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*Programmes for the eradication, control and monitoring of certain  
animal diseases and zoonoses*

## **Survey programme for Avian Influenza in poultry and wild birds**

**Approved\* for 2009 by Commission Decision 2008/897/EC**

**Finland**

\* in accordance with Commission Decision 90/424/EEC



**THE PROGRAMME FOR SURVEY OF AVIAN INFLUENZA IN  
POULTRY AND WILD BIRDS IN FINLAND DURING 2009 AND APPLICATION FOR COMMUNITY  
FINANCING; REVISED VERSION 21.8.2008**

**1. Identification of the programme**

Member State: Finland

Disease: Avian Influenza

Year of implementation: 2009

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**2. Description of the surveillance programme in poultry**

**2.1. Objectives, general requirements**

The objectives and general requirements shall be those described in the draft commission decision on the implementation of surveillance programmes for avian influenza in poultry and wild birds to be carried out in the Member States and amending Decision 2004/450/EC (SANCO/10007/2007 rev.2).

The poultry business in Finland is concentrated in the province of Western Finland. However, the aim is to include farms also from other parts of the country. The latest available numbers of farms from IACS (Integrated Administration and Control System) are used for calculations.

**2.2. Design and implementation**

The total number of holdings to be sampled in Finland in 2009 for avian influenza will be 222. The total number of samples to be taken from these farms will be 2500 - 3000 depending on the number of sheds per farm at the time of sampling.

- 60 holdings with laying hens (annex I)
- 35 holdings with chicken breeders (annex II)
- 35 holdings with free range hens for organic production (annex III)
- 59 holdings with turkey (annex IV)
- 26 holdings with ducks and/or geese (annex V)
- 13 holdings with farmed feathered game (annex VI)
- 4 holdings with ostriches (annex VII)

**2.2.1. Gallus gallus**

Broiler production flocks are excluded from the survey due to their short life span.

There are 660 layer hen farms with more than 100 hens in the IACS data. There are 39 breeding flocks (chicken breeders) and 38 flocks with free range hens for organic production.

#### Sampling design and types of production

In total 60 farms with laying hens will be randomly selected from the register.

Of the 39 breeding farms, 35 will be randomly selected.

Of the 38 holdings with free range hens for organic production, 35 will be randomly selected.

#### Number of samples

The average size of the selected farms is 4800 hens. Five samples from each shed and 10 samples per farm as a minimum will be collected to ensure 95 % probability of identifying at least one positive bird if the prevalence of seropositive birds is  $\geq 30\%$ . **The total number of samples from farms with flocks of *Gallus gallus* will be 1300 - 1950** depending on the number of sheds per farm.

### **2.2.2. Turkeys**

#### Sampling design and types of production

The total number of commercial turkey holdings including both breeders and producers is 77. From these farms, 59 will be randomly selected but taking into consideration their geographical distribution (Annex IV). There are no organic production type turkey farms in Finland.

#### Number of samples

The average size of turkey farms is 5000 birds. Five samples from each shed and 10 samples as a minimum per farm will be collected to ensure 99 % probability of identifying at least one positive bird if the prevalence of seropositive birds is  $\geq 5\%$ . This will add up to the total number of **590 - 885 blood samples** depending on the number of sheds per farm.

### **2.2.3. Ducks (incl. mallards) and geese**

There are 14 farms with at least 50 ducks and 12 farms with at least 50 geese in Finland. All of these will be included in the survey.

### **2.2.4. Pheasants**

There are 13 farms with pheasants in the IACS data. All of these will be included in the survey.

### **2.2.5. Ratites**

There are no large-scale (> 100 animals) ostrich or emu farms in Finland. There are 4 farms with at least 10 ostriches in Finland according to the IACS data. These farms will be included in the survey by sampling ostriches at slaughter.

### **2.2.6. Other types of poultry**

the number of quail, guinea fowl and feathered game farms is not significant in Finland.

### **2.3. Laboratory testing**

The surveillance in poultry shall be carried out by haemagglutination-inhibition (HI) test for H5 and H7 in accordance with the diagnostic manual.

The laboratory responsible for the testing is the Finnish Food Safety Authority Evira.

## **3. Description of the surveillance programme in wild birds**

### **3.1. Objectives, general requirements and criteria**

The objectives and general requirements shall be those described in the Commission Decision 2007/268/EY on the implementation of surveillance programmes for avian influenza in poultry and wild birds to be carried out in the Member States and amending Decision 2004/450/EC.

### **3.2 Design and implementation**

The numbers of wild birds to be sampled in Finland in 2009 for avian influenza will be 300 birds in active sampling and 100 birds in passive sampling. The numbers and areas can be found in Annex VIII.

#### **3.2.1. Active surveillance**

Finland will mostly utilise the help of volunteered hunters during autumn 2009 and also experts from the bird conservation/watching institutions and ringing stations during spring and autumn 2009 to collect cloacal swabs/ fresh faeces and oropharyngeal samples from newly hunted or captured wild birds, as in previous years.

Wild bird sampling will be focused on waterfowls (mainly ducks / mallards), waders and seagulls. Sampling will be focused on certain sites at coastline during spring and autumn migration which comprises also the risk group for avian influenza. Some samples will be taken inland and during summer.

The Finnish Food Safety Authority will pay 6 EUR per bird to the voluntary persons taking these samples.

The anticipated number of active sampling is 600 samples from 300 birds.

#### **3.2.2. Passive surveillance**

The Fish and Wildlife Health Unit of Evira in the city of Oulu takes samples for AI testing from individual autopsied wild birds when needed. In addition, instructions for estimating the need for sampling for AI in mass deaths of wild birds have been sent to the provincial veterinary officers as well as other parties. At least cloacal swabs and oropharyngeal samples as well as organ samples will be taken from these birds and sent to Evira (Helsinki) for virological investigation.

The anticipated number of wild bird passive surveillance samples is 200 samples from 100 birds.

### **3.3. Laboratory testing: description of the laboratory tests used**

The virological surveillance in wild birds will be carried out individually by M-gene PCR in accordance with the diagnostic manual. In case of a positive finding H5 PCR and analysis of the cleavage site are undertaken. Virus isolation may be needed in some cases.

the laboratory responsible for the testing is the Finnish Food Safety Authority Evira.

#### **4. Description of the epidemiological situation of the disease in poultry during the last five years.**

##### **4.1. Measures included in the programme for poultry surveillance**

###### 4.1.1. Designation of the central authority charged with supervising and coordinating the departments responsible for implementing the programme

The Finnish Food Safety Authority Evira is responsible for the implementation of the avian influenza surveillance programme for poultry in Finland.

###### 4.1.2. System in place for the registration of holdings

There is a central register for rural business in Finland which is held by the Information Centre of the Ministry of Agriculture and Forestry. In this register system there are separate subregisters such as a register for holdings keeping laying hens and producing eggs for commercial purposes and required to label the eggs in accordance with the EU directive 1999/74/EC. Only small holdings selling eggs directly to consumers or situated in certain remote areas are exempted from this labelling requirement and are not all registered centrally.

Also poultry holdings receiving financial support such as all broiler flocks and most turkey flocks are registered for financial support and control purposes.

Information on the number of back-yard flocks, free-range organic farms and holdings keeping other species of poultry, such as farmed feathered game, ducks and geese or ostriches has to be compiled from different registers and their reliability can therefore not be ensured.

###### 4.1.3. Data on vaccination

The use of avian influenza vaccine is prohibited in Finland.

#### **5. Description of the epidemiological situation of the disease in wild birds during the last five years**

##### **5.1. Measures included in the wild bird surveillance programme**

###### 5.1.1. Designation of the central authority charged with supervising and coordinating the departments responsible for implementing the programme:

the Finnish Food Safety Authority Evira is responsible for the implementation of the avian influenza surveillance programme for wild birds in Finland.

###### 5.1.2 Description and delimitation of the geographical and administrative areas in which the programme is to be applied:

For passive surveillance it is difficult to anticipate where the dead birds are found. However, taking into consideration passive surveillance in recent years it is likely that

these samples will mostly come from coastal areas especially in Uusimaa (FI 181) and Oulu (FI 1A2)

### 5.1.3. Estimation of the local and/or migratory wild bird population

The estimated number of migratory wild bird population in Finland is 80 million birds and the local population 20 million birds.

## **6. Measures in place as regards the notification of the disease**

Avian influenza is a compulsorily notifiable disease in Finland according to the Act on animal diseases (55/1980). Avian influenza subtypes H5 have never been detected in poultry in Finland. Only low pathogenic strains of the virus have been detected in some wild birds.

## **7. Costs**

### 7.1. Detailed analysis of the costs

#### **7.1.1. Poultry**

As the number of samples to be taken will depend on the number of sheds per farm, the maximum numbers of samples described in the relevant annexes I-VII will be used for the calculation of the financial costs. No costs of the sampling have been included as they have not been reimbursed by the EU in the past.

laying hens	900 samples	1800 tests (H5+H7)
chicken breeders	525 samples	1050 tests
organic hens	350 samples	700 tests
turkeys	885 samples	1770 tests
ducks and geese	260 samples	520 tests
pheasants etc.	130 samples	260 tests
ostriches	40 samples	80 tests
<b>Total</b>	<b>3090 samples</b>	<b>6180 tests</b>

The unit cost of 5 € per HI-test (H5/H7) was used for the assessment of the total costs. The assessment was based on the calculations carried out for the year 2006 (annex X, see original application).

In addition, there is a small reservation for two false positive holdings (by HI-test) where additional sampling of 40 samples from each holding must be carried out and the samples examined by PCR and virus isolation. The samples would be pooled (five in each pool).

#### **7.1.2. Wild birds**

A total of 300 birds (600 samples) in active surveillance and 100 birds (200 samples) in passive surveillance will be examined. Cloacal swabs and oropharyngeal swabs

will be taken from each bird. The total number of tests will thus be 800. An estimation of 30 additional confirmatory tests is estimated to be carried out with both H5 and H7 PCR. This adds up to 860 tests.

An estimation of 30 samples will be put to virus isolation.

The unit cost of 17,50 euros per PCR-test was used for the assessment of the total costs for the examination. The number was based on the calculations carried out for the year 2006 (annex X).

## **7.2. Summary of the costs**

### **7.2.1. Poultry surveillance**

The total cost for the examination of the samples of poultry is assessed to be **32.200,- €**. The table of summary of the costs of the poultry surveillance is in Annex IX.

### **7.2.2. Wild bird surveillance**

The estimated cost of the wild bird survey programme is 15050 € for PCR testing and 1687,50 € for virus isolation (56,25 per test), which adds up to **16.737,50 €**.



## ANNEX I

**Table 2.2.1 POULTRY HOLDINGS TO BE SAMPLED****Laying hens**

NUT (2) code	Total number of holdings	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
FI 13	40	3	10-15		HI
FI 18	419	40	10-15		HI
FI 19	158	15	10-15		HI
FI 1A	16	1	10-15		HI
FI 20	3	1	10-15		HI
Total	636	60	600-900	1200-1800	

## ANNEX II

**Table 2.2.1 POULTRY HOLDINGS TO BE SAMPLED****Chicken breeders**

NUT (2) code	Total number of holdings	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
FI 13	-	-	-		HI
FI 18	24	22	10-15		HI
FI 19	15	13	10-15		HI
FI 1A	-	-	-		HI
FI 20	-	-	-		HI
Total	39	35	350-525	700-1050	

## ANNEX III

**Table 2.2.1 POULTRY HOLDINGS TO BE SAMPLED****Organic hens**

NUT (2) code	Total number of holdings	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
FI 13	10	9	10		HI
FI 18	12	12	10		HI
FI 19	14	12	10		HI
FI 1A	2	2	10		HI
FI 20	-	-	-		HI
<b>Total</b>	<b>38</b>	<b>35</b>	<b>350</b>	<b>700</b>	

## ANNEX IV

**Table 2.2.1 POULTRY HOLDINGS TO BE SAMPLED****Turkeys**

NUT (2) code	Total number of holdings	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
FI 13	15	11	10		HI
FI 18	34	26	10		HI
FI 19	28	22	10		HI
FI 1A	-	-	-		HI
FI 20	-	-	-		HI
Total	77	59	590 – 885	1180 - 1770	

## ANNEX V

**Table 2.2.1 POULTRY HOLDINGS TO BE SAMPLED****Ducks and geese**

NUT (2) code	Total number of holdings	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
FI 13	12	12	10		HI
FI 18	11	11	10		HI
FI 19	3	3	10		HI
FI 1A	-		-		
FI 20	-	-	-		
<b>Total</b>	<b>26</b>	<b>26</b>	<b>260</b>	<b>520</b>	

## ANNEX VI

**Table 2.2.1 POULTRY HOLDINGS TO BE SAMPLED****Farmed feathered game**

NUT (2) code	Total number of holdings	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
FI 13	3	3	10		HI
FI 18	8	8	10		HI
FI 19	1	1	10		HI
FI 1A	1	1	10		HI
FI 20	-	-	-		HI
Total	13	13	130	260	

## ANNEX VII

**Table 2.2.1 POULTRY HOLDINGS TO BE SAMPLED****Ostriches**

NUT (2) code	Total number of holdings	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
FI 13	1	1	10		HI
FI 18	1	1	10		HI
FI 19	1	1	10		HI
FI 1A	-	-	10		HI
FI 20	1	1	-		HI
Total	4	4	40	80	

## ANNEX VIII

**Table 3.2.1 WILD BIRDS – investigation according to the surveillance programme for avian influenza**

NUT (2) code	Wild birds to be sampled	Total number of birds to be sampled	Estimated total number of samples to be taken for active surveillance	Estimated total number of samples to be taken for passive surveillance
FI 13	ducks, geese, waders, seagulls	80	60	20
FI 18	ducks, geese	90	50	40
FI 19	ducks, geese	120	100	20
FI 1A	geese, seagulls	60	45	15
FI 20	ducks, waders, geese	50	45	5
<b>Total</b>		<b>400</b>	<b>300</b>	<b>100</b>



## ANNEX IX

## Summary of the costs, surveillance in poultry

Measures eligible for co-financing surveillance in poultry			
Methods of laboratory analysis	Number of tests to perform per method	Unitary test cost (per method)	Total cost
Serological pre-screening			
Haemagglutination-inhibition-test (HI) for H5/H7	3090*2=6180	4,80 €	29664 €
Virus isolation test		56,80 €	
PCR test	10	19,07€	190,70€
Other measures to be covered	Specify activities		
Sampling			
Others			
<b>Total</b>			<b>29854,70 €</b>

## ANNEX X

## Summary of the costs, surveillance in wild birds

<b>Measures eligible for co-financing surveillance in wild birds</b>			
<b>Methods of laboratory analysis</b>	<b>Number of tests to perform per method</b>	<b>Unitary test cost (per method)</b>	<b>Total cost</b>
Serological pre-screening			
Haemagglutination-inhibition-test (HI) for H5/H7	400*2=800	4,80 €	3840 €
Virus isolation test	50	56,25 €	2840 €
PCR test	850	19,07€	16209,50 €
<b>Other measures to be covered</b>	<b>Specify activities</b>		
Sampling	300	6 €	1800 €
Others			
<b>Total</b>			<b>24689,50 €</b>