



# Import Health Standard

## For

# Bovine Semen

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Short Name: `bovsemid.gen`

**MAF Biosecurity New Zealand**  
**Ministry of Agriculture and Forestry**  
**P.O Box 2526**  
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**New Zealand**

## **Issuing Authority**

This standard is issued under section 22 of the Biosecurity Act 1993 (the Act).

Dated at Wellington this 27<sup>th</sup> day of June 2011.

Manager Animal Imports and Exports  
Ministry of Agriculture and Forestry (MAF)

For Director General  
Ministry of Agriculture and Forestry  
(Pursuant to delegated authority)

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# Import Health Standard for Bovine Semen

## PART A. BACKGROUND, SCOPE AND OUTCOMES

### Background

1. Under section 22 of the Biosecurity Act, this document is the import health standard for bovine semen.
2. If this standard needs to be amended or revoked urgently, or an amendment to the standard is minor, the amendment or revocation may be carried out without consultation.
3. A guidance document issued by the Director-General accompanies this import health standard. The guidance document provides information relevant to how requirements may be met and includes definitions of terms used in this standard.

### Scope

4. This standard specifies the requirements that must be met to import frozen bovine semen into New Zealand, bovine semen being semen derived from any member of the sub-family *Bovinae*.
5. The bovine semen must meet the general requirements and documentation requirements contained in PART B of this standard and to the extent that PART C of this standard applies, the specific requirements contained in PART C of this standard.

### Outcomes

6. All imports of bovine semen must be subject to risk management measures for specified risk organisms appropriate to the status of the risk organism, their likelihood of entry and/or establishment in New Zealand and consequent impacts.
7. The risk organisms associated with bovine semen that are subject to specific risk management requirements are (with category and legal status under the Biosecurity Act as well as presence in New Zealand):
  - Bluetongue virus (Unwanted; Exotic; Notifiable)
  - Borna disease virus (Unwanted; Exotic)
  - Bovine viral diarrhoea virus type 2, BVDV2 (Unwanted; Exotic)
  - Crimean Congo haemorrhagic fever virus, CCHFV (Unwanted; Exotic; Notifiable)
  - Foot and mouth disease virus, FMDV (Unwanted; Exotic; Notifiable)
  - Bovine herpes virus, IBR/IPV, abortifacient strains (Unwanted; Exotic; Notifiable)
  - Lumpy skin disease virus, LSDV (Unwanted; Exotic; Notifiable)
  - Rift Valley Fever virus, RVFV (Unwanted; Exotic; Notifiable)
  - Vesicular stomatitis virus (Unwanted; Exotic; Notifiable)

- Bovine brucellosis, including *Brucella abortus*, *B. melitensis*, *B. suis* (Unwanted; Exotic; Notifiable)
  - Bovine tuberculosis, *Mycobacterium bovis* (Unwanted; Reportable under the Bovine Tb Pest Management Strategy)
  - Contagious bovine pleuropneumonia, CBPP, *Mycoplasma mycoides subsp. mycoides SC* (Unwanted; Exotic; Notifiable)
  - *Mycoplasma bovis* (Unwanted; Exotic; Notifiable)
  - Q fever, *Coxiella burnetii* (Unwanted; Exotic; Notifiable)
8. For each risk organism, specific risk management requirements are specified in PART C using the general format:
- Country, zone or compartment freedom; OR
  - Specified measures to verify premises and/or donor freedom.
9. MAF will, in conjunction with the veterinary authority of the exporting country, determine how the relevant identified risks are to be managed, taking into account:
- the verifiable health status of the exporting country/zone/compartment; AND
  - the national systems and standards in the exporting country for regulatory oversight of the germplasm industry; AND
  - the capabilities and preferences of the exporting country's Competent Authority.
- Once this determination has been concluded, country-specific Zoosanitary Certificate templates will be included in the guidance document.

## Definitions

10. The definitions below relate to requirements for importing the consignment, for all other definitions see the guidance document.

### Donor(s)

Female animal(s) from which embryos are collected, or male animal(s) from which semen was collected.

### Germplasm

Animal genetic material, i.e. frozen semen and frozen *in vivo* derived embryos.

### Herd of origin

The herd in which the donor animal resided prior to entering the germplasm collection centre or embryo collection herd. If the donor animal has been on the germplasm collection centre or embryo collection herd for more than 90 days in the case of bulls or 60 days in the case of females the germplasm collection centre or embryo collection herd can be deemed to be the herd of origin.

## PART B. GENERAL REQUIREMENTS

### Approved countries

11. Countries must be approved by MAF to export bovine semen to New Zealand. A list of eligible countries is included in the guidance document for this standard.

## **Donor eligibility**

12. Donors that were imported to the exporting country must have lived continuously in the exporting country for at least 90 days and in the herd of origin for at least 30 days prior to semen collection for export to New Zealand.

## **Semen collection centre requirements**

13. Bovine semen must be collected, handled, prepared, processed and stored at semen collection centres approved for export by the veterinary authority. The semen collection centres must be subject to regular inspection by an Official Veterinarian and under the supervision of a semen collection centre veterinarian approved by the veterinary authority. The name and approval numbers of these semen collection centres must be recorded on the zoosanitary certificate.
14. Donors may be transferred from one approved semen collection centre to another of equal health status without isolation or testing if:
  - donors were examined, by the approved semen collection centre veterinarian, and showed no clinical sign of disease on the day of entry to the centre; AND
  - transfer was direct; AND
  - transfer was not through a bluetongue infected zone OR donors were protected from insect attack during transit; AND
  - donors did not come into direct or indirect contact with animals of a lower health status; AND
  - the means of transport used was disinfected before use; AND
  - routine (annual) tests for bluetongue, bovine brucellosis, bovine tuberculosis, BVD-MD, and IBR-IPV were carried out on the donor during the 12 months prior to transfer.

## **Donor and semen collection centre health status**

15. The donors must not be resident in any establishment that is subject to quarantine restrictions, for at least the 90 days before the first semen collection for this consignment to New Zealand until completion of the testing of the donors as required by this standard.
16. Prior to collection of semen for this consignment, the donors must be isolated for at least 28 days at a place specifically approved for this purpose by the veterinary authority. During this time they were not used for natural mating and were isolated from animals not of equivalent health status.
17. The approved semen collection centre veterinarian is responsible for ensuring that, on the day(s) of collection of the semen, the health status of each donor is monitored and recorded, and the donor does not show any clinical evidence of infectious diseases transmissible in semen.

## **Semen collection, processing, storage and transport**

18. Semen must be collected, handled, prepared, processed and stored under the supervision of the approved semen collection centre veterinarian and in accordance with the OIE Code.
19. Antibiotics must be added to the semen diluent in accordance with the OIE Code chapter on collection and processing of bovine semen. The names of antibiotics added and their concentration must be stated on the zoosanitary certificate. After addition of antibiotics, the semen must be kept above 5°C for at least 45 minutes.
20. All straws must be sealed, and clearly and permanently marked to identify the donor and the date(s) of collection. If a code is used for this information, its decipher must accompany the consignment. The marking should, in accordance with the OIE Code, conform to the international standards of the International Committee for Animal Recording (ICAR; [www.icar.org](http://www.icar.org)).
21. The semen for export must be stored in the frozen state for at least 30 days before shipment to New Zealand, and during this time the donors and all animals in contact with them must remain healthy and free from any diseases transmissible in semen.
22. The semen must only be stored with germplasm that has been collected and processed in compliance with the OIE Code. Containers must be held until export in a storage place approved by the veterinary authority of the exporting country.
23. The semen must be placed in transport containers filled with fresh (previously unused) liquid nitrogen. Transport containers may be either new or empty and disinfected. For the transport container used to transport the semen to New Zealand, the disinfectant used, its active chemical and date of disinfection must be recorded on the zoosanitary certificate.
24. The transport container, in which the semen is to be transported to New Zealand, must be sealed, by either the semen collection centre veterinarian or an official veterinarian, using tamper evident seals. The seal number must be recorded on the zoosanitary certificate.

## **Laboratory testing**

25. All required laboratory testing must be conducted at a laboratory approved by the veterinary authority of the exporting country to conduct export testing.
26. Laboratory or other diagnostic tests must be those prescribed for that disease by the OIE for use during international trade, or specifically approved by MAF.
27. Any PCR testing of sexed semen is to be done on a representative semen sample prior to the sorting process, unless evidence is provided to MAF demonstrating that the PCR process is valid for sorted sexed semen.

## **Documentation accompanying the consignment**

28. Documentation must be in English, but may be bilingual (language of exporting country/English).

29. The documentation that accompanies the consignment to New Zealand must consist of:

- an original zoosanitary certificate, signed and stamped on every page by an official of the competent veterinary authority of the exporting country;

AND

- an import permit issued under section 22(2) of the Act;

AND EITHER

- a tabulated summary of laboratory tests for each donor completed in accordance with the specific requirements in the zoosanitary certificate (indicating donor identification consistent with the zoosanitary certificate, dates of germplasm collection, and for each relevant disease the date/s samples were drawn, the test undertaken and the reported result);

OR

- copies of laboratory reports for all tests.

### **Clearance**

30. Upon arrival in New Zealand the documentation accompanying the consignment must be inspected by an Inspector at the port of arrival. The Inspector may also inspect the consignment.

31. Providing that the documentation meets all requirements noted in the zoosanitary certificate, the consignment may be given a biosecurity clearance under section 26 of the Biosecurity Act 1993 and the consignment released to the importer.

## **PART C. SPECIFIC REQUIREMENTS FOR IDENTIFIED RISK ORGANISMS**

### **Bluetongue (BTV)**

EITHER

32. At the time of collection the exporting country was free from BTV in accordance with the requirements of the OIE Code;

OR

33. Donors were kept in a BTV free zone, as defined by the OIE Code or recognised by MAF, for at least the 60 days immediately prior to, and during, semen collection for export to New Zealand;

OR

34. Donors were kept during the seasonally free period in a BTV seasonally free zone, as defined by the OIE Code, or otherwise protected from Culicoides, for at least the 60 days immediately prior to, and during, semen collection for export to New Zealand;

OR

35. Donors were subjected to OIE prescribed antibody detection tests for BTV, such as the competitive enzyme linked immunosorbent assay (cELISA), at least every 60 days during, and between 21 and 60 days after semen collection for export to New Zealand, with negative results;

OR

36. Donors were subjected to OIE prescribed agent detection tests for BTV, such as a virus isolation (VI) test or a polymerase chain reaction (PCR) test, on blood samples collected at commencement and conclusion of, and at least every 7 days (for VI test) or at least every 28 days (for PCR test) during, semen collection for export to New Zealand, with negative results.

### **Borna disease**

EITHER

37. Donors have been resident since birth in a country or countries that have never had a reported case of Borna disease;

OR

38. Borna disease is officially notifiable in the exporting country, and the donors have been resident for the previous 3 months in herds where there have been no reported cases in the 12 months prior to semen collection for export to New Zealand;

OR

39. Donors or aliquots of semen from each semen collection for export to New Zealand have been tested for Borna disease, using a MAF-approved test and process, with negative results.

### **Bovine viral diarrhoea type 2 (BVD2)**

EITHER

40. At the time of semen collection for export to New Zealand, the exporting country was free of BVDV2, i.e. there have been no cases of BVDV2 for at least 3 years;

OR

41. The semen collection centre must have been maintained free from BVDV2 from commencement until conclusion of semen collection for export to New Zealand, through compliance with the recommendations in the OIE Code in relation to BVDV, including:

- testing all cattle prior to pre-entry isolation for antibodies and antigen using prescribed tests; AND
- testing all cattle during pre-entry isolation for antibodies (after 21 days isolation) and antigen, using prescribed tests; AND
- if any animal seroconverts, keeping all animals in pre-entry isolation until there is no more seroconversion for 3 weeks; AND
- only approving entry for groups where pre-entry isolation results indicate the absence of antigen-positive cattle; AND
- thereafter, annually re-testing seronegative cattle; AND
- for seropositive donors, testing of semen for BVDV, with negative results, prior to use of that animal as a semen donor;

OR

42. An aliquot of semen from each semen collection for export to New Zealand has been tested for BVDV2, by VI or a MAF approved reverse transcriptase polymerase chain reaction (RT-PCR) test, with negative results.

### **Crimean Congo haemorrhagic fever (CCHF)**

EITHER

43. The exporting country has been recognised by MAF as being free of CCHF or CCHF is officially notifiable in the exporting country, and there has not been a reported case of CCHF in the exporting country for the 21 days before and during semen collection for export to New Zealand;

OR

44. Donors were serologically tested for CCHF using MAF approved methods such as an enzyme linked immunosorbent assay (ELISA) to detect IgG and IgM antibodies. Blood samples must be collected within 7 days prior to commencement of semen collection and every 21 to 60 days thereafter, until 21 to 60 days after conclusion of semen collection for export to New Zealand. The results must indicate:

- that any donor seronegative at the start of testing has maintained a seronegative status; AND
- that any donor seropositive at the start of testing did not have a rise in titre over consecutive tests.

### **Foot and mouth disease (FMD)**

EITHER

45. Donors were 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 Code;

OR

46. The herds of origin, semen collection centre, donor animals and semen for export must comply with OIE Code recommendations for export of bovine semen from countries or zones presenting a risk of FMD; AND  
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 must be approved by MAF. The approval will be dependant on the facility, its location and operating standards, and that the verification systems of the veterinary authority achieve a very high level of risk management for FMD. The process for MAF approval may include site inspection. MAF reserves the right to supervise collection, require the use of New Zealand approved semen collection personnel, or require any other measures deemed necessary to ensure compliance with facility and operating standards upon which the approval is based.

### **Bovine herpes virus abortifacient strains (BHV)**

EITHER

47. At the time of collection of semen for export to New Zealand, the exporting country was free of BHV 1.1, BHV 1.2a and BHV5 in accordance with the OIE Code or as recognised by MAF;

OR

48. The semen collection centre must have been maintained free from BHV from commencement until conclusion of semen collection for export to New Zealand, through compliance with the recommendations in the OIE Code in relation to BHV, including:

- testing all cattle prior to pre-entry isolation for antibodies using a prescribed test, with negative results; AND
- testing 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
- thereafter, annually re-testing all donors for antibodies, with negative results;

OR

49. Donors were subjected to a prescribed antibody test for BHV, at least 21 days after semen collection for export to New Zealand, with negative results;

OR

50. An aliquot of semen from each semen collection for export to New Zealand was tested for both BHV1 and BHV5, by VI or MAF approved PCR test, with negative results.

### **Lumpy skin disease (LSD)**

EITHER

51. Donors must have been resident for 6 months prior to semen collection in a country or zone that is free of LSD as defined by the OIE Code;

OR

52. Donors must have been resident in an establishment or semen collection centre 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 semen collection for export to New Zealand;

OR

53. An aliquot of semen from each semen collection for export to New Zealand was tested for LSD by a MAF approved PCR test, with negative results.

### **Rift Valley fever (RVF)**

EITHER

54. Donors were resident, for at least the 30 days prior to, and during semen collection for export to New Zealand, in a country or zone that is free from RVF in accordance with the OIE Code;

OR

55. Donors were serologically tested for RVF, using an OIE prescribed test, on the day of semen collection for export to New Zealand, and at least 14 days later, and showed no significant rise in titre.

### **Vesicular stomatitis (VS)**

EITHER

56. Donors were resident in a country that is free from VS in accordance with the OIE Code;

OR

57. VS is officially notifiable in the exporting country and no reported cases have occurred within 100km of the semen collection centre during the period from 30 days prior to commencement, until 30 days after conclusion of semen collection for export to New Zealand;

OR

58. Donors were:

- resident for the 30 days prior to and during semen collection in a herd where no case of VS was reported in that period; AND
- subjected to a serological test for VS, between 21 to 42 days after semen collection for export to New Zealand, with negative results.

### **Bovine brucellosis**

EITHER

59. Donors have been kept since birth in a country or zone that is free from bovine brucellosis in accordance with the OIE Code;

OR

60. The semen collection centre has been maintained free from bovine brucellosis from commencement until conclusion of semen collection for export to New Zealand, through compliance with the recommendations in the OIE Code in relation to bovine brucellosis, including:

- prior to pre-entry isolation the donors were either from a country or zone that is free from bovine brucellosis in accordance with the OIE Code or were from a herd officially free from bovine brucellosis; AND
- during the 30 days prior to pre-entry isolation donors were tested using an OIE prescribed serological test for bovine brucellosis, with negative results; AND
- all cattle in pre-entry isolation were tested using an OIE prescribed serological test for bovine brucellosis, with negative results; AND

- at least annually all cattle resident in the semen collection centre were tested using an OIE prescribed test for bovine brucellosis, with negative results.

## **Bovine tuberculosis**

EITHER

61. The semen collection centre was:

- free from bovine tuberculosis in accordance with the OIE Code or the veterinary authority of the exporting country; AND
- located in a country or zone that has been recognised by MAF as being free of bovine tuberculosis;

OR

62. The semen collection centre has been 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 Code in relation to bovine tuberculosis, including:

- prior to pre-entry isolation the donors were from a herd free from bovine tuberculosis, either in accordance with the OIE Code or the veterinary authority of the exporting country; AND
- during the 30 days prior to entry to the semen collection centre, donors were tested using an OIE prescribed test for bovine tuberculosis, with negative results; AND
- at least annually all cattle resident in the semen collection centre were tested using an OIE prescribed test for bovine tuberculosis, with negative results.

## **Contagious bovine pleuropneumonia (CBPP)**

EITHER

63. Donors were born in and have been continuously resident in a country that is free from CBPP i.e. there have been no cases of CBPP for at least 3 years;

OR

64. Donors have:

- never been vaccinated for CBPP; AND
- been kept since birth, or for at least the 6 months prior to commencement until conclusion of semen 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 Code; AND
- been serologically tested for CBPP, using OIE prescribed methods on two occasions 21 to 30 days apart, with the last test within 14 days prior to semen collection for export to New Zealand, with negative results.

### ***Mycoplasma bovis***

65. Donors have never recorded a positive test for *Mycoplasma bovis*.

### **Q fever**

66. Donors have never recorded a positive test for Q fever;

AND EITHER

67. Donors were subjected to a MAF approved serological test for Q fever, on a sample collected between 21 and 120 days after each semen collection for export to New Zealand, with negative results;

OR

68. An aliquot of semen from each semen collection for export to New Zealand was tested for Q fever by a MAF approved PCR test, with negative results;

OR

69. Within the 6 month period before or after semen collection for export to New Zealand, the resident herd of cattle on the semen collection centre has been tested for Q fever, with negative results. This testing can be a MAF approved serological test done on either the whole herd or a random sample of at least 60 animals (whichever is the lesser number); AND  
The semen collection centre herd has been isolated for the period between semen collection and diagnostic sampling.

### **PART D. EQUIVALENCE**

70. The requirements for importation of bovine semen are met if, in the opinion of the Director-General, the measures taken for managing the risks associated with the importation of those goods, are equally effective at managing those risks as the requirements specified in (1) to (69) above. If an equivalence measure (s) is approved, MAF will issue an Import Permit (under Section 22 of the Biosecurity Act).