cervids, swine, elephants Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
DOURINE	Trypanosoma equiperdum	B202	Africa, Asia, South America, parts of Russia, Burma	direct (venereal), vectored	horses, donkeys
EPIZOOTIC LYMPHANGITIS (pseudoglanders equine blastomycosis, equine histoplasmosis)	Histoplasma farciminosum	B203	Asia, Africa, Mediterranean littoral	direct, vehicle-borne	horses
EQUINE INFECTIOUS ANAEMIA	retroviridae	B205	worldwide	direct, vector-borne, vehicle-borne	horses
GLANDERS	Actinobacillus mallei	B209	Eastern Europe, Asia, North Africa, parts of China and Mongolia	vehicle-borne (ingested)	humans, small carnivores, equids
JAPANESE ENCEPHALITIS	flavivirus	B212	Malaysia, Japan, Eastern Soviet Union, Korea, China, Taiwan, the Philippines, Indonesia, Singapore, Hong Kong, Vietnam, Laos, Bangladesh, Nepal, Thailand, Burma, Sri Lanka, India, the Pacific Islands	vector-borne (mosquito)	humans, horses, swine, cattle, sheep, goats, rabbits, rats, pigeons, dogs, ducks, chickens, wild birds, reptiles
SURRA and MURRINA	Trypanosoma evansi and equinum	B215	Africa, north of the Tsetse belt, Middle East, Asia, Central and South America	vector-borne	camelids, horses, buffalo, cattle
VENEZUELAN EQUINE ENCEPHALITIS	alphavirus	B216	South and Central America, USA	vector-borne (arthropods)	horses, camelid, humans
MELIOIDOSIS	Pseudomonas mallei	C613	tropics, subtropics	direct	multiple mammalian and avian species

Hazards associated with Wild Equids

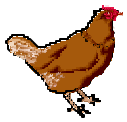
DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
TUBERCULOSIS	Mycobacterium bovis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans
BESNOITIOSIS	Besnoitia besnoiti, bennetti	-	France, Israel, Korea, Russia, Africa, Portugal, Venezuela	vehicle-borne, vector-borne	cattle, horses, zebras, donkeys, mule, goats, (carnivores are natural hosts)
PIROPLASMOSIS (babesiosis)	Babesia equi, B. caballi	-	Southern Europe, Russia, Africa, Asia, Americas	vector-borne	perissodac-tylae
THEILERIASIS	Theileria parva spp. (East Coast fever) T. mutans, orientalis, taurotragi, buffeli, annulata (Mediterranean Coast Fever)	-	parva, mutans, taurotragi - Africa buffeli - Australia annulata - Asia, mid-East, Mediterranean orientalis - worldwide	vector-borne	ruminants, European hare
BORNA DISEASE	unclassified RNA virus	-	Germany, Switzerland (may be more widespread than yet reported)	direct, vehicle-borne	horses, sheep, camelids
WEST NILE FEVER	West Nile virus	-	Morocco, French Mediterranean	vector-borne	horses, humans
HENDRA VIRUS	paramyxovirus	-	Australia	direct	humans, horses, cats, ginea pigs (reservoir in bats and rabbits)
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)
AINO VIRUS INFECTION	rhabdovirus	-	Africa, Asia, East Indies, Australia	vector-borne	cattle, buffalo
MANGE	Psoroptes ovis	-	parts of Europe, Middle East, Africa, South America	direct, vehicle-borne	sheep, horses, goats, camelids, cattle, rabbits
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis, clostridial infections, colibacillosis, corynebacterial infections, equine encephalomyelitis, EE & WEE, equine influenza, equine viral rhinopneumonitis, equine viral arteritis, leptospirosis, necrobacillosis, pasteurellosis, salmonellosis (intestinal), staphylococcal infections, streptococcal infections

Other diseases not considered as hazards:
brucellosis, contagious equine metritis, foot and mouth disease, rift valley fever

Poultry

Hazards associated with imported Poultry



DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOWL PLAGUE (Highly pathogenic avian influenza)	orthomyxovirus type A	A150	worldwide	direct, indirect	avians
NEWCASTLE DISEASE	paramyxovirus type 1	A160	worldwide	direct, vehicle-borne, airborne	avians
AVIAN TUBERCULOSIS	Mycobacterium avium	B303	worldwide	direct	all species of birds, rabbits and swine
DUCK HEPATITIS	duck hepatitis virus	B304	worldwide	direct	waterfowl
FOWL TYPHOID	Salmonella gallinarum	B308	worldwide	direct, vehicle-borne, vector-borne	chickens, turkeys
PULLORUM DISEASE	Salmonella pullorum	B313	worldwide	direct, vehicle-borne	chickens, turkeys
AVIAN SPIROCHAETOSIS	Borrelia anserina	C854	warm areas (Southern USA)	direct, vector-borne (tick vector - Argas persicus)	avians
GOOSE PARVOVIRUS INFECTION (Derzsy's disease)	parvovirus	-	all major goose-farming areas (Europe, Russia, Israel, Far East)	direct, vehicle-borne	geese and Muscovy ducks
TURKEY VIRAL RHINOTRACHEITIS / SWOLLEN HEAD DISEASE (chickens)	pneumovirus	-	widespread in most major poultry-rearing area, except North America	direct, (vehicle-borne and air-borne highly likely but currently unproven)	turkeys, chickens, guinea fowl, pheasants
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, some may be vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
avian chlamydiosis (B312), avian encephalomyelitis (C853), avian leukosis (C856), avian mycoplasmosis (Mycoplasma gallisepticum) (B311), avian tuberculosis (B303), coccidiosis (C620), duck virus enteritis (B305), fowl cholera (B306), fowl pox (B307), infectious bronchitis (B301), infectious bursal disease (B309), infectious laryngotracheitis (B302), and Marek's disease (B310).

Ratites

Hazards associated with imported Ratites

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa	direct, vehicle-borne, vector-borne (mosquitoes)	cattle, sheep, humans (ratites may serve as a reservoir host)
FOWL PLAGUE (highly pathogenic avian influenza)	orthomyxovirus type A	A150	worldwide	direct, vehicle-borne	avians
NEWCASTLE DISEASE	paramyxovirus type 1	A160	worldwide	direct, vehicle-borne, air-borne	avians
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (experimentally, vector-borne)	cattle, sheep, (goats, horses, humans, ostrich)
HEARTWATER (Cowdriosis)	Cowdria ruminantium (rickettsia)	B055	Africa, parts of West Indies, Madagascar	vector-borne (ticks)	ruminants (found in ostrich blood samples)
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans (bird)
VENEZUELAN EQUINE ENCEPHALOMYELITIS	alphavirus	B216	South and Central America, USA	vector-borne (arthropods)	horses, humans (Eastern EE causes pathology in ostriches)
AVIAN TUBERCULOSIS	Mycobacterium avium	B303	worldwide	direct	all species of birds, rabbits and swine
FOWL TYPHOID	Salmonella gallinarum	B308	worldwide	direct, vehicle-borne, vector-borne	avians
PULLORUM DISEASE	Salmonella pullorum	B313	worldwide	direct, vehicle-borne	avians
WESSELSBRON DISEASE	Group B arbovirus	-	South Africa, Zimbabwe, Mozambique	vector-borne	sheep, cattle, humans (ratites may act as vectors)
CRIMEAN-CONGO HAEMORRHAGIC FEVER	bunyavirus	-	South Africa	vector-borne (ticks)	humans, ruminants, avians (poultry and ostriches)
BORNA DISEASE	unclassified RNA virus	-	Germany, Switzerland (may be more widespread than yet reported)	direct, vehicle-borne	horses, sheep (ostrich in Israel)

Hazards associated with imported Ratites

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
AEGYPTIANELLOSIS	Aegyptia pullorum (rickettsia)	-	South Africa	vector-borne (ticks)	avians
VERMINOUS GASTRITIS (wireworm)	Libyostrongylus douglassi (nematode)	-	South Africa, Australia, USA	vehicle-borne	ratites
VERMINOUS ENCEPHALITIS	Chandlerella quiscali (nematode)	-	South Africa, USA	vector-borne (Culicoides)	emu, grackles, starlings
SALMONELLA ENTERIDITIS	S. enteritidis phage type 4	-	worldwide	vertical transmission	public health significance because non-host adapted
CESTODE INFESTATION	Huottuynia struthionus	-	Africa, South America	vehicle-borne	ostrich, rhea
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
avian chlamydiosis (B312), dermatophilosis (B107), coccidiosis (C620), and fowl pox (B307).

Bees

Hazards associated with imported Bees

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
VARROASIS	Varroa jacobsoni	B455	Asia, Eastern Europe, South America, UK	direct	bees
AFRICANISATION	genetics of African bee species	-	Central and South America, Africa, USA	direct	bees

Diseases not considered as hazards due to their presence in Canada:
acariasis of bees (B451), American foulbrood (B452), European foulbrood (B453), and nosemosis (B454).

Cervids

Hazards associated with imported Cervids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus A Virus O Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America and Europe	direct, airborne, vehicle-borne	cloven hoofed animals
VESICULAR STOMATITIS	Virus New Jersey Virus Indiana	A020	Central and South America, USA	direct, vehicle-borne, vector-borne	cattle, horses, swine, deer, camelids
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	ruminants, swine
PESTE DES PETITS RUMINANTS	morbillivirus	A050	West and sub-Saharan Africa, Arabian peninsula, India, Asia, Pakistan	direct	sheep, goats, cervids
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA, Canada	vector-borne	ruminants
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	ruminants (goats, horses, camelids, humans)
HEARTWATER (cowdriosis)	Cowdria ruminantium (Rickettsia)	B055	Africa, Madagascar, parts of West Indies	vector-borne	ruminants
LEPTOSPIROSIS (foreign serovars)	L pomon, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals
SCREW-WORM	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and subtropical Africa, Asia, North and South America	direct	warm-blooded animals and birds
ANAPLASMOSIS	Anaplasma marginale (Rickettsia)	B101	South Africa, Australia, USA, South America, Russia	vector-borne	ruminants

Hazards associated with imported Cervids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
BABESIOSIS	Babesia bovis (B. argentina, B. berbera, B. bigemina, B. major, B. divergens)	B102	B. bigemina: South America, West Indies, Australia, Africa B. bovis :South and Central America, Australia, Asia, Southern Europe B. divergens: North-west Europe, Spain, Eire, UK B. bovis: Europe, South America, Africa B. berbera: Mediterranean Europe, North Africa B. major: UK, Europe	vector-borne	ruminants
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
BRUCELLOSIS	Brucella rangiferi	-	worldwide	direct, vehicle-borne	reindeer, caribou
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
THEILERIOSIS (turning sickness in deer)	Theileria taurotragi, cervi, arestotalis, tarandi, mutans, annulata, parva, lawrenci, barnetti	B111	Africa	vector-borne	wild cervids, cattle
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals (kudu known to be one of the wildlife reservoirs)
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
SURRA	Trypanosoma evansi	B215	Africa, South America, Asia	mechanically vector-borne (flies)	horses, ruminants, elephants, swine

Hazards associated with imported Cervids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
PORCINE BRUCELLOSIS	Brucella suisbiovar 4 and 5	B253	USA, Northern Europe, Russia	direct, vehicle-borne	swine, caribou, reindeer, moose
MELIOIDOSIS	Pseudomonas pseudomallei	C613	Australia, Papua New Guinea	direct	dogs, cats, domestic livestock, rabbits, rodents, pigeons, humans
FILARIASIS	Elaeophora schneideri	C622	North and Central Europe, New Zealand, parts of Russia	vector-borne (biting flies)	mule deer (reservoir host), moose, caribou, reindeer, wapiti, white tail deer, sheep
HERPES VIRUS OFCERVIDS	CHV-1 (related to BHV-1)	-	Scotland, European wild populations	direct	red deer, roe deer, chamois, reindeer, ibex
MALIGNANT CATARRHAL FEVER	alcephaline herpesvirus 1	-	Africa, United States, Canada, Australia, New Zealand, Europe, Scandinavia, East Indies	direct	cattle, farmed deer reservoir in free living ruminants
TICK-BORNE FEVER	Cytoecetes phagocytophila	-	UK, Ireland, Scandinavia, Spain, Switzerland	vector-borne	sheep, cattle, deer, goats
TISSUE WORM	Elaphostrongy-lus cervi	-	Norway, Sweden	vector-borne (molluscs)	cervids, camelids
CHRONIC WASTING DISEASE OF DEER (transmissible spongiform encephalopathy)	unknown	-	USA wild and farmed cervids, zoo animals elsewhere	direct	mule deer, Rocky Mountain elk, antelopes, wapiti, white-tailed deer
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean	vector-borne	deer (mainly white-tailed), cattle, sheep controver-sial, camelids
BESNOITIOSIS	Besnoitia besnoiti, B. tarandi	-	worldwide, sub-polar and tropical-subtropical	vector-borne, vehicle-borne	cattle, goats, cervids (B. tarandi in caribou in particular)
LOUPING ILL	flavivirus	-	UK, Ireland, Norway, Spain, Bulgaria, Turkey	vector-borne (ticks)	sheep (ruminants, horses, swine, rodents, wild birds) humans

Hazards associated with imported Cervids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, some may be vehicle-borne	

Additional Hazards associated with Wild Cervids, Antelope & Pronghorn

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
LUMPY SKIN DISEASE	Capripoxvirus	A070	sub-Saharan Africa, Egypt, Israel, Kenya	direct, vehicle-borne, vector-borne	cattle, camelids, experimentally infects impala
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct, airborne, vehicle-borne, vector-borne	cattle, sheep, goats, horses, dogs, cats, fur-bearing species (swine are secondary hosts)
NAIROBI SHEEP DISEASE	bunyaviridae	B158	East and Central Africa	vector-borne	sheep, goats, blue duikers
CYTAUXZOONOSIS (protozoan)	Cytauxzoon sylvicapri, C. strepsocerosi, C. taurotrugi	-	Africa	vector-borne	giraffes, kudu, eland, duikers
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)
BOVINE EPHEMERAL FEVER	bovine ephemeral virus	-	Africa, Australia, Asia	vector-borne	ruminants

Diseases not considered as hazards due to their presence in Canada:
bovine virus diarrhoea (C652), dermatophilosis (B107), eperythrozoonosis, haemorrhagic septicemia (B109), infectious bovine rhinotracheitis (B110), lyme disease (Borrelia burgdorferi), malignant catarrhal fever (OHV2), paratuberculosis (Johnes disease B059), tularaemia (B352), Parelaphostrongylus tenuis (except for importation into the Provinces of British Columbia, Alberta and Saskatchewan) and warble fly infestation (Hypoderma diana) (C654).

Other diseases not considered as hazards:
alpaca fever (streptococcus zooepidemicus), aspergillosis, candidiasis, colibacillosis, cryptococcosis, mucormycosis, necrobacillosis, nocardiosis, Parelaphostrongylus tenuis

New World Camelids - Llamas & Alpacas

Hazards associated with imported New World Camelids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, air-borne, vehicle-borne	cloven hoofed animals
VESICULAR STOMATITIS	Virus New Jersey Virus Indiana	A020	parts of Central and South America, USA	direct, vehicle-borne, vector-borne	cattle, horses, deer, swine, camelids
RINDERPEST	morbillivirus	A040	Asia, Middle East, and tropical Africa	direct, vehicle-borne	ruminants, swine
LUMPY SKIN DISEASE	Capripoxvirus	A070	sub-Saharan Africa, Egypt, Israel, Kenya	direct, vehicle-borne, vector-borne	cattle, camelids
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA, Canada	vector-borne	ruminants
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, (goats, horses, humans, camelids)
ECHINOCOCCOSIS / HYDATIDOSIS	Echinococcus granulosus	B053	worldwide (but uncommoon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants
LEPTOSPIROSIS (foreign serovars)	L pomon, L. Canicola, L grippotyphosa, L. Ictero-hermmohagiiae, L hardjo	B056	worldwide	direct, vehicle-borne	warm-blooded animals
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals
SCREW-WORM	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and sub-tropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds

Hazards associated with imported New World Camelids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
BABESIOSIS	Babesia bovis B.argentina, B.berbera, B.bigemina, B.major, B.divergens)	B102	B.bigemina: South America, West Indies, Australia, Africa B.bovis: South and Central America, Africa, Australia, Asia, Southern Europe B.divergens; Northwest Europe, Spain, Eire, UK B.berbera: Mediterranean Europe, North Africa B.major: UK, Europe	vector-borne (arthropods)	ruminants
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
THEILERIASIS	Theileria parva (East Coast fever) T. mutans T. orientalis T. taurotragi T. buffeli T. annulata (Mediterrannean Coast Fever)	B111	parva: Africa mutans: Africa orientalis: all continents taurotragi: Africa buffeli: Australia annulata: Mediterranean	vector-borne (T. mutans transmitted by Amblyomma spp only)	ruminants, European hare
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa Surra - Africa, South America, Asia Chagas disease - Central and South America	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored, Surra - mechanically vector-borne) Chagas disease - vector-borne	Nagana - warm-blooded animals Surra- equine, camelid, ruminants, cervids, swine, elephants Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
CAPRINE AND OVINE BRUCELLOSIS	Brucella melitensis	B152	Africa, Europe, Israel, USA	direct, vehicle-borne	sheep, goats, camelids
CONTAGIOUS CAPRINE PLEUROPNEUMONIA	Mycoplasma mycoides capri, M. mycoides mycoides (LC), M. mycoides capricolum	B155	North Africa, Spain, Mediterranean litoral, Asia Minor, India	direct	goats, camelids

Hazards associated with imported New World Camelids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
MANGE	Psoroptes ovis	B213	parts of Europe, Middle East, Africa, South America	direct, vehicle-borne	sheep, horses, goats, cattle, rabbits, camelid
VENEZUELAN EQUINE ENCEPHALOMYELITIS	alphavirus	B216	South and Central America, USA	vector-borne (arthropods)	horses, humans, camelids
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean	vector-borne	deer (mainly white-tailed), cattle, sheep controver-sial, camelids
BORNA DISEASE	unclassified RNA virus	-	Germany, Switzerland (may be more widespread than yet reported)	direct, vehicle-borne	horses, sheep, camelids
BOVINE EPHEMERAL FEVER	bovine ephemeral virus	-	Africa, Australia, Asia	vector-borne	cattle, buffalo, camelids
CAMELPOX	orthopoxvirus	-	India, Pakistan, Afghanistan, Iran, Russia, Middle East, North and East Africa	direct	camelids, rabbits
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, some may be vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis (C618), caseous lymphadenitis (Corynebacterium streptococcus C705), clostridial infections (C616), coccidiosis (C620), haemorrhagic septicemia (B109), paratuberculosis (Johnes disease B059), Q fever (B057),listeriosis(C611), toxoplasmosis (C612), bovine virus diarrhoea/mucosal disease (C652), and warble fly infestation (Hypoderma diana) (C654).

Other diseases not considered as hazards:
alpaca fever (Streptococcus zooepidemicus), aspergillosis, candidiasis, colibacillosis, cryptococcosis, mucormycosis, necrobacillosis, nocardiosis, and Parelaphostrongylus tenuis.

Old World Camelids

Hazards associated with Bactrian Camels and Dromedaries

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, airborne, vehicle-borne	cloven hoofed animals
VESICULAR STOMATITIS	Virus New Jersey Virus Indiana	A020	parts of Central and South America, USA	direct, vehicle-borne, vector-borne	cattle, horses, donkeys, swine, camelids
RINDERPEST	morbillivirus	A040	Asia, Middle East and tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild)
CONTAGIOUS BOVINE PLEUROPNEUMONIA	Mycoplasma mycoides (SC)	A060	Eastern Europe, Asia, Africa, parts of Western Europe	direct, vehicle-borne	cattle
LUMPY SKIN DISEASE	Capripoxvirus	A070	sub-Saharan Africa, Egypt, Israel, Kenya	direct, vehicle-borne, vector-borne	cattle, camelids
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA, Canada	vector-borne	ruminants
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experi-mentally)	cattle, sheep (goats, horses, camelids, humans)
ECHINOCOCCOSIS / HYDATIDOSIS	Echinococcus granulosus	B053	worldwide (but uncommoon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants
HEARTWATER OR COWDRIOSIS	Cowdria ruminantium (rickettsia)	B055	Africa, Madagascar, parts of West Indies	vector-borne	ruminants
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals
SCREW-WORM	Cochliomyia hominivorax and Chrysomyia bezziana	B060	tropical and sub-tropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds
ANAPLASMOSIS	Anaplasma marginale (rickettsia)	B101	South Africa, Australia, Russia, South America, USA	vector-borne	ruminants

Hazards associated with Bactrian Camels and Dromedaries

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
BABESIOSIS	Babesia bovis B.argentina, B.berbera, B.bigemina, B.major, B.divergens)	B102	B.bigemina: South America, West Indies, Australia, Africa B.bovis: South and Central America, Africa, Australia, Asia, Southern Europe B.divergens; Northwest Europe, Spain, Eire, UK B.berbera: Mediterranean Europe, North Africa B.major: UK, Europe	vector-borne (arthropods)	ruminants
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
THEILERIASIS	Theileria parva (East Coast fever) T. mutans T. orientalis T. taurotragi T. buffeli T. annulata (Mediterrannean Coast Fever)	B111	parva: Africa mutans: Africa orientalis: all continents taurotragi: Africa buffeli: Australia annulata: Mediterranean	vector-borne (T. mutans transmitted by Amblyomma spp only)	ruminants, European hare
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa Surra - Africa, South America, Asia Chagas disease - Central and South America	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored, Surra - mechanically vector-borne) Chagas disease - vector-borne	Nagana - warm-blooded animals Surra- equine, camelid, ruminants, cervids, swine, elephants Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
CAPRINE AND OVINE BRUCELLOSIS	Brucella melitensis	B152	Africa, Europe, Israel, USA	direct, vehicle-borne	sheep, goats, camelids
CONTAGIOUS CAPRINE PLEUROPNEUMONIA	Mycoplasma mycoides capri, M. mycoides mycoides (LC), M. mycoides capricolum	B155	North Africa, Spain, Mediterranean litoral, Asia Minor, India	direct	goats, camelids

Hazards associated with Bactrian Camels and Dromedaries

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
MANGE	Psoroptes ovis	B213	parts of Europe, Middle East, Africa, South America	direct, vehicle-borne	sheep, horses, goats, camelids, cattle, rabbits
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean	vector-borne	deer (mainly white-tailed), cattle, sheep controver-sial, camelids
AFRICAN HORSE SICKNESS	orbivirus	-	Africa, Spain, Portugal	vector-borne	horses, mule, donkeys, camel
GLANDERS	Actinobacillus mallei	-	Eastern Europe, Asia, North Africa, parts of China & Mongolia	vehicle-borne (ingested)	humans, small carnivores, equids, camels
WESSELSBRON DISEASE	group B arboviruses	-	Southern Africa	vector-borne	cattle, sheep, camelids
IBARAKI DISEASE	orbivirus	-	Japan	vector-borne	cattle
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)
AINO VIRUS INFECTION	rhabdovirus	-	Africa, Asia, East Indies, Australia	vector-borne	ruminants
BORNA DISEASE	unclassified RNA virus	-	Germany, Switzerland (may be more widespread than yet reported)	direct, vehicle-borne	horses, sheep, camelids
BOVINE EPHEMERAL FEVER	bovine ephemeral virus	-	Africa, Australia, Asia	vector-borne	cattle, buffalo, camelids
CAMELPOX	orthopoxvirus	-	India, Pakistan, Afghanistan, Iran, Russia, Middle East, North and East Africa	direct	camelids, rabbits
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastrointestinal helminths (foreign)	-		direct, some may be vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
bovine virus diarrhoea (C652), dermatophilosis (B107), eperythrozoonosis, haemorrhagic septicemia (B109), infectious bovine rhinotracheitis (B110), lyme disease (Borrelia burgdorferi), malignant catarrhal fever (OHV2), paratuberculosis (Johnes disease B059), tularaemia (B352), Parelaphostrongylus tenuis (except for importation into the Provinces of British Columbia, Alberta and Saskatchewan) and warble fly infestation (Hypoderma diana) (C654).

Diseases not considered as hazards:
Elaphostrongylus cervi

Elephants

Hazards associated with Elephants

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America	direct, airborne, vehicle-borne	cloven hoofed animals
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild), perissodac-tylae (odd-toed ungulates)
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa	direct, vehicle-borne, vector-borne (mosquitoes)	cattle, sheep, goats, humans, wild herbivores, monkeys, rodents
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, goats, horses, camelids, humans, elephants, hippos, rhinos
SCREW-WORM	Cochliomya hominivorax, Chrysomyia bezziana	B060, B061	tropical and subtropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts

Hazards associated with Elephants

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
AINO VIRUS INFECTION	rhabdovirus	-	Africa, Asia, East Indies, Australia	vector-borne	cattle, sheep, goats, many wildlife species including buffalo
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)
MELIOIDOSIS	Pseudomonas mallei	-	tropics, subtropics	direct	multiple mammalian and avian species
TUBERCULOSIS	Mycobacterium tuberculosis var. bovis and hominis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans
BABESIOSIS	Babesia bigemina	-	Central and South America, West Indies, Asia, Australia, Southern Europe	vector-borne	ruminants
PIROPLASMOSIS (babesiosis)	Babesia spp.	-	Southern Europe, Africa, Asia, Americas	vector-borne	perissodac-tylae
THEILERIASIS	Theileria parva spp. (East Coast fever) T. mutans, orientalis, taurotragi, buffeli, annulata (Mediterranean Coast Fever)	-	parva, mutans, taurotragi - Africa buffeli - Australia annulata - Asia, mid-East, Mediterranean orientalis - worldwide	vector-borne	ruminants, European hare
VENEZUELAN EQUINE ENCEPHALITIS	alphavirus	-	South and Central America, USA	vector-borne (arthropods)	horses, camelid, elephants, humans
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis, clostridial infections, colibacillosis, eastern and western equine encephalitides, leptospirosis, listeriosis, pasteurelloses, intestinal salmonellosis

Other diseases not considered as hazards:
borna disease, brucellosis (B103), contagious equine metritis (B201), elephant poxvirus, epizootic lymphangitis, equine infectious anaemia, glanders (B209), rabies (B058), biologically-vectored Trypanosoma spp., vesicular stomatitis (A020).

Giraffe and Okapi

Hazards associated with imported Giraffe and Okapi

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America	direct, airborne, vehicle-borne	cloven hoofed animals
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild), perissodac-tylae (odd-toed ungulates)
LUMPY SKIN DISEASE	Capripoxvirus	A070	sub-Saharan Africa, Egypt, Israel, Kenya	direct, vehicle-borne, vector-borne	cattle, camelids, ? giraffes
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, goats, horses, camelids, humans, elephants, hippos, rhinos
HEARTWATER (cowdriosis)	Cowdria ruminantium (rickettsia)	B055	Africa, Madagascar, parts of West Indies	vector-borne	cattle, sheep, goats, antelopes, many wildlife reservoir species
SCREW-WORM	Cochliomya hominivorax, Chrysomyia bezziana	B060, B061	tropical and subtropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds
ANAPLASMOSIS	Anaplasma marginale (rickettsia)	B101	South Africa, Australia, Russia, South America, USA	vector-borne	ruminants, giraffes, buffalo, wildebeest

Hazards associated with imported Giraffe and Okapi

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats (seriological evidence in horses, buffalo, deer and dogs)
AINO VIRUS INFECTION	rhabdovirus	-	Africa, Asia, East Indies, Australia	vector-borne	cattle, buffalo, wildlife species
MELIOIDOSIS	Pseudomonas mallei	-	tropics, subtropics	direct	multiple mammalian and avian species
TUBERCULOSIS	Mycobacterium hominis, bovis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans
CYTAUXZOONOSIS (protozoan)	Cytauxzoon sylvicapri, C. strepsocerosi, C. taurotrugi	-	Africa	vector-borne	giraffes, kudu, eland, duikers
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis, clostridial infections, colibacillosis, corynebacterial infections, necrobacillosis, pasteurellosis, salmonellosis (intestinal), staphylococcal infections, streptococcal infections
Other diseases not considered as hazards:
Aujeszky's disease, bluetongue, epizootic haemorrhagic disease, rabies, vesicular stomatitis

Hippopotami

Hazards associated with Hippopotami

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America	direct, airborne, vehicle-borne	cloven hoofed animals
VESICULAR STOMATITIS	Virus Indiana Virus New Jersey	A020	USA, Central and South America	direct, vehicle-borne, vector-borne	cattle, horses, donkeys, swine, camelid
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild), perissodac-tylae (odd-toed ungulates)
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa	direct, vehicle-borne, vector-borne (mosquitoes)	cattle, sheep, humans. hippopotami antibody-positive
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, goats, horses, camelids, humans, elephants, hippos, rhinos
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa Surra - Africa, South America, Asia Chagas disease - Central and South America	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored, Surra - mechanically vector-borne) Chagas disease - vector-borne	Nagana - warm-blooded animals Surra-equine, camelid, ruminants, cervids, swine, elephants Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
BOVINE BRUCELLOSIS	Brucella abortus	-	worldwide	direct, vehicle-borne	ruminants, swine, horses
TUBERCULOSIS	Mycobacterium hominis, bovis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans

Hazards associated with Hippopotami

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
AKABANE DISEASE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya	vector-borne	cattle, sheep, goats(seriologi -cal evidence in horses, buffalo, deer and dogs)
AINO VIRUS INFECTION	rhabdovirus	-	Africa, Asia, East Indies, Australia	vector-borne	cattle, buffalo
MELIOIDOSIS	Pseudomonas mallei	-	tropics, subtropics	direct	multiple mammalian and avian species
PIROPLASMOSIS (babesiosis)	Babesia spp.	-	Southern Europe, Africa, Asia, Americas	vector-borne	perissodac-tylae
THEILERIASIS	Theileria parva spp. (East Coast fever) T. mutans, orientalis, taurotragi, buffeli, annulata (Mediterranean Coast Fever)	-	parva, mutans, taurotragi - Africa buffeli - Australia annulata - Asia, mid-East, Mediterranean orientalis - worldwide	vector-borne	ruminants, European hare
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis, clostridial infections, colibacillosis, corynebacterial infections, necrobacillosis, pasteurellosis, salmonellosis (intestinal), staphylococcal infections, streptococcal infections

Other diseases not considered as hazards:
african horse sickness, borna disease, contagious equine metritis, dourine, epizootic lymphangitis, equine infectious anaemia, glanders, melioidosis, rabies, rift valley fever, screwworm, west nile fever

Rhinoceros

Hazards associated with Rhinoceros

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild), perissodac-tylae (odd-toed ungulates)
RIFT VALLEY FEVER	phlebovirus	A080	Africa	direct, vehicle-borne, vector-borne (mosquitoes)	cattle, sheep, goats, humans subclinical in multiple other species
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA, Canada	vector-borne	ruminants
AFRICAN HORSE SICKNESS	orbivirus	A110	Africa, Spain, Portugal	vector-borne	equines, other perissodac-tylae
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, goats, horses, camelids, humans, elephants, hippos, rhinos
SCREW-WORM	Cochliomya hominivorax, Chrysomyia bezziana	B060, B061	tropical and subtropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts

Hazards associated with Rhinoceros

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
HEARTWATER (cowdriosis)	Cowdria ruminantium (rickettsia)	-	Africa, Madagascar, parts of West Indies	vector-borne	cattle, sheep, goats, antelopes, leopards tortoises, helmeted guinea fowl
TUBERCULOSIS	Mycobacterium bovis, hominis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans
BABESIOSIS	Babesia bigemina	-	Central and South America, West Indies, Asia, Australia, Southern Europe	vector-borne	ruminants
PIROPLASMOSIS (babesiosis)	Babesia equi, caballi	-	Southern Europe, Russia, Africa, Asia, Americas	vector-borne	perissodac-tylae
THEILERIASIS	Theileria parva spp. T. mutans, orientalis, taurotragi, buffeli, annulata	-	parva, mutans, taurotragi - Africa buffeli - Australia annulata - Asia, mid-East, Mediterranean orientalis - worldwide	vector-borne	ruminants, European hare
FILARIASIS	Stephanofilaria spp - dinniki, stilesi, assamensis, zaheerei, kaeli, okinawaensis	-	Africa - dinniki USA, Russia - stilesi Asia - assamensis India, Far East - zaheeri, kaeli, okinawaensis	vector-borne	cattle, buffalo, rhinos
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis, clostridial infections, colibacillosis, leptospirosis, listeriosis, pasteurelloses, intestinal salmonellosis

Other diseases not considered as hazards:
akabane, bovine ephemeral fever, borna disease, brucellosis, dourine, elephant poxvirus, epizootic lymphangitis, equine influenza, foot and mouth disease, glanders, rabies, lumpy skin disease, vesicular stomatitis, Trypanosoma brucei and congolense, venezuelan equine encephalitis, wesselsbron disease, west nile fever

Tapirs

Hazards associated with Tapirs

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America	direct, airborne, vehicle-borne	cloven hoofed animals
VESICULAR STOMATITIS	Virus Indiana Virus New Jersey	A020	USA, Central and South America	direct, vehicle-borne, vector-borne (biting flies, mosquitoes)	cattle, horses, donkeys, swine, camelids
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild), perissodac-tylae (odd-toed ungulates)
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	cattle, sheep, goats, horses, camelids, humans, elephants, hippos, rhinos
SCREW-WORM	Cochliomyia hominivorax, Chrysomya bezziana	B060, B061	tropical and subtropical Africa, Asia, Central and South America	direct	warm-blooded animals and birds
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio- logically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
MURRINA	Trypanosoma equinum	-	Africa, north of the Tsetse belt, Middle East, Asia, Central and South America	vector-borne	camelids, horses, buffalo, cattle, tapir

Hazards associated with Tapirs

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
MELIOIDOSIS	Pseudomonas pseudomallei	-	tropics and sub-tropics	direct, vehicle-borne	wide range of mamma- lian species and birds
TUBERCULOSIS	Mycobacterium hominis, bovis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans, perissodac-tylae (odd-toed ungulates)
PIROPLASMOSIS (babesiosis)	Babesia equi and caballi	-	Southern Europe, Africa, Asia, Americas	vector-borne	perissodac-tylae
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis, clostridial infections, colibacillosis, leptospirosis, listeriosis, pasteurelloses, intestinal salmonellosis

Other diseases not considered as hazards:
borna disease, elephant poxvirus, epizootic lymphangitis, equine infectious anaemia, rabies, theileriasis

Procyonids

raccoons, pandas, coatis, cacomistles (ring-tailed cat)

Hazards associated with imported Procyonids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne, vector-borne experimentally	ungulates, humans, wild carnivores, ranched foxes
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct	cattle, sheep, goats, horses, felidae, fur-bearing species (swine), foxes, jackals, domestic dogs
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct	warm-blooded animals
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra-equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - mechanically vector-borne	Chagas disease - humans, swine, dogs, cats, wide variety of wildlife reservoirs including lesser pandas
TUBERCULOSIS	Mycobacterium hominis, bovis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans, carnivores
TRICHINELLOSIS	Trichinella spiralis	-	worldwide (temperate zones)	vehicle-borne	warm-blooded animals
TULARAEMIA	Francisella tularensis	-	North America, Eurasia	direct, vehicle-borne, vector-borne	small mammals, sheep, deer
TRANSMISSIBLE MINK ENCEPHALOPATHY (TSE)	prion	-	follows scrapie and BSE distributions	vehicle-borne	farmed mink, raccoons
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	

Hazards associated with imported Procyonids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
canine distemper, canine infectious hepatitis (fox encephalitis), dermatophilosis, giant kidney worm (Dioctophyma renale), infectious feline panleucopaenia, leptospirosis, listeriosis, pasteurellosis, pseudotuberculosis, Q fever, salmonellosis, toxoplasmosis, Tyzzer's disease

Edentata and Aardvarks

includes Anteaters, Armadillos, and Sloths

Hazards associated with imported Edentates and Aardvarks

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, airborne, vehicle-borne	cloven hoofed animals, armadillos
RINDERPEST	morbillivirus	A040	Asia, Middle East and tropical Africa	direct, vehicle-borne	cattle, buffalo, swine, other ruminants (mild) - armadillos plays an unknown role
AFRICAN SWINE FEVER	arbovirus	A120	Africa, parts of Europe	direct, vehicle-borne, vector-borne	swine armadillos plays an unknown role
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne, vector-borne experimentally	cattle, sheep (camelid, goats, horse, humans, hare, anteaters)
RABIES	*rhabdovirus*	B058	worldwide except some island countries	direct	warm-blooded animals
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio- logically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, dogs, cats, wide variety of wild reservoir including armadillos

Hazards associated with imported Edentates and Aardvarks

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
TUBERCULOSIS	Mycobacterium bovis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans, carnivores, edentates
MANGE	Psoroptes, Sarcoptes	-	parts of Europe, Africa, Middle East, South America	direct, vehicle-borne	sheep, goats, cattle, horses, rabbits, camelid, edentata
LEPROSY	Mycobacterium leprae	-	Southern USA (Texas, Louisiana)	direct, vehicle-borne	humans, armadillos
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-	worldwide	direct, some may be vehicle-borne	
	Ticks and other integumentary arthropods (foreign)	-	worldwide	direct	

Diseases not considered as hazards due to their presence in Canada:
intestinal salmonellosis, leptospirosis, staphylococcosis

Other diseases not considered as hazardous:
adiaspiromycosis

Insectivora

Tenrecs, Hedgehogs, Shrews and Moles

Hazards associated with imported Insectivora

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, air-borne, vehicle-borne	cloven hoofed animals, hedgehogs
TULARAEMIA	Francisella tularensis	-	North America, Eurasia	direct, vehicle-borne, vector-borne	ruminants, swine, humans, carnivores
LYMPHOCYTIC CHORIOMENINGITIS VIRUS	arenavirus	-		direct, vertically-transmitted, vector-borne	rodents, swine, dogs, humans, primates, (rabbits, horses, chickens) East African hedgehogs, moles
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
bordetellosis, coccidiosis, leptospirosis, pasteurellosis, Q fever, intestinal salmonellosis, toxoplasmosis

Other diseases not considered as hazards:
adiaspiromycosis

Marsupials & Monotremes

Includes Kangaroos, Koalas, Wombats, Wallabys, Duck-Billed Platypus, Spiny Anteaters, Echidnas, Cuscuss, Bandicoots, Tasmanian Devils, Opossums

Hazards associated with imported Marsupials and Monotremes

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
RABIES	rhabdovirus	B058	worldwide, except for Finland, Norway, Sweden, Japan, UK, Ireland, Uruguay, Australia, New Zealand	direct (biting)	warm-blooded animals
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide	direct, vehicle-borne	ruminants, swine, horses
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, dogs, cats, swine, wide variety of wildlife reservoir including opossums
MELIOIDOSIS	Pseudomonas pseudomallei	C613	Australia, Papua-New Guinea	direct	dogs, cats, domestic livestock, rodents, rabbits, pigeons, humans
TULARAEMIA	Francisella tularensis	-	North America, Eurasia	direct, vehicle-borne, vector-borne	small mammals, sheep, deer

Hazards associated with imported Marsupials and Monotremes

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
TYPHUS AND MURINE TYPHUS	Rickettsia prowazekii, typhi	-	Eastern USA (prowazekii), worldwide (typhi, mooseri)	vector-borne	humans, opossum, rats, cats, flying squirrels
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
actinomycosis, bordetellosis, candidiasis, coccidiomycosis, coccidiosis, colibacillosis, corynebacteriosis, diplococcosis, eperythrozoonosis, erysipelas, haemobartonellosis, heartworm, histoplasmosis, leptospirosis, listeriosis, necrobacillosis, nocardiosis, pasteurellosis, pseudomoniasis, Q fever, Rocky Mountain spotted fever, salmonellosis, staphylococcosis, streptococcosis, toxoplasmosis, vibriosis (campylobacteriosis)

Other diseases not considered as hazards:
arbovirus (marsupials and monotremes suspected to act a silent carriers), Besnoitiosis, relapsing fever (Borrelia recurrentis)

Non - human Primates

RISK ASSESSMENT RESPONSIBILITY LIES WITH HEALTH CANADA DUE TO THE OVERRIDING IMPORTANCE OF ZOONOTIC ASPECTS OF IMPORTATION OF THESE ANIMALS. UNTIL THE HEALTH CANADA ASSESSMENT IS COMPLETE, IMPORTATION OF NON-HUMAN PRIMATES DESTINED FOR NON-ZOO AND NON-RESEARCH FACILITIES IS PROHIBITED. THIS INCLUDES CIRCUS IMPORTATIONS. CFIA IMPOSES OIE IMPORT CONDITIONS WHEN IMPORTATION IS PERMITTED.

Hazards associated with imported Non - Human Primates

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa	direct, vehicle-borne, vector-borne (mosquitoes)	cattle, sheep, goats humans, wild herbivores, monkeys, rodents
PSEUDORABIES (Aujeszky's Disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct, airborne, vehicle-borne, vector-borne	cattle, sheep, goats, horses, dogs, cats, fur-bearing species (swine secondary hosts)
ECHINOCOCCOSIS	Echinococcus granulosus	B053	worldwide (uncommon in North America, Scandinavia, Iceland, New Zealand, Tasmania)	direct	humans, ruminants
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct (biting)	warm-blooded animals
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored,	Nagana - warm-blooded animals
	Trypanosoma rhodesiense, gambiense		Surra - Africa, South America, Asia	Trypanosoma - biologically vector-borne (T. Rhdesiense, gambiense) mechanically vectored (T. Cruzi)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi (zoonotic)		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
TULARAEMIA	Francisella tularensis	B352	North America, Eurasia	direct, vehicle-borne, vector-borne (ticks, tabanid flies, mosquitoes)	small mammals, sheep, deer

Hazards associated with imported Non - Human Primates

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
MELIOIDOSIS	Pseudomonas pseudomallei	C613	Australia, Papua New Guinea	direct	dogs, cats, domestic livestock, rabbits, rodents, pigeons, humans
TUBERCULOSIS	Mycobacterium bovis, hominis	-	worldwide	direct, vehicle-borne	ruminants, swine, primates
KURU (TSE)	prion	-	New Guinea	vehicle-borne	chimpanzee, humans
VENEZUELAN EQUINE ENCEPHALITIS	alphavirus	-	South and Central America, USA	vector-borne (arthropods)	horses, camelid, humans
	Ticks and other integumentary arthropods (foreign)	-	worldwide	direct	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-	worldwide	direct, some may be vehicle-borne	

Zoonotic Hazards associated with imported Non-Human Primates

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
HUMAN IMMUNODEFICIENCY VIRUS (AIDS)	HIV	-	worldwide	direct	humans, primates
HERPES B ENCEPHALITIS (Herpes virus B)	herpesvirus simiae	-	Asia, Africa	direct	humans, rabbits, Old World primates
MONKEYPOX	monkeypox virus	-	Africa	direct	humans, primates, giant anteater
SMALLPOX	variola virus	-	primate populations	direct	primates and humans
YELLOW FEVER	flavivirus	-	Africa, South America	vector-borne, rarely direct	all primates including humans
KYASANUR FOREST VIRUS DISEASE	flavivirus	-	India	vector-borne	primates, humans, rodents are reservoir species
EBOLA	filovirus	-	Africa	direct, vector-borne?	primates, humans

Zoonotic Hazards associated with imported Non-Human Primates

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
MENGO VIRUS (encphalomyocarditis virus)	enterovirus	-	Africa, South America	direct, vehicle-borne, vector-borne	rodents (reservoir), lagomorphs swine, mongoose, primates and humans
MARBURG VIRUS (green monkey virus)	rhabdovirus	-	Africa	unknown - direct, plus ?	Old World monkeys, humans
LYMPHOCYTIC CHORIOMENGITIS VIRUS (lcm virus)	arenavirus	-		direct, vertically transmitted, vector-borne	rodents (reservoir host), swine, dogs, primates, humans (rabbits, horses and chickens considered dead-end hosts)
LASSA FEVER	arenavirus	-	Africa	direct	humans, primates
BUBONIC PLAGUE	Yersinia (Pasteurella) pestis	-	uncontrolled wild rodents populations, most continents	vector-borne (rat-> flea)	multiple species including simians and humans
RELAPSING FEVER	Borrelia recurrentis, venezuelensis	-	B. recurrentis - Africa B. venezuelensis - South America	vector-borne	primates, humans

Diseases not considered as hazards:
bordetellosis, campylobacteriosis, chickenpox virus, chlamydiosis, coccidiomycosis, colibacillosis, corynebacterial infections, cryptococcosis, diplococcosis, eastern and western equine encephalitis virus, enterovirus and rhinovirus (human 'colds' and 'flu') erysipelas infection, glanders, hepatitis virus A and B (human hepatits), hepatitis A and B viruses, herpes simplex virus ('cold sores' in man), histoplasmosis, intestinal salmonellosis, klebsiella infection, leptospirosis, listeriosis, mange (Sarcoptes scabei), moniliasis, mumps virus, mycoplasma pneumonia, nocardiosis, pasteurellosis, Plasmodium spp. (Malaria), pneumocystis infection, poliomyelitis viruses I, II and III, pseudomonas infections, Rocky Mountain spotted fever (Rickettsia rickettsi), rubella virus (German measles), rubeola virus (measles), schistosomiasis, shigellosis, staphylococcosis, streptococcosis, streptothricosis (Dermatophilus congolensis), tanapox virus, Yabavirus

Wild Canids

Wolf, Coyote, Jackals, Dingo, Foxes, Raccoon Dog, Bushdog, Small-Eared Dog, African Hunting Dog

Hazards associated with imported Wild Canids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne, vector-borne experimentally	ungulates, humans, wild carnivores, ranched foxes
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct	cattle, sheep, goats, horses, felidae, fur-bearing species (swine), foxes, jackals, domestic dogs
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct	warm-blooded animals
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa T. evansi - North Africa, Middle East, Asia, Far East, Central and South America Trypanosoma cruzzi - Central and South America	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored, Surra - mechanically vector-borne) mechanically vector-borne	Nagana - warm-blooded animals T. evansi - warm-blooded animals Chagas disease - humans, swine, dogs, cats, wide variety of wildlife reservoirs including foxes
BRUCELLOSIS	Brucella abortus, suis	-	worldwide	direct, vehicle-borne	ruminants, swine, horses, dogs, wolf, foxes, jackals
TUBERCULOSIS	Mycobacterium hominis, bovis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans, carnivores
TRICHINELLOSIS	Trichinella spiralis	-	worldwide (temperate zones)	vehicle-borne	warm-blooded animals

Hazards associated with imported Wild Canids

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
BESNOITIOSIS	Besnoitia besnoiti, bennetti	-	France, Israel, Korea, Russia, Africa, Portugal, Venezuela	vehicle-borne, vector-borne	cattle, horses, zebras, donkeys, mule, goats, carnivores are natural host
SALMON POISONING	Neorickettsia helminthoeca	-	West coast USA	vector-borne (trematode, with a snail intermediate host)	arctic red fox, coyote, domestic dogs
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
babesiosis, canine parvovirus, canine parainfluenza, canine eherlichiosis, coccidiosis, Dioctophyma renale (giant kidney worm), distemper, giardiasis, heartworm, infectious canine hepatitis (fox encephalitis), leptospirosis, listeriosis, lungworm, pseudotuberculosis, toxoplasmosis, Tyzzer's disease

Non - Domestic Felines

Hazards associated with Non-Domestic Felines

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne (vector-borne experimentally)	ungulates, horses, humans, big cats - African lions, cougars, cheetahs, lynx, leopards, tigers
RABIES	rhabdovirus	B058	worldwide, except for Finland, Norway, Sweden, Japan, UK, Ireland, Uruguay, Australia, New Zealand	direct (biting, saliva)	warm-blooded animals
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide	direct, vehicle-borne	ruminants, swine, humans, big cats
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		T. evansi - North Africa, Middle East, Asia, Far East, Central and South America	vector-borne	horses, camel, ruminants, deer, swine, elephants, dogs, cats all domestic animals are susceptible
	Chagas disease - T. cruzi		T. cruzi Central and South America	mechanically vector-borne	Chagas disease - humans, swine, dogs, cats, wide range of wild reservoir hosts
FELINE SPONGIFORM ENCEPHALOPATHY (Same prion as BSE)	prion	-	UK, Switzerland, Ireland, France, Portugal (BSE, domestic cat FSE); zoo population of cheetah in Germany, England (FSE)	vehicle-borne	FSE in domestic cats, cheetahs
TRICHINELLOSIS	Trichinella spiralis	-	worldwide (temperate zones)	vehicle-borne	warm-blooded animals

Hazards associated with Non-Domestic Felines

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
BESNOITIOSIS	Besnoitia besnoiti, bennetti	-	France, Israel, Korea, Russia, Africa, Portugal, Venezuela	vehicle-borne, vector-borne	cattle, horses, zebras, donkeys, mule, goats, carnivores are natural host
CYTAUXZOONOSIS (protozoan, Theileriidae)	Cytauxzoon felis	-	USA (SE, mid-west, Gulf Coast)	vector-borne	bobcat (reservoir host), domestic cats, tigers, cheetahs, cougars, panther
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
clostridial infections, coccidiosis, cryptococcosis (C.neoformans), enterotoxaemia, feline calicivirus, feline infectious anaemia, feline infectious peritonitis, feline panleukopaenia, feline viral rhinotracheitis, leptospirosis (L. ballum, pomona, grippotyphosa), listeriosis, mycoplasmosis (M. laidlawi, leonis), pasteurellosis, salmonellosis (S. anatum,bredeney,california, newport, saint-paul)

Lagomorphs

Hazards associated with imported Lagomorphs

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
MYXOMATOSIS	poxvirus	B351	Europe, Western USA, Australia	direct, vector-borne	domestic rabbits, European wild rabbits (Oryctolagus cuniculus)
TULARAEMIA	Francisella tularensis	B352	North America, Eurasia	direct, vehicle-borne, vector-borne (ticks, tabanid flies, mosquitoes)	small mammals, sheep, deer
VIRAL HAEMORRHAGIC DISEASE OF RABBITS	parvovirus	B353	Europe, Mexico, China, Korea, Australia, Bosnia, Herzegovina	direct, vehicle-borne	rabbits
MANGE	Psoroptes ovis	C706	parts of Eurpoe, Middle East, Africa, South America	direct, vehicle-borne	sheep, horses, goats, cattle, rabbits, camelids
HENDRA VIRUS	paramyxovirus	-	Australia	direct	humans, horses, cats, guinea pigs (reservoir in bats and rabbits)
CAMELPOX	orthopoxvirus	-	India, Pakistan, Afghanistan, Iran, Russia, Middle East, North and East Africa	direct	camelids, rabbits

Wild Rodents

Hazards associated with imported Wild Rodents

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	direct, vehicle-borne, airborne	cloven hoofed animals, porcupine
RIFT VALLEY FEVER	phlebovirus	A080	Central and South Africa	direct, vehicle-borne	cattle, sheep, goats, humans, wild herbivores, some primates, rodents
ANTHRAX	Bacillus anthracis	B051	worldwide	direct, vehicle-borne, vector-borne experi-mentally	cattle, sheep, (camelid, goats, horses, humans) hares via vector
PSEUDORABIES (Aujeszky's disease)	herpesvirus-I porcine	B052	patchy across all continents with the excep-tion of Australia	direct, vehicle-borne	cattle, sheep, goats, horses, dogs, cats, rat, mice, porcupine, hare, rabbits, muskrat, woodchuck
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax Surra - T. evansi Chagas disease - T. cruzi	B113	Nagana - Africa Surra - Africa, South America, Asia Chagas disease - Central and South America, Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms bio-logically vectored, Surra - mechanically vector-borne) Chagas disease - (via arthropod vector faeces)	Nagana - warm-blooded animals Surra-equine, camelid, ruminants, cervids, swine, elephants Chagas disease - humans, swine, dogs, cats, wide variety of wild reservoir including rodents
MYXOMATOSIS	poxvirus	B351	Europe, Western USA, Australia	direct, vector-borne	domestic rabbits, European wild rabbits (Oryctolagus cuniculus)
TULARAEMIA	Francisella tularensis	B352	North America, Eurasia	direct, vehicle-borne, vector-borne (ticks, tabanid flies, mosquitoes)	small mammals, sheep, deer
LOUPING ILL (ovine encephalomyelitis)	flavivirus	-	UK, Ireland, Norway, Spain, Bulgaria, Turkey	vector-borne (ticks)	sheep, cattle, horses, deer, dogs, humans; wildlife reservoirs include cervids rodents and red grouse
TRICHINELLOSIS	Trichinella spiralis	-	worldwide	vehicle-borne	warm-blooded animals

Hazards associated with imported Wild Rodents

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
BRUCELLOSIS	Brucellosis serovars	-	worldwide	direct, vehicle-borne	ruminants, swine, horses, humans, hare, mice, rabbits, rat
TUBERCULOSIS	Mycobacterium bovis, avium, hominis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans, mice, rat, rabbits
LYMPHOCYTIC CHORIOMENINGITIS VIRUS (LCM)	arenavirus	-		direct, vertically transmitted, vector-borne	rodents (reservoir hosts), swine, dogs, primates, humans (rabbits, horses, chickens are dead-end hosts)
ECTROMELIA (mousepox)	poxvirus	-		direct	mice
SYLVATIC PLAGUE	Yersinia (Pasteurella) pestis	-	endemic in New World wild rodent populations including USA	vector-borne (rat-> flea)	multiple species including simians and humans
	Ticks and other integumentary arthropods (foreign)	-	worldwide	direct	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-	worldwide	direct, some may be vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
bordetellosis, chlamydiosis, clostridial infections, coccidiosis, colibacillosis, corynebacterial infection, eperythrozoonosis, erysipelas, giardiasis, haaemophilus infection, haemobartonellosis, haemorrhagic septicaemia, histoplasmosis, intestinal salmonellosis, leptospirosis, listeriosis, necrobacillosis, nosematosis, pasteurellosis, pseudomonas infection, pseudotuberculosis, Q fever, Rocky Mountain spotted fever, streptobacillosis, streptococcosis, streptothricosis, toxoplasmosis,

Other diseases not considered as hazards:
babesiosis, besnoitiosis, fibromatosis (rabbit, hare and squirrel viruses), myiaisis, rabies

Bats

Hazards associated with imported Bats

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
PSEUDORABIES (Aujeszky's Disease)	herpesirus-1 porcine	B052	patchy across all continents with the exception of Australia	direct, vehicle-borne	cattle, sheep, goats, horses, dogs, cats, fur-bearing species
RABIES	rhabdovirus	B058	worldwide, except for some island countries	direct	warm-blooded animals including vampire bats
TRYPANOSOMIASIS	Nagana - Trypanosoma brucei, T. congolense, T. simiae, T.suis, T.uniforme, T. vivax	B113	Nagana - Africa	Nagana - vector-borne (tsetse flies - Glossina spp. All Nagana organisms biologically vectored,	Nagana - warm-blooded animals
	Surra - T. evansi		Surra - Africa, South America, Asia	Surra - mechanically vector-borne)	Surra- equine, camelid, ruminants, cervids, swine, elephants
	Chagas disease - T. cruzi		Chagas disease - Central and South America	Chagas disease - vector-borne	Chagas disease - humans, swine, cats, dogs, wide variety of wild reservoir hosts
HENDRA VIRUS	paramyxovirus	-	Australia	direct	humans, horses, cats, ginea pigs (reservoir in bats and rabbits)
BOVINE BRUCELLOSIS	Brucella abortus	-	worldwide	direct, vehicle-borne	ruminants, swine, horses, chiropters
BOVINE TUBERCULOSIS	Mycobacterium bovis	-	worldwide	direct, vehicle-borne	ruminants, swine, humans, bats
RELAPSING FEVER (SPIROCHAETOSIS)	Borrelia species	-	distribution matches that of vectors	vector-borne	vertebrates

Hazards associated with imported Bats

DISEASE	AGENT	OIE LIST	DISTRIBUTION	MODE OF TRANSMISSION	HOST RANGE
	Ticks and other integumentary arthropods (foreign)	-		direct, vehicle-borne	
	Integumentary respiratory and gastro-intestinal helminths (foreign)	-		direct, vehicle-borne	

Diseases not considered as hazards due to their presence in Canada:
coibacillosis, eastern equine encephalitis, histoplasmosis, leptospirosis, pasteurellosis, salmonellosis (intestinal), shigellosis, staphylococcosis, streptococcosis, toxoplasmosis

APPENDIX 2

Animal Health Hazards Associated with Imported Animal Products

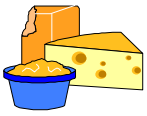
NOTE: Hazard identification tables are derived using the criteria stated under Import Risk Analysis Process (page 25).

Bovine

Hazards associated with imported Bovine Meat and Edible Offal

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	swine
BOVINE SPONGIFORM ENCEPHALOPATHY (BSE)	prion	B115	UK, Switzerland, France, Ireland, Portugal	some species of captive wild carnivores, humans?

Hazards associated with imported Bovine Dairy Products



DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	swine

Hazards associated with imported Bovine Hides and Skins

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	cloven-hoofed animals
ANTHRAX	Bacillus anthracis	B051	worldwide	humans

Hazards associated with imported Bovine Meat, Bone and Blood Meal

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	cloven-hoofed animals
ANTHRAX	Bacillus anthracis	B051	worldwide	cattle, sheep, goats, horses, humans (dogs, swine)
BOVINE SPONGIFORM ENCEPHALOPATHY (BSE)	prion	B115	UK, Switzerland, France, Ireland, Portugal	cattle, some species of captive wild carnivores and ruminants, humans?

Ovine and Caprine

Hazards associated with imported Ovine and Caprine Meat and Edible Offal

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	swine

Hazards associated with imported Ovine and Caprine Milk and Milk Products

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	swine

Hazards associated with imported Ovine and Caprine Fleece and Wool

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	cloven-hoofed animals
ANTHRAX	Bacillus anthracis	B051	worldwide	humans

Hazards associated with imported Ovine and Caprine Meat, Bone and Blood Meal

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America	cloven-hoofed animals
ANTHRAX	Bacillus anthracis	B051	worldwide	humans, cattle, sheep, goats, horses (swine, dogs)
SCRAPIE	prion	B160	Europe, India, North and Central America, Iceland	sheep and goats (possibly causes BSE in cattle)

Swine

Hazards associated with imported SwineMeat and Edible Offal

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America	swine
SWINE VESICULAR DISEASE	enterovirus	A030	parts of Europe	swine
AFRICAN SWINE FEVER	arbovirus	A120	Africa, regions of Europe	swine
HOG CHOLERA	pestivirus	A130	parts of - Africa, South and Central America, Asia, and Europe	swine

Hazards associated with imported Swine Meat, Bone and Blood Meal

DISEASE	AGENT	OIE LIST	DISTRIBUTION	TARGET HOST RANGE
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America	cloven-hoofed animals
SWINE VESICULAR DISEASE	enterovirus	A030	parts of Europe	swine
AFRICAN SWINE FEVER	arbovirus	A120	Africa, regions of Europe	swine
HOG CHOLERA	pestivirus	A130	parts of - Africa, South and Central America, Asia and Europe	swine
ANTHRAX	Bacillus anthracis	B051	worldwide	humans, cattle, sheep, goats, horses (dogs, swine)

Equine

No animal health hazards are associated with imported meat and edible offal of equines.

Cervine

Hazards associated with imported Cervine Meat				
DISEASE	**AGENT**	**OIE LIST**	**DISTRIBUTION**	**TARGET HOST RANGE**
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America	swine
CHRONIC WASTING DISEASE OF DEER (transmissible spongiform encephalopathy)	unknown	-	USA, zoo animals	mule deer, Rocky mountain elk, antelopes, wapiti, white-tailed deer, plus unknown - omnivores?
TISSUE WORM	Elaphostrongylus cervi	-	Norway, Sweden	pluck infective via mollusc intermediate host

E cervi - stage I larvae in lungs -> coughed out, mollusc ->larval maturation -> infective adult -> deer musculature.
Hence, meat per se is not a source of infection for other deer, but lung tissue presents a risk if discarded.

Poultry

Hazards associated with imported Poultry Meat, Edible Offal and Eggs				
DISEASE	**AGENT**	**OIE LIST**	**DISTRIBUTION**	**TARGET HOST RANGE**
NEWCASTLE DISEASE	paramyxovirus type 1	A160	worldwide	birds

Lagomorphs

Hazards associated with imported Lagomorph Meat and Edible Offal				
DISEASE	**AGENT**	**OIE LIST**	**DISTRIBUTION**	**TARGET HOST RANGE**
TULARAEMIA	Francisella tularensis	B352	North America, Eurasia	small mammals, sheep, deer
VIRAL HAEMORRHAGIC DISEASE OF RABBITS	parvovirus	B353	Europe, Mexico, China, Korea, Australia, Bosnia, Herzegovina	rabbits

Bees

Hazards associated with imported Honey				
DISEASE	**AGENT**	**OIE LIST**	**DISTRIBUTION**	**TARGET HOST RANGE**
AMERICAN FOULBROOD	Bacillus larvae	B452	worldwide	bees
EUROPEAN FOULBROOD	Melissococcus pluton	B453	worldwide	bees

Hazards associated with imported Pollen				
DISEASE	**AGENT**	**OIE LIST**	**DISTRIBUTION**	**TARGET HOST RANGE**
ACARIASIS (honeybee tracheal mite HBTM)	Acarapis woodi	B451	worldwide	bees
AMERICAN FOULBROOD	Bacillus larvae	B452	worldwide	bees
EUROPEAN FOULBROOD	Melissococcus pluton	B453	worldwide	bees
VARROASIS (Asian mite)	Varroa jacobsoni	B455	worldwide	bees

Ratites

Hazards associated with imported Ratite Meat and Edible Offal				
DISEASE	**AGENT**	**OIE LIST**	**DISTRIBUTION**	**TARGET HOST RANGE**
NEWCASTLE DISEASE	paramyxovirus type 1	A160	worldwide	birds

Hazards associated with imported Ratite Egg Shells, Feathers and Raw Hides				
DISEASE	**AGENT**	**OIE LIST**	**DISTRIBUTION**	**TARGET HOST RANGE**
NEWCASTLE DISEASE	paramyxovirus 1	A160	worldwide	birds

APPENDIX 3

Animal Health Hazards
Associated with Imported Germplasm

NOTE: Hazard identification tables are derived using the criteria stated under Import Risk Analysis Process (page 25).

Bovine

Hazards associated with imported Bovine Semen

DISEASE	AGENT	OIE LIST	DISTRIBUTION
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America
VESICULAR STOMATITIS	Virus New Jersey Virus Indiana	A020	Central and South America, USA
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa
CONTAGIOUS BOVINE PLEUROPNEUMONIA	Mycoplasma mycoides (SC)	A060	Eastern Europe, Asia, Africa, parts of Western Europe
LUMPY SKIN DISEASE	capripoxvirus	A070	sub-Saharan Africa, Egypt, Israel, Kenya
RIFT VALLEY FEVER	phlebovirus	A080	South and Central Africa
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA
LEPTOSPIROSIS (foreign serovars)	Leptospira serovars (foreign)	B056	worldwide
PARATUBERCULOSIS (Johnes' disease)	Mycobacterium paratuberculosis	B059	worldwide
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide
BOVINE GENITAL CAMPYLOBACTERIOSIS	Campylobacter fetus var. venerealis	B104	worldwide
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide
ENZOOTIC BOVINE LEUCOSIS	retrovirus	B108	North and South America, parts of Europe
INFECTIOUS BOVINE RHINOTRACHEITIS / INFECTIOUS PUSTULAR VULVOVAGINITIS	herpesvirus	B110	worldwide
TRICHOMONIASIS	Trichomonas fetus	B112	worldwide
BOVINE VIRUS DIARRHOEA / MUCOSAL DISEASE	togavirus	C652	worldwide

Hazards associated with imported Bovine Semen

DISEASE	AGENT	OIE LIST	DISTRIBUTION
BOVINE EPHEMERAL FEVER	rhabdovirus	-	Africa, Australia
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean

Hazards associated with imported Bovine Embryos

DISEASE	AGENT	OIE LIST	DISTRIBUTION
VESICULAR STOMATITIS	virus New Jersy virus Indiana	A020	Central and South America, USA
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa
CONTAGIOUS BOVINE PLEUROPNEUMONIA	Mycoplasma mycoides (SC)	A060	Eastern Europe, Asia, Africa, parts of Western Europe
LUMPY SKIN DISEASE	Capripoxvirus	A070	sus-Saharan Africa, Egypt, Israel, Kenya
LEPTOSPIROSIS (foreign serovars)	Leptospira (foreign serovars)	B056	worldwide
PARATUBERCULOSIS (Johnes' disease)	Mycobacterium paratuberculosis	B059	worldwide
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide
INFECTIOUS BOVINE RHINOTRACHEITIS / INFECTIOUS PUSTULAR VULVOVAGINITIS	herpesvirus (BHV1)	B110	worldwide NOTE: HAZARD REMOVED BY TRYPSIN TREATMENT
TRICHOMONIASIS	Trichomonas fetus	B112	worldwide
BOVINE SPONGIFORM ENCEPHALOPATHY (BSE)	prion	B115	UK, Oman, Ireland Switzerland, France, Portugal
BOVINE VIRUS DIARRHOEA / MUCOSAL DISEASE	togavirus	C652	worldwide
AKABANE	bunyavirus	-	Australia, Israel, Japan, Korea, Kenya

And additionally, for *In Vitro Fertilized* Bovine Embryos

DISEASE	AGENT	OIE LIST	DISTRIBUTION
INFECTIOUS BOVINE RHINOTRACHEITIS / INFECTIOUS PUSTULAR VULVOVAGINITIS	herpesvirus (BHV1)	B110	worldwide NOTE: TREATMENT WITH TRYPSIN NOT GUARANTEED EFFECTIVE

And additionally, for *In Vitro Fertilized* Bovine Embryos

DISEASE	AGENT	OIE LIST	DISTRIBUTION
Essentially all animal health hazards associated with the importation of live bovine animals	See table entitled "Hazards associated with imported bovine" in Appendix 1.		

Swine

Hazards associated with imported Semen of Swine

DISEASE	AGENT	OIE LIST	DISTRIBUTION
FOOT AND MOUTH DISEASE (FMD)	Virus A Virus O Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America
VESICULAR STOMATITIS	virus New Jersey virus Indiana	A020	Central and South America, USA
SWINE VESICULAR DISEASE	enterovirus	A030	parts of Europe, Japan
AFRICAN SWINE FEVER	arbovirus	A120	Africa, parts of Europe
HOG CHOLERA (Classical swine fever)	pestivirus	A130	parts of Africa, South and Central America, Asia, and Europe
PSEUDORABIES (Aujeszky's disease)	porcine herpes virus 1	B052	patchy across all continents with the exception of Australia NOTE: THIS HAZARD REMOVED BY TRYPSIN TREATMENT
LEPTOSPIROSIS (foreign serovars)	Leptospira serovars	B056	worldwide
TUBERCULOSIS	Mycobacterium tuberculosis	B105	worldwide
PORCINE BRUCELLOSIS	Brucella suis	B253	Europe, South America, Africa, India, Central and Southeast Asia, Australia, Pacific Islands
ENTEROVIRUS ENCEPHALOMYELITIS (Teschen disease)	enterovirus 1	B256	worldwide

Hazards associated with imported Embryos of Swine

DISEASE	AGENT	OIE LIST	DISTRIBUTION
FOOT AND MOUTH DISEASE (FMD)	Virus A Virus O Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America
VESICULAR STOMATITIS	Virus Indiana Virus New Jersey	A020	Central and South America, USA
SWINE VESICULAR DISEASE	enterovirus	A030	parts of Europe, Japan
AFRICAN SWINE FEVER	arbovirus	A120	Africa, parts of Europe
HOG CHOLERA (Classical swine fever)	pestivirus	A130	South and Central America, Africa, Asia, parts of Europe
PSEUDORABIES (Aujeszky's disease)	herpesvirus-1 porcine	B052	patchy across all continents with the exception of Australia NOTE: THIS HAZARD REMOVED BY TRYPSIN TREATMENT
LEPTOSPIROSIS (foreign serovars)	Leptospira serovars	B056	worldwide
ENTEROVIRUS ENCEPHALOMYELITIS (Teschen disease)	enterovirus	B256	worldwide

Ovine and Caprine

Hazards associated with imported Ovine and Caprine Semen

DISEASE	AGENT	OIE LIST	DISTRIBUTION
FOOT AND MOUTH DISEASE (FMD)	Virus A Virus O Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America, parts of Europe
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa
PESTE DES PETITS RUMINANTS	morbillivirus	A050	West and sub-Saharan Africa, Arabian peninsula, India, Pakistan, Asia
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA
SHEEP AND GOAT POX	poxvirus	A100	North and East Africa, Middle East, India, Asia, Iberian peninsula
PSEUDORABIES (Aujeszky's disease)	herpes virus-1 porcine	B052	patchy across all continents with the exception of Australia
LEPTOSPIROSIS (foreign serovars)	Leptospira serovars	B056	worldwide
PARATUBERCULOSIS (Johnes' disease)	Mycobacterium paratuberculosis	B059	worldwide
BRUCELLOSIS - BOVINE and BRUCELLOSIS - CAPRINE AND OVINE	Brucella abortus and Brucella ovis Brucella melitensis	B103 B152	worldwide and Africa, Europe, Israel, USA
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide
CAPRINE ARTHRITIS-ENCEPHALTIS	lentivirus	B153	major goats-producing regions
CONTAGIOUS CAPRINE PLEUROPNEUMONIA	Mycoplasma mycoides capri, M. mycoides mycoides (LC), M. mycoides capricolum	B155	North Africa, Spain, Mediterranean litoral, Asia, India
PULMONARY ADENOMATOSIS (Jaagsiekte)	retrovirus	B157	worldwide
NAIROBI SHEEP DISEASE	bunyavirus	B158	Central Africa
SCRAPIE	prion	B160	Europe, India, North and Central America, Iceland
MAEDI-VISNA	lentivirus	B161	parts of North America, Europe, Africa
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean
WESSELSBRON DISEASE	group B arbovirus	-	South Africa, Zimbabwe, Mozambique

Hazards associated with imported Ovine and Caprine Embryos

DISEASE	AGENT	OIE LIST	DISTRIBUTION
FOOT AND MOUTH DISEASE (FMD)	Virus A Virus O Virus C Virus SAT1 Virus SAT2 Virus SAT3	A010	Africa, Asia, parts of South America, parts of Europe
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa
PESTE DES PETITS RUMINANTS	morbillivirus	A050	West and sub-Saharan Africa, Arabian peninsula, India, Pakistan, Asia
RIFT VALLEY FEVER	phlebovirus	A080	Southern and Central Africa
BLUETONGUE (Hazard in goats, not in sheep)	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA
SHEEP AND GOAT POX	poxvirus	A100	North and East Africa, Middle East, India, Asia, Iberian peninsula
PARATUBERCULOSIS (Johnes' disease)	Mycobacterium paratuberculosis	B059	worldwide
BRUCELLOSIS - BOVINE and BRUCELLOSIS - CAPRINE AND OVINE	Brucella abortus and Brucella ovis Brucella melitensis	B103 B152	worldwide Africa, Europe, Israel, USA
CAPRINE ARTHRITIS ENCEPHALITIS	lentivirus	B153	major goat-producing regions
CONTAGIOUS CAPRINE PLEUROPNEUMONIA	Mycoplasma mycoides capri, M. mycoides mycoides (LC), M. mycoides capricolum	B155	North Africa, Spain, Meditarranean litoral, Asia, India
PULMONARY ADENOMATOSIS (Jaagsiekte)	retrovirus	B157	worldwide
SCRAPIE	prion	B160	Europe, India, North and Central America, Iceland
MAEDI-VISNA	lentivirus	B161	North America, Europe, Africa
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean

Equine

Hazards associated with imported Equine Semen

DISEASE	AGENT	OIE LIST	DISTRIBUTION
VESICULAR STOMATITIS	Virus Indiana Virus New Jersey	A020	USA, Central and South America
AFRICAN HORSE SICKNESS	orbivirus	A110	Africa, Spain, Portugal
LEPTOSPIROSIS (foreign serovars)	Leptospira - foreign serovars	B056	worldwide
CONTAGIOUS EQUINE METRITIS	Taylorella (was Haemophilus) equigenitalis	B201	Morocco, Japan, parts of Europe
DOURINE	*Trypanosoma equiperdum*	B202	Africa, Asia, America, parts of Russia
EQUINE INFECTIOUS ANAEMIA	retrovirus	B205	worldwide
GLANDERS	Actinobacillus mallei	B209	Eastern Europe, Asia, North Africa, parts of China and Mongolia
JAPANESE ENCEPHALITIS	flavivirus	B212	Malaysia, Japan, Eastern Soviet Union, Korea, China, Taiwan, the Philippines, Indonesia, Singapore, Hong Kong, Vietnam, Laos, Bangladesh, Nepal, Thailand, Burma, Sri Lanka, India, the Pacific Islands
VENEZUELAN EQUINE ENCEPHALOMYELITIS	alphavirus	B216	South and Central America, USA
EQUINE COITAL EXANTHEMA	equine herpes virus 3	C751	worldwide
WEST NILE FEVER	West Nile Fever virus	-	French Mediterranean
BORNA DISEASE	unclassified RNA virus	-	Germany, Switzerland (plus others perhaps)

Poultry

Hazards associated with imported Poultry Semen

DISEASE	AGENT	OIE LIST	DISTRIBUTION
FOWL PLAGUE (highly pathogenic avian influenza)	orthomyxovirus type A	A150	worldwide
NEWCASTLE DISEASE	paramyxovirus type 1	A160	worldwide
DUCK VIRUS ENTERITIS (duck plague)	herpesvirus	B305	Netherlands, China, France, Belgium, India, England, Canada
FOWL TYPHOID	Salmonella gallinarum	B308	worldwide
PULLORUM DISEASE	Salmonella pullorum	B313	worldwide
AVIAN SPIROCHAETOSIS	Borrelia anserina	C854	tropics and sub-tropics, Southwest USA
GOOSE PARVOVIRUS INFECTION (Derzsy's disease)	parvovirus	-	major goose-producing areas
TURKEY VIRAL RHINOTRACHEITIS, SWOLLEN HEAD SYNDROME	pneumovirus	-	widespread in major poultry-producing regions

Hazards associated with imported Poultry Hatching Eggs

DISEASE	AGENT	OIE LIST	DISTRIBUTION
FOWL PLAGUE (highly pathogenic avian influenza)	orthomyxovirus type A	A150	worldwide
NEWCASTLE DISEASE	paramyxovirus type 1	A160	worldwide
DUCK VIRUS ENTERITIS (duck plague)	herpesvirus	B305	Netherlands, China, France, Belgium, India, England, Canada
FOWL TYPHOID	Salmonella gallinarum	B308	worldwide
PULLORUM DISEASE	Salmonella pullorum	B313	worldwide
AVIAN SPIROCHAETOSIS	Borrelia anserina	C854	tropics and sub-tropics, Southwest USA
GOOSE PARVOVIRUS INFECTION (Derzsy's disease)	parvovirus	-	major goose-producing areas
EGG DROP SYNDROME	adenovirus 127	-	widespread in major poultry-producing regions
TURKEY VIRAL RHINOTRACHEITIS, SWOLLEN HEAD SYNDROME	pneumovirus	-	widespread in major poultry-producing regions

Cervids

Hazards associated with imported Cervids Semen

DISEASE	AGENT	OIE LIST	DISTRIBUTION
FOOT AND MOUTH DISEASE (FMD)	Virus O Virus A Virus C Virus SAT 1 Virus SAT 2 Virus SAT 3	A010	Africa, Asia, parts of South America
VESICULAR STOMATITIS	Virus New Jersey Virus Indiana	A020	Central and South America, USA
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa
BLUETONGUE	orbivirus	A090	Africa, Israel, Syria, Turkey, Pakistan, India, Portugal, Spain, Peru, Greek Islands, Australia, South and Central America, USA
LEPTOSPIROSIS (foreign serovars)	Leptospira serovars (foreign)	B056	worldwide
BOVINE BRUCELLOSIS	Brucella abortus	B103	worldwide
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide
CHRONIC WASTING DISEASE OF DEER (transmissible spongiform encephalopathy)	unknown	-	USA, zoo animals
EPIZOOTIC HAEMORRHAGIC DISEASE	orbivirus	-	North America, Africa, Australia, perhaps Caribbean
HERPES VIRUS OF Cervids	HCV-1 (related to BHV-1)	-	Scotland, European wild populations

Hazards associated with imported Cervids Embryos

DISEASE	AGENT	OIE LIST	DISTRIBUTION
VESICULAR STOMATITIS	Virus New Jersey Virus Indiana	A020	Central and South America, USA
RINDERPEST	morbillivirus	A040	Asia, Middle East, tropical Africa
LEPTOSPIROSIS (foreign serovars)	Leptospira - foreign serovars	B056	worldwide
PARATUBERCULOSIS (Johnes disease)	Mycobacterium paratuberculosis	B059	worldwide
BOVINE TUBERCULOSIS	Mycobacterium bovis	B105	worldwide
HERPES VIRUS OF Cervids	HCV-1 (related to BHV-1)	-	Scotland, European wild populations
CHRONIC WASTING DISEASE OF DEER (transmissible spongiform encephalopathy)	unknown	-	USA, zoo animals

APPENDIX 4

Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization

April 15, 1994

Members,

Reaffirming that no Member should be prevented from adopting or enforcing measures necessary to protect human, animal or plant life or health, subject to the requirement that these measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between Members where the same conditions prevail or a disguised restriction on international trade;

Desiring to improve the human health, animal health and phytosanitary situation in all Members;

Noting that sanitary and phytosanitary measures are often applied on the basis of bilateral agreements or protocols;

Desiring the establishment of a multilateral framework of rules and disciplines to guide the development, adoption and enforcement of sanitary and phytosanitary measures in order to minimize their negative effects on trade;

Recognizing the important contribution that international standards, guidelines and recommendations can make in this regard;

Desiring to further the use of harmonized sanitary and phytosanitary measures between Members, on the basis of international standards, guidelines and recommendations developed by the relevant international organizations, including the Codex Alimentarius Commission, the International Office of Epizootics, and the relevant international and regional organizations operating within the framework of the International Plant Protection Convention, without requiring Members to change their appropriate level of protection of human, animal or plant life or health;

Recognizing that developing country Members may encounter special difficulties in complying with the sanitary or phytosanitary measures of importing Members, and as a consequence in access to markets, and also in the formulation and application of sanitary or phytosanitary measures in their own territories, and desiring to assist them in their endeavors in this regard;

Desiring therefore to elaborate rules for the application of the provisions of GATT 1994 which relate to the use of sanitary or phytosanitary measures, in particular the provisions of Article XX(b)[1];

Hereby agree as follows:

[1] In this Agreement, reference to Article XX(b) includes also the chapeau of that Article.

Article 1

General Provisions

1. This Agreement applies to all sanitary and phytosanitary measures which may, directly or indirectly, affect international trade. Such measures shall be developed and applied in accordance with the provisions of this Agreement.

2. For the purposes of this Agreement, the definitions provided in Annex A shall apply.

3. The annexes are an integral part of this Agreement.

4. Nothing in this Agreement shall affect the rights of Members under the Agreement on Technical Barriers to Trade with respect to measures not within the scope of this Agreement.

Article 2

Basic Rights and Obligations

1. Members have the right to take sanitary and phytosanitary measures necessary for the protection of human, animal or plant life or health, provided that such measures are not inconsistent with the provisions of this Agreement.

2. Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence, except as provided for in paragraph 7 of Article 5.

3. Members shall ensure that their sanitary and phytosanitary measures do not arbitrarily or unjustifiably discriminate between Members where identical or similar conditions prevail, including between their own territory and that of other Members. Sanitary and phytosanitary measures shall not be applied in a manner which would constitute a disguised restriction on international trade.

4. Sanitary or phytosanitary measures which conform to the relevant provisions of this Agreement shall be presumed to be in accordance with the obligations of the Members under the provisions of GATT 1994 which relate to the use of sanitary or phytosanitary measures, in particular the provisions of Article XX(b).

Article 3

Harmonization

1. To harmonize sanitary and phytosanitary measures on as wide a basis as possible, Members shall base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, where they exist, except as otherwise provided for in this Agreement, and in particular in paragraph 3.

2. Sanitary or phytosanitary measures which conform to international standards, guidelines or recommendations shall be deemed to be necessary to protect human, animal or plant life or health, and presumed to be consistent with the relevant provisions of this Agreement and of GATT 1994.

3. Members may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on the relevant international standards, guidelines or recommendations, if there is a scientific justification, or as a consequence of the level of sanitary or phytosanitary protection a Member determines to be appropriate in accordance with the relevant provisions of paragraphs 1 through 8 of Article 5.[2] Notwithstanding the above, all measures which result in a level of sanitary or phytosanitary protection different from that which would be achieved by measures based on international standards, guidelines or recommendations shall not be inconsistent with any other provision of this Agreement.

4. Members shall play a full part, within the limits of their resources, in the relevant international organizations and their subsidiary bodies, in particular the Codex Alimentarius Commission, the International Office of Epizootics, and the international and regional organizations operating within the framework of the International Plant Protection Convention, to promote within these organizations the development and periodic review of standards, guidelines and recommendations with respect to all aspects of sanitary and phytosanitary measures.

5. The Committee on Sanitary and Phytosanitary Measures provided for in paragraphs I and 4 of Article 12 (referred to in this Agreement as the "Committee") shall develop a procedure to monitor the process of international harmonization and coordinate efforts in this regard with the relevant international organizations.

Article 4

Equivalence

1. Members shall accept the sanitary or phytosanitary measures of other Members as equivalent. even if these measures differ from their own or from those used by other Members trading in the same product, if the exporting Member objectively demonstrates to the importing Member that its measures achieve the importing Member's appropriate level of sanitary or phytosanitary protection. For this purpose, reasonable access shall be given, upon request, to the importing Member for inspection, testing and other relevant procedures.

2. Members shall, upon request, enter into consultations with the aim of achieving bilateral and multilateral agreements on recognition of the equivalence of specified sanitary or phytosanitary measures.

Article 5

Assessment of Risk and Determination of the Appropriate Level of Sanitary or Phytosanitary Protection

1. Members shall ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations.

2. In the assessment of risks, Members shall take into account available scientific evidence; relevant processes and production methods; relevant inspection, sampling and testing methods; prevalence of specific diseases or pests; existence of pest- or disease-free areas; relevant ecological and environmental conditions; and quarantine or other treatment.

3. In assessing the risk to animal or plant life or health and determining the measure to be applied for achieving the appropriate level of sanitary or phytosanitary protection from such risk, Members shall take into account as relevant economic factors: the potential damage in terms of loss of production or sales in the event of the entry, establishment or spread of a pest or disease; the costs of control or eradication in the territory of the importing Member; and the relative cost-effectiveness of alternative approaches to limiting risks.

4. Members should, when determining the appropriate level of sanitary or phytosanitary protection, take into account the objective of minimizing negative trade effects.

[2] For the purposes of paragraph 3 of Article 3, there is a scientific justification if, on the basis of an examination and evaluation of available scientific information in conformity, with the relevant provisions of this Agreement, a Member determines that the relevant international standards, guidelines or recommendations are not sufficient to achieve its appropriate level of sanitary or phytosanitary protection.

5. With the objective of achieving consistency in the application of the concept of appropriate level of sanitary or phytosanitary protection against risks to human life or health, or to animal and plant life or health, each Member shall avoid arbitrary or unjustifiable distinctions in the levels it considers to be appropriate in different situations, if such distinctions result in discrimination or a disguised restriction on international trade. Members shall cooperate in the Committee, in accordance with paragraphs 1, 2 and 3 of Article 12, to develop guidelines to further the practical implementation of this provision. In developing the guidelines, the Committee shall take into account all relevant factors, including the exceptional character of human health risks to which people voluntarily expose themselves.

6. Without prejudice to paragraph 2 of Article 3, when establishing or maintaining sanitary or phytosanitary measures to achieve the appropriate level of sanitary or phytosanitary protection, Members shall ensure that such measures are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility.[3]

7. In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.

8. When a Member has reason to believe that a specific sanitary or phytosanitary measure introduced or maintained by another Member is constraining, or has the potential to constrain, its exports and the measure is not based on the relevant international standards, guidelines or recommendations, or such standards, guidelines or recommendations do not exist, an explanation of the reasons for such sanitary or phytosanitary measure may be requested and shall be provided by the Member maintaining the measure.

Article 6

Adaptation to Regional Conditions, Including Pest- or Disease-Free Areas and Areas of Low Pest or Disease Prevalence

1. Members shall ensure that their sanitary or phytosanitary measures are adapted to the sanitary or phytosanitary characteristics of the area - whether all of a country, part of a country, or all or parts of several countries - from which the product originated and to which the product is destined. In assessing the sanitary or phytosanitary characteristics of a region, Members shall take into account, *inter alia,* the level of prevalence of specific diseases or pests, the existence of eradication or control programmes, and appropriate criteria or guidelines which may be developed by the relevant international organizations.

2. Members shall, in particular, recognize the concepts of pest- or disease-free areas and areas of low pest or disease prevalence. Determination of such areas shall be based on factors such as geography, ecosystems, epidemiological surveillance, and the effectiveness of sanitary or phytosanitary controls.

3. Exporting Members claiming that areas within their territories are pest- or disease-free areas or areas of low pest or disease prevalence shall provide the necessary evidence thereof in order to objectively demonstrate to the importing Member that such areas are, and are likely to remain, pest or disease-free areas or areas of low pest or disease prevalence, respectively. For this purpose, reasonable access shall be given, upon request, to the importing Member for inspection, testing and other relevant procedures.

[3] For purposes of paragraph 6 of Article 5, a measure is not more trade-restrictive than required unless there is another measure, reasonably available taking into account technical and economic feasibility, that achieves the appropriate level of sanitary or phytosanitary protection and is significantly less restrictive to trade.

Article 7

Transparency

Members shall notify changes in their sanitary or phytosanitary measures and shall provide information on their sanitary or phytosanitary measures in accordance with the provisions of Annex B.

Article 8

Control, Inspection and Approval Procedures

Members shall observe the provisions of Annex C in the operation of control, inspection and approval procedures, including national systems for approving the use of additives or for establishing tolerances for contaminants in foods, beverages or feedstuffs, and otherwise ensure that their procedures are not inconsistent with the provisions of this Agreement.

Article 9

Technical Assistance

1. Members agree to facilitate the provision of technical assistance to other Members, especially developing country Members, either bilaterally or through the appropriate international organizations. Such assistance may be, *inter alia,* in the areas of processing technologies, research and infrastructure, including in the establishment of national regulatory bodies, and may take the form of advice, credits, donations and grants, including for the purpose of seeking technical expertise, training and equipment to allow such countries to adjust to, and comply with, sanitary or phytosanitary measures necessary to achieve the appropriate level of sanitary or phytosanitary protection in their export markets.

2. Where substantial investments are required in order for an exporting developing country Member to fulfil the sanitary or phytosanitary requirements of an importing Member, the latter shall consider providing such technical assistance as will permit the developing country Member to maintain and expand its market access opportunities for the product involved.

Article 10

Special and Differential Treatment

1. In the preparation and application of sanitary or phytosanitary measures, Members shall take account of the special needs of developing country Members, and in particular of the least-developed country Members.

2. Where the appropriate level of sanitary or phytosanitary protection allows scope for the phased introduction of new sanitary or phytosanitary measures, longer time-frames for compliance should be accorded on products of interest to developing country Members so as to maintain opportunities for their exports.

3. With a view to ensuring that developing country Members are able to comply with the provisions of this Agreement, the Committee is enabled to grant to such countries, upon request, specified, time limited exceptions in whole or in part from obligations under this Agreement, taking into account their financial, trade and development needs.

4. Members should encourage and facilitate the active participation of developing country Members in the relevant international organizations.

Article 11

Consultations and Dispute Settlement

1. The provisions of Articles XXII and XXIII of GATT 1994 as elaborated and applied by the Dispute Settlement Understanding shall apply to consultations and the settlement of disputes under this Agreement, except as otherwise specifically provided herein.

2. In a dispute under this Agreement involving scientific or technical issues, a panel should seek advice from experts chosen by the panel in consultation with the parties to the dispute. To this end, the panel may, when it deems it appropriate, establish an advisory technical experts group, or consult the relevant international organizations, at the request of either party to the dispute or on its own initiative.

3. Nothing in this Agreement shall impair the rights of Members under other international agreements, including the right to resort to the good offices or dispute settlement mechanisms of other international organizations or established under any international agreement.

Article 12

Administration

1. A Committee on Sanitary and Phytosanitary Measures is hereby established to provide a regular forum for consultations. It shall carry out the functions necessary to implement the provisions of this Agreement and the furtherance of its objectives, in particular with respect to harmonization. The Committee shall reach its decisions by consensus.

2. The Committee shall encourage and facilitate ad hoc consultations or negotiations among Members on specific sanitary or phytosanitary issues. The Committee shall encourage the use of international standards, guidelines or recommendations by all Members and, in this regard, shall sponsor technical consultation and study with the objective of increasing coordination and integration between international and national systems and approaches for approving the use of food additives or for establishing tolerances for contaminants in foods, beverages or feedstuffs.

3. The Committee shall maintain close contact with the relevant international organizations in the field of sanitary and phytosanitary protection, especially with the Codex Alimentarius Commission, the International Office of Epizootics, and the Secretariat of the International Plant Protection Convention, with the objective of securing the best available scientific and technical advice for the administration of this Agreement and in order to ensure that unnecessary duplication of effort is avoided.

4. The Committee shall develop a procedure to monitor the process of international harmonization and the use of international standards, guidelines or recommendations. For this purpose, the Committee should, in conjunction with the relevant international organizations, establish a list of international standards, guidelines or recommendations relating to sanitary or phytosanitary measures which the Committee determines to have a major trade impact. The list should include an indication by Members of those international standards, guidelines or recommendations which they apply as conditions for import or on the basis of which imported products conforming to these standards can enjoy access to their markets. For those cases in which a Member does not apply an international standard, guideline or recommendation as a condition for import, the Member should provide an indication of the reason therefor, and, in particular, whether it considers that the standard is not stringent enough to provide the appropriate level of sanitary or phytosanitary protection. If a Member revises its position, following its indication of the use of a standard, guideline or recommendation as a condition for import, it should provide an explanation for its change and so inform the Secretariat as well as the relevant international organizations, unless such notification and explanation is given according to the procedures of Annex B.

5. In order to avoid unnecessary duplication, the Committee may decide, as appropriate, to use the information generated by the procedures, particularly for notification, which are in operation in the relevant international organizations.

6. The Committee may, on the basis of an initiative from one of the Members, through appropriate channels invite the relevant international organizations or their subsidiary bodies to examine specific matters with respect to a particular standard, guideline or recommendation, including the basis of explanations for non-use given according to paragraph 4.

7. The Committee shall review the operation and implementation of this Agreement three years after the date of entry into force of the WTO Agreement, and thereafter as the need arises. Where appropriate, the Committee may submit to the Council for Trade in Goods proposals to amend the text of this Agreement having regard, *inter alia,* to the experience gained in its implementation.

Article 13

Implementation

Members are fully responsible under this Agreement for the observance of all obligations set forth herein. Members shall formulate and implement positive measures and mechanisms in support of the observance of the provisions of this Agreement by other than central government bodies. Members shall take such reasonable measures as may be available to them to ensure that non-governmental entities within their territories, as well as regional bodies in which relevant entities within their territories are members, comply with the relevant provisions of this Agreement. In addition, Members shall not take measures which have the effect of, directly or indirectly, requiring or encouraging such regional or non-governmental entities, or local governmental bodies, to act in a manner inconsistent with the provisions of this Agreement. Members shall ensure that they rely on the services of non-governmental entities for implementing sanitary or phytosanitary measures only if these entities comply with the provisions of this Agreement.

Article 14

Final Provisions

The least-developed country Members may delay application of the provisions of this Agreement for a period of five years following the date of entry into force of the WTO Agreement with respect to their sanitary or phytosanitary measures affecting importation or imported products. Other developing country Members may delay application of the provisions of this Agreement, other than paragraph 8 of Article 5 and Article 7, for two years following the date of entry into force of the WTO Agreement with respect to their existing sanitary or phytosanitary measures affecting importation or imported products, where such application is prevented by a lack of technical expertise, technical infrastructure or resources.

ANNEX A

DEFINITIONS[4]

1. *Sanitary or phytosanitary measure* - Any measure applied:

(a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;

(b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs;

(c) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or

(d) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.

Sanitary or phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including, *inter alia,* end product criteria; processes and production methods; testing, inspection, certification and approval procedures; quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labeling requirements directly related to food safety.

2. *Harmonization* - The establishment, recognition and application of common sanitary and phytosanitary measures by different Members.

3. *International standards, guidelines and recommendations*

(a) for food safety, the standards, guidelines and recommendations established by the Codex Alimentarius Commission relating to food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling, and codes and guidelines of hygienic practice;

(b) for animal health and zoonoses, the standards, guidelines and recommendations developed under the auspices of the International Office of Epizootics;

(c) for plant health, the international standards, guidelines and recommendations developed under the auspices of the Secretariat of the International Plant Protection Convention in cooperation with regional organizations operating within the framework of the International Plant Protection Convention; and

(d) for matters not covered by the above organizations, appropriate standards, guidelines and recommendations promulgated by other relevant international organizations open for membership to all Members, as identified by the Committee.

4. *Risk assessment* - The evaluation of the likelihood of entry, establishment or spread of a pest or disease within the territory of an importing Member according to the sanitary or phytosanitary measures which might be applied, and of the associated potential biological and economic consequences; or the evaluation of the potential for adverse effects on human or animal health arising from the presence of additives, contaminants, toxins or disease-causing organisms in food, beverages or feedstuffs.

5. *Appropriate level of sanitary, or phytosanitary protection* - The level of protection deemed appropriate by the Member establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory.

NOTE: Many Members otherwise refer to this concept as the "acceptable level of risk".

6. *Pest- or disease-free area* - An area, whether all of a country, part of a country, or all or parts of several countries, as identified by the competent authorities, in which a specific pest or disease does not occur.

NOTE: A pest- or disease-free area may surround, be surrounded by, or be adjacent to an area - whether within part of a country or in a geographic region which includes parts of or all of several countries - in which a specific pest or disease is known to occur but is subject to regional control measures such as the establishment of protection, surveillance and buffer zones which will confine or eradicate the pest or disease in question.

7. *Area of lowpest or disease prevalence* - An area, whether all of a country, part of a country, or all or parts of several countries, as identified by the competent authorities, in which a specific pest or disease occurs at low levels and which is subject to effective surveillance, control or eradication measures.

[4] For the purpose of these definitions, "animal" includes fish and wild fauna; "plant" includes forests and wild flora; “pests" include weeds, and "contaminants" include pesticide and veterinary drug residues and extraneous matter.

ANNEX B

TRANSPARENCY OF SANITARY AND PHYTOSANITARY REGULATIONS

Publication of regulations

1. Members shall ensure that all sanitary and phytosanitary regulations[5] which have been adopted are published promptly in such a manner as to enable interested Members to become acquainted with them.

2. Except in urgent circumstances, Members shall allow a reasonable interval between the publication of a sanitary or phytosanitary regulation and its entry into force in order to allow time for producers in exporting Members, and particularly in developing country Members, to adapt their products and methods of production to the requirements of the importing Member.

Enquiry points

3. Each Member shall ensure that one enquiry point exists which is responsible for the provision of answers to all reasonable questions from interested Members as well as for the provision of relevant documents regarding:

(a) any sanitary or phytosanitary regulations adopted or proposed within its territory;

(b) any control and inspection procedures, production and quarantine treatment, pesticide tolerance and food additive approval procedures, which are operated within its territory;

(c) risk assessment procedures, factors taken into consideration, as well as the determination of the appropriate level of sanitary or phytosanitary protection;

(d) the membership and participation of the Member, or of relevant bodies within its territory, in international and regional sanitary and phytosanitary organizations and systems, as well as in bilateral and multilateral agreements and arrangements within the scope of this Agreement, and the texts of such agreements and arrangements.

4. Members shall ensure that where copies of documents are requested by interested Members, they are supplied at the same price (if any), apart from the cost of delivery, as to the nationals[6] of the Member concerned.

Notification procedures

5. Whenever an international standard, guideline or recommendation does not exist or the content of a proposed sanitary or phytosanitary regulation is not substantially the same as the content of an international standard, guideline or recommendation, and if the regulation may have a significant effect on trade of other Members, Members shall:

(a) publish a notice at an early stage in such a manner as to enable interested Members to become acquainted with the proposal to introduce a particular regulation;

(b) notify other Members, through the Secretariat, of the products to be covered by the regulation together with a brief indication of the objective and rationale of the proposed regulation. Such notifications shall take place at an early stage, when amendments can still be introduced and comments taken into account;

(c) provide upon request to other Members copies of the proposed regulation and, whenever possible, identify the parts which in substance deviate from international standards, guidelines or recommendations;

(d) without discrimination, allow reasonable time for other Members to make comments in writing, discuss these comments upon request, and take the comments and the results of the discussions into account.

6. However, where urgent problems of health protection arise or threaten to arise for a Member, that Member may omit such of the steps enumerated in paragraph 5 of this Annex as it finds necessary, provided that the Member:

(a) immediately notifies other Members, through the Secretariat, of the particular regulation and the products covered, with a brief indication of the objective and the rationale of the regulation, including the nature of the urgent problem(s);

(b) provides, upon request, copies of the regulation to other Members;

(c) allows other Members to make comments in writing, discusses these comments upon request, and takes the comments and the results of the discussions into account.

7. Notifications to the Secretariat shall be in English, French or Spanish.

8. Developed country Members shall, if requested by other Members, provide copies of the documents or, in case of voluminous documents, summaries of the documents covered by a specific notification in English, French or Spanish.

9. The Secretariat shall promptly circulate copies of the notification to all Members and interested international organizations and draw the attention of developing country Members to any notifications relating to products of particular interest to them.

10. Members shall designate a single central government authority as responsible for the implementation, on the national level, of the provisions concerning notification procedures according to paragraphs 5, 6, 7 and 8 of this Annex.

General reservations

11. Nothing in this Agreement shall be construed as requiring:

(a) the provision of particulars or copies of drafts or the publication of texts other than in the language of the Member except as stated in paragraph 8 of this Annex; or

(b) Members to disclose confidential information which would impede enforcement of sanitary or phytosanitary legislation or which would prejudice the legitimate commercial interests of particular enterprises.

---

[5] Sanitary and phytosanitary measures such as laws, decrees or ordinances which are applicable generally.

[6] When "nationals" are referred to in this Agreement, the term shall be deemed. in the case of a separate customs territory Member of the WTO, to mean persons, natural or legal, who are domiciled or who have a real and effective industrial or commercial establishment in that customs territory.

ANNEX C

CONTROL, INSPECTION AND APPROVAL PROCEDURES[7]

1. Members shall ensure, with respect to any procedure to check and ensure the fulfilment of sanitary or phytosanitary measures, that:

(a) such procedures are undertaken and completed without undue delay and in no less favourable manner for imported products than for like domestic products;

(b) the standard processing period of each procedure is published or that the anticipated processing period is communicated to the applicant upon request; when receiving an application, the competent body promptly examines the completeness of the documentation and informs the applicant in a precise and complete manner of all deficiencies; the competent body transmits as soon as possible the results of the procedure in a precise and complete manner to the applicant so that corrective action may be taken if necessary; even when the application has deficiencies, the competent body proceeds as far as practicable with the procedure if the applicant so requests; and that upon request, the applicant is informed of the stage of the procedure, with any delay being explained;

(c) information requirements are limited to what is necessary for appropriate control, inspection and approval procedures, including for approval of the use of additives or for the establishment of tolerances for contaminants in food, beverages or feedstuffs;

(d) the confidentiality of information about imported products arising from or supplied in connection with control, inspection and approval is respected in a way no less favourable than for domestic products and in such a manner that legitimate commercial interests are protected;

(e) any requirements for control, inspection and approval of individual specimens of a product are limited to what is reasonable and necessary;

(f) any fees imposed for the procedures on imported products are equitable in relation to any fees charged on like domestic products or products originating in any other Member and should be no higher than the actual cost of the service;

(g) the same criteria should be used in the siting of facilities used in the procedures and the selection of samples of imported products as for domestic products so as to minimize the inconvenience to applicants, importers, exporters or their agents;

(h) whenever specifications of a product are changed subsequent to its control and inspection in light of the applicable regulations, the procedure for the modified product is limited to what is necessary to determine whether adequate confidence exists that the product still meets the regulations concerned; and

(i) a procedure exists to review complaints concerning the operation of such procedures and to take corrective action when a complaint is justified.

Where an importing Member operates a system for the approval of the use of food additives or for the establishment of tolerances for contaminants in food, beverages or feedstuffs which prohibits or restricts access to its domestic markets for products based on the absence of an approval, the importing Member shall consider the use of a relevant international standard as the basis for access until a final determination is made.

2. Where a sanitary or phytosanitary measure specifies control at the level of production, the Member in whose territory the production takes place shall provide the necessary assistance to facilitate such control and the work of the controlling authorities.

3. Nothing in this Agreement shall prevent Members from carrying out reasonable inspection within their own territories.

[7] Control, inspection and approval procedures include, *inter alia*, procedures for sampling, testing and certification.