



# Guidance Document

## Bovine Germplasm

BOVIGERM.GEN

[Document Date]

Draft for  
Consultation

## Title

Guidance Document: Bovine Germplasm.

## About this document

This guidance document contains information about acceptable ways of ensuring compliance with the requirements in the *Import Health Standard (IHS): Bovine Germplasm*.

Any guidance on how to comply with the applicable requirements may not be the only way to achieve compliance. Stakeholders are encouraged to discuss departures from the approaches outlined in this guidance document with the Ministry for Primary Industries (MPI) to avoid expending resources on the development of alternative approaches which may later be considered unsuitable.

The term “must” is not typically used in guidance. In this particular document if the term “must” is used, it is used in the context of quoting or paraphrasing the requirements set out in the related *IHS: Bovine Germplasm*.

## Related Requirements

*Import Health Standard: Bovine Germplasm*

## Document history

Refer to Appendix 1.

## Contact Details

For further information and questions about this guidance document, please contact:

Ministry for Primary Industries  
Agriculture and Investment Services  
Animal Imports  
PO Box 2526  
Wellington 6140  
Email: [animal.imports@mpi.govt.nz](mailto:animal.imports@mpi.govt.nz)

## Disclaimer

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<b>Contents</b>	<b>Page</b>
<b>1 Purpose</b>	<b>3</b>
<b>2 Background</b>	<b>3</b>
<b>3 Definitions</b>	<b>3</b>
<b>4 Importer Responsibilities</b>	<b>3</b>
<b>5 Guidance</b>	<b>3</b>
5.1 Import Permit	3
5.2 Equivalence	4
5.1 Genetically modified (GM) and new organisms	4
5.3 Incorporation of material by reference	4
5.4 Harmonised system (HS) codes	4
5.5 Exporting country systems and certification	5
5.6 Diagnostic tests, vaccines and treatment	6
5.7 Inspection and verification	6
<b>6 Specified Requirements for Identified Risk Organisms</b>	<b>7</b>
6.1 Model veterinary certificate	7
<b>Appendix 1 – Document History</b>	<b>16</b>

# 1 Purpose

- (1) This guidance document has been issued to accompany the *IHS: Bovine Germplasm*. This guidance document should be read in conjunction with that IHS.
- (2) This document includes:
  - a) Countries with MPI-approved exporting systems to import bovine semen and bovine embryos into New Zealand.
  - b) A model veterinary certificate.
  - c) Links to negotiated country specific veterinary certificates.

# 2 Background

- (1) The *IHS: Bovine Germplasm*, which this guidance document accompanies, contains generic import requirements. These are the rules to manage the biosecurity risk of importing bovine semen and bovine embryos from all countries that can meet the requirements of the IHS and in doing so meet New Zealand's appropriate level of protection. The generic IHS serves as the basis for country-to-country (bilateral) negotiations. This guidance document contains a model veterinary certificate and the bilaterally-agreed veterinary certification for trade in bovine semen and bovine embryos. This country-specific veterinary certificate represents what will be certified prior to exporting consignments of bovine semen and bovine embryos from the country specified.
- (2) General information about importing semen and embryos can be found here: <http://mpi.govt.nz/importing/live-animals/semen-and-embryos/>.

# 3 Definitions

- (1) Refer to Schedule 2 of the *IHS: Bovine Germplasm*.

# 4 Importer Responsibilities

- (1) The costs to MPI in performing functions relating to the importation of bovine semen and bovine embryos will be recovered in accordance with the Biosecurity Act 1993 (the Act) and any regulations made under that Act. All costs involved with documentation, transport, storage and obtaining a biosecurity clearance must be covered by the importer or agent.
- (2) Consignments that do not comply with the requirements of the IHS may be re-shipped or destroyed using an MPI-approved destruction method.
- (3) There are reporting obligations for owners of imported semen and embryos from ruminants under the Biosecurity (Imported Animals, Embryos, and Semen Information) Regulations 1999.
  - a) [www.mpi.govt.nz/importing/live-animals/farm-animals/reporting-obligations-for-owners-of-imported-ruminant-animals/](http://www.mpi.govt.nz/importing/live-animals/farm-animals/reporting-obligations-for-owners-of-imported-ruminant-animals/)

# 5 Guidance

## 5.1 Import Permit

- (1) An import permit (copy acceptable) is required for all consignments of bovine semen and bovine embryos.
- (2) Completed applications can be submitted to Animal Imports [animal.imports@mpi.govt.nz](mailto:animal.imports@mpi.govt.nz).
- (3) Application forms can be found on the MPI website at: [Application form Semen and Embryos](#).

- (4) The import permit will provide specific notes in the special conditions section if equivalence decisions are granted.

## 5.2 Equivalence

- (1) MPI may accept an alternative method, system or process that can be shown to achieve the biosecurity requirements of the IHS (i.e. equivalence).
- (2) MPI's preference is that the exporting country's Competent Authority makes equivalence requests. Equivalence requests can be lodged with [animal.imports@mpi.govt.nz](mailto:animal.imports@mpi.govt.nz).

## 5.1 Genetically modified (GM) and new organisms

- (1) Under the Hazardous Substances and New Organisms (HSNO) Act 1996, a GM organism is considered a new organism.
- (2) GM organisms are organisms whose genes or other genetic material have been modified by in vitro techniques.
- (3) Organisms that result solely from artificial insemination, superovulation, embryo transfer, or embryo splitting are not considered to be GM organisms.
- (4) For more information please visit: <https://www.epa.govt.nz/industry-areas/new-organisms/rules-for-new-organisms/>.
- (5) Bovinae species that are not already present in New Zealand also require HSNO approval, which must be presented to MPI at the time of application for an import permit.

## 5.3 Incorporation of material by reference

- (1) Incorporation by reference means that standards, guidelines or lists are incorporated into the IHS and they form part of the requirements. This is done because technical documents are too large or impractical to include in the IHS.
- (2) Where the IHS states that section 142O(1) of the Act does not apply, this means that importers need to refer to the most recent version of any standards, guidelines or lists that are incorporated by reference in the IHS.

## 5.4 Harmonised system (HS) codes

- (1) The harmonised system is an international product numbering classification developed by the World Customs Organisation (WCO). The New Zealand harmonised system is found here: <http://aria.stats.govt.nz/aria/>
- (2) Animal products imported using the IHS will be under one of the following HS Codes:

HS Code	Commodity Description
05111010	Bovine semen
05119991	Bovine embryos

## 5.5 Exporting country systems and certification

### 5.5.1 Approval for exporting systems

- (1) The table below lists those exporting countries whose exporting systems and certification have already been approved.

Countries with approved exporting systems	Date approved
Australia	2013
Canada	2012
European Union	2012
Norway	2016
Switzerland	2016
United States of America	2013

- (2) MPI recommends Competent Authorities that request the approval of their exporting systems refer to Section 3 of the *Code* titled *Quality of Veterinary Services*, to prepare evidence for MPI regarding capabilities and preferences of the exporting country's Competent Authority.
- (3) The import risk analysis work has already been done for all countries:  
[www.mpi.govt.nz/dmsdocument/2830/send](http://www.mpi.govt.nz/dmsdocument/2830/send)

### 5.5.2 Agreed country specific veterinary certificates

- (1) Requests from exporting countries to negotiate veterinary certification for the import of bovine semen and bovine embryos into New Zealand will be prioritised according to MPI resources available at the time of application.
- (2) A model veterinary certificate is provided in this guidance document and can be used by the Competent Authority as a reference for country-specific veterinary certificate negotiation.
- (3) All country-specific veterinary certificates agreed under *BOVIGERM.GEN* between an exporting country's Competent Authority and MPI are included in the table below:

For semen:

Country	Link to certificate	S27 CTO direction #	Date agreed	Date applicable for use

For embryos:

Country	Link to certificate	S27 CTO direction #	Date agreed	Date applicable for use

- (4) Country-specific veterinary certificates with equivalent measures will be recorded with a number relevant to a Chief Technical Officer (CTO) direction under section 27(1)d(iii) of the Act, to enable border staff to clear the goods and record the number in the MPI database. Using the measures before a new country-specific veterinary certificate is agreed can create challenges at the time of biosecurity clearance. MPI should be notified prior to their use in order to provide clarification to border staff.
- (5) When a newly negotiated country-specific veterinary certificate replaces one which is currently in use, the application of new import conditions will apply according to the dates listed in the table. MPI will

advise the exporting country when the previous veterinary certificates for that country can no longer be used.

## 5.6 Diagnostic tests, vaccines and treatment

- (1) MPI's approval process includes consultation with the MPI Animal Health Laboratory (AHL) and the test must be deemed valid for diagnostic purposes in bovines.
- (2) MPI lists all approved diagnostic tests and vaccines in the MPI document: *Approved Diagnostic Tests, Vaccines, Treatments and Post-Arrival Testing Laboratories for Animal Import Health Standards (MPI-STD-TVTL)*.
- (3) Where OIE recommended diagnostic tests and vaccines are listed, details can be found in the OIE *Manual of Diagnostic Tests and Vaccines* found on the OIE website: <http://www.oie.int/en/international-standard-setting/terrestrial-manual/access-online/>
- (4) The *OIE Terrestrial Animal Health Code* chapter listing the prescribed and alternative diagnostic tests for OIE listed diseases is found on the OIE website: [http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre\\_1.1.3.htm](http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_1.1.3.htm)

## 5.7 Inspection and verification

- (1) On arrival, all documentation accompanying the consignment will be verified by an inspector. The inspector may also inspect the consignment, or a sample of the consignment on arrival.
- (2) Inspectors are able to inspect and verify due to their authorised powers under the Act.
- (3) These requirements are independent of the IHS requirements.
- (4) A 12 month trial for physical verification of germplasm will begin on 1 March 2020. Of the consignments of frozen germplasm being imported into NZ, MPI will randomly select 10% for inspection.
- (5) For more information visit: [www.mpi.govt.nz/dmsdocument/37973-inspection-of-frozen-germplasm-pdf](http://www.mpi.govt.nz/dmsdocument/37973-inspection-of-frozen-germplasm-pdf)

## 6 Specified Requirements for Identified Risk Organisms

### 6.1 Model veterinary certificate

- (1) Below is a model veterinary certificate for trade in bovine semen and bovine embryos. This model meets the requirements of the IHS.

Part 1: Details of dispatched consignment	1.1. Consignor (Exporter): Name: Address:	1.2. Certificate reference number:
		1.3. Competent Authority:
	1.4. Consignee (Importer): Name: Address:	
	1.5. Country of origin: ISO Code*	1.6. Zone or compartment of origin:**
	1.7. Country of destination: ISO Code*	1.8. Zone or compartment of destination:**
	1.9. Place of origin: Name: Address:	
	1.10. Place of shipment:	1.11. Date of departure:
	1.12. Means of transport: <input type="checkbox"/> Aeroplane <input type="checkbox"/> Ship Identification:	1.13. Expected border post:
		1.14. CITES permit No(s):**
	1.15. Description of commodity:	1.16. Commodity Code (ISO Code*):
		1.17. Total number of:
	1.18. Temperature of commodities for transport:	1.19. Total number of packages:
1.20. Identification of container/serial number:	1.21. Type of packaging:	
1.22. Identification of commodity:		

\* Optional

\*\* If referenced in Part 2



## Part II: Detail of donors

## Embryo donor information

Donor identification	Date/s of collection	Breed	Date of Birth	Country of Birth	Name of Owner	Address of Owner

## Semen donor information

Donor identification	Date/s of collection	Straw identification	Number of Straws	Date of entry into semen collection facility	Name of semen collection facility	Address of semen collection facility	Semen collection facility approval number	Date of last inspection of semen facility

## Test information

(Note that this information is to be amended as appropriate to the exporting country)

	<Disease name>			<Disease name>			<Disease name>			<Disease name>			<Disease name>			<Disease name>			<Disease name>		
Donor identification	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result

## Other information

<disease name> Vaccine		
Name of the vaccine	Inactivated or modified live virus	Virus types and strains

Part 2: Veterinary Information	Country:	Certificate reference number:
	<p>I, the undersigned Official Veterinarian, certify that the product described above satisfy the following requirements:</p> <p><b>Part 1: Requirements</b></p> <p><b>Eligibility</b></p> <p>(1) frozen semen from the Bovinae subfamily; or</p> <p>(2) <i>in vivo</i> derived embryos from the Bovinae subfamily.</p> <p><b>Requirements for clearance</b></p> <p>(3) In order to obtain biosecurity clearance, bovine germplasm must:</p> <p>a) meet the requirements of and be accompanied by this certificate;</p> <p>b) be accompanied by an import permit.</p> <p><b>Diagnostic tests, vaccines and treatment</b></p> <p>(4) All pre-export and/or surveillance testing must be:</p> <p>a) conducted by a laboratory approved by the Competent Authority of the exporting country; or</p> <p>b) conducted by a laboratory approved by the Competent Authority of any other country approved to export the specified type of germplasm to New Zealand.</p> <p>(5) All laboratory samples must be collected, processed, and stored in accordance with the recommendations in the <i>Code</i> and/or the Manual or as described in <i>MPI-STD-TVTL</i>.</p> <p>(6) All diagnostic test(s) and vaccines must be those that have been approved by MPI for that purpose and documented in <i>MPI-STD-TVTL</i>.</p> <p>(7) All products and vaccinations must meet the specific disease requirements in <i>Part 2: Specified Requirements</i> must have been administered according to the manufacturer's instruction.</p> <p>(8) All requirements for the administration of a vaccine require that either the final dose of a primary vaccination course has been administered or the recommended booster to complement the primary course has been administered.</p> <p>(9) Where products been administered, the product name, manufacturer, active ingredients (where applicable), and the dose and date of the treatment must be recorded on the veterinary certificate.</p> <p>(10) Where vaccines have been administered, all vaccine names, whether they are inactivated or modified live virus, and the virus types and strains included in the vaccine must be recorded on the veterinary certificate.</p> <p><b>Semen collection centre requirements</b></p> <p>(11) Semen collection must be carried out in a semen collection centre that complies with the recommendations for centres in the <i>Code</i> chapter <i>General Hygiene in Semen Collection and Processing Centres</i>.</p> <p>(12) The semen collection centre must be:</p> <p>a) approved for export by the Competent Authority;</p> <p>b) subjected to regular inspection, at least every 12 months, by an Official Veterinarian;</p> <p>c) under the supervision of a semen collection centre veterinarian approved by the Competent Authority.</p> <p>(13) The name and approval number of the semen collection centre must be recorded on the veterinary certificate.</p> <p>(14) Semen donors may be transferred from one approved semen collection centre to another approved centre of equal health status without isolation or testing if the Competent Authority ensures that all of the following requirements are met:</p> <p>a) Donors have been examined by the approved semen collection centre veterinarian on the day of entry into the centre and show no evidence of infectious disease transmissible in semen.</p> <p>b) Transfer is direct.</p> <p>c) Donors are protected from insect attack during transit.</p> <p>d) Donors do not come into direct or indirect contact with animals of lower health status.</p> <p>e) The means of transport is disinfected before use.</p> <p><b>Donor requirements</b></p> <p>(15) Semen donors must meet the requirements in the <i>Code</i> chapter <i>Collection and Processing of Bovine, Small Ruminant, and Porcine Semen</i>, and any additional requirements in Part 2: Specified Requirements.</p> <p>(16) During the 28 days in which semen donors are held in pre-entry isolation prior to entering the semen collection centre (as prescribed in the <i>Code</i>), they must not be used for natural mating and must be isolated from animals not of equivalent health status.</p>	




	<p>(17) Embryo donors must meet the recommendations in the <i>Code</i> chapter <i>Collection and Processing of In Vivo Derived Embryos from Livestock and Equids</i> and any additional requirements in Part 2: Specified Requirements for Identified Risk Organisms of this IHS.</p> <p>(18) Embryo donors must be resident in the embryo collection herd for at least 28 days prior to embryo collection for export to New Zealand. While resident with the collection herd, the herd must not be subject to veterinary restrictions for the identified risk organisms managed in Part 2 of this IHS.</p> <p>(19) During the 28 days in which embryo donors are resident with the embryo collection herd, they must be isolated from animals not of equivalent health status.</p> <p>(20) Germplasm donors that were imported to the exporting country must have lived continuously in an approved countries for at least the 60 days before germplasm collection.</p> <p>(21) On the day of germplasm collection, the embryo collection team veterinarian or semen collection centre veterinarian must determine that the donor is free from clinical evidence of infectious diseases transmissible in germplasm.</p> <p>(22) Where a specific requirement of this IHS for a risk organism is met by pre-collection testing, the germplasm donors must be isolated from other animals not of equivalent tested health status, from the time of the test sample collection until completion of germplasm collection for export.</p> <p>(23) Where a specific requirement of this IHS for a risk organism is met by monitoring the germplasm donors for clinical signs for a specified time after collection, the germplasm must be stored for that amount of time prior to export.</p> <p><b>Semen collection, processing and storage</b></p> <p>(24) Semen collection, processing and storage must comply with the sections relevant for bovine semen in the <i>Code</i> chapter <i>Collection and Processing of Bovine, Small Ruminant, and Porcine Semen</i>.</p> <p>(25) Where Part 2 requires testing within a certain time period before or after semen collection:</p> <ol style="list-style-type: none"> <li>Semen collection may be a time period of up to 60 consecutive days.</li> <li>Samples for testing before collection must be obtained within the specified period before the first day of the semen collection period.</li> <li>Tests required after semen collection must have samples collected within the specified period after the last day of the semen collection period.</li> </ol> <p>(26) A cryogenic or cooling agent used in the freezing process, storage and transport must not have been used previously in association with any other product of animal origin.</p> <p>(27) All straws must be sealed, and clearly and permanently marked to identify the donor and the date(s) of freezing. The markings must conform to international standards of the International Committee for Animal Recording (ICAR). If a code is used for this information, its decipher instructions must accompany the consignment.</p> <p>(28) Semen may only be stored with germplasm that has been collected and processed in accordance with the <i>Code</i>.</p> <p>(29) Semen must be held in a storage place approved by the Competent Authority of the exporting country until the time of export.</p> <p>(30) Subject to (30), semen may only be imported into New Zealand if the semen is imported directly from the country in which it was collected.</p> <p>(31) If semen is collected in a country that meets the requirements of 1.5 and stored in another country (exporting country) that meets the requirements of 1.5, that semen may be imported into New Zealand if the consignment is accompanied by:</p> <ol style="list-style-type: none"> <li>A declaration from the Competent Authority of the exporting country identifying the semen from the origin country as the semen being exported to New Zealand;</li> <li>A veterinary certificate from the Competent Authority of the exporting country that certifies that the semen has been stored and transported in the exporting country in accordance with the requirements of this IHS;</li> <li>Evidence that the semen was collected, processed, and stored in the origin country in accordance with the requirements of this IHS in the form of either: <ol style="list-style-type: none"> <li>A veterinary certificate issued by the Competent Authority of the origin country certifying that the semen meets the requirements of this IHS; or</li> <li>A letter from the Competent Authority of the origin country confirming the semen meets the requirements of this IHS and indicating which requirements therein have been fulfilled.</li> </ol> </li> </ol> <p><b>Embryo collection, processing and storage</b></p> <p>(32) Embryos must be collected, washed, processed, stored and traceability maintained under the supervision of an embryo collection team veterinarian and in accordance with the recommendations in the OIE <i>Code</i> chapter on <i>Collection and Processing of In Vivo Derived Embryos from Livestock and Equids</i>.</p> <p>(33) The embryo collection team must operate in accordance with the conditions listed in the OIE <i>Code</i> chapter on <i>Collection and Processing of In Vivo Derived Embryos from Livestock and Equids</i>.</p> <p>(34) Embryos must be collected, washed, processed, stored and traceability maintained under conditions that comply with the recommendations in the IETS <i>Manual</i>.</p>
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	<p>(35) At the time of embryo collection each embryo must be examined over its entire surface at not less than 50X magnification and found to have an intact zona pellucida and be free of adherent material.</p> <p>(36) Any micro-manipulation that causes a breach of the zona pellucida must be done as per the procedures described in the OIE <i>Code</i> chapter <i>Collection and Processing of Micromanipulated Oocytes or Embryos from Livestock and Horses</i> and the IETS <i>Manual</i>.</p> <p>(37) All biological products of animal origin used in the media and solutions for collection, processing, washing or storage of embryos must be free of pathogenic organisms including pestiviruses and prions. Media and solutions must be sterilised by approved methods according to the IETS <i>Manual</i> and handled in a manner that ensure that sterility is maintained.</p> <p>(38) All straws must be sealed, and clearly and permanently marked to identify the donor and the date(s) of freezing. The markings must conform to international standards of the International Committee for Animal Recording (ICAR) and the IETS <i>Manual</i>. If a code is used for this information, its decipher instructions must accompany the consignment.</p> <p>(39) Embryos may only be stored with germplasm that has been collected and processed in accordance with the OIE <i>Code</i>.</p> <p>(40) Embryos must only be held in a storage place approved by the Competent Authority of the exporting country until the time of export.</p> <p>(41) Subject to (41), embryos can only be imported into New Zealand if the embryos are imported directly from the country in which they were collected.</p> <p>(42) If embryos are collected in a country that meets the requirements of clause 1.5 and stored in another approved country (exporting country), those embryos may be imported into New Zealand if the consignment is accompanied by:</p> <ul style="list-style-type: none"> <li>a) A declaration from the Competent Authority of the exporting country identifying the embryos from the origin country as the embryos being exported to New Zealand;</li> <li>b) A veterinary certificate from the Competent Authority of the exporting country that certifies that the embryos have been stored and transported in the exporting country in accordance with the requirements of this IHS;</li> <li>c) Evidence that the embryos were collected, processed, and stored in the origin country in accordance with the requirements of this IHS in the form of either: <ul style="list-style-type: none"> <li>i. A veterinary certificate issued by the Competent Authority of the origin country certifying that the embryos meet the requirements of this IHS; or</li> <li>ii. A letter from the Competent Authority of the origin country confirming the embryos meet the requirements of this IHS and indicating which requirements therein have been fulfilled.</li> </ul> </li> </ul> <p><b>Transport</b></p> <p>(43) All transport containers in which germplasm is transported to New Zealand must be new or disinfected and must be free of contamination. When a transport container is disinfected, the disinfectant, its active chemical and the date of disinfection must be recorded on the veterinary certificate.</p> <p>(44) The container must only be filled with fresh (previously unused) liquid nitrogen.</p> <p>(45) All transport containers in which semen is transported to New Zealand must be sealed, by either the semen collection centre veterinarian or an Official Veterinarian, using tamper-evident seals that are positioned to ensure that no germplasm can be added after the transport container has been sealed. The seal number must be recorded on the veterinary certificate.</p> <p>(46) Where semen is transferred from one transport container to another, the date of transfer, approved collection centre, reason for transfer, and the name of veterinarian involved in the transfer must be recorded on the veterinary certificate.</p> <p><b>Part 2: Specified Requirements</b></p> <p>(47) Subject to clause (2), bovine semen and bovine embryos must comply with every OIE <i>Code</i> recommendation relating to the risk organisms specified in this Part.</p> <p>(48) Bovine semen and bovine embryos must comply with the following measures for the risk organisms specified in this Part.</p> <p><b>Bovine herpes virus 1.1, 1.2a, and 5 (Infectious Bovine Rhinotracheitis/Infectious Pustular Vulvovaginitis, IBR/IPV)</b></p> <p>(49) At the time of collection of semen for export to New Zealand, the exporting country must be free from BHV 1.1, BHV 1.2a and BHV5 in accordance with the OIE <i>Code</i>; or</p> <p>(50) The semen collection centre must be maintained free from BHV 1.1, 1.2a, and 5 from commencement until conclusion of semen collection for export to New Zealand, through compliance with the recommendations in the OIE <i>Code</i> in relation to BHV, and:</p> <ul style="list-style-type: none"> <li>a) The centre must:</li> </ul>
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	<ul style="list-style-type: none"> <li>i. Test all cattle prior to pre-entry isolation for antibodies using a test listed in <i>MPI-STD TVTL</i>, with negative results;</li> <li>ii. Test all cattle in pre-entry isolation for antibodies, with negative results, or where an animal in a group has tested positive re-testing the remaining animals, with negative results, not less than 21 days after removal of the positive animal; and</li> <li>iii. Thereafter, annually re-test all donors for antibodies, with negative results; or</li> </ul>
(51)	<p>The semen donor must be:</p> <ul style="list-style-type: none"> <li>a) held in isolation for the 30 days following collection;</li> <li>b) tested for BHV 1.1, 1.2a, and 5 using a test listed in <i>MPI-STD-TVTL</i> at least 21 days after semen collection for export to New Zealand, with negative results; or</li> </ul>
(52)	<p>An aliquot of semen from each semen collection for export to New Zealand must be tested for BHV1.1, 1.2a, and 5 with a test listed in <i>MPI-STD-TVTL</i>, with negative results. Note: there are no import requirements for embryos.</p>
	<p><b>Bovine leukaemia virus (Enzootic Bovine Leukosis, EBL)</b></p>
(53)	<p>The semen donor must be resident at the time of semen collection in an EBL-free herd in accordance with the <i>OIE Code</i>; and</p> <ul style="list-style-type: none"> <li>a) if less than two years of age, the semen donor must come from a serologically negative 'uterine' dam; or</li> <li>b) the semen donor must be subjected to a test listed in <i>MPI-STD-TVTL</i> for EBL on blood samples on two occasions with negative results, the first test being carried out at least 30 days before and the second test at least 90 days after collection of the semen; or</li> </ul>
(54)	<p>An aliquot of semen from each collection for export to New Zealand must be tested for BLV with a test listed in <i>MPI-STD-TVTL</i>, with negative results. Note: there are no import requirements for embryos.</p>
	<p><b>Bovine viral diarrhoea virus genotype 2 (BVDV2)</b></p>
(55)	<p>At the time of germplasm collection for export to New Zealand, the exporting country must be recognised by the CTO as free from BVDV2; or</p>
	<p>Semen:</p>
(56)	<p>The semen collection centre must be maintained free from BVDV2 from commencement until conclusion of semen collection for export to New Zealand, through compliance with the recommendations in the <i>OIE Code</i> in relation to BVDV2:</p> <ul style="list-style-type: none"> <li>a) The collection centre must: <ul style="list-style-type: none"> <li>i. Test all cattle within 30 days prior to pre-entry isolation with a test listed in <i>MPI-STD-TVTL</i>;</li> <li>ii. Test all cattle after 21 days isolation with a test listed in <i>MPI-STD-TVTL</i>;</li> <li>iii. If any animal seroconverts, keep all animals in pre-entry isolation until there is no more seroconversion for 3 weeks;</li> <li>iv. Only approve entry for groups where pre-entry isolation results indicate the absence of antigen-positive cattle;</li> <li>v. Thereafter, annually re-test seronegative cattle;</li> <li>vi. For seropositive donors, test semen for BVDV with a test listed in <i>MPI-STD-TVTL</i> with negative results, prior to use of that animal as a semen donor; or</li> </ul> </li> </ul>
(57)	<p>An aliquot of semen from each semen collection for export to New Zealand must be tested for BVDV2 with a test listed in <i>MPI-STD-TVTL</i>, with negative results.</p>
	<p>Embryos:</p>
(58)	<p>The embryo donor must be tested for BVDV2:</p> <ul style="list-style-type: none"> <li>a) between 28-14 days prior to collection with a test listed in <i>MPI-STD-TVTL</i>;</li> <li>b) isolated from untested cattle between the test date and embryo collection; or</li> </ul>
(59)	<p>A pooled sample of embryos/oocytes, collection fluids and/or washing fluids from each embryo collection for export to New Zealand must be tested for BVDV2 with a test listed in <i>MPI STD TVTL</i>, with negative results.</p>
	<p><b>Foot and mouth disease (FMD)</b></p>
	<p>Semen:</p>

	<p>(60) The donor must be resident for at least the 3 months before semen collection in a country or zone that is free from FMD without vaccination in accordance with the OIE <i>Code</i>; or</p> <p>(61) The herd of origin, semen collection centre, donor animal and semen for export must comply with OIE <i>Code</i> recommendations for export of bovine semen from countries or zones presenting a risk of FMD; and</p> <p>a) Each semen collection, processing and storage facility in the exporting country intended to be used during the preparation of an export consignment to New Zealand has been approved by MPI.</p> <p>Embryos:</p> <p>(62) The donor must be resident for at least the 3 months before embryo collection in a country or zone that is free from FMD without vaccination in accordance with the OIE <i>Code</i>; or</p> <p>(63) The herd of origin, embryo collection herd where the donors were resident during embryo collection, donor animal and embryos for export must comply with the OIE <i>Code FMD Article Recommendations for the Importation of In Vivo Derived Embryos of Cattle</i>; and</p> <p>a) Each embryo collection, processing and storage facility in the exporting country, intended to be used during the preparation of an export consignment to New Zealand has been approved by MPI.</p> <p><b>Lumpy skin disease (LSD)</b></p> <p>(64) The germplasm donor must be resident for 6 months prior to germplasm collection in a country or zone that is free of LSD as defined by the OIE <i>Code</i>; or</p> <p>(65) The germplasm donor must be resident in an establishment that was free of clinical evidence of LSD during a period from at least 6 months prior to commencement, until 28 days after conclusion of germplasm collection for export to New Zealand; or</p> <p>(66) An aliquot of semen or a sample of embryos/oocytes, collection fluids and/or washing fluids from each germplasm collection for export to New Zealand must be tested for LSD with a test listed in <i>MPI-STD-TVTL</i> with negative results.</p> <p><b>Rift Valley fever virus (RVF)</b></p> <p>(67) The donor must be resident, for at least the 30 days prior to, and during germplasm collection for export to New Zealand in a country or zone that is free from RVF in accordance with the OIE <i>Code</i>; or</p> <p>(68) The donor showed no sign of RVF within the period from 14 days prior to and 14 days following germplasm collection; and either</p> <p>a) the donor must be vaccinated against RVF at least 14 days prior to collection; or</p> <p>b) the donor must be demonstrated to be seropositive on the day of collection with a test listed in <i>MPI-STD-TVTL</i>; or</p> <p>c) testing of paired samples with a test listed in <i>MPI-STD-TVTL</i> must demonstrate that seroconversion did not occur between germplasm collection and 14 days after.</p> <p><b><i>Brucella suis</i>, <i>Brucella melitensis</i>, and <i>Brucella abortus</i> (bovine brucellosis)</b></p> <p>(69) The semen donor must be kept since birth in a country or zone that is free from <i>Brucella</i> in accordance with the OIE <i>Code</i>; or</p> <p>(70) The semen collection centre must be maintained free from <i>Brucella</i> from commencement until conclusion of semen collection for export to New Zealand, through compliance with the recommendations in the OIE <i>Code</i> in relation to <i>Brucella</i>. The centre must require that:</p> <p>a) Prior to pre-entry isolation the donors must be either from a country or zone that is free from <i>Brucella</i> in accordance with the OIE <i>Code</i> or must be from a herd officially free from <i>Brucella</i>;</p> <p>b) During the 30 days prior to pre-entry isolation, donors must be tested with a test listed in <i>MPI-STD-TVTL</i> for <i>Brucella</i>, with negative results;</p> <p>c) All cattle in pre-entry isolation must be tested with a test listed in <i>MPI-STD-TVTL</i> for <i>Brucella</i>, with negative results;</p> <p>d) At least annually all cattle resident in the semen collection centre must be tested with a test listed in <i>MPI-STD-TVTL</i> for <i>Brucella</i>, with negative results.</p> <p>Note: there are no import requirements for embryos.</p> <p><b><i>Campylobacter fetus</i> subspecies <i>venerealis</i> (bovine genital campylobacteriosis, BGC)</b></p> <p>(71) The semen donor must never have been used for natural service; or</p> <p>a) must have only been mated virgin heifers.</p> <p>(72) After a minimum of 7 days in pre-entry isolation, the semen donor must undergo testing for <i>Campylobacter fetus</i> subspecies <i>venerealis</i> as follows:</p> <p>a) Animals less than six months old or kept since that age only in a single sex group prior to pre-entry isolation must be tested with test listed in <i>MPI-STD-TVTL</i>, once on a preputial specimen, with a negative result.</p>
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	<p>b) Animals aged six months or older that could have had contact with females prior to pre-entry isolation must be tested with an approved test three times at weekly intervals on preputial specimens, with a negative result in each case.</p> <p>c) Annual testing:</p> <ol style="list-style-type: none"> <li>A preputial specimen/s from donor bulls and any in-contact animals on semen production must be tested with an approved test or culture.</li> <li>Bulls returning to collection after a lay-off of more than six months must be tested not more than 30 days prior to resuming production.</li> </ol> <p>Note: there are no import requirements for embryos.</p> <p><b><i>Coxiella burnetii</i> (Q-fever)</b></p> <p>(73) The germplasm donor must never have been confirmed positive for Q fever; and either</p> <ol style="list-style-type: none"> <li>The donor must be subjected to a serological test listed in <i>MPI-STD-TVTL</i> for Q fever, on a sample collected between 21 and 120 days after each germplasm collection for export to New Zealand, with negative results; or</li> <li>An aliquot of semen or a sample of embryos/oocytes, collection fluids and/or washing fluids from each germplasm collection for export to New Zealand must be tested for Q fever with a test listed in <i>MPI-STD-TVTL</i>, with negative results; or</li> <li>Within the 6 month period before or after germplasm collection for New Zealand, but before export, the embryo collection herd or semen collection centre herd must be tested for Q fever, with negative results. This testing must be with a test listed in <i>MPI-STD-TVTL</i> and must be performed on either the whole herd or a random sample of at least 60 animals (whichever is the lesser number); and <ol style="list-style-type: none"> <li>The herd must be isolated for the period between semen collection and diagnostic sampling.</li> </ol> </li> </ol> <p><b><i>Mycobacterium tuberculosis</i> (bovine tuberculosis)</b></p> <p>Semen:</p> <p>(74) The semen collection centre must be:</p> <ol style="list-style-type: none"> <li>free from bovine tuberculosis in accordance with the OIE <i>Code</i>;</li> <li>located in a country or zone that has been recognised by the CTO as free from bovine tuberculosis; or</li> </ol> <p>(75) The semen collection centre must be maintained free from bovine tuberculosis from commencement until conclusion of semen collection for export to New Zealand, through compliance with the recommendations in the OIE <i>Code</i> in relation to bovine tuberculosis; and</p> <ol style="list-style-type: none"> <li>Prior to pre-entry isolation, donors must be from a herd free from bovine tuberculosis, either in accordance with the OIE <i>Code</i> or the competent authority of the exporting country;</li> <li>During the 30 days prior to entry to the semen collection centre, donors must be tested with a test listed in <i>MPI-STD-TVTL</i> for bovine tuberculosis, with negative results;</li> <li>At least annually all resident cattle were tested with a test listed in <i>MPI-STD-TVTL</i> for bovine tuberculosis, with negative results.</li> </ol> <p>Embryos:</p> <p>(76) No clinical signs of bovine tuberculosis were observed in the embryo collection herd during the 24 hours prior to embryo collection for export to New Zealand; and either</p> <ol style="list-style-type: none"> <li>The donors must be: <ol style="list-style-type: none"> <li>from an embryo collection herd that is free from bovine tuberculosis in accordance with the OIE <i>Code</i> or the competent authority of the exporting country;</li> <li>from a country or zone that has been recognised by the CTO as free from bovine tuberculosis; or</li> </ol> </li> <li>The donor must be: <ol style="list-style-type: none"> <li>from an embryo collection herd that is free from bovine tuberculosis, either in accordance with the OIE <i>Code</i> or the competent authority of the exporting country;</li> <li>subjected to a test listed in <i>MPI-STD-TVTL</i> for bovine tuberculosis during the period between 30 days prior to and 12 months after embryo collection for export to New Zealand, with negative results.</li> </ol> </li> </ol> <p><b><i>Mycoplasma mycoides</i> subspecies <i>mycoides</i> SC (contagious bovine pleuropneumonia, CBPP)</b></p> <p>(77) The germplasm donor must be born in and have been continuously resident in a country that is recognised by the CTO as free from CBPP; or</p> <p>(78) The germplasm donor must:</p> <ol style="list-style-type: none"> <li>never have been vaccinated for CBPP;</li> <li>be kept since birth, or for at least the 6 months prior to commencement until conclusion of germplasm collection for export to New Zealand in establishments where no case of CBPP has been reported, and which are not situated in a CBPP infected zone, as defined by the OIE <i>Code</i>;</li> </ol>
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	<p>c) be serologically tested for CBPP, using a test listed in <i>MPI-STD-TVTL</i> on two occasions 21 to 30 days apart, with the last test within 14 days prior to germplasm collection for export to New Zealand, with negative results.</p> <p><b><i>Mycoplasma bovis</i></b></p> <p>(79) Collection and processing of germplasm must be in accordance with the recommendations of the OIE <i>Code</i>, except for:</p> <p>Semen:</p> <p>(80) The following antibiotic combination must be used at the specified final dose per mL of extended semen:</p> <ul style="list-style-type: none"> <li>a) Gentamicin (500 µg), tylosin (100 µg), lincomycin–spectinomycin (300/600 µg) (GTLS); or             <ul style="list-style-type: none"> <li>i. Another MPI approved antibiotic combination, listed in <i>MPI-STD-TVTL</i>;</li> </ul> </li> <li>b) Antibiotics must be prepared and stored as separate stock solutions as described by the manufacturer to maintain potency;</li> <li>c) Antibiotics must be added to media/extender on the day of processing;</li> <li>d) The semen must remain in the antibiotic solution at the recommended concentration for a minimum of 2 hours at no less than 5°C before being frozen in the antibiotic solution; or</li> </ul> <p>(81) Another MPI approved antibiotic combination and protocol, listed in <i>MPI-STD-TVTL</i>, must be used.</p> <p>Embryos:</p> <p>(82) The embryos must be subjected to the protocol described in the IETS <i>Manual</i>: tylosin (200 µg/mL) incubation at 37°C in the antibiotic treatment for a minimum of 4 hours after being washed 10 times; or</p> <p>(83) The embryos must be subjected to another MPI approved antibiotic combination and protocol, listed in <i>MPI-STD-TVTL</i>; or</p> <p>(84) Each germplasm collection for export to New Zealand must be tested with a validated PCR test for <i>M. bovis</i> listed in <i>MPI-STD-TVTL</i>, with negative results.</p>		
	<table border="1"> <tr> <td data-bbox="320 1041 882 1417"> <p><b>Official Veterinarian</b></p> <p>Name:</p> <p>Address:</p> <p>Email:</p> </td> <td data-bbox="882 1041 1396 1417"> <p>Signature:</p> <p>Date:</p> <div style="text-align: center;">  <p>[Official Veterinarian signature, Official stamp and date]</p> </div> </td> </tr> </table>	<p><b>Official Veterinarian</b></p> <p>Name:</p> <p>Address:</p> <p>Email:</p>	<p>Signature:</p> <p>Date:</p> <div style="text-align: center;">  <p>[Official Veterinarian signature, Official stamp and date]</p> </div>
<p><b>Official Veterinarian</b></p> <p>Name:</p> <p>Address:</p> <p>Email:</p>	<p>Signature:</p> <p>Date:</p> <div style="text-align: center;">  <p>[Official Veterinarian signature, Official stamp and date]</p> </div>		



## Appendix 1 – Document History

Date First Issued	Title	Shortcode
TBD	Guidance Document: Bovine Germplasm	BOVIGERM.GEN
Date of Issued Amendments	Title	Shortcode

Draft for  
Consultation