

## The surveillance programme for infectious laryngotracheitis (ILT) and avian rhinotracheitis (ART) in poultry flocks in Norway 2014

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# Surveillance programmes for terrestrial and aquatic animals in Norway

Annual report 2014

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## **Publisher**

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ISSN 1894-5678

## **Title:**

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**Date:** 2015-03-24

**Front page photo:** Processed from Colourbox

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## **Example of citation:**

David B, Sjurseth SK, Er C. The surveillance programme for infectious laryngotracheitis (ILT) and avian rhinotracheitis (ART) in poultry flocks in Norway 2014. *Surveillance programmes for terrestrial and aquatic animals in Norway*. Annual report 2014. Oslo: Norwegian Veterinary Institute 2015.

# The surveillance programme for infectious laryngotracheitis (ILT) and avian rhinotracheitis (ART) in poultry flocks in Norway 2014

Bruce David, Siri Kulberg Sjurseth, Chiek Er

***Surveillance in 2014 did not detect infectious laryngotracheitis (ILT) in chicken nor avian rhinotracheitis (ART) in turkeys.***

## Introduction

The Norwegian Food Safety Authority is responsible for the implementation of the surveillance programmes for infectious laryngotracheitis (ILT) and avian rhinotracheitis (ART) in chicken and turkey flocks, respectively. Started in 1998, these programmes are based on serological investigations. The Norwegian Veterinary Institute in Oslo is responsible for the planning, laboratory investigations and the reporting components of the programmes.

ILT is a severe respiratory disease in chickens that is seen in commercial chickens in most parts of the world, including most European countries (1). However, ILT has not been diagnosed in commercial chicken flocks in Norway since 1971, although clinical outbreaks of ILT have occurred sporadically in Norwegian hobby flocks since 1998 (2).

ART is a highly contagious infection which affects the upper respiratory passages of poultry. The disease is caused by avian metapneumovirus (aMPV), and has been diagnosed in most countries (1) and sporadically in our neighbouring countries. ART had never been diagnosed in Norwegian poultry until the national surveillance programme for ART demonstrated the presence of antibodies against aMPV in one broiler breeder farm in 2003 and in one layer breeder farm in 2004. The diagnosis for ART in these flocks was based on serology only, like in many other countries (1). As the use of stamping out measures was unable to control the spread of the infection, chickens were excluded from the national surveillance programme for ART as of May 2005.

## Aims

The aim of the national surveillance programme for ILT in chickens and ART in turkeys is to document that the respective commercial poultry populations in Norway are free of these infections, and to contribute to the maintenance of this status.

## Materials and methods

According to the national regulations for certification of poultry breeding farms (3), blood samples from 60 birds must be taken at least once a year from every breeding flock at the farms. These blood samples are to be tested for Newcastle disease, as Norway is a non-vaccinating country. Thirty of the 60 samples from chicken and turkey flocks are included in the national surveillance programmes for ILT and ART, respectively. In addition, forty randomly chosen turkey flocks are sampled at slaughter for ART. Flocks with single positive reactions for antibodies against ILT-virus are followed up by repeated sampling, and if false positive results cannot be ruled out by this procedure, serum samples with a positive reaction in the ELISA-tests are submitted to the Veterinary Laboratories Agency (VLA), Weybridge, England for testing using virus neutralisation tests.

### ILT

An indirect ELISA-test produced by Synbiotics, San Diego, CA, USA (ProFLOK LT ELISA kit), was used for the testing of antibodies against the ILT-virus.

### ART

All serum samples were tested for specific antibodies against aMPV with a blocking-ELISA produced by SVANOVA, Uppsala, Sweden (SVANOVIR APV-Ab).

## Results

Of 2,909 blood samples analysed in the surveillance programme for ILT, all were negative. All 1,382 blood samples analysed in the surveillance programme for ART were negative.

Table 1 shows the number of farms, flocks and birds tested in the different poultry production types in the national surveillance programme for ILT and ART in 2014.

Table 1. Number of farms, flocks and birds tested in the surveillance programmes for infectious laryngotracheitis (ILT) in chickens and avian rhinotracheitis (ART) in turkeys in 2014.

Disease - Production line	Total numbers tested			Flocks with seropositive samples
	Farms	Flocks	Birds	
ILT - Broilers	64	86	2 519	0
ILT - Layers	10	13	390	0
ART - Turkey	45	47	1 382	0

## Discussion

Antibodies against ILT are often found in samples from hobby flocks. It is thus of major importance that commercial poultry flocks are kept strictly isolated from hobby birds and backyard poultry flocks. The non-commercial bird populations are complex, and pose a problem for the control of this contagious poultry disease due to the difficulties associated with performing systematic disease surveillance in such bird populations.

## References

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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.

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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 Affairs and the Ministry of Health and Care Services.

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