



EUROPEAN COMMISSION
HEALTH AND CONSUMERS DIRECTORATE-GENERAL

Director General

SANCO/10272/2013

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

Survey programme for Avian Influenza

Hungary

Approved* for 2013 by Commission Decision 2012/761/EU

* in accordance with Council Decision 2009/470/EC

1. Identification of the programme

Member State:	Hungary
Disease:	Avian Influenza
Year of implementation:	2013
Reference of this document:	2010/367/EC: Commission Decision of 25 June 2010 on the implementation by Member States 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 Article 27 of Council Decision 2009/470 EC Commission Decision 2008/425 EC
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Date sent to the Commission:	27th of April, 2012

2. Description of the surveillance programme in poultry

2.1 Objectives, general requirements and criteria

Avian influenza is an infectious viral disease in birds, including poultry. Infections with avian influenza viruses in domestic poultry cause two main forms of that disease that are distinguished by their virulence. The low pathogenic form generally only causes mild symptoms, while the highly pathogenic form results in very high mortality rates in most poultry species.

Directive 2005/94/EC sets out measures for the control of outbreaks, in poultry and other captive birds, of highly pathogenic avian influenza (HPAI) and low pathogenic avian influenza caused by avian influenza viruses of the H5 and H7 subtypes (LPAI), as defined in that Directive. Directive 2005/94/EC also provides for certain preventive measures relating to the surveillance and the early detection of avian influenza viruses.

Directive 2005/94/EC provides that compulsory surveillance programmes are to be implemented by the Member States. Those surveillance programmes aim at identifying the circulation of LPAI viruses in poultry, in particular in waterfowl poultry species, before they become widespread in the poultry population, so that control measures can be taken to possibly prevent a mutation into a HPAI virus which might have devastating consequences.

The Animal Health and Animal Welfare Directorate of the National Food Chain Safety Office, in co-operation with other directorates of the same office and with the Ministry of Rural Development are continuing to monitor poultry for Avian Influenza.

2.1.1 Timeframe and Reporting

Sampling will be started at the beginning of the year 2013 and shall be finished by the end of 2013. (The survey shall be completed by the 31st of December, 2013.)

The final report of the survey will be submitted to the Commission and the CRL until 31st of March, 2014 at the latest.

A monthly report containing all positive results found during the survey will be provided to the Commission by the Animal Health and Animal Welfare Directorate of the National Food Chain Safety Office by the end of each month.

2.1.2 Laboratories involved:

All samples will be tested by the National Reference Laboratory for Avian Influenza (NRL), no other laboratory will be involved.

National Reference Laboratory for Avian Influenza (NRL):

Name: Veterinary Diagnostic Directorate of the National Food Chain Safety Office
Állategészségügyi Diagnosztikai Igazgatóság
Address: 1149 Budapest, Tábornok u. 2., Hungary
Mailing Address: 1581 Budapest, 146. Pf. 2., Hungary
Tel.: +36-1-460-6300
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E-mail: adi.titkarsag@oai.hu

2.2 Design and implementation

2.2.1 Selection of the holdings to be sampled

In order to get relevant data, the number of holdings of the different poultry categories were actualised before having calculated the number of holdings to be sampled. Some counties with very low population of a given poultry category (or with absence of it) are excluded from the programme (regarding that category of poultry).

Poultry categories to be sampled

The poultry holdings to be sampled (except ducks, geese and waterfowls) are indicated in Table 2.2.1.1 – Table 2.2.1.8. The duck, goose and waterfowl holdings to be sampled are indicated in Table 2.2.2.1-2.2.2.5:

Table 2.2.1.1: Laying hen holdings
Table 2.2.1.2: Free range laying hen holdings
Table 2.2.1.3: Chicken breeder holdings
Table 2.2.1.4: Fattening turkey holdings
Table 2.2.1.5: Turkey breeder holdings
Table 2.2.1.6: Ratite holdings (emus, ostriches)
Table 2.2.1.7: Farmed feathered game holdings (pheasants, partridges, guinea fowl)
Table 2.2.1.8: “Backyard flock” holdings

Table 2.2.2.1: Farmed feathered game holdings (waterfowls)
Table 2.2.2.2: Duck breeder holdings
Table 2.2.2.3: Duck fattening holdings
Table 2.2.2.4: Goose breeder holdings
Table 2.2.2.5: Goose fattening holdings

(see tables on the following pages)

Table 2.2.1.1 POULTRY HOLDINGS (except ducks, geese and waterfowls) TO BE SAMPLED

Serological investigation on holdings of 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
HU10	53	7	10	70	HI
HU21	54	7	10	70	HI
HU22	50	7	10	70	HI
HU23	16	1	10	10	HI
HU31	56	10	10	100	HI
HU32	67	10	10	100	HI
HU33	154	18	10	180	HI
TOTAL	450	60		600	

Table 2.2.1.2 POULTRY HOLDINGS (except ducks, geese and waterfowls) TO BE SAMPLED

Serological investigation on holdings of FREE RANGE 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
HU23	1	1	10	10	HI
HU31	1	1	10	10	HI
TOTAL	2	2		20	

Table 2.2.1.3 POULTRY HOLDINGS (except ducks, geese and waterfowls) TO BE SAMPLED

Serological investigation on holdings of 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
HU10	14	5	10	50	HI
HU21	49	16	10	160	HI
HU22	32	9	10	900	HI
HU23	10	2	10	20	HI
HU31	7	2	10	20	HI
HU32	28	12	10	120	HI
HU33	12	7	10	70	HI
TOTAL	152	53		530	

Table 2.2.1.4 POULTRY HOLDINGS (except ducks, geese and waterfowls) TO BE SAMPLED

Serological investigation on holdings of FATTENING 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
HU10	2	1	10	10	HI
HU21	24	5	10	50	HI
HU22	159	20	10	200	HI
HU23	77	10	10	100	HI
HU31	4	2	10	20	HI
HU32	23	7	10	70	HI
HU33	86	15	10	150	HI
TOTAL	375	60		600	

Table 2.2.1.5 POULTRY HOLDINGS (except ducks, geese and waterfowls) TO BE SAMPLED

Serological investigation on holdings of TURKEY 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
HU10	1	1	10	10	HI
HU23	1	1	10	10	
HU31	4	4	10	40	HI
HU32	30	22	10	220	HI
HU33	8	7	10	70	HI
TOTAL	44	35		350	

Table 2.2.1.6 POULTRY HOLDINGS (except ducks, geese and waterfowls) TO BE SAMPLED

Serological investigation on holdings of RATITES

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
HU10	1	1	10	10	HI
HU31	3	3	10	30	HI
TOTAL	4	4		40	

Table 2.2.1.7 POULTRY HOLDINGS (except ducks, geese and waterfowls) TO BE SAMPLED

Serological investigation on holdings of FARMED FEATHERED GAME (pheasants, partridges, guinea fowl)

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
HU10	5	3	10	30	HI
HU21	5	4	10	40	HI
HU23	2	2	10	20	HI
HU31	2	1	10	10	HI
HU32	8	7	10	70	HI
HU33	34	25	10	250	HI
TOTAL	53	42		420	

Table 2.2.1.8 POULTRY HOLDINGS (except ducks, geese and waterfowls) TO BE SAMPLED

Serological investigation on holdings of „BACKYARD FLOCKS”

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
HU10	8660	70	10	700	HI
HU21	69800	70	10	700	HI
HU22	20308	70	10	700	HI
HU23	34485	70	10	700	HI
HU31	34616	70	10	700	HI
HU32	51786	70	10	700	HI
HU33	26971	70	10	700	HI
TOTAL	246626	490		4900	

Table 2.2.2.1 DUCK, GOOSE AND WATERFOWL HOLDINGS TO BE SAMPLED

Serological investigation on holdings of FARMED FEATHERED GAME (waterfowl)

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
HU21	3	3	20	60	HI
HU31	1	1	20	20	HI
HU32	1	1	20	20	HI
HU33	3	3	20	60	HI
TOTAL	8	8		160	

Table 2.2.2.2 DUCK, GOOSE AND WATERFOWL HOLDINGS TO BE SAMPLED

Serological investigation on holdings of duck breeders

NUT (2) code ^(b)	Total number of duck holdings	Total number of duck and goose holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
HU22	1	1	20	20	HI
HU23	4	4	20	80	HI
HU32	1	1	20	20	HI
HU33	3	3	20	60	HI
TOTAL	9	9		180	

Table 2.2.2.3 DUCK, GOOSE AND WATERFOWL HOLDINGS TO BE SAMPLED

Serological investigation on holdings of fattening ducks

NUT (2) code ^(b)	Total number of duck holdings	Total number of duck and goose holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
HU10	3	1	20	20	HI
HU21	1	1	20	20	HI
HU31	1	1	20	20	
HU32	5	5	20	100	HI
HU33	332	72	20	1440	HI
TOTAL	342	80		1600	

Table 2.2.2.4 DUCK, GOOSE AND WATERFOWL HOLDINGS TO BE SAMPLED

Serological investigation on holdings of geese breeders

NUT (2) code ^(b)	Total number of goose holdings	Total number of duck and goose holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
HU10	9	9	20	180	HI
HU21	3	3	20	60	HI
HU22	2	2	20	40	HI
HU23	1	1	20	20	HI
HU31	9	9	20	180	HI
HU32	12	12	20	240	HI
HU33	9	9	20	180	HI
TOTAL	45	45		900	

Table 2.2.2.5 DUCK, GOOSE AND WATERFOWL HOLDINGS TO BE SAMPLED

Serological investigation on holdings of fattening geese

NUT (2) code ^(b)	Total number of duck and goose holdings	Total number of duck and goose holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
HU10	8	6	20	120	HI
HU22	1	1	20	20	HI
HU23	1	1	20	20	HI
HU32	83	27	20	540	HI
HU33	372	55	20	1100	HI
TOTAL	465	90		1800	

3.2 Design and implementation

The monitoring programme includes the testing of 1450 wild birds in total.

The samples to be taken will be stratified as follows:

- 100% passive surveillance

3.2.1 Passive surveillance

The passive surveillance involves those sick and dead wild birds, which will be found in:

- areas where increased incidence of morbidity and mortality in wild birds occurs;
- areas close to the lakes and waterways in particular when these areas are in proximity to domestic poultry farms;
- areas where cases of HPAI H5N1 have been identified in wild birds or poultry to possibly identify asymptomatic carriers;
- areas epidemiologically linked to these cases.

The passive surveillance will be targeted on birds belonging to identified “higher risk” species listed in Annex II of the Commission Decision 2010/367/EC 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 and other wild birds living in close proximity with them and also on birds coming possibly in close contact to domestic poultry holdings, which might function as “bridge species”, in particular those that are listed in part 2 of Annex II of the Commission Decision mentioned above.

Table 3.2.1 indicates the planned amount of wild birds to be sampled.

NUT (2) code	Wild birds to be sampled	Total number of samples to be taken for passive surveillance
HU10	Anseriformes	150
	Charidriiformes and others	
HU21	Anseriformes	210
	Charidriiformes and others	
HU22	Anseriformes	210
	Charidriiformes and others	
HU23	Anseriformes	210
	Charidriiformes and others	
HU31	Anseriformes	210
	Charidriiformes and others	
HU32	Anseriformes	230
	Charidriiformes and others	
HU33	Anseriformes	230
	Charidriiformes and others	
TOTAL		1450

3.3 Laboratory testing: description of the laboratory tests used

The swab samples for wild bird monitoring will be tested by molecular biological methods. Molecular biological testing (RT-PCR) will be performed with the general influenza A primer M-gene (M +25, M-124 and M +64 probe) and using H5, H7 and N1 primers (VLA protocol, 2006). Positive samples will be re-tested by virus isolation test (VI). Dead birds collected and sent into the laboratory will undergo routine post-mortem inspection including histopathology.

All laboratory tests will be carried out in accordance with Commission Decision 2006/437/EC approving a Diagnostic Manual for avian influenza as provided for in Council Directive 2005/94/EC.

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

In Hungary the first outbreak of avian influenza in poultry caused by the highly pathogen H5N1 virus was in June-July of 2006. There were 29 outbreaks at this time. All outbreaks were immediately localised and eradicated. No reoccurrence was present. In January of 2007 there were 2 outbreaks. These outbreaks were immediately localised and eradicated, too. There was no connection in between the outbreaks of 2006 and 2007.

On 29 October 2010 in the frame of the avian influenza monitoring programme 15 laboratory results out of 40 confirmed as positive against H5 antigen by testing blood-samples taken from a breeding-duck stock. On the same day (29 October 2010) the official control and movement restriction of the holding was ordered by the local competent authority. The positive serological results for H5 antigen could be caused by cross-reaction of the neuraminidase (N)-subtype, we had ordered the repeated serological and virological investigation of the whole stock. The repeated sampling was done under the personal control of the competent authority on 02 November 2010, and the results were the following: 13 samples were positive against H5N3 and H5N1 antigens out of the 120 samples, 107 samples proved to be negative. All of the serums proved to be negative against H7N1 and H7N7 antigens. The cloacal- and tracheal tampons, taken from the stock, were tested for avian influenza virus by PCR-method (OIE MM 2004 2.1.14.B.4.B.). After the viral test the presence of H4 and H6 viruses were proved in one animal, the presence of the low pathogen H6 influenza virus was proved in two animals. On the basis of the molecular-virological data, on 12 November 2010 our authority ordered the stamping-out of the whole stock affected, and in the frame of this process 1187 elite duck-parents were killed, and the disposal of 4800 breeding-eggs was ordered. In the holdings of the same owner in the circle of 1 km radius, the stamping out of 1187 elite duck-parents, and the disposal of 4800 breeding-eggs was ordered. At the same time with the stamping-out, the surveillance of the holdings situated around the infected holding within 3 km radius were started. Tests were carried out on 12 November 2010 and 13 November 2010. The serological and virological tests of the 3 duck-holdings situated in this area were proved to be negative.

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

Animal Health and Animal Welfare Directorate of the National Food Chain Safety Office

Address: H-1149 Budapest, Tábornok u. 2.

Pf.:123 , Hungary
Tel: +36-1-460-6300
Fax: +36-1-222-6064

4.1.2 System in place for the registration of holdings

All holdings are registered by the competent County Food Chain Safety and Animal Health Directorates. The directorates submit these registration data of holdings to the Animal Health and Animal Welfare Directorate of the National Food Chain Safety Office.

4.1.3 Data on vaccination

In Hungary the use of any type of vaccines against the virus of avian influenza in poultry is prohibited.

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

There were 64 positive cases for the virus of HPAI in wild birds in 2006.

In 2009 there were 8 LPAI positive cases. There was 1 LPAI case in March and 7 LPAI cases in December confirmed in wild birds 2009.

In 2010 13 LPAI cases were confirmed by laboratory tests carried out in wild birds.

In 2011 8 LPAI cases were confirmed by laboratory tests carried out in wild birds.

(In 2011 LPAI avian influenza viruses were shown in county Somogy in wild ducks (H9), in county Győr in wild ducks (H2), in county Somogy in clinically healthy gulls (H5N2), in county Fejér in white fronted goose (H3), in county Somogy in wild ducks (H11) and in *Anas crecca* (H1N1), in county Szabocs in wild ducks (H11N2 and H9N2), in county Csongrád in wild ducks (H6N8) and in county Heves common pheasant (H9N2).)

5.1 Measures included in the programme for wild birds surveillance

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

Animal Health and Animal Welfare Directorate of the National Food Chain Safety Office

Address: H-1149 Budapest, Tábornok u. 2.

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

The surveillance programme is extended to the whole territory of Hungary taking into consideration that large amount of migrating wild birds from different species crosses or have rest in this area. The geographical and administrative areas are bound according to the county system in Hungary. The Food Chain Safety and Animal Health Directorates of Government Office for ... County are responsible for the local management of the programme.

5.1.3 Estimation of the local and migratory wildlife population

The estimated local wildlife population in Hungary consists of approximately 9731000 – 13206000 pair of nesting birds (ie. 19462000 – 26412000 birds) and 10273000 – 18122000 wintering birds.

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

In case of founding a suspicious case the owner or the veterinarian of the holding or the founder of the wild bird should immediately notify the competent district veterinary officer who decrees about the obligatory measures according to the contingency plan for the control of avian influenza and Newcastle disease in Hungary. This contingency plan is approved by the Commission in the Commission Decision No. 2004/402/EC.

Except the contingency plan the Decree of the Minister of Agriculture and Rural Development No. 143/2007. (XII. 4.) on detailed rules of protection against avian influenza contains measures to be taken in case of a suspicion of the disease of avian influenza.

7. Costs

7.1 Detailed analysis of the costs

7.1.1 Poultry (see Table 7.1.1)

Table 7.1.1 Detailed analysis of the costs (Poultry)

Poultry category	Total number of tests to be performed per method	Methods of laboratory analysis	Unitary test cost per method (EUR)	Total cost (EUR)
Laying hens	600	HI (H5+H7)	12	7200
Free range laying hens	20	HI (H5+H7)	12	240
Chicken breeder	530	HI (H5+H7)	12	6360
Fattening turkeys	600	HI (H5+H7)	12	7200
Turkey breeder	350	HI (H5+H7)	12	4200
Ratites	40	HI (H5+H7)	12	480
Farmed feathered game (pheasants, partridges, guinea fowl)	420	HI (H5+H7)	12	5040
Backyard flocks	4900	HI (H5+H7)	12	58800
Farmed feathered game (waterfowls)	160	HI (H5+H7)	12	1920
Duck breeders	180	HI (H5+H7)	12	2160
Fattening ducks	1600	HI (H5+H7)	12	19200
Goose breeders	900	HI (H5+H7)	12	10800
Fattening geese	1800	HI (H5+H7)	12	21600
SUBTOTAL (HI)	12100			145200
~5% PCR	600	PCR	36	21600
~3% VI	360	VI	25	9000
TOTAL (HI+PCR+VI)	13060			175800

7.1.2 Wild birds (see Table 7.1.2)

Table 7.1.2 Detailed analysis of the costs (Wild birds)

Type of surveillance	Total number of tests to be performed per method	Methods of laboratory analysis	Unitary test cost per method (EUR)	Total cost (EUR)
Passive	1450	PCR	36	52200
SUBTOTAL (PCR)	1450			52200
10% VI	150	VI	25	3750
TOTAL (PCR + VI)	1600			55950

7.2 Summary of the costs

7.2.1 Poultry surveillance (see Table 7.2.1)

Table 7.2.1 Measures eligible for co-financing surveillance in poultry

Methods of laboratory analysis	Number of tests to perform per method	Unitary test cost per method (EUR)	Total cost (EUR)
Serological pre-screening	-	-	-
Haemagglutination-inhibition-test (HI)	12100 (12100 for H5 and 12100 for H7)	12	145200
Virus isolation test (VI)	360	25	9000
PCR test (RT-PCR)	600	36	21600
Other measures to be covered	Specify activities		
Sampling	12100 Blood sampling	0,5	6050
Others	-	-	-
TOTAL	13060		181850

7.2.2 Wild bird surveillance (see Table 7.2.2)

Table 7.2.2 Measures eligible for co-financing surveillance in wild birds

Methods of laboratory analysis	Number of tests to perform per method	Unitary test cost per method (EUR)	Total cost (EUR)
Serological pre-screening	-	-	-
Haemagglutination-inhibition-test (HI)	-	-	-
Virus isolation test (VI)	150	25	3750
PCR test (RT-PCR)	1450	36	52200
Other measures to be covered	Specify activities		
Sampling	1450 swab sampling	10	14500
Others	-	-	-
TOTAL			70450
