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- 6) For simplification purposes you are invited to submit multi annual programmes
- 7) As mentioned during the Plenary Task Force of 28/2/2014, you are invited to submit your programmes in English.

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Submission date

Submission number

Tuesday, May 13, 2014 12:09:25

1399975767822-3463

# 1. *Identification of the programme*

Member state :	SVERIGE	
Disease	avian influenza in poultry	y and wild birds
This program is multi annual :	no	
Request of Union co-financing from beginning of:	2015	

## 1.1 Contact

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- 2. Description and implementation of the surveillance programme in poultry
- 2.1.1 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.

# 2.1.2 System in place for the registration of holdings

(max. 32000 chars):

(max. 32000 cnars)	<i>/</i> .										
	The different Swedish poultry registers are briefly presented in the table below.  All registers are administered by SBA.										
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 fjäderfän								
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 fjäderfä	All holdings with breeders for broiler laying hen and turkey	Council Dir. 2009/158/EC	Statens jordbruksverks föreskrifter (2010:58) om obligatorisk hälsoövervakning av								
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								

# 2.1.3 Design (risk based or surveillance based on representative sampling)

(max. 32000 chars):

For the year 2015 Sweden has designed a surveillance programme based on the representative samling 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 2015.

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.

# 2.1.3.1 Short description of predominant poultry population and types of poultry production

(max. 32000 chars):

The poultry production in Sweden is mainly concentrated to the south parts of the country.

### Laying hens

The number of laying hen holdings is 354. Of these 354, 96 have a free range holding system. In 2013, 3 855 448 laying hens were slaughtered in Sweden.

#### Chicken breeders

In 2015, there will be 32 holdings of parent flocks of laying hens and broilers registered in the Poultry Health Control Programme.

#### Turkey breeders

In April 2014, 3 holdings of parent flocks of turkeys were registered in the Poultry Health Control Programme.

#### Fattening turkeys

There are approximately 20 holdings of fattening turkeys in Sweden. In 2013, 451 973 turkeys were slaughtered in Sweden.

### Fattening geese and fattening ducks

In Sweden, ducks and 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. In 2013, 1 334 ducks and 15 806 geese were slaughtered in Sweden.

#### Farmed game birds (gallinaceous)

Pheasants are the most common farmed gallinaceous game bird in Sweden. In 2013, there were 16 holdings with breeders of pheasants sampled by a veterinarian at the holding. 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.

Farmed game birds (waterfowl)

In 2013, there were 7 holdings with breeders of mallards sampled by a veterinarian at the holding.

#### Ratites

In 2013, 203 ratites were slaughtered in Sweden.

#### **Broilers**

Birds from all holdings with small-scale or organic broiler production sending their birds to small-scale slaughterhouses or to the slaughterhouses for laying hens (n=26 in 2013) will be included in the sampling programme. These broiler holdings often have less developed biosecurity than large commercial broiler holdings. In 2013, 83 265 440 broilers were slaughtered in Sweden in total.

# 2.1.3.2 Criteria and risk factors for risk based surveillance(1)

(max. 32000 chars):			
N.A.			

(1) Including maps showing target sampling sites identified as being particularly at risk for the introduction of avian influenza virus, taking into account criteria set out in point 4 of Annex I to Commission Decision 2010/367/EC.

# 2.2 Target populations (2)

(max. 32000 chars):

#### Laying hens

The number of laying hen holdings, incl. free-range, is, according to the Swedish Poultry Register, 354 (March 2014). Of these 354, 258 have an indoor system and 96 have a free range holding system (March 2014). A few holdings have both in- and outdoor holding system. Swedish laying hens are slaughtered mainly at two slaughterhouses. In 2013, 3 855 448 laying hens (from indoor and free range systems) were slaughtered in Sweden. 60 of the indoor holdings shall be sampled at slaughter.

### Free range laying hens

The number of free range laying hen holdings is 96 (March 2014). 2015, 53 of these holdings shall be sampled, if possible at slaughter.

### Chicken breeders

Samples taken in parent flocks of laying hens and broilers within the Poultry Health Control Programme will be used for the surveillance programme. Ten samples from one flock per holding (n=32 in 2015) 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 (n=3, April 2014) will be used for the surveillance. Ten samples from one flock per holding 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 20 sampled holdings. Blood samples will be collected from ten birds per holding.

## Fattening ducks

In 2013, 1334 ducks were slaughtered in Sweden. All holdings that send their birds for slaughter shall be sampled at the slaughterhouse. 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 (in 2013, 13 holdings) shall be sampled. 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 (in 2013, 16 holdings) 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 (in 2013, 7 holdings) will be sampled by a veterinarian at the holding. Twenty blood samples per holding will be taken.

#### Ratites

Ratites are slaughtered at three Swedish slaughterhouses. In 2013, 203 ostriches were slaughtered in Sweden. 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 sending their birds to small-scale slaughterhouses or to the slaughterhouses for laying hens (n=26 in 2013) will be included in the sampling programme. These broiler holdings often 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 that will lead to consequences for the programme. Sweden will also provide additional information on request from the Commission.

(2) including MS specific exceptional circumstances as described in Annex I point 3 of Commission Decision 2010/367/EU)

2.2.1 POULTRY HOLDINGS <sup>(a)</sup> (except ducks, geese and farmed game birds (waterfowl e.g. mallards) to be sampled

Serological investigation according to Annex I to Commission Decision 2010/367/EU

Targets for year **2015** 

Category: broilers (only when at risk)

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	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	22	22	10	220	ELISA test	X
SE23	3	3	10	30	ELISA test	X
SE31	0	0	0	0	NA	X
SE32	0	0	0	0	NA	X
SE33	0	0	0	0	NA	X

	Total	260
		Add a new row
(b) Refers to the location	ocks or establishments as appropriate. f the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statisti 19s of one category of poultry in concerned NUTS 2 region.	ics) can not be used, region as defined in the programme by the Member States is requested

## Category: fattening turkeys

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	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	18	18	10	180	ELISA test	X
SE23	8	8	10	80	ELISA test	X
SE31	0	0	0	0	NA	X
SE32	0	0	0	0	NA	X
SE33	0	0	0	0	NA	X
Total				260		
					Add a new row	

(a) (b) (c)

Holdings or herds or flocks or establishments as appropriate.

Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested Total number of holdings of one category of poultry in concerned NUTS 2 region.

#### Category: turkey breeders

### delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	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	1	1	10	10	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
Total				30		
	•					1

Add a new row

Holdings or herds or flocks or establishments as appropriate.

Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested Total number of holdings of one category of poultry in concerned NUTS 2 region.

Category: chicken breeders

delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis	
SE11	0	0	0	0	NA	X
SE12	10	10	10	100	ELISA test	X
SE21	4	4	10	40	ELISA test	X
SE22	13	13	10	130	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
SE33	0	0	0	0	NA	X
Total				320		
		Add a new row				

Holdings or herds or flocks or establishments as appropriate.

Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested Total number of holdings of one category of poultry in concerned NUTS 2 region.

Category: laying hens

ANNEX 4: Standard requirements for the submission of surveillance programmes for avian influenza in poultry and wild birds as referred to in Article 1(d)

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis	
SE11	2	1	10	10	ELISA test	X
SE12	91	20	10	200	ELISA test	X
SE21	31	8	10	80	ELISA test	X
SE22	44	9	10	90	ELISA test	X
SE23	69	17	10	170	ELISA test	X
SE31	9	3	10	30	ELISA test	X
SE32	6	1	10	10	ELISA test	X
SE33	6	1	10	10	ELISA test	X
Total				600		
				Add a new row		

 $Holdings\ or\ herds\ or\ flocks\ or\ establishments\ as\ appropriate.$ 

Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested Total number of holdings of one category of poultry in concerned NUTS 2 region.

Category: free range laying hens

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis	
SE11	4	1	10	10	ELISA test	X
SE12	35	18	10	180	ELISA test	X

Total				530		
SE33	0	0	0	0	NA	X
SE32	3	1	10	10	ELISA test	X
SE31	6	3	10	30	ELISA test	X
SE23	12	7	10	70	ELISA test	X
SE22	16	10	10	100	ELISA test	X
SE21	20	13	10	130	ELISA test	X

Add a new row

Category: ratites

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	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	1	1	10	10	ELISA test	X
SE23	0	0	0	0	NA	X

Holdings or herds or flocks or establishments as appropriate.

Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested Total number of holdings of one category of poultry in concerned NUTS 2 region.

(a) Holdings or herds or flocks or establishments as appropriate.							
	Total				30		
SE33		0	0	0	0	NA	X
SE32		0	0	0	0	NA	X
SE31		1	1	10	10	ELISA test	X

Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested Total number of holdings of one category of poultry in concerned NUTS 2 region.

### Category: farmed game birds (gallinaceous)

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis	
SE11	1	1	10	10	ELISA test	X
SE12	6	6	10	60	ELISA test	X
SE21	0	0	0	0	NA	X
SE22	11	11	10	110	ELISA test	X
SE23	3	3	10	30	ELISA test	X
SE31	0	0	0	0	NA	X
SE32	0	0	0	0	NA	X
SE33	0	0	0	0	NA	X

Total	210
	Add a new row
<ul> <li>(a) Holdings or herds or flocks or establishments as appropriate.</li> <li>(b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be unit of the holdings of one category of poultry in concerned NUTS 2 region.</li> </ul>	used, region as defined in the programme by the Member States is requested

# Add a category

Totals	Total number of tests	
Total poultry 2015	2 240	

2.2.2 DUCKS, GEESE AND FARMED GAME BIRDS (WATERFOWL e.g. MALLARD) HOLDINGS (a) to be sampled.

Serological investigation according to Annex I to Commission Decision 2010/367/EU

Targets for year

2015

Category: fattening ducks

delete this category

NUTS (2) (b)	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	Method of laboratory analysis	
SE11	0	0	0	0	NA	X
SE12	0	0	0	0	NA	X
SE21	0	0	0	0	ELISA test	Х
SE22	3	3	20	60	ELISA test	Х
SE23	0	0	0	0	NA	X
SE31	0	0	0	0	NA	X
SE32	0	0	0	0	NA	X
SE33	0	0	0	0	NA	X
Total				60		
					Add a new row	

Holdings or herds or flocks or establishments as appropriate.

Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested

Category: fattening geese

NUTS (2) (b)	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	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

	Add a new row					
Total				280	<u> </u>	
SE33	0	0	0	0	NA	X
SE32	0	0	0	0	NA	X
SE31	0	0	0	0	NA	X
SE23	1	1	20	20	ELISA test	X
SE22	13	13	20	260	ELISA test	X

<sup>(</sup>a) Holdings or herds or flocks or establishments as appropriate.

Category: farmed game (waterfowl e.g. mallards)

NUTS (2) (b)	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	Method of laboratory analysis	
SE11	0	0	0	0	NA	X
SE12	2	2	20	40	ELISA test	X
SE21	1	1	20	20	ELISA test	X
SE22	5	5	20	100	ELISA test	X
SE23	0	0	0	0	NA	X
SE31	0	0	0	0	NA	X
SE32	0	0	0	0	NA	X
SE33	0	0	0	0	NA	X
SE 11-33 (Whole Sweden)	0	0	0	340	PCR test	X
SE 11-33 (whole Sweden)	0	0	0	10	Virus isolation test	X

Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested

SE 11-33 (whole sweden)	0	0	0	10	gene sequensing	X
Total				520		
					Add a new row	
(a) Holdings or herds or flocks or establishments as appropriate. (b) Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested						

# Add a category

NUTS (2) (b)	Total number of tests	
Total ducks and geese 2015	860	

TOTALS for Poultry (2.2.1) + Ducks and Geese (2.2.2) for year:

2015

Poultry +Ducks/Geese	Total number of tests
Grand Total	3 100
Grand Total ELISA	2 740
Grand Total agar	0
Grand Total HI tests (H5)	0
Grand Total HI tests (H7)	0
Grand Total Virus Isolation test	10

Grand Total PCR test	340
Grand Total Other test	10
Grand Total Samplings	0

## 2.3 Sampling procedures, sampling periods and frequency of testing

(max. 32000 chars):

The surveillance programme for avian influenza will run from 1 January to 31 December 2015. Holdings will be sampled once annually after taken into consideration possible seasonal factors in the production. Laying hens will be sampled through out the year. If laying hens from a sufficient number of holdings are sent to slaughter, the blood samples will be taken at the slaughter house. If necessary, samples will be taken at the holdings. Broilers, fattening turkeys, ratites, geese and ducks will be sampled at the slaughter house. Geese and ducks are mainly slaughtered in October-November, while for the other cathegories the slaughter (and thereby the sampling) is rather evenly distributed throughout the year. For parent flocks of laying hens, broilers and turkeys, samples taken within the Poultry Health Control Programme will be used for the surveillance programme. These samples are taken through out the year. Farmed feathered game is sampled at the holding, mainly during the first half of the year.

## 2.4. Laboratory testing: description of the laboratory tests used and follow up investigations

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. (IDEXX Influenza A Ab test). Positive results will be confirmed with

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. \$1, 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.

## 3. Description and implementation of the surveillance programme in wild birds

3.1.1 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme and relevant collaborating partners (e.g. epidemiologists, ornithologists, nature bird observation and hunter organisations).

(max. 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.

3.1.2 Descri	ntion and delimitation	of the aeographical	and administrative area	as in which the proar	amme is to be applied

max. 32000 chars):

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

### 3.1.3 Estimation of the local and/or migratory wildlife population

(max. 32000 chars):

In Sweden there are in total 490 different bird species identified. Around 200 are staying the whole year and the rest are migratory birds in more or less extent. The majority of the birds are staying in south and middle Sweden and a smaller part in the northern part.

In summer there are around 550 milion bird individs and 450 millions leave Sweden in the end of the summer or in autumn.

The majority of the migratory birds arrive to Sweden in Mars to June, depending on climatic conditions, from south and east and a very limited number from north.

The Swedish ornithologists work with a report system called Svalan were the movements of migratory birds cabe 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

3.2 Design, criteria, risk factors and targe	et population <mark>(3)</mark>				
(max. 32000 chars) :					
The passive surveillance will be carried out in the who	le area of Sweden.				
Areas at risk (wetlands in particular where links wit. Commission Decision 2010/367/EC should be taken in				ed to in point 2 of Part 1	of Annex II to
3.2.1 WILD BIRDS focussed on target speci	es				
Investigations according to the surveillance prog	gramme set out in Pa	rt 2 of Annex II to De	ecision 2010/367/E0	<u>C</u>	
Targets for year 2015					
NUTS (2) code/region (a)	Total number of birds to be sampled	Estimated total number of samples to be taken for passive surveillance	Type of test	Number of tests	

SE 11-33 (whole territory of Sweden)	500	600	PCR test	600	X
SE 11-33 (whole territory of Sweden)	0	0	Virus isolation test	50	X
SE 11-33 (whole territory of Sweden)	0	0	Gene sequensing	50	X
Total					

#### Add a new row

- (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.
- b) General description of the wild birds are intended to be sampled in the framework of the active and passive surveillance.
- (c) Voluntary, to be included for information purposes, not eligible for cofinancing.

	Total number of tests
Total number of tests	700
Total Virus isolation tests	50
Total PCR tests	600
Total Other tests	50

## 3.3 Sampling procedures and sampling periods

### max 32000 chars:

Wild birds found dead or moribund are send 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.

## 3.4 Laboratory testing: description of the laboratory tests used

#### max 32000 chars:

From dead birds, swab samples (mostly both cloacal and tracheal) are collected. The samples are analysed for the detction of avian inluenza 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.

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

#### max 32000 chars:

Within the EU surveillance pro	gramme fo	or AIV, th	ne follow	ing nun	nbers of	holding	s have been tested during the years 2007-2013:	
	2007	2008	2009	2010	2011	2012	2013	
Laying hens	60	65	61	62	91	79	60	
Turkeys	23	23	17	21	22	19	26	
Ducks	3	8	3	4	6	3	1	
Geese	16	30	13	11	20	20	13	
Broilers <sup>1</sup>	17	28	27	24	39	34	26	
Ratites	10	10	6	4	5	3	2	
Breeding hens (parents)	40	42	33	34	36	36	36	
Breeding turkeys (parents)	4	2	4	3	3	3	3	
Game birds (mallards)	7	6	6	7	9	7	7	
Game birds (pheasants)	23	23	20	17	15	16	16	
Backyard flocks	0	0	6	0	0	0	0	

(1 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 virusisolation attempts were negative.

In 2011, antibodies against AIV subtype H5 were found in two 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 the two holdings

In 2012, no antibodies against AIV subtype H5 or H7 were found.

In 2013, antibodies against AIV subtype H5 were found in one holding with mallard breeders. The holding was further investigated by cloacal and oropharyngeal swab sampling. No AIV H5 or H7 could be detected by PCR-analysis of swab samples from the holding.

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

(max. 32000 chars):

Until spring 2006 highly patogenic 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 2011 and 2012 neither HPAI nor LPAI is detected. During 2013 three cases of LPAI has been found on mallards at the same place and time.

# 6. 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).

### 7. Costs

## 7.1 Detailed analysis of the costs

#### 7.1.1 Poultry

(max. 32000 chars):

Administration (planning, administration of the programme, information, reporting, follow up etc) (ca. 190 timmar x 1100 SEK) 209 000 SEK

Sampling (collecting samples at slaughterhouses) (Beräknad total åtgång ca. 70 timmar. Sannolikt arvode 2015: 716 SEK/timme.

716 x 70t =50 120 SEK. Avrundning något uppåt:

53 000 SEK

Sampling (collecting samples at holdings):

(Provtagning vilthägn: I ansökan för 2014: beräknat 2500 SEK/hägn. Pris för provtagning per hägn 2015? Uppräknat 5%: 2 625 SEK/hägn. Beräknat på 21 (fasan) + 8 (gräsand)= 29 viltfågelhägn. Provtas à 2 625 SEK/hägn = 76 125 SEK.)

(Värphöns: Beräknat på att 50 värphönsbesättningar provtas på slakteri och att 63 bes. värphöns provtas i besättningen, vid avlivning med Chickpulp. Jämförbart med provtagning på slakteri (då veterinär redan finns på plats, till skillnad mot i vilthägn)? Beräknad tid per besättning (10 prover): 0,5 timme (som på slakteri). Timkostnad, uppskattad: 900 SEK. 63 bes.x 0,5t x 900 SEK = (28 350kr) 30 000kr.)

Totalt provtagning i vilthägn samt värphöns i besättningar: 76 125+ 30 000 = 106 125 SEK:

106 125 SEK

Sampling equipment (tubes, plastic bags, envelopes etc) and transport costs

15 000 SEK

Serology:

Total number of tests:

2740

ELISA cost per sample 83 SEK (the cost will also include necessary confirmation with HI-test)

Total serology:

227 420 SEK

Total estimated number of birds to be sampled (for ELISA and PCR tests in the holdings or at slaughterhouses): 2980

PCR and Virusisolation:

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	530	63 300 SEK
M-gene PCR holding no. 2	120	1	60	530	31 800 SEK
M-gene PCR holding no. 3	120	1	60	795	47 700 SEK
H5-PCR	25	2	50	355	17 750 SEK
H7-PCR	25	2	50	355	17 750 SEK
Sequencing	5	2	10	1350	13 500 SEK
Virusisolation	5	2	10	800	8 000 SEK
Total PCR and virusisolation:	:				199 800 SEK

## 7.1.2 Wild birds

(max. 32000 chars):

	500	500	577 SEK	288 500
-gene realtime PCR (pooled)	500	500	530 SEK	265 000
5/H7-PCR (confirmatory test)	100	100	355 SEK	35 500
ne sequensing	50	50	1 350 SEK	67 500
rus isolation	50	50	800 SEK	40 000

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.

# 7.2 Summary of the annual costs:

## 7.2.1 Poultry surveillance

Detailed analysis of the cost of the programme - poultry

## Targets for year 2015

Laboratory testing			
Methods of laboratory analysis	Number of tests	Indicative unitary test cost (per method) in € (*)	Total cost (€)
ELISA test	2 740	3.26	8932.4
agar gel immune diffusion test	0	1.8	0
HI-Test for H5 (specify number of tests for H5)	0	9.64	0
HI-Test for H7 (specify number of tests for H7)	0	9.64	0
Virus isolation test	10	37.87	378.7
PCR test	340	19.74	6711.6
Gene sequensing	10	93	930
Sampling			
	Number of samples	Unitary cost in € (*)	Total cost (€)

Samples	2 980	6.09	18148.2	
Other measures				
	Number of samples	Unitary cost in €	Total cost (€)	
Other please specify here	0	0	0	X
			Add a new row	
Total poultry Testing + Sampling + Other measures	6 080		35 100,90 €	

<sup>(\*)</sup> as per cofinancing decision for 2014 programmes

## 7.2.2 Wild bird surveillance

## Detail analysis of the cost of the programme - wild birds

Targets for year 2015

Laboratory testing			
Methods of laboratory analysis	Number of tests	Unitary test cost (per method) in € (*)	Total cost (€)
Virus isolation test	50	37.89	1894.5
PCR test	600	19.74	11844
Other cost	50	93	4650
Delivery of wild animals			
	No of wild birds	Eligible cost in € (*)	Total cost (€)
Delivery of wild animals	500	10	5000
Other measures			
	Number	Unitary cost in €	Total cost (€)

Other please specify here	0	0	0	X
			Add a new row	
Total wild birds Testing + Delivery + Other measures	1200		23′388,50 €	

(\*) as per cofinancing decision for 2014 programmes

TOTALS for Poultry (7.2.1) + Ducks and Geese (7.2.2) for year:

2015

	Total Cost
Grand Total Poultry + Ducks/Geese	58 489

## 7.3 Co-financing rate:

The maximum co-financing rate is in general fixed at 50%. However based on provisions of Article 5.2 and 5.3 of the Common Financial Framework, we request that the co-financing rate for the reimbursement of the eligible costs would be increased:

 $\bigcirc \mbox{Up}$  to 75% for the measures detailed below

Oup to 100% for the measures detailed below

Not applicable

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7.4 Source of national funding
Please specify the source of the national funding:
⊠public funds □food business operators participation □other
Please give details on the source of national funding (max 32000 characters)

Enligt det regleringsbrev för budgetåret 2014 (Regeringsbeslut 2013-12-19) avseende Statens jordbruksverk finns ett ramanslag för "Bekämpande av smittsamma husdjurssjukdomar" där bidrag till Al-övervakningen finns med under ap.4. "Bidrag till utveckling och genomförande av sjukdomskontroller". Bland annat får dessa medel användas för att kunna utföra de sjukdomskontroller som EU ställer krav på.

#### **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: jpg, jpeg, tiff, tif, xls, xlsx, doc, docx, ppt, pptx, bmp, pna, pdf.

  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) Only use letters from a-z and numbers from 1-10 in the attachment names, otherwise the submission of the data will not work.

## List of all attachments

Attachment name	File will be saved as (only a-z and 0-9 and) :	File size
	Total size of attachments :	No attachmen