Surveillance and control programmes for terrestrial and aquatic animals in Norway
Norwegian Veterinary Institute

Annual Reports · 2010

The surveillance and control programme for bovine tuberculosis in Norway

Ståle Sviland

Scientific editors Hege Hellberg and Ståle Sviland
Norwegian Veterinary Institute

Veterinærinstituttet
Norwegian Veterinary Institute

Surveillance and control programmes for terrestrial and aquatic animals in Norway. Annual report 2010

Editors
Ståle Sviland and Hege Hellberg

Publisher
Norwegian Veterinary Institute
PO Box 750 Sentrum
N-0106 Oslo
Norway

Fax: + 47 23 21 60 01
Tel: + 47 23 21 60 00
E-mail: postmottak@vetinst.no
www.vetinst.no

Front page photo: Hanne Mari Jordsmyr

ISSN 1503-1454

Example of citation:
Sviland S. The surveillance and control programme for bovine tuberculosis in Norway. In: Sviland S, Hellberg H (editors). Surveillance and control programmes for terrestrial and aquatic animals in Norway. Annual report 2010. Oslo: Norwegian Veterinary Institute; 2011. ISSN 1503-1454.

The surveillance and control programme for bovine tuberculosis in Norway

Ståle Sviland

In 2010, samples from one cattle for Mycobacterium sp. examination was submitted from post-mortem of fallen stock.

Introduction

Apart from two single-herd outbreaks in Sogn og Fjordane county in 1984 and 1986 Norway has been considered free from bovine tuberculosis since 1963 (1, 2, 3). And since 1994, the EFTA Surveillance Authority (ESA) has recognised Norway as officially free from bovine tuberculosis, as described in ESA Decision 225/96/COL replacing ESA Decision 67/94/COL. In 2000, a surveillance and control programme for bovine tuberculosis was launched. The programme includes compulsory veterinary inspection of all bovine carcasses at slaughter, with submission of suspicious materials to the Norwegian Veterinary Institute for further examination.

Aims

The aims of the programme are to document absence of bovine tuberculosis, according to Directive 64/432/EEC with amendments, and to contribute to the maintenance of this favourable situation.

Material and methods

Submission of material from slaughterhouses

Lung tissue, lymph nodes and other organs with pathological lesions where bovine tuberculosis can not be excluded, are submitted for examination.

The Food Safety Authority collects the samples during routine meat inspection.

Histopathological examination

Tissues are fixed in 10 % neutral phosphate-buffered formalin for more than 24 hours, processed according to a standard routine protocol, embedded in paraffin, sectioned at 5 µm and stained with haematoxylin and eosin and Ziehl-Neelsen (4).

Bacteriological examination

Samples are examined as described in the OIE manual (4). Samples are homogenised, decontaminated with 5 % oxalic acid and centrifuged. The top layer of the sediment is used for culturing and microscopic examination. The sediment is inoculated onto slopes of Petragnani medium, Stonebrink's medium and Middelbrook 7H10 medium. The slopes are incubated aerobically at 37 °C for two months and checked every week for growth of acid-fast bacilli, determined by the Ziehl-Neelsen method.

Results and discussion

Table 1 shows the number of samples collected and the results since the programme started in 2000. In 2010, samples from one cattle were submitted.

The low number of submitted samples indicates a low prevalence of suspicious pathological lesions. Continuous surveillance by veterinary meat inspection, early and effective eradication campaigns, combined with restricted import of live cattle, have contributed significantly to this situation.

Table 1. Number of samples tested for bovine tuberculosis during the period 2000-2010

Year	No. of samples	No. of herds	No. of positive	
			Samples	Herds
2000	0	0	0	0
2001	3	3	0	0
2002	0	0	0	0
2003	1	1	0	0
2004	4	4	0	0
2005	1	1	0	0
2006	3	3	0	0
2007	0	0	0	0
2008	4	2	0	0
2009	1	1	0	0
2010	1	1	0	0

References

1. Sandvik O. Animal Health Standards in Norway. Næss B (editor). Oslo: The Royal Ministry of Agriculture; 1994.

2. Mørk T, Bratberg B, Djønne B. The surveillance and control programme for bovine tuberculosis in Norway. In: Fredriksen B, Mørk T (editors). Surveillance and control programmes for terrestrial and aquatic animals in Norway. Annual report 2001. Oslo: National Veterinary Institute; 2002. p. 103-7.

3. Sviland S, Kampen AH. The surveillance and control programme for bovine tuberculosis in Norway. In: Brun E, Hellberg H, Sviland S, Jordsmyr HM (editors). Surveillance and control programmes for terrestrial and aquatic animals in Norway. Annual report 2007. Oslo: National Veterinary Institute; 2008. p. 69-72.

4. Office International des Epizooties. Manual of standards for diagnostic tests and vaccines for terrestrial animal (mammals, birds and bees). Vol 1. 5th ed. Paris: Office International des Epizooties; 2004.

The Norwegian Veterinary Institute (NVI) is a nationwide research institute in the fields of animal health, fish health, and food safety. The primary mission of the NVI is to give research-based independent advisory support to ministries and governing authorities. Preparedness, diagnostics, surveillance, reference functions, risk assessments, and advisory and educational functions are the most important areas of operation.

The Norwegian Veterinary Institute has its main laboratory in Oslo, with regional laboratories in Sandnes, Bergen, Trondheim, Harstad og Tromsø, with about 360 employees in total.

www.vetinst.no

Veterinærinstituttet
Norwegian Veterinary Institute

The Norwegian Food Safety Authority (NFSA) is a governmental body whose aim is to ensure through regulations and controls that food and drinking water are as safe and healthy as possible for consumers and to promote plant, fish and animal health and ethical farming of fish and animals. We encourage environmentally friendly production and we also regulate and control cosmetics, veterinary medicines and animal health personnel. The NFSA drafts and provides information on legislation, performs risk-based inspections, monitors food safety, plant, fish and animal health, draws up contingency plans and provides updates on developments in our field of competence.

The NFSA comprises three administrative levels, and has some 1300 employees.

The NFSA advises and reports to the Ministry of Agriculture and Food, the Ministry of Fisheries and Coastal Affaires and the Ministry of Health and Care Services.

www.mattilsynet.no

Mattilsynet