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22 October 1998

Dr Joan Arnoldi  
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USDA APHIS  
Jamie L. Whitten Building  
12th Street and Independence Ave., SW  
AgBox 3491  
Washington DC 20050

Dear Joan

**Request for recognition of New Zealand's freedom of *Brucella abortus***

This letter is to formally request that the United States officially recognize that *Brucella abortus* has been successfully eradicated and that New Zealand is officially classified as being free of the organism. Any efforts you can make to facilitate any necessary legislative and/or import health standard changes would be much appreciated.

Please find attached a copy of the information which was submitted to and accepted by the OIE. If you require any additional information please do not hesitate to call me on 202 328 4816 or fax 202 332 4309.

Yours sincerely

A handwritten signature in black ink that reads "Bill Jolly".

Dr WT Jolly  
Counsellor (Veterinary Services)  
for Barry O'Neil, Chief Veterinary Officer

cc : Tom Walton  
Glen Garris  
Lisa Ferguson



Ministry of Agriculture and Forestry, New Zealand

Te Manatu Ahuwhenua, Ngaherehere, Aotearoa



**MAF REGULATORY AUTHORITY**

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Ref.: E-USA-01

23 September, 1998

Dr Joan M. Arnoldi  
Deputy Administrator  
Veterinary Services  
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Washington DC 20250

Dear Joan

**Request for recognition of New Zealand's freedom of *Brucella abortus***

This letter is to formally request that the United States officially recognize that *Brucella abortus* has been successfully eradicated and that New Zealand is officially classified as being free of the organism.

Please find attached a copy of the information which was submitted to and accepted by the OIE.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Barry O'Neil', written in a cursive style.

Barry O'Neil  
Chief Veterinary Officer

Encl.



Ref: 156-08

10 April 1996

**FILE COPY**



Dr J. Blancou  
Director General  
Office International des Epizooties  
12, rue de Prony  
75017 Paris  
France

Dear Dr Blancou

**NEW ZEALAND'S FREEDOM FROM *Brucella abortus***

In 1989, the Chief Veterinary Officer of New Zealand presented the Office International des Epizooties with a statement that the last two cattle herds in New Zealand with a history of serological reactions to *Brucella abortus* had been accredited free from the disease. From 1989 to mid-1995, on-farm testing for *B. abortus* continued. The final round of testing was completed in 1995 and during that year MAF Regulatory Authority conducted a final audit of the national brucellosis eradication program. As the audit detected no significant non-conformances, I am pleased to enclose the official statement with a request that the OIE include New Zealand in the list of countries free from *B. abortus*.

For your consideration, please find attached the following:

1. New Zealand's statement on freedom from *B. abortus*,
2. A draft copy of NASS Standard 153.23: 'Specification for Investigation and Eradication of Bovine Brucellosis' for dealing with bovine brucellosis should it be introduced into New Zealand.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Barry O'Neil', written over a circular stamp.

Barry O'Neil  
Chief Veterinary Officer

**MAF Regulatory Authority**

ASB Bank House, 101-103 The Terrace, PO Box 2526, Wellington, New Zealand

**STATEMENT TO THE OFFICE INTERNATIONAL DES  
EPIZOOTIES**

**ON THE CLASSIFICATION OF NEW ZEALAND AS A  
COUNTRY BIOLOGICALLY-FREE FROM BOVINE BRUCELLOSIS**

9 April 1996

Prepared by the

Ministry of Agriculture  
Regulatory Authority  
ASB Bank House  
101-103 The Terrace  
PO Box 2526  
Wellington  
New Zealand



Ref: 156-08  
9 April 1996

## STATEMENT

1. *Brucella abortus* is a notifiable organism in New Zealand under the Biosecurity Act 1993.
2. Vaccination against bovine brucellosis has been prohibited in New Zealand since 1987.
3. The last two herds under quarantine because of a history of serological reactions (complement fixation test) for brucellosis were accredited free of the disease in 1989.
4. The last isolation of *Brucella abortus* in New Zealand was in 1988.
5. Active surveillance for *Brucella abortus* carried out for five years (1989-1994) detected no cases of brucellosis in cattle.
6. The importation of cattle from countries not free from bovine brucellosis is strictly regulated and subject to quarantine measures.
7. The successful eradication of *Brucella abortus* demonstrated that New Zealand has developed and maintained an efficient and active operational system for bovine brucellosis surveillance, monitoring, control and eradication. An audit of the national brucellosis eradication program confirmed a high level of compliance with active surveillance procedures.
8. New Zealand is a permanent member of the Office International des Epizooties (OIE) and has a record of regular and prompt disease reporting. Such reporting also includes major trading partners and other relevant international organisations in accordance with all international obligations.

A handwritten signature in black ink, appearing to read 'Barry O'Neil', written over a horizontal line.

Barry O'Neil  
Chief Veterinary Officer



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## Summary

*Brucella abortus* infection in *New Zealand's* cattle herds was recorded for the first time in 1893. The *organism* is considered to have been eradicated in 1989 when the last two herds under quarantine were accredited free of brucellosis. Surveillance and eradication procedures were based on screening of herds using the bulk milk ring test, brucellin skin test and an automated complement fixation test. A semi-automated microtitre complement fixation test was, and remains, the standard test for bovine brucellosis in New Zealand. Vaccination against bovine brucellosis has been prohibited since 1987.

Between December 1989 and mid 1995, the New Zealand cattle population continued to be subjected to routine testing. In 1995, MAF Regulatory Authority conducted a final audit of the national bovine brucellosis eradication program. The audit focused on retrospective assessment of the completeness of the surveillance testing activities that took place during the period from 1989 to 1994. No major non-conformances were detected.

## I. Introduction

Bovine brucellosis in cattle was recorded in New Zealand for the first time in 1893. The only *Brucella* species known to occur in New Zealand have been *B. abortus* in cattle and *B. ovis* in sheep.

*B. melitensis*, *B. suis* and *B. canis* have never been recorded in New Zealand and both active and passive surveillance continues to confirm the absence of these species.

In 1966, a slaughterhouse survey revealed that about 15% of cattle were infected with *B. abortus*. It was considered that the prevalence was too high for a test and slaughter program to be affordable. Therefore, compulsory vaccination of all female cattle with *B. abortus* strain 19 was introduced with the aim of reducing the prevalence of infection before eradication was attempted.

## II. Bovine brucellosis eradication program

Before the commencement of the national brucellosis eradication program, New Zealand's Ministry of Agriculture conducted extensive trials to compare the performance of the brucellosis card test (BCT), the serum agglutination test (SAT), the complement fixation test (CFT), and the bulk milk ring test (BMT). These studies concluded that:

- a) the definitive test in the brucellosis eradication scheme should be the CFT
- b) the BCT could prove useful as a low cost screening test,
- c) the BMT was considered suitable as a low-cost-screening test to monitor the status of dairy herds once they were cleared of infection.

A compulsory test, slaughter and quarantine program commenced in 1971 and by 1977 all of New Zealand's cattle herds were under a testing regime. It was based on a semi-automated microtitre CFT which has remained the standard test. Both field and laboratory components of the program were subjected to quality control checks.

The BMT was found to be effective in identifying infected herds even when within-herd prevalence was low. This test was used to monitor dairy herds three or four times a year, depending on whether the operation was factory supply or town milk supply.

The brucellin skin test was extensively used as a screening test in beef herds from 1985. The test had been shown to be sufficiently sensitive to provide assurance of herd freedom <sup>(1)</sup>.

By August 1986, there were 35 herds under quarantine for bovine brucellosis. At that stage the usefulness of vaccination was reassessed and it was concluded that vaccination was hindering the progress of eradication so it was banned in June 1987.

The last two cattle herds under quarantine because of a history of serological reactions were accredited free of the disease in 1989. As outlined in the official statement of freedom presented to the Office International des Epizooties <sup>(2)</sup>, the Chief Veterinary Officer's Annual Report for 1990<sup>(3)</sup>, "unless new infections are detected in the meantime, active testing for bovine brucellosis will cease at the end of 1994".

During the period from 1989 to 1994, on-farm testing of all breeding cattle for *B. abortus* infection continued. Testing included whole of herd CFT (herds of fewer than 10 breeding animals), bulk milk ring test (dairy herds) and brucellin skin test (beef herds)<sup>(4)</sup>.

In July 1992 routine screening of a "miscellaneous" herd detected a single beef animal with a positive CF titre to brucellosis and four animals which were regarded as having suspicious titres<sup>(5)</sup>. However, after intensive investigation of these animals it was possible to rule out *B. abortus* infection. The serological reactions were considered to be non-specific, caused by the presence of *Yersinia enterocolitica* serotype 09. The serotype was subsequently recognised in a number of herds where animals with suspicious titres in the *B. abortus* CF test were detected.

### III. Audit of the national bovine brucellosis eradication program

During 1995, MAF Regulatory Authority conducted a final audit of the national bovine brucellosis eradication program. The audit focused on retrospective assessment of the effectiveness and completeness of the surveillance testing activities that took place during the period from 1989 to 1994. A sample of 4 of the 17 Ministry of Agriculture Veterinary District Offices were selected and reviewed as well as the two of five Ministry of Agriculture Animal Health Laboratories responsible for testing the bulked milk samples from all dairy herds. The audit covered the following issues:

- a) the collation of national information,
- b) epidemiological control of the program, and
- c) program goals and funding procurement.

In summary, the audit concluded that:

- a) Apart from some slippage in the timing of tests in the final testing year, all evidence reviewed supports the completion of bovine brucellosis surveillance testing of dairy and breeding beef herds,
- b) Surveillance of miscellaneous herds (herds with fewer than 10 test-eligible animals) improved significantly in the final 3 years of the surveillance period with the introduction of tuberculosis surveillance status cards.

- c) There is no evidence that bovine brucellosis is present in wild cattle herds located in some of the most inaccessible areas of New Zealand and on offshore islands. These herds are the subject of periodical culling for the tuberculosis control reasons. Culling pressure has increased over recent years and epidemiological evidence suggests that, although the bovine brucellosis status of these animals has not been fully investigated, no farmed animals which have had occasional contacts with these herds have ever become infected.
- d) Although there has been no evidence of bovine brucellosis in animals since December 1989, there have subsequently been a few medical reports of a 'newly acquired *B. abortus* infection' in humans. Traceback investigations revealed no evidence of infection in animals. It would appear that diagnostic techniques in humans do not take into account the sources of cross-reactions documented in veterinary literature.

#### **IV. New Zealand's importation policy**

When importing live animals, the OIE International Animal Health Code requires all livestock to be purchased from herds with a proven health status before going into pre-export isolation at a facility managed by the state veterinary authority of the exporting country. New Zealand complies with this standard and, in addition, applies a 12 month herd of origin freedom requirement for all susceptible animals. Importation of germplasm into New Zealand is based on requirements reflecting the live animal conditions.

Without appropriate certification issued by the national veterinary authority of the exporting country, animals are not permitted to enter New Zealand. This is supervised by the MAF Quarantine Service. On arrival in New Zealand the animals are detained in the approved quarantine facilities which are supervised by MAF veterinary staff. In general, post-arrival quarantine is 30 days and the animals are tested for brucellosis and a number of other diseases. The quarantine period may be longer, depending on test requirements.

The importation into New Zealand of animals vaccinated against bovine brucellosis is prohibited.

#### **V. Discussion**

The brucellosis eradication programme which commenced in 1971 estimated that 36% of all herds in existence at that time were infected. An intensive testing program, effective removal of positive reactors and other control measures resulted in the eradication of bovine brucellosis from cattle herds by 1989. The last field strain of *Brucella abortus* was isolated in 1988 <sup>(6)</sup>.

Until the end of 1994, New Zealand's cattle population continued to be screened for brucellosis on a regular basis. The bulk milk ring test was used for monitoring dairy herds three to four times a year, and intradermal brucellin test was used for monitoring beef herds.

From 1995 Ministry of Agriculture has and will maintain targeted surveillance for brucellosis as part of its on-going national animal health surveillance program. Animal health laboratories will perform tests on cases for which bovine brucellosis should be included in the differential diagnosis. Any positive or suspicious results will be fully investigated by additional testing of field samples.

Import policies with respect to bovine brucellosis will remain unchanged and will comply with the *OIE* International Animal Health Code.

## VI. Recommendation to the OIE

According to the *OIE* International Animal Health Code requirements, and the achievements of its national brucellosis eradication program, New Zealand submits this application to be classified as a country biologically free from *B. abortus*.

### References

1. MacDiarmid, S C, 1987: A theoretical basis for the use of a skin test for brucellosis surveillance in extensively-managed cattle herds. *Revue Scientifique et Technique de l'Office International des Epizooties* 6: 1029-1035.
2. Hellstrom J, 1991: New Zealand is free from bovine brucellosis. *Surveillance*, 18(1): 14.
3. Chief Veterinary Officer, 1990: Annual report 1989. *Surveillance*, 17(3): 9-10.
4. MacDiarmid, S C, 1994: Bovine brucellosis eradication in New Zealand. *Surveillance*, 21(2): 18-21.
5. Rooney, K, 1993: Brucellosis investigation - Taranaki. *Surveillance*, 20(2): 15-18.
6. Ryan, J T, 1992: Bovine brucellosis eradication - the end game. *Surveillance*, 19(1): 23-24.

## Annex 1

Table 1. Cattle herds under movement control for brucellosis

Year	Herds
1979	393
1980	611
1981	489
1982	351
1983	204
1984	125
1985	46
1986	35
1987	10
1988	2
1989	0

**NASS STANDARD 153.23**

**Specification for Investigation**

**And**

**Eradication of Bovine Brucellosis**

## 1. Introduction

### 1.1 Scope

This NASS standard outlines the service for investigation and eradication of bovine brucellosis and prescribes requirements with which the supplier of this service must comply.

### 1.2 Reference

The following publication is referred to in this NASS standard:

ISO 9001 International Standard (1987), Quality Systems - Model for quality assurance in design/development, production, installation and servicing.

### Biosecurity Act 1993

### 1.3 Definitions

For the purposes of this NASS standard, the following definitions apply:

#### Bovine Brucellosis

A chronic infectious disease of cattle caused by *Brucella abortus*. The disease is characterised by abortion in late pregnancy, retained placentae and a subsequent high rate of infertility.

#### Disease control place

Means any land declared to be a disease control place (DCP) under section 130 of the Biosecurity Act 1993.

#### Notification

Means notification to the chief executive of the supplier organisation by the Chief Veterinary Officer (CVO) of a positive diagnosis of bovine brucellosis.

#### Procedure <sup>1</sup>

Means a document that specifies, as applicable, the purpose and scope of an activity; what shall be done and by whom; when, where, and how it shall be done; what materials, equipment, and documentation shall be used; and how it shall be controlled.

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<sup>1</sup> As defined in CAN3-Z299. 1-85 National Standard of Canada, Quality Assurance Program - Category 1

## **Specification <sup>2</sup>**

The document that prescribes the requirements with which the product or service has to conform.

## **Supplier <sup>3</sup>**

Means the party responsible for the performance of the work specified in the contract.

## **1.4 Service Outline**

Following notification, disease investigation and eradication are carried out as outlined in section 2.2.2 and detailed in the Technical Requirements (section 3).

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<sup>2</sup> As defined in ISO 8402 International Standard (1986), Quality - Vocabulary

<sup>3</sup> As defined in CAN3-Z299. 1-85 National Standard of Canada, Quality Assurance Program - Category 1

## **2. Service Requirements**

### **2.1 General Requirements**

The supplier shall provide the CVO with a service for investigation of bovine brucellosis, and implementation of eradication procedures in accordance with this specification, and as applicable the Biosecurity Act 1993 and ISO 9001.

The CVO requires sufficient capability to manage an eradication programme involving up to 25 infected herds at the peak of the outbreak.

The supplier shall develop procedures for the provision of the service. Actual operations must comply with the documentation.

The supplier shall provide quarterly reports to the CVO giving an update on the supplier's management structure and key personnel (refer section 2.3), and results of internal audits and corrective action.

The supplier shall provide the CVO's representatives access at all times to premises/working areas for the purpose of quality surveillance and audit.

### **2.2 Critical Outcomes**

#### **2.2.1 Initial Actions**

On notification, the EDRM must achieve the outcomes listed in Table 1 within the specified times.

**Table 1 Initial disease investigation and eradication**

Outcome	Maximum time (h)
CVO informed that disease investigation visits to all at-risk properties contiguous to the DCP have been made	24
CVO informed that the DCP has been depopulated of cattle	48

### **2.2.2 Subsequent Actions**

If required, in the light of the initial disease investigation visits, the CVO will determine a strategy for further disease investigation/eradication. The supplier shall implement the CVO's strategy.

## **2.3 Key Personnel**

Within one month of receipt of this specification, the supplier shall appoint the key personnel listed below. The CVO shall be notified in writing of these appointments.

### **2.3.1 Management Representative**

The management representative (reporting to senior management) shall have defined authority and responsibility for ensuring that there are systems in place to meet the requirements of this specification and that these systems are implemented and maintained.

### **2.3.2 Exotic Disease Response Managers (EDRM)**

EDRMs are required to:

Manage disease investigation and eradication from the Regional Response Centres (refer section 2.4).

#### **Qualifications**

EDRMs must:

Be registered as veterinary surgeons in New Zealand.

### **2.3.3 Technical Advisors/Communications Officers**

Technical advisors/communications officers shall be selected in consultation with the CVO.

If required, a technical advisor/communications officer, with specialised knowledge of bovine brucellosis must be available to assist the CVO formulate a strategy for disease investigation and eradication, and act as a spokesperson on technical matters and provide technical background information for release as required.

#### **Qualifications**

Technical advisors must:

Have a specialised knowledge of animal disease epidemiology.

Have experience in brucellosis control/eradication.

### **2.3.4 Technical Diagnostic Experts (TDE)**

Technical diagnostic experts (TDE) are required to cover the following areas:

Brucellosis Serology

Isolation and identification of *Brucella abortus*

## **2.4 Control Centres**

Regional Response Centres (RRC) shall be established when required in the vicinities of Hamilton, Palmerston North, Christchurch and Dunedin to manage disease investigation and eradication activities in the upper North Island, lower North Island, upper South Island lower South Island respectively. Each RRC shall be managed by EDRM (refer section 2.3.2).

## **2.5 Accountabilities During Disease Control**

The CVO is responsible for defining the strategy to be applied:

The chief executive of the supplier organisation shall be accountable to the CVO for providing the resources to allow the implementation of disease control in accordance with the CVO's decisions.

The EDRMs (refer section 2.3.2) shall be accountable to the CVO for the day-to-day decision-making regarding disease investigation and eradication.