



EUROPEAN COMMISSION  
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Unit G5 - Veterinary Programmes

**SANCO/10789/2012**

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

## **Survey programme for Avian Influenza (AI)**

**Approved\* for 2012 by Commission Decision 2011/807/EU**

**Sweden**

\* in accordance with Council Decision 2009/470/EC

# Standard requirements for the submission of surveillance programmes for avian influenza

version : 2.1

## 1. Identification of the programme

Member state : SVERIGE

Disease : avian influenza in poultry and wild birds

Request of Community co-financing from beginning of:

2012

to end of

2012

### 1.1 Contact

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## 2. Description of the surveillance programme in poultry

### 2.1 Objectives of surveillance programmes

(max. 32000 chars) :

The objectives of the surveillance programme in poultry are (in accordance with Commission Decision 2010/367/EU):

1. Detecting circulating low pathogenic avian influenza (LPAI) of subtypes H5 and H7 in gallinaceous birds and ratites thereby complementing other early detection systems.
2. Detecting infections of LPAI of subtypes H5 and H7 subtypes and highly pathogenic avian influenza (HPAI) in domestic waterfowl.

### 2.2 Design, implementation and target population

(max. 32000 chars) :

For the year 2012 Sweden has designed a surveillance programme based on the representative sampling method in Annex I to Decision 2010/367/EU. Blood samples will be taken according to point 5, Tables 1 and 2, of this annex. For detailed information please see point 3, Tables 5.1 and 5.2. Samples will always be accompanied by referrals specially designed for the surveillance programme for avian influenza 2012.

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It is mandatory for the person taking the samples to fill in information on name and address of the animal owner and the farm, species sampled, identity of the flock, date of sampling, place of sampling and name of the person taking the samples. This information will be filed at SVA.

All positive results will be followed up by further investigation at the holding and the Commission and the EURL will be informed of all results in accordance with Decision 2010/367/EU.

## 2.2.1 Risk based surveillance (RBS)

(max. 32000 chars) :

NA

## 2.2.2 Surveillance based on Representative Sampling

(max. 32000 chars) :

Please see point 3.

## 3. Target populations

(max. 32000 chars) :

### Laying hens

The number of laying hen holdings, incl. free-range, is 361 (April 2011). Swedish laying hens are slaughtered at two slaughterhouses, one of these slaughtered 3.0 of the 3.6 million layers slaughtered in 2010. The first laying hen flock slaughtered each week at these two slaughterhouses will be sampled regardless of housing system and biosecurity level. This will result in sampling of 60 laying hen flocks from different holdings (ten birds per flock).

### Free range laying hens

The number of free range laying hen holdings is 83 (April, 2011). All organic (free range) holdings sending their birds for slaughter will be sampled at the two Swedish slaughterhouses for laying hens. This will result in sampling of 53 holdings with free range laying hens.

### Chicken breeders

Samples taken in parent flocks of laying hens and broilers within the Poultry Health Control Programme

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will be used for the surveillance programme. Ten samples from one flock per holding (n=38 in April 2011) taken from the last sampling occasion within the programme will be analyzed. Turkey breeders Samples taken in parent flocks of turkeys within the Poultry Health Control Programme will be used for the surveillance. Ten samples from one flock per holding (n=4 in April, 2011) taken from the last sampling occasion within the programme will be analyzed.

## Fattening turkeys

All holdings that send their birds for slaughter will be sampled at the slaughterhouse. This will result in approximately 25 sampled holdings. Blood samples will be collected from ten birds per holding.

## Fattening ducks

In 2010, only 188 ducks were slaughtered in Sweden and 4 holdings were sampled within the surveillance programme for avian influenza. Should any producer send ducks for slaughter in 2012 twenty samples per holding will be taken. If less than 20 birds are slaughtered all ducks will be sampled.

## Fattening geese

In Sweden, geese are mainly bred and slaughtered in the most southern parts of the country. The majority of these birds are slaughtered during October and early November. All Swedish holdings that send geese for slaughter will be sampled, approximately 20 holdings. Twenty samples per holding will be taken at slaughter, when less than 20 birds are slaughtered all birds will be sampled.

## Farmed game birds (gallinaceous)

Pheasants are the most common farmed gallinaceous game bird in Sweden. Partridges have been excluded from the sampling programme since they are a small population bred under conditions with low risk for an introduction of AIV. All holdings with breeders of pheasants (18 holdings in April, 2011) will be sampled by a veterinarian at the holding. Ten blood samples per holding will be taken.

## Farmed game birds (waterfowl)

All holdings with breeders of mallards (6 holdings in April, 2011) will be sampled by a veterinarian at the holding. Twenty blood samples per holding will be taken.

## Ratites

The number of ratite farms registered in the Swedish poultry register is 22 (April, 2011). Some of these are small holdings with only 5-10 birds. Ratites are slaughtered at three Swedish slaughterhouses (in 2010, 490 ostriches were slaughtered). All holdings that send birds to slaughter will be sampled. Ten blood samples will be collected from each holding, when less than 10 birds are slaughtered all birds will be sampled.

## Broilers

Birds from all holdings with small-scale or organic broiler production (approximately 25 holdings in 2011) sending their birds to small-scale slaughterhouses or the slaughterhouses for laying hens will be included in the sampling programme. These broiler holdings have less developed biosecurity than large commercial broiler holdings. Blood samples will be taken from ten birds from each holding at slaughter.

The Commission will be informed of any major changes in the Swedish poultry population or production

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that will lead to consequences for the programme. Sweden will also provide additional information on request from the Commission.

## 4. Risk-based surveillance (RBS) method

### 4.1 Criteria and Risk factors

#### 4.1.1 Criteria and risk factors for virus introduction into poultry holdings due to direct or indirect exposure to wild birds in particular those of identified 'target species'

(max. 32000 chars) :

NA

#### 4.1.2. Criteria and risk factors for virus spread within poultry holdings and between poultry holdings, as well as the consequences (impact) of the spread of avian influenza from poultry to poultry and between poultry holdings

(max. 32000 chars) :

NA

### 4.2. Targeting of populations at risk

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(max. 32000 chars) :

NA

## 4.3. Targeting of poultry holdings to be sampled

(max. 32000 chars) :

NA

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## 5. Poultry holdings to be sampled

### 5.1 Poultry holdings (except ducks, geese and mallard) to be sampled according to table 1 of Annex 1 to Decision 2010/367/EU

Category : broilers

**delete this category**

SE	NUTS (2) (a)	Total number of holdings to be sampled	Number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Method of laboratory analysis	
SE11		0	0	0	0	NA	X
SE12		1	1	10	10	ELISA test	X
SE21		0	0	0	0	NA	X
SE22		19	19	10	190	ELISA test	X
SE23		5	5	10	50	ELISA test	X
SE31		0	0	0	0	NA	X
SE32		0	0	0	0	NA	X





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<b>Total</b>	25	25	250	
<b>Add a new row</b>				
<i>(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.</i>				

Category : chicken breeders

**delete this category**

NUTS (2) (a)	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	Method of laboratory analysis
SE11	0	0	0	0	NA
SE12	13	13	10	130	ELISA test
SE21	4	4	10	40	ELISA test
SE22	17	17	10	170	ELISA test
SE23	4	4	10	40	ELISA test
SE31	0	0	0	0	NA
SE32	0	0	0	0	NA
SE33	0	0	0	0	NA
<b>Total</b>	38	38		380	

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*(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.*

**Add a new row**

Category : turkey breeders

**delete this category**

NUTS (2) (a)	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	Method of laboratory analysis
SE11	0	0	0	0 NA	X
SE12	0	0	0	0 NA	X
SE21	0	0	0	0 NA	X
SE22	0	0	0	0 NA	X
SE23	2	2	10	20 ELISA test	X
SE31	2	2	10	20 ELISA test	X
SE32	0	0	0	0 NA	X
SE33	0	0	0	0 NA	X
<b>Total</b>	4	4		40	

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*(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.*

**Add a new row**

Category : laying hens

**delete this category**

NUTS (2) (a)	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	Method of laboratory analysis	
SE11	7	2	10	20	ELISA test	X
SE12	81	18	10	180	ELISA test	X
SE21	39	10	10	100	ELISA test	X
SE22	46	10	10	100	ELISA test	X
SE23	82	18	10	180	ELISA test	X
SE31	10	1	10	10	ELISA test	X
SE32	6	1	10	10	ELISA test	X
SE33	7	0	0	0	NA	X
<b>Total</b>	278	60		600		

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*(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.*

**Add a new row**

Category : free range laying hens

**delete this category**

NUTS (2) (a)	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	Method of laboratory analysis
SE11	2	1	10	10	ELISA test
SE12	29	18	10	180	ELISA test
SE21	19	14	10	140	ELISA test
SE22	16	10	10	100	ELISA test
SE23	10	8	10	80	ELISA test
SE31	5	2	10	20	ELISA test
SE32	2	0	0	0	NA
SE33	0	0	0	0	NA
<b>Total</b>	<b>83</b>	<b>53</b>		<b>530</b>	

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(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.

Add a new row

Category : ratites

delete this category

NUTS (2) (a)	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	Method of laboratory analysis
SE11	0	0	0	0 NA	X
SE12	3	3	10	30 ELISA test	X
SE21	0	0	0	0 NA	X
SE22	3	3	10	30 ELISA test	X
SE23	1	1	10	10 ELISA test	X
SE31	1	1	10	10 ELISA test	X
SE32	0	0	0	0 NA	X
SE33	0	0	0	0 NA	X
<b>Total</b>	8	8		80	

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*(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.*

**Add a new row**

Category : farmed feathered game

**delete this category**

NUTS (2) (a)	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	Method of laboratory analysis
SE11	1	1	10	10	ELISA test
SE12	3	3	10	30	ELISA test
SE21	0	0	0	0	NA
SE22	10	10	10	100	ELISA test
SE23	3	3	10	30	ELISA test
SE31	0	0	0	0	NA
SE32	0	0	0	0	NA
SE33	1	1	10	10	ELISA test
<b>Total</b>	18	18		180	

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(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.

**Add a new row**

**Add a category**

## 5.2 Ducks, geese and mallard holdings to be sampled according to table 2 of Annex I to Decision 2010/367/EU

NUTS (2) (a)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Method of laboratory analysis	
SE11	0	0	0	0	0 NA	X
SE12	4	4	20	80	ELISA test	X
SE21	0	0	0	0	0 NA	X
SE22	23	23	20	460	ELISA test	X
SE23	1	1	20	20	ELISA test	X
SE31	0	0	0	0	0 NA	X
SE32	0	0	0	0	0 NA	X
SE33	0	0	0	0	0 NA	X

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Total	28	28	28	560
<i>(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.</i>				
<b>Add a new row</b>				

## 6. Frequency and period for testing

(max. 32000 chars) :

The surveillance programme for avian influenza will run from 1 January to 31 December 2012. Holdings will be sampled once annually after taken into consideration possible seasonal factors in the production.

## 7. Laboratory testing

Description of the used serological tests : (max 32000 chars)

All laboratory investigations will be carried out in accordance with the avian influenza diagnostic manual (Commission Decision 2006/437/EC) and point 9 of Annex I to Decision 2010/367/EU. An ELISA will be used for the serological analysis. (Reference: Terregino C. Evaluation of sensitivity and specificity of a commercial competitive avian influenza type A antibody ELISA kit (IDVET® Screen Influenza A), Istituto Zooprofilattico Sperimentale delle Venezie, Legnaro (Padova), Italy, OIE-FAO and National Reference Laboratory for Newcastle Disease and Avian Influenza). Positive results will be confirmed with



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haemagglutination inhibition tests (for subtypes H5 and H7) in accordance with the guidelines.

If any sample turns out to be positive the holding is further investigated for any signs of ongoing avian influenza infection. Cloacal and oropharyngeal swabs from 60 birds (or all birds if less than 60) of each bird category in the holdings are then taken. The samples are analysed for the detection of avian influenza virus genome by using an M-gene realtime PCR (Spackman et al). Positive samples are further analysed for detection and identification of H5 and H7 viruses, including virus pathotyping by amplicon sequencing (Slomka et al, 2007) (Avian Diseases: Vol. 51, No. s1, pp. 227-234).

All laboratory testing will be performed at the National Veterinary Institute (SVA), Uppsala, Sweden. All virus isolates will be sent to the EU Reference Laboratory (EURL). The Swedish Board of Agriculture (SBA) will report to the Commission in accordance with Art 4. of Decision 2010/367/EU .

## 8. Description of the surveillance programme in wild birds

### 8.1 Objectives of surveillance

(max 32000 chars)

Sweden will continue a surveillance of AI in different species of wild birds found dead or moribund in different parts of the country (passive surveillance). In the case that HPAI H5N1 is detected, the surveillance in wild birds found dead or moribund will be enhanced to determine how spread the virus is. Testing of the samples will be carried out at the National Veterinary Institute.

### 8.2 Surveillance design

(max. 32000 chars) :

To ensure optimal flow of information the Swedish Board of Agriculture has a working group on wild birds. In that working group people from bird watching institution, the Swedish Environmental Protection Agency, The National Veterinary Institute and the Lunds and Kalmar University are discussing issues concerning the surveillance. Sampling in the passive surveillance is ongoing the whole year and in the whole country.

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## 8.3 Sampling procedures

*max 32000 chars :*

Wild birds found dead or moribund are sent by post by the finder in existing routines to the National Veterinary Institute in Uppsala for sampling and analysis. In case of enhanced investigations, in forehand contracted organisations will do local examinations for dead or moribund wild birds for further examination and sampling at NRL.

## 8.4 Laboratory testing

*max 32000 chars :*

From dead birds, swab samples (mostly both cloacal and tracheal) are collected. The samples are analysed for the detection of avian influenza virus genome by using an M-gene realtime PCR (Spackman et al). positive samples are further analysed for detection and identification of H5 and H7 viruses, including virus pathotyping by amplicon sequencing (Slomka et al). If virus genome is detected virus isolation and further subtyping are performed. The viruses isolated are sent to CRL.

## 8.5. WILD BIRDS - Investigation according to the surveillance programme for avian influenza in wild birds set out in Annex II to Decision 2010/367/EU

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SE 11-33 (whole territory of Sweden)	NUTS (2) code/region (a)	Wild birds to be sampled	Total number of 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
		1000	1000	1 000	0	1 000
	<b>Total</b>			1 000	0	1 000
<b>Add a new row</b>						

*(a) Refers to the place of collection of birds/samples. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member State is requested. Please fill-in these values directly in the field.*

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

max 32000 chars :

Within the EU surveillance programme for AIV, the following numbers of holdings have been tested during the years 2006-2010:

	2006	2007	2008	2009	2010
Laying hens	60	60	65	61	62
Turkeys	26	23	23	17	21
Ducks	2	3	8	3	4
Geese	28	16	30	13	11
Broilers <sup>1</sup>	7	17	28	27	24
Ratites	15	10	10	6	4
Breeding hens (parents)	40	40	42	33	34
Breeding turkeys (parents)	4	4	2	4	3
Game birds (mallards)	0	7	6	6	7
Game birds (pheasants)	0	23	23	20	17
Backyard flocks	0	0	0	6	0

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(<sup>1</sup> Small-scale production)

Before 2006 AIV had never been detected in Swedish poultry. In March 2006 highly pathogenic avian influenza virus subtype H5 was isolated in samples, taken due to findings in the wild bird population, from a mallard on a Swedish game farm. There were no clinical signs in the flock. Since 2006 no findings of low pathogenic H5 or H7 or high pathogenic strains of AIV have been done in Swedish poultry flocks. Several investigations have been performed, though, due to positive serological findings within the surveillance programme.

In 2007, farmed game birds were included in the Swedish AI surveillance programme for the first time. Holdings with breeders of mallards and pheasants were sampled. Three holdings with mallard breeders were serologically positive against AIV subtype H5 and H7. Further investigations in these holdings, by PCR-analysis of cloacal and oropharyngeal swabs, were all negative (no AIV detected on the holding).

In 2008, antibodies against AIV subtype H5 were found in blood samples from two holdings with farmed mallard breeders and one holding with breeder geese. Cloacal and oropharyngeal swabs were taken for further investigations of these holdings:

- Swabs taken from mallards on one of the game bird farms were negative for AIV when these were analyzed by PCR (no AIV detected on the holding).
- From the other mallard flock AIV subtype H4N6 was isolated.
- Swabs from breeder geese were found to be PCR-positive for AIV but H5 and H7 negative. No virus could be isolated.

In 2009, one goose and two ducks on a 4H club farm were serologically positive against AIV subtype H5. Following-up investigations including PCR analyses of oropharyngeal and cloacal swabs taken out from 95 different birds at the farm were all negative. This year also mallard breeders from one holding were serologically positive against AIV/H5. PCR-analysis of oropharyngeal and cloacal swabs were all negative in following-up investigations.

In 2010, antibodies against AIV subtype H5 were found in four holdings with mallard breeders. The holdings were further investigated by cloacal and oropharyngeal swab sampling. No AIV could be detected by PCR-analysis of swab samples from two of the holdings. In samples from the other two holdings influenza A virus genome was detected in the M-gene PCR. Further analyses of these samples including PCR for H5 and H7 and virus isolation attempts were negative.

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## 9.1 Measures included in the programme for surveillance in poultry

### 9.1.1 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

(max. 32000 chars) :

The Swedish Board of Agriculture (SBA) is the authority under the Ministry of Agriculture with mandate to decide about sampling, disease surveillance, eradication of epizootic diseases etc. SBA also compensates the farmer for economic losses due to decisions taken in accordance with the act on epizootic diseases.

The National Veterinary Institute (SVA) is also an authority under the Ministry of Agriculture and the National Reference Laboratory for Avian Influenza. SVA has been appointed by SBA to organize and perform the surveillance programme for avian influenza in poultry since 2002. The Department of Animal Health and Antimicrobial Strategies is responsible for the programme at SVA and handles the planning of the programme, administration, giving instructions to veterinarians involved in the sampling, sending out sampling material etc. The Department of Virology, Immunobiology and Parasitology performs the analyses.

The National Food Administration (SLV, an authority under the Ministry of Agriculture) has official veterinarians employed regionally. These veterinarians are responsible for the sampling at the slaughterhouses.

### 9.1.2 System in place for the registration of holdings

(max. 32000 chars) :

The different Swedish poultry registers are briefly presented in the table below.  
All registers are administered by SBA.

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Register	Population covered	EU-legislation	National legislation
The Swedish poultry register	All commercial poultry holdings	Council Dir. 2005/94/EC Council Dir. 92/66/EEC	Statens jordbruksverks föreskrifter (2006:11) om registrering av anläggningar med fjäderfä
The Swedish register of laying hens	All holdings with a capacity of 350 laying hen and sell eggs for consumption	Council Dir. 1999/74/EC Commission Dir. 2002/4/EC	Statens jordbruksverks föreskrifter (2003:20) om registrering av anläggningar med värphöns
Establishments for poultry	All holdings with breeders for broiler laying hen and turkey	Council Dir. 2009/158/EC	Statens jordbruksverks föreskrifter (2010:58) om obligatorisk hälsoövervakning av fjäderfä
OMNIS	All poultry holdings approved within the voluntary and preventive salmonella control programme	NA	Statens jordbruksverks föreskrifter (2007:78) om frivillig och förebyggande kontroll avseende salmonella hos fjäderfä

## 9.1.3 Data on vaccination carried out

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(max. 32000 chars) :

Vaccination of poultry against avian influenza is prohibited in Sweden. In 2006 vaccination with Nobilis® Influenza H5N2 (Intervet) was introduced in Swedish zoos after approval of the vaccination programme by the Commission (Com. Dec. 2006/474/EEC). Some of the zoos are continuing the vaccination programme in 2011.

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

(max. 32000 chars) :

Until spring 2006 highly pathogenic avian influenza virus (HPAI) has never been detected in wild birds in Sweden. Previous surveillance since autumn 2002 at the bird conservation station at Ottenby, Öland, has demonstrated that HPAI was not present during that period. Mallards are the species that most samples come from.

At the National Veterinary Institute surveillance in all diseased or dead bird species is ongoing since a long period (exceeding the last five years). In birds found dead or diseased in the wild necropsy is performed and if changes are observed that lead to a suspicion concerning AI or ND further tests are performed. At the moment all birds found dead are tested for AI.

HPAI has been detected in 65 wild birds during spring 2006. Low pathogenic avian influenza virus (LPAI) has been found in Mallards with a quite high prevalence but has also been found in several other species like for example Black headed gull, Mew gull, bean goose and Teal. During 2009 and 2010 no case of HPAI has been detected in Sweden in wild birds. LPAI has been found in 69 of the 3 863 sampled birds, mostly in Mallards and in a few Eurasian wigeons in the active surveillance during the autumn 2009.

During 2010 77 of the 2 288 sampled wild birds are found positive for LPAI.

### 10.1 Measures included in the programme for surveillance in wild birds

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(max. 32000 chars) :

Measures included as in 2010/367/EU.

**10.1.1**      *Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme*

32max. 32000 chars) :

The programme will be supervised of the Swedish Board of Agriculture in close cooperation with a working group on wild birds and the National Veterinary Institute. The working group on wild birds consists of ornithologists as well as epidemiologists.

**10.1.2**      *Description and delimitation of the geographical and administrative areas in which the programme is to be applied*

(max. 32000 chars) :

The passive surveillance will be carried out in the whole area of Sweden.

**10.1.3**      *Estimation of the local and/or migratory wildlife population*



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(max. 32000 chars) :

The Swedish ornithologists work with a report system called Svalan where the movements of migratory birds can be followed each year. The Swedish Board of Agriculture and the National Veterinary Institute are using this reporting system to continuously update the wild birds situation. <http://www.artportalen.se/birds/default.asp>

## 11. Measures in place as regards the notification of the disease

(max. 32000 chars) :

Avian influenza is included in the Swedish act on epizootic diseases (Epizootilagen, SFS 1999:657). According to this act both animal owners and veterinarians are obliged to report suspect cases of avian influenza. This applies to both clinical and laboratory suspicions. If AI is suspected or confirmed on a farm, measures will be taken according to Council Directive 2005/94/EC and Commission Decision 2010/367/EU).

## 12. Costs

### 12.1 Detailed analysis of the costs

#### 12.1.1 Poultry

(max. 32000 chars) :

Administration (planning, administration of the programme, information, reporting, follow up etc) 153 000 SEK

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Sampling (collecting samples at slaughterhouses)						71 000 SEK
Sampling (collecting samples at holdings)						80 000 SEK
Sampling equipment (tubes, plastic bags, envelopes etc) and transport costs						5 000 SEK
<b>Serology:</b>						
Total number of tests:			2870			
ELISA cost per sample			80 SEK (the cost will also include necessary confirmation with HI-test)			
<hr/>						
Total serology:			229 600 SEK			
<b>PCR and Virus isolation:</b>						
Estimated no of seropositive holdings = 3						
Holding no. 1 with two poultry categories						
Holdings nos 2 and 3 with one poultry category of which holding no 3 analysed out of normal working hours (+ 50% cost/test)						
	No of samples	No of holdings	No of tests	Cost/test		Laboratory costs
M-gene PCR holding no. 1	240	1	120	490		58 800 SEK
M-gene PCR holding no. 2	120	1	60	490		29 400 SEK
M-gene PCR holding no. 3	120	1	60	735		44 100 SEK
H5-PCR	25	2	50	325		16 250 SEK
H7-PCR	25	2	50	325		16 250 SEK
Sequencing	5	2	10	1200		12 000 SEK
Virus isolation	5	2	10	665		6 650 SEK

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Total PCR and virusisolation:

183 450 SEK

## 12.1.2 Wild birds

(max. 32000 chars) :

	No of samples	No of tests	Cost/test	Laboratory costs
Collection, transport and sampling of wild birds	1 000	1 000	515 SEK	515 000
M-gene realtime PCR (pooled)	1 000	1 000	490 SEK	490 000
H5/H7-PCR (confirmatory test)	200	200	325 SEK	65 000
Gene sequencing	50	50	1 200 SEK	60 000
Virus isolation	50	50	665 SEK	33 250
-----				
Total sampling, PCR and virusisolation				1 163 250 SEK

This application does not cover the costs following an eventual and extensive AI outbreak among wild birds that may require expanded active sampling and analysis of dead and sick birds in specific areas in accordance with Commission Decision 2010/367/EU.

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## 12.2 Summary of the costs

### 12.2.1 Poultry surveillance

Methods of laboratory analysis	Number of tests to perform per method	Unitary test cost (per method) in €	Total cost (€)
ELISA test	2 870	8.89	25514.3
agar gel immune diffusion test	0	0	0
Haemagglutination-inhibition-test (HI) for H5 (specify number of tests for H5)	0	0	0
Haemagglutination-inhibition-test (HI) for H7 (specify number of tests for H7)	0	0	0
Virus isolation test	10	73.89	738.9
PCR test	340	53.86	18312.4
<b>Total</b>	<b>3 220</b>		<b>44 565,60 €</b>
<b>Other measures to be covered</b>			
sequencing	10	133.33	1333.3
Sampling (including sampling equipment and transport costs)	2 870	6.04	17334.8
			<b>Add a new row</b>

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<b>Total</b>	139			18 668,10 €
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## 12.2.2 Wild bird surveillance

Methods of laboratory analysis	Number of tests to perform per method	Unitary test cost (per method) in €	Total cost (€)
Haemagglutination-inhibition-test (HI) for H5/H7	0	0	0
Virus isolation test	50	73.89	3694.5
PCR test	1 000	54.44	54440
H5/H7 PCR test (confirmatory test)	200	36.11	7222
<b>Total</b>	1 050	128,33 €	65 356,50 €
<b>Other measures to be covered</b>			
Sampling	1 000	57.22	57220 <b>X</b>
sequencing	50	133.33	6666.5 <b>X</b>
			<b>Add a new row</b>
<b>Total</b>	1050	190,55 €	63 886,50 €

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## Attachments

### IMPORTANT :

- 1) The more files you attach, the longer it takes to upload them .
- 2) This attachment files should have one of the format listed here : [.zip](#), [.jpg](#), [.jpeg](#), [.tiff](#), [.tif](#), [.xls](#), [.doc](#), [.bmp](#), [.pna](#).
- 3) The total file size of the attached files should not exceed 2 500Kb (+- 2.5 Mb) . You will receive a message while attaching when you try to load too much.
- 4) IT CAN TAKE **SEVERAL MINUTES TO UPLOAD** ALL THE ATTACHED FILES. Don't interrupt the uploading by closing the pdf and wait until you have received a Submission Number!
- 5) Zip files cannot be opened (by clicking on the Open button) . All other file formats can be opened.