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HEALTH & CONSUMER PROTECTION DIRECTORATE-GENERAL

Directorate F - Food and Veterinary Office

DG(SANCO)/8613/2002 – MR Final

FINAL REPORT OF A MISSION

CARRIED OUT IN THE UNITED KINGDOM (NORTHERN IRELAND)

FROM 19 TO 23 AUGUST 2002

IN ORDER TO EVALUATE THE BOVINE BRUCELLOSIS

ERADICATION PROGRAMME

Please note that comments from the competent authorities concerning factual errors have been included in bold, italic print in the body of the report. Comments providing additional information are included as footnotes (in bold, italic print).

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ABBREVIATIONS & SPECIAL TERMS USED IN THE REPORT

AHWI	Animal Health and Welfare Inspector
APHIS	The Animal and Public Health Information System (database of cattle holdings, identification and movement records)
CA	Competent Authority/ies
CCA	Central Competent Authority/ies
CFT	Complement Fixation Test
CVO	Chief Veterinary Officer
DARD-NI	Department of Agriculture and Rural Development, Northern Ireland
DHSSPS	Department of Health, Social Services and Public Safety
DVO	Divisional Veterinary Office
ELISA	Enzyme-linked immunosorbent assay
FVO	Food and Veterinary Office
OBF	Officially Brucellosis Free
OTMS	Over thirty months slaughter scheme
SAHWI	Senior Animal Health and Welfare Inspector
SAT	Serum Agglutination Test
SOP	Standard Operational Procedures
SPVO	Senior Principal Veterinary Officer
VO	Veterinary Officer
VSD	Veterinary Services Division (central diagnostic laboratory)

1. INTRODUCTION

The mission took place in Northern Ireland from 19 to 23 August 2002. The mission team comprised 2 inspectors from the Food and Veterinary Office (FVO) and one Member State expert. The inspection team was accompanied throughout the mission by representatives from the central competent authority.

The mission was undertaken as part of the FVO's planned mission programme.

An opening meeting was held on 19 August 2002 with the competent authority for Northern Ireland, the DARD-NI (Department of Agriculture and Rural Development). At this meeting, the inspection team confirmed the objectives of, and itinerary for the mission, and additional information required for the satisfactory completion of the mission was received.

2. OBJECTIVES OF THE MISSION

The objective of the mission was to evaluate the progress of the bovine brucellosis eradication programme undertaken in 2001. This mission was part of a series of missions to be undertaken in 2002 to Member States where Community funded bovine brucellosis eradication programmes are in place.

In pursuit of this objective, the following sites were visited:

COMPETENT AUTHORITY VISITS			**Comments**
Competent authority	Central	1	
	Districts	3	Armagh and Ballymena Divisional offices were visited. Staff from Larne DVO were also met during visits in that Division, although the Divisional office was not visited.
LABORATORY VISITS			
Central		1	Laboratory of Veterinary Sciences Division
LIVE ANIMAL CONTROL SITES			
Livestock market		1	
Farms		4	2 dairy herds and 2 suckler herds. One herd of each type was restricted and one was not.
FOOD PROCESSING ESTABLISHMENTS			
Slaughterhouses		1	

3. LEGAL BASIS FOR THE MISSION

The mission was carried out under the general provisions of EU legislation and, in particular:

- Council Directive 64/432/EEC of 26 June 1964 on animal health problems affecting intra-Community trade in bovine animals and swine (as amended)[1].
- Council Decision 90/424/EEC[2] of 26 June 1990 on expenditure in the veterinary field.

1 Official Journal L 121, 29/07/1964 pp.1977-2012

- Council Decision 90/638/EEC[3] of 27 November 1990 laying down Community criteria for the eradication and monitoring of certain animal diseases.
- Commission Decision 98/139/EC[4] of 4 February 1998 laying down certain detailed rules concerning on-the-spot checks carried out in the veterinary field by Commission experts in Member States.

Certain aspects of the following legislation were also considered:

- Council Directive 92/102/EEC[5] of 27 November 1992 on the identification and registration of animals.
- Commission Regulation (EC) No 2629/97 of 29 December 1997 laying down detailed rules for the implementation of Council Regulation (EC) No 820/97 as regards eartags, holding registers and passports in the framework of the system for the identification and registration of bovine animals[6]
- Regulation (EC) No. 1760/2000 of the European Parliament and of the Council of 17 July 2000 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products and repealing Council Regulation EC No. 820/97[7]
- Council Directive 92/46/EEC of 16 June 1992 laying down the health rules for the production and placing on the market of raw milk, heat-treated milk and milk-based products[8]

4. BACKGROUND

4.1. Summary of previous mission results

The FVO has not carried out any previous missions to evaluate the Brucellosis eradication programme in Northern Ireland. Recent FVO missions covering animal health controls and/or controls on milk include:

- 30 April-4 May 2001, to evaluate the situation with regard to Foot and Mouth Disease (ref. DG(SANCO)/3331/2001)
- 19-20 January 2000 to evaluate the application of Council Directive 92/46/EEC laying down the health rules for the production and placing on the market of milk and milk-based products (ref. DG(SANCO)/1003/2000)
- 24-28 June 2002, to evaluate the implementation of certain EC measures aimed at the eradication, control and prevention of transmissible spongiform encephalopathies (TSE) and amendments proposed by the UK as regards the date based export scheme (DBES) (ref. DG(SANCO)/8575/2002)

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[2] Official Journal L 224, 18/08/1990, pp. 19 - 28
[3] Official Journal L 347, 12/12/1990 pp. 27 – 29
[4] Official Journal L 038, 12/02/1998 pp. 10 – 13
[5] Official Journal L 355 , 05/12/1992 pp. 32 - 36
[6] Official Journal L 354 , 30/12/1997 pp. 19 - 22
[7] Official Journal L 204 , 11/08/2000 pp. 1 - 10
[8] Official Journal L 268 , 14/09/1992 pp. 1 - 32

These reports are available on the Health and Consumer Protection Directorate General internet site at http://europa.eu.int/comm/food/fs/inspections/index_en.html.

4.2. Eradication programme for 2001

The United Kingdom programme for 2001 was approved by Commission Decision 2000/774/EC[9] of 30 November 2000 approving the programmes for the eradication and monitoring of animal diseases and for the prevention of zoonoses presented for the year 2001 by the Member States. The programme covers only Northern Ireland. Great Britain has been recognised as Officially Brucellosis Free by Commission Decision 1999/466/EC[10].

5. MAIN FINDINGS

5.1. Competent authority structure and responsibilities

5.1.1. Services involved in the eradication programme

The Central Competent Authority (CCA) for animal health matters in the United Kingdom is the Department of the Environment, Food and Rural Affairs. Within Northern Ireland, the Department of Agriculture and Rural Development (DARD-NI) is designated as competent authority for all matters related to animal health. ***The Veterinary Service within DARD-NI is responsible for*** the implementation of the brucellosis eradication programme. DARD-NI is under the responsibility of the Northern Ireland Minister for Agriculture.

The Veterinary Service has a pyramidal management structure under the Chief Veterinary Officer (CVO). There are two Deputy Chief Veterinary Officers (DCVO), one responsible for policy and one for administration. Under the DCVO for policy, one Senior Principal Veterinary Officer (SPVO) is responsible for enzootic disease. Five Divisional Veterinary Officers work on enzootic diseases under this SPVO.

For animal health purposes, the country is divided into 2 regions (Northern and Southern Region) with 5 Divisional Veterinary Offices (DVO) in each. Under the DCVO responsible for implementation, one SPVO is responsible for each Region.

At local level, each DVO is headed by a Divisional Veterinary Officer (Field), who manages a number of Veterinary Officers (VO) and Animal Health and Welfare Inspectors (AWHI) carrying out duties in the field. Generally each VO is responsible for a geographical area or "patch" with the Division. Each patch is further sub-divided into areas, in which an AHWI is responsible for carrying out blood sampling for the Brucellosis eradication programme. Within the DVO, a Senior Animal Health and Welfare Inspector (SAWHI) is responsible for co-ordinating and monitoring the work of the AHWIs.

The Food Standards Agency (FSA) of the United Kingdom, through its subsidiary the FSA NI, is the competent authority for controls on food safety, including on

[9] Official Journal L 308 , 08/12/2000 pp. 39 - 44
[10] Official Journal L 181, 16/07/1999 pp. 34 - 35

milk and milk products. The Department of Health, Social Services and Public Safety (DHSSPS) has lead responsibility for food safety issues in Northern Ireland. Responsibility for enforcement activities in milk product plants is delegated to 26 local competent food authorities, the District Councils, which employ Environmental Health Officers to carry out the controls. Responsibility for enforcement activities related to the production of liquid milk (including dairy farm inspections) has been devolved to DARD-NI Quality Assurance Division (QAD) and, for production (slaughter and cutting) of fresh meat and poultry meat, to DARD-NI Veterinary Service.

5.1.2. Resources

The expenditure on compensation for the Brucellosis eradication programme during the 1999/2000 budget period (April to March) was in excess of GBP 6.5m and the total programme cost was over GBP 8.6 m. For 2000/2001 the costs were approximately GBP 8.9m for compensation and GBP 10.7m for total costs.

EU funds co-finance payment of compensation of slaughter of positive reactors, at the rate of 50%, up to a maximum figure, set annually. For 2000 a maximum of 900,000 Euro was approved and for 2001, 700,000 Euro. For 2002, a maximum of 700,000 Euro has again been approved. This latter payment will be subject to review by the Commission services, against compliance with the provisions of the approved programme.

5.1.3. Personnel

The total number of staff in the Veterinary Service is 801, of which 106 are Veterinary Officers and 187 are technical field staff (SAHWI and AWHI). These are supported by administrative staff as well as a central informatics section.

AWHI undertake a variety of tasks, including supervision at livestock markets, identity checks of animals at abattoirs, sampling herds and mapping of breakdown and contiguous herds in the context of the brucellosis eradication programme. All of the blood sampling for the programme is carried out by AHWIs, none of this sampling is carried out by veterinary officers or private veterinary practitioners. Private veterinary practitioners may, however, submit samples from cows which have aborted.

5.1.4. Legal and enforcement powers

The Diseases of Animals Order (Northern Ireland) 1981 provides general powers of enforcement to DARD-NI authorised officers.

For brucellosis eradication, the main legal powers are laid down in the Brucellosis Control Order (Northern Ireland) 1972 (as amended). This Order provides the necessary powers to carry out testing for Brucellosis, take control measures where disease is found or suspected and pay compensation for animals slaughtered under the programme.

5.1.5. Prioritisation and documentation of controls

Brucellosis has been identified as one of the top priorities for the veterinary services. All testing due and completed is listed on the Animal and Public Health Information System (APHIS), the database operated by DARD-NI which is used

both as an animal identification and movement control database and an animal health controls database. Different types of test are also prioritised according to risk.

Detailed staff instructions exist, dealing with, *inter alia*, procedures for recording data on APHIS, interrogating the database to monitor progress with testing, deciding testing intervals and prioritising tests.

Following the Foot and Mouth Disease outbreak of 2001, backlogs in routine testing occurred. Considerable progress has been made in reducing the backlog of routine tests, however, routine tests, are considered to be a lower priority than 'risk' tests.

5.1.6. Transposition of EC legislation

Council Directive 92/102/EEC is transposed by, and EC Regulations 1760/2000, 2629/97, 2630/97 and 494/98 are supported by, the following legislation:

- The Cattle Identification (No. 2) Regulations (Northern Ireland) 1998
- The Cattle Identification (Notification of Births, Deaths and Movements) Regulations (Northern Ireland) 1999
- The Cattle Identification (Enforcement) Regulations (Northern Ireland) 1998

EU legislation relating to the bovine brucellosis eradication programmes has been transposed into national legislation by:

- The Brucellosis Control Order (Northern Ireland) 1972 (as amended).

Council Directive 92/46/EEC has been transposed by:

- The Dairy Product (Hygiene) regulations (Northern Ireland) 1995

5.1.7. Liaison with human health authorities

The CCA informed the mission team that the number of cases of human brucellosis reported in Northern Ireland in 2000 was 14, and, in 2001, 20 cases. All were due to *Brucella abortus*. All of the cases were related to direct or indirect contact with animals, none were linked to foodborne infection. A prevalence rate could not be given, as the disease in humans is not notifiable.

The Consultant in Communicable Disease Control of the responsible Health Board reports cases of human brucellosis, where occupational contact with animals is declared on the reporting documents, to the relevant field Divisional Veterinary Officers. The ***Divisional Veterinary Officer*** then investigates the health status of the herd in question and arranges any cattle blood testing deemed necessary.

Representatives from the veterinary services participate in a number of different committees and fora dealing with zoonoses. In addition there are regular contacts with the Food Standards Agency and the Health and Safety Executive for Northern Ireland.

5.1.8. Laboratory service

The laboratory for the testing of samples taken under the bovine Brucellosis programme is the Veterinary Sciences Division (VSD) in Belfast. The laboratory carries out all serological examinations of blood and milk samples for the programme as well as most of the bacteriology. Samples for investigation of abortions may be submitted by private practitioners to the Omagh Regional Laboratory. All such samples are screened for Brucellosis and any positive samples are confirmed at VSD.

5.2. Farm Registration

Every cattle herd must be registered on the APHIS (Animal and Public Health Information System) database operated by DARD-NI and is allocated a unique herd number. The fully operational nature of this database has been recognised in Commission Decision 1999/696/EC[11]. In addition, full details of the testing programme are maintained on the APHIS database. All DVOs have access to APHIS.

5.3. Animal Identification

5.3.1. Description of system

Cattle in Northern Ireland are identified with double tags bearing a unique code number comprising of:

- the member state identifier (UK);
- the digit "9" which denotes NI (within the UK identification system);
- a set of digits (between 3 and 6 – the first two of which denote the electoral area) identifying the individual herd;
- ***up to*** 4 digits identifying the individual animal; and
- a final check digit used by the computer system for validation (by means of an algorithm) of any numbers entered.

All births must be notified to DARD-NI within ***7 days of identification, which must be carried out within*** 20 days of birth for beef producing herds and ***within 36 hours of birth*** for dairy herds. DARD-NI provides the keeper with a copy of the registration details in the month following the receipt of a birth notification, so that the owner can cross check to ensure that details are correct. All deaths must be notified within 7 days.

As provided for under Article 6(3) of the Council Regulation 1760/2000/EC[12], DARD-NI does not issue passports for cattle born and remaining within Northern Ireland. Instead, cattle involved in movements must be accompanied by a movement document (MC2).

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[11] Official Journal L 275, 26/10/1999 p.32

[12] Official Journal L 204 , 11/08/2000 pp. 1 - 10

5.3.2. Operation of system

During farm visits, the bovine animals seen were identified in compliance with EU requirements. Farmers met stated that tag loss occurred at acceptable rates, particularly following design changes to the tags. In addition, they informed the team that replacement tags could be obtained quickly and easily following authorisation.

At two of the four farms visited, delays in notification of births and deaths were found. It was shown, however, that the APHIS system could be used to identify these omissions either at herd tests or when animals were moved and, where applicable, impose restrictions on the animals. In one case, in a farm without brucellosis, situated in a low incidence Division, it was found that calves dying during or shortly after calving were not notified to DARD-NI.

5.4. Movement controls

5.4.1. Description of system

All herdowners must maintain a register of cattle born in or moved into or out of the herd. The register must show the dates of all movements, births and deaths and, in the case of births, the identification of the dam. The record must be kept for 10 years.

From 1 January 2000 the movement permit system relying on advance official authorisation of movements was replaced by movement control documents requiring the herdowner to notify DARD-NI on the day that an animal enters or leaves the holding. The herdowner dispatching the animal fills out the details of the holding the animal is leaving and the holding of destination. He retains one copy and sends a second copy to his DVO. The two remaining copies travel with the animal to destination, where the new herdowner must send one copy to his DVO and retain one copy for his records**.** In the case of restricted herds or animals additional controls apply.

All movements are recorded and confirmed on the APHIS database, which can be used for tracing purposes. Cattle on farms are checked against official records at herd tests and at cattle identification inspections.

5.4.2. Operation of system

In general the registers seen were correctly kept. Although it was stated that AHWIs carry out checks on registers, there was no documentary evidence of this check. During the visit to the livestock market and the abattoir, the system for checks on movement notifications and the operation of the APHIS database were seen and found to be satisfactory.

5.5. National eradication programme

5.5.1. Disease statistics

5.5.1.1. Number of Herds

There are currently 43,000 herds listed on the APHIS database. However, many of these are not operational and of those that are, many do not contain cattle eligible

for testing under the Brucellosis eradication programme. All herds with eligible cattle are included in the programme.

32,700 herds presented cattle for Brucella testing in the 10 years ending 31 October 2000, while 23,500 had cattle tested in the last 2 years of this period.

5.5.1.2. Progress with eradication

Only Brucella abortus occurs in Northern Ireland. Northern Ireland herds were declared Officially Brucellosis Free (OBF) in 1982. By 1995 a level of infection of approximately 0.005%had been achieved. There were sporadic outbreaks between 1995 and 1997, most of which were believed to be due to false positive reactions. Three primary outbreaks in 1997 and 1998, attributed to movements of animals across the border with the Republic of Ireland, led to a significant disease spread in Northern Ireland. Two of these foci have been resolved but the third, in Armagh, is still associated with herd breakdowns. Two new foci of infection have occurred in the Enniskillen and Newry Divisions.

The following table shows the herd and animal incidence for 1998 to October 2001:

Year	% Herds	% Animals
1998	0.16	0.06
1999	0.36	0.13
2000	0.48	0.11
Oct./01	0.46	0.13

5.5.2. Classification of holdings

According to the approved eradication plan, animals are tested biennially or, in the three high incidence Divisions, annually and retain their OBF status if these test are clear. This is not always in accordance with the requirements of Annex A of Council Directive 64/432/EEC.

A holding will become 'restricted' if a positive reactor is disclosed/detected, when a VO has reason to suspect infection on the holding, or when the provisions of the relevant legislation have not been met. In such cases, the OBF herd status is withdrawn and movement restrictions are applied.

The category ‘Brucellosis Free’ does not apply in Northern Ireland in practice, as vaccination is not currently used.

5.5.3. Testing regime

5.5.3.1. Main testing programme

The programme is based on a test and slaughter policy. The 2001 Brucellosis Programme aimed to carry out biennial blood sampling on all herds with eligible animals, together with additional targeted testing of certain herds and individual

animals. In the three divisions where incidence is high, Armagh, Newry and Enniskillen, annual herd testing is carried out.

All eligible animals must be presented for all classes of test. An eligible animal is defined as a female animal or bull over 12 months. Entire males kept only for meat production are not required to undergo testing provided the owner signs a declaration stating that the animals will only go direct to slaughter. However where a herd has lost its OBF status the bull beef cattle must be sampled.

Blood samples are collected by AHWIs. Samples are tested in the Veterinary Sciences Laboratory of the DARD-NI. SAT is used to screen all blood samples, positive results are confirmed by CFT. Non-negative test results are interpreted by VOs, using a standard or severe interpretation depending on the epidemiological situation. Detailed guidelines on interpretation are provided in working instructions.

A procedure has been developed for situations where herdowners do not co-operate with routine herd testing. A warning letter is sent and a test date proposed. If the farmer fails to present his eligible animals for testing, this procedure is repeated. If after two warning letters the farmer has still not presented his cattle for testing, the herd is restricted and a prosecution is initiated. In the case where the herd is considered to present a risk, herd movement restrictions can be imposed at the same time as the first letter is sent.

Monthly Bulk Milk ELISA testing is carried out in all dairy herds. In the event of positive results, all eligible animals are subjected to blood testing.

Given the current incidence of bovine brucellosis in Northern Ireland, annual herd testing would be required to meet the requirements for maintenance of OBF status of herds, as laid down in Annex A, Part II of Council Directive 64/432/EEC. This requirement is not being met for beef suckler herds undergoing only biennial herd tests.

Where abortions are notified, animals must be isolated and undergo serological testing at 3 and 21 days post-abortion.

Inconclusive reactors must be isolated and re-tested after 14 days. Animals may be re-tested on a number of occasions if the results remain inconclusive. There are detailed guidelines for field staff on factors to consider when deciding whether to continue re-testing or slaughter.

The national programme has been augmented in two “Risk Areas” in the Armagh and Newry Divisions, with 4 monthly blood sampling of herds in a blanket control zone.

From 26 February 2001, when the outbreak of Foot and Mouth disease occurred in Northern Ireland, the field blood-sampling programme was suspended. Routine herd blood sampling ceased, as did most ‘risk’ blood sampling. Other aspects of the brucellosis programme, including sampling and slaughter of aborting and reactor animals and the bulk milk sampling scheme, continued. Routine herd testing recommenced in June 2001. At present tests on approximately 120,000 eligible beef animals are three months are more overdue, 71% of these are biennial, and 22% annual, herd tests. This represents about 10% of the ***tests*** expected to be ***carried out*** in the current financial year.

5.5.3.2.Pre and post movement tests

Pre- and/or post-movement tests are not currently required in Northern Ireland. This is not in accordance with the requirements for the maintenance of OBF status of holdings as laid down in Council Directive 64/432/EEC.

5.5.3.3. Cull Cow monitoring scheme

The cull cow monitoring scheme was introduced in 2001 in order to detect non-declared abortions. Additionally, routine sampling of culled animals was considered to provide a cost-effective means of monitoring the health status of herds through which they have passed.

Cows presented for the OTMS (over thirty months scheme) cull, which is carried out in two slaughterhouses in Northern Ireland, are sampled. A blood sample is collected by DARD-NI staff and submitted to VSD for serological testing. All samples yielding any CFT, reading or a SAT reading of 1/80 or greater, will be reported to the head office of the veterinary services, who trace the animals' movements and email details to relevant DVO for follow-up action.

5.5.3.4. Tests following outbreaks for re-qualification.

Following a breakdown, the herd is restricted and reactors are valued and slaughtered. Bacteriological confirmation of infection usually results in the slaughter of all breeding and potential breeding animals in the herd. The decision to depopulate herds is taken by the CCA based on the information on the breakdown submitted by the DVO. Where a decision to depopulate is taken, priority is given to the valuation and slaughter of reactor animals.

A backward and forward trace is carried out using the APHIS system. All forward traced breeding or potential breeding animals are restricted and tested on a regular basis until calved or slaughtered. Where relevant, backward traced herds are tested. Progeny of reactor animals are traced and, where female, and born in the two years prior to the dam having been declared a reactor, slaughtered as negative in-contacts.

Associated herds ***are*** restricted pending an assessment of the degree of contact with the infected herd. Where there is found to be contact that could present a risk of spread of disease between the herds, they ***are*** treated as a single epidemiological unit[13].

When a herd is restricted, contiguous herds are mapped based on information held by the Divisional Agricultural Development Officer (for subsidy purposes). This information is verified on the spot and contiguous herds with eligible animals are included in the contiguous testing programme. Both 'inner ring' herds (those immediately contiguous to the breakdown herd) and 'outer ring' herds (those contiguous to the inner ring) are mapped. Inner ring herds are restricted and tested twice at a three month interval. Outer ring herds ***are*** subject to ***restriction until one clear herd test has been obtained***. ***If these tests are clear, restrictions are lifted and testing continues at three month intervals until the breakdown herd is***

[13] ***In their response to the draft report the competent authorities stated that: "All associated herds are restricted and tested. Where risk of spread is identified, such herds are always tested as a single epidemiological unit***."

derestricted. Detailed guidelines are available to field staff to help them to decide what contiguous herd testing should be undertaken. Immediate bulk milk sampling of dairy herds in the inner ring to high risk breakdowns is also undertaken.

Contiguous herd tests represent a significant measure for detection of new reactors: rates of positive animals per 1000 tests for routine biennial and annual tests are 0.1 and 0.12 respectively, whilst for contiguous herd testing the rate is 1.11.

OBF status can only be regained after either:

- depopulation, completion and inspection of cleaning and disinfection, keeping the holding free of eligible animals for six months, and, after restocking, ***a clear herd test 2 months later. In such cases a further check test is carried out after 3-6 months***, or

- removal of the reactor(s), regular herds tests either until all animals have had a clear 21-day post-calving test (for culture positive herds) or for a minimum of 2 tests 30 and 90 days after removal of the reactor (culture negative herds)

During the visits to Divisions, the testing history of several reactor herds was examined. In general the above testing regime was correctly implemented. The contiguous herd testing was reviewed on the basis of some examples and the mission team felt it was effectively managed by the DVO.

5.5.3.5.Bacteriological examinations

The following table gives the number of abortions checked between 1996 and 2000:

Year	**Number of abortions checked**
1996	740
1997	805
1998	777
1999	850
2000	2364

It is a legal requirement to report abortions and retained placentas to the DVO. Animals that abort are restricted and must be isolated and blood tested. The blood sample must be repeated 21 days ***post-abortion***. In some cases the private veterinary practitioner may submit abortion materials for investigation of the cause of abortion. Such samples are routinely screened for Brucellosis. The animal must remain in isolation until negative results have been received for all tests. A swab of vaginal mucus may be submitted, particularly where the Divisional Veterinary Officer considers the risk of disease to be high and where a rapid confirmation is required. Results from culture of swabs are usually available in 5 days. The farmer is not required to pay for any sampling carried out by DARD-NI staff. In addition, when material submitted by the private practitioner for differential diagnosis is

subjected to screening for Brucellosis, the farmer is not charged for these screening tests.

The mission team noted a good awareness of the requirement to notify abortions during the farm visits. DARD-NI has run a number of publicity campaigns to promote awareness and all farmers met were aware of these campaigns.

When reactors are slaughtered, up to three animals from the herd will be sampled for bacteriological examination, usually from the submandibular, parotid, retropharyngeal and supramammary or inguinal lymph nodes. The animals with the highest titres and/or freshly aborted animals are chosen for sampling. The herd confirmation rate by culture for reactor herds between 1996 and 2001 was 91%.

5.5.4. Additional movement controls

Under the Brucellosis Control Order, following a blood test an animal may not be moved out of the herd or off the premises for seven days, except to move to an abattoir in Northern Ireland for immediate slaughter.

In the case of restricted animals, the herdowner is required to obtain a movement licence from the local DVO in advance of moving the animal out of the herd. In the case of restricted herds, animals may only be moved directly to slaughter under a movement licence.

In the case of a brucellosis breakdown in a herd, the VO responsible for the "patch" must carry out a "Brucellosis Herd Audit", to determine whether requirements in relation to notification of births, deaths and movements have been met.

In addition, in breakdown herds, a notice can be served restricting animals to housing or to certain fields within the holdings. Such notices are used to limit the potential for spread of disease to contiguous herds.

5.5.5. Temporary Grazing

There is extensive use of short-term leased land ('conacre') in Northern Ireland. In addition many farms are fragmented in nature. Movements between land parcels within a holding are not required to be notified. Animal movements are frequent, with the average bovine animal moving five times in its lifetime. DARD-NI recognises that these factors can play an important role in the spread of brucellosis.

5.5.6. Controls on milk

There is no production of raw cow's milk cheese or other raw cow's milk products in Northern Ireland, although such production is not prohibited.

Milk from reactor animals is not separated from that of the herd and is pasteurised together with milk from healthy animals. This is contrary to the requirements of Article 3 of Council Directive 92/46/EC. The ***enforcement*** authority for liquid milk production, QAD, expressed the view that since all milk is pasteurised under official control there is ***a minimal risk*** to public health arising from the use of milk from reactor animals.

In the case of a breakdown on a farm, a VO carries out a visit to the premises and provides the farmer with advice, *inter alia*, regarding the public health risks associated with use of raw milk.

5.5.7. Disinfection procedures - infected farms / transport vehicles

Following removal of positive reactors or complete depopulation, holdings must be cleaned and disinfected. There is a list of approved disinfectants for this purpose. A VO will visit the premises to determine which parts of the premises must be cleaned and disinfected and how manure and slurry must be treated. The farmer is responsible for carrying out the cleaning and disinfection. A VO must inspect the completed work to ensure that it has been carried out satisfactorily.

Farmers are given information regarding protective clothing to be worn during cleaning and disinfection operations.

The transporter of the reactor animals must clean and disinfect the vehicle immediately after delivery to the slaughterhouse. DARD-NI provides information on the public health risks and precautions to be taken, in particular when cleaning and disinfecting vehicles. The official veterinarian at the slaughterhouse visited reported that transporters did not always follow the advice given.

5.5.8. Vaccination policy

The Brucellosis Control Order (Northern Ireland) 1972 (as amended) does not allow the use of vaccination except by a veterinarian with the permission of the Minister. The Order requires veterinarians to mark vaccinated animals and to inform DARD-NI of the details of animals vaccinated. Vaccination is not currently used in Northern Ireland.

5.5.9. Laboratory services

The laboratory tests employed are as set down in Annex C to Council Directive 64/432/EEC, as last amended by Commission Regulation 535/2002[14]. The official tests are the Microtitre Serum Agglutination test (SAT), with EDTA when positive titres are obtained, for screening blood samples, the Complement Fixation Test (CFT), for confirmation of SAT results, and the Bulk Milk ELISA.

The serology and bacteriology tests are carried out in the laboratory of the Veterinary Sciences Division (VSD) in Belfast. Test results for blood samples are entered into the APHIS system and are available by this route to the responsible DVO. The APHIS system will automatically interpret any all-negative tests for routine herd tests in herds that are not classified as 'at risk' and automatically allocate the next herd test at the required interval. Non-negative tests are queued on the system for VOs at the responsible DVO to interpret.

At present results of the Bulk Milk ELISA test and from bacteriological cultures are not reported through the APHIS system, but are transmitted from the laboratory to head office and from there to the responsible DVO. The mission team saw no evidence to suggest that this led to unacceptable delays in the notification of results.

[14] Official Journal L 80, 23/03/2002, p 22 - 28

According to figures supplied by DARD-NI, the interval between registration of collection of blood samples on APHIS and the recording of results is usually less than 12 days.

During the visit to the laboratory the procedures in place for intake, handling and further processing of samples were reviewed. There is an internal traceability system in place. The test techniques were in accordance with Annex C of Council Directive 64/432/EEC. For SAT and CFT, the antigen used is *Brucella abortus* biovar 1, Weybridge strain 99. Standardisation is carried out daily using the national standard serum, which is checked against the OIE standard (supplied by Weybridge). A commercial kit is used for the Bulk Milk ELISA. It was also seen that SOPs were available for the tests currently in use. All positive serological samples were re-tested. 5% of samples selected at random are re-tested for quality assurance purposes. Crosschecks are carried out on plate reading to monitor staff performance and there is a training period and assessment for staff prior to carrying out new tests. Results are validated prior to reporting and cross checks are carried out at each stage of the sample handling, testing and reporting.

The laboratory has participated in ring trials with the laboratories in Great Britain and the Republic of Ireland and at EU level.

5.5.10. Removal of positive animals/herds

Following disclosure of positive test results the VO issues a notice to the farmer with the list of reactors to be isolated and subsequently removed under a movement licence.

Only two slaughterhouses are used for the slaughter of reactors, one for cattle over thirty months and one for cattle under thirty months. The former has an off-line slaughter facility specifically for reactor cattle.

Hauliers are appointed for the removal of reactor animals and negative in-contacts on the basis of a yearly tender process. Following valuation, the DVO issues movement permits to the haulier, who liases directly with the slaughterhouse to arrange delivery of the animals.

During the farm visits, and when examining records at DVOs visited, the mission team found that reactors were generally removed within a week of valuation. The time taken for removal of negative in-contacts was longer and varied according to the number of breakdowns in progress.

5.5.11. Epidemiological studies of infected holdings

A detailed epidemiological investigation form has been developed for use in brucellosis outbreaks. The form is completed by the VO responsible for the 'patch' in which the breakdown herd is located. The form covers all relevant information, including herd details, management information, details of all premises/land used by the herdowner, degree of contact with associated herds, reproductive history and calving management, clinical and test history of herd, movement history, previous disease history, information on human disease, likely source of infection, estimated period of infection, details of contiguous herds (inner and outer ring), information on risk of contact, details of other species present on the holding and any breeding abnormalities in these species.

5.5.12. Compensation system

Valuation is carried out by agreement between an authorised officer of DARD-NI and the owner of the animal or his agent. If they fail to agree, the owner can select an independent valuer paid by the Ministry from a list of at least 3 such valuers submitted by the Ministry to the owner. Where an owner refuses to select a valuer from this list, valuation is carried out by a valuer selected by DARD-NI.

In cases where an independent valuer is used, whether selected by the farmer or DARD-NI, no further arbitration is foreseen.

Blood sampling of reactors is carried out at the time of valuation to confirm the identity of the reactors and reduce the risk of fraud.

Compensation is paid at 75% of the valuation of the reactor or 75% of the average market value, whichever is less. Compensation is paid for negative in-contacts at 100% of the market price. There is no upper limit for compensation for slaughtered negative in-contact animals. The target for payment of compensation is 12 working days after slaughter. This is achieved in 97% of cases.

Concern has been expressed that compensation may in some cases provide an incentive to deliberately introduce disease in herds. In cases where fraudulent activity is suspected, co-ordination meetings are held between the veterinary services at central, regional and local levels, the Fraud Investigation Unit of DARD-NI and the Disease Control Division (responsible *inter alia,* for payment of compensation) to determine the approach to take to investigation and control of the breakdown. Prosecutions can be taken and/or compensation withheld.

6. CONCLUSIONS

6.1. Competent authority structure and responsibilities

The structure and organisation of the competent authority allows effective communication and co-ordination of activities under the bovine brucellosis eradication programme. A high level of commitment to disease eradication was seen at all levels. Nevertheless there are insufficient human resources to allow the level of testing required by Annex A of Council Directive 64/432/EEC.

There are well-defined procedures in place for routine testing and control measures where disease is found or suspected, and clear guidelines have been drawn up for staff in the field. In general it was found that these procedures and guidelines were correctly implemented.

6.2. Farm registration, animal identification and movement controls

The APHIS database is used for farm registration, control of animal identification and movements. This system was seen to function effectively. Animal identification and farm registers seen were generally in accordance with requirements. Late notification of births and deaths were noted at some farm visits although some had already been detected in the course of official controls.

The system for additional movement controls on restricted animals and herds is effective.

6.3. Bovine Brucellosis eradication programme

The current routine testing regime is in accordance with the programme submitted to and approved by the Commission Services. The routine testing does not, in all cases, meet the requirements for maintenance of OBF status for herds as laid down in Annex A of Council Directive 64/432/EEC. In addition, 30-day pre- or post-movement testing is not currently required.

Conversely, certain elements of the testing regime are in excess of the requirements of the Directive. Bulk Milk ELISA testing is carried out in dairy herds on a monthly basis, a cull cow sampling scheme has been introduced and there is extensive use of check testing both for contiguous herds and as a result of forward and backward tracing.

The approved programme has been generally implemented in Northern Ireland. However a backlog of routine tests arose due to the Foot and Mouth outbreak in 2001. Since testing has been prioritised on a risk basis, additional tests (monthly Bulk Milk ELISA sampling and cull cow serological sampling) are carried out and there is a good rate of reporting and testing of aborting animals, it is reasonable to accept that serious disease problems are not being overlooked as a result of the backlog in routine testing.

The CA have recently reviewed the control measures for brucellosis and identified certain additional potential weaknesses. Proposals for addressing these weaknesses are currently undergoing a public consultation.

The centralisation of all serological testing has reduced the risk of variability in test results. The organisation of the whole testing procedure is satisfactory and allows rapid completion of tests.

Milk from reactor animals is not separated from that of the rest of the herd and is pasteurised together with milk from healthy animals. This is contrary to the requirements of Article 3 of Council Directive 92/46/EC.

6.4. Overall Conclusion

In general the approved national eradication programme for bovine brucellosis in Northern Ireland is being applied, although there is still a backlog in routine testing due to the Foot and Mouth outbreak in 2001. At this time it is not possible to evaluate with certainty the progress with the eradication of the disease due to the distortion to the testing regime associated with that outbreak. EU requirements with regard to maintenance of OBF status of herds and controls on milk from reactor animals are not being fully met.

7. CLOSING MEETING

A closing meeting was held at the offices of the central competent authority on 23 August 2002. At this meeting, the main findings and conclusions of the mission were presented by the inspection team, and accepted by the CCA representatives.

8. RECOMMENDATIONS

8.1. To the competent authorities of Northern Ireland

(1) To make available sufficient resources to carry out all routine herd testing as foreseen in the approved bovine brucellosis eradication plan.

(2) To bring the routine herd, and pre- or post-movement, testing regime into line with the requirements for maintenance of Officially Brucellosis Free status as laid down in Annex A of Council Directive 64/432/EEC.

(3) To take action to address the identified weaknesses in the current measures for disease control.

(4) To take action to ensure that only milk in compliance with Article 3(2) of Council Directive 92/46/EEC is used for manufacture of products for human consumption.

The Northern Irish authorities should submit an action plan, detailing how the above conclusions and recommendations have been addressed, and including deadlines for their completion, within two months of receiving the final report.

8.2. To the Commission Services

(1) To continue to monitor progress of the bovine brucellosis eradication programme in Northern Ireland in the light of the findings of the present mission.

9. ADDENDUM

In their comments on the draft report, the competent authorities provided some clarifications in relation to the recommendations and undertook to provide the requested action plan following receipt of the final report.