EUROPEAN COMMISSION
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Unit G5 - Veterinary Programmes

SANCO/10778/2012

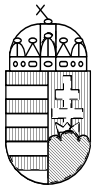
Programmes for the eradication, control and monitoring of certain animal diseases and zoonoses

Survey programme for Avian Influenza (AI)

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

Hungary

* in accordance with Council Decision 2009/470/EC



Central Agricultural Office
Animal Health and Animal Welfare Directorate

H U N G A R Y

Application

for Community financing for the national control programme of Hungary for

Avian Influenza

for the year 2012.

30th of April, 2011

1. Identification of the programme

Member State:	**Hungary**
Disease:	**Avian Influenza**
Year of implementation:	**2012**
Reference of this document:	2010/376/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 Comission Decision 2008/425 EC
Contact (name, phone, fax, e-mail):	**Dr. Edith Nagy** Department of Animal Health Animal Health and Animal Welfare Directorate Central Agricultural Office **Tel: +36-1-460-6300 ext. 122** **Fax: +36-1-222-6064** **e-mail:** nagye@oai.hu
Date sent to the Commission:	**30th of April, 2011**

2. Description of the surveillance programme in poultry

2.1 Objectives, general requirements and criteria

2.1.1 Timeframe and Reporting

Sampling will be started at the beginning of the year 2012 and shall be finished by the end of 2012. (The survey shall be completed by the 31st of December, 2012.)
The final report of the survey will be submitted to the Commission and the CRL until 31st of March, 2013 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 Central Agricultural 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 Central Agricultural Office Állategészségügyi Diagnosztikai Igazgatóság
Address:	1149 Budapest, Tábornok u. 2., Hungary
Mailing Address:	1581 Budapest, 146. Pf. 2., Hungary
Tel.:	+36-1-460-6300
Fax:	+36-1-252-5177
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:

(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	59	8	10	80	HI
HU21	49	5	10	50	HI
HU22	66	9	10	90	HI
HU23	16	2	10	20	HI
HU31	61	9	10	90	HI
HU32	62	9	10	90	HI
HU33	176	18	10	180	HI
TOTAL	**489**	**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
HU21	3	3	10	30	HI
HU32	1	1	10	10	HI
TOTAL	**4**	**4**		**40**	

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	13	5	10	50	HI
HU21	48	16	10	160	HI
HU22	29	10	10	100	HI
HU23	5	2	10	20	HI
HU31	5	2	10	20	HI
HU32	28	11	10	110	HI
HU33	17	7	10	70	HI
TOTAL	**145**	**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	1	1	10	10	HI
HU21	22	5	10	50	HI
HU22	123	20	10	200	HI
HU23	50	10	10	100	HI
HU31	2	2	10	20	HI
HU32	29	7	10	70	HI
HU33	90	15	10	150	HI
TOTAL	**317**	**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
HU31	2	2	10	20	HI
HU32	14	14	10	140	HI
HU33	2	2	10	20	HI
TOTAL	**18**	**18**		**180**	

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
HU31	3	3	10	30	HI
HU33	1	1	10	10	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	3	3	10	30	HI
HU21	3	3	10	30	HI
HU23	2	2	10	20	HI
HU31	1	1	10	10	HI
HU32	6	4	10	40	HI
HU33	25	22	10	220	HI
TOTAL	**40**	**35**		**350**	

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	14735	70	10	700	HI
HU21	69496	70	10	700	HI
HU22	45134	70	10	700	HI
HU23	47038	70	10	700	HI
HU31	49952	70	10	700	HI
HU32	52286	70	10	700	HI
HU33	72858	70	10	700	HI
TOTAL	**351499**	**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	2	2	20	40	HI
HU33	3	3	20	60	HI
TOTAL	**5**	**5**		**100**	

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
HU23	4	4	20	80	HI
HU31	3	3	20	60	HI
HU33	25	25	20	500	HI
TOTAL	**32**	**32**		**640**	

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	2	1	20	20	HI
HU21	3	2	20	40	HI
HU32	3	2	20	40	HI
HU33	287	75	20	1500	HI
TOTAL	**295**	**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	6	5	20	100	HI
HU31	7	5	20	100	HI
HU32	10	8	20	160	HI
HU33	33	29	20	580	HI
TOTAL	**56**	**47**		**940**	

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	2	1	20	20	HI
HU21	3	1	20	20	HI
HU23	1	1	20	20	HI
HU31	1	1	20	20	HI
HU32	68	6	20	120	HI
HU33	375	80	20	1600	HI
TOTAL	**450**	**90**		**1800**	

2.3 Laboratory testing: description of the laboratory tests used

For the testing of all poultry categories mentioned in section 2.2.1, the haemagglutination inhibition test (HI) will be used. The serological testing with the HI method for avian influenza subtypes H5 and H7 will be carried out. Birds showing positive result for serological tests will be re-tested by virus isolation using 9-11 days old embryonated incubated eggs and by RT-PCR.

All laboratory tests will be carried out in accordance with Chapter 2.7.12. on Highly Pathogenic Avian Influenza of Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Fifth Edition, OIE and Commission Decision 2006/437/EC approving a Diagnostic Manual for avian influenza as provided for in Council Directive 2005/94/EC.

3. Description of the surveillance programme in wild birds

3.1 Objectives, general requirements and criteria

The Animal Health and Animal Welfare Directorate of the Central Agricultural Office, in co-operation with other directorates of the same office and with the Ministry of Rural Development as well as with the Ministry for Environment and Water and the Hungarian Ornithological Society are continuing to monitor wild birds for Avian Influenza.

3.1.1 Timeframe and Reporting

Sampling will be started at the beginning of the year 2012 and shall be finished by the end of 2012. (The survey shall be completed by the 31st of December, 2012.)
The final report of the survey will be submitted to the Commission and the CRL until 31st of March, 2013 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 Central Agricultural Office by the end of each month.

3.1.2 Laboratories involved:

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

Name:	Veterinary Diagnostic Directorate of the Central Agricultural Office Állategészségügyi Diagnosztikai Igazgatóság
Address:	1149 Budapest, Tábornok u. 2., Hungary
Mailing Address:	1581 Budapest, 146. Pf. 2., Hungary
Tel.:	+36-1-460-6300
Fax:	+36-1-252-5177
E-mail:	adi.titkarsag@oai.hu

3.2 Design and implementation

The monitoring programme includes the testing of 3500 wild birds in total.

The samples to be taken will be stratified as follows:

- 40% passive surveillance
- 60% active 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.

3.2.2 Active surveillance

The active surveillance involves living and clinically healthy and/or clinically diseased, injured or hunted birds. The samples to be taken will be stratified as follows:

- 70% water fowl (Anseriformes) which will be sampled during the hunting season from shot birds
- 30% other wild birds such as Charidriiformes (shore birds and gulls), swans, pigeons, etc. including zoo birds and birds kept in sanctuaries.

The location of sampling will be selected in co-operation with the above named institutions in order to concentrate on high risk resting areas of migratory water fowl crossing the territory of Hungary.

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

Table 3.2.1 WILD BIRDS TO BE SAMPLED

NUT (2) code	Wild birds to be sampled	Total number of samples to be taken for active surveillance	Total number of samples to be taken for passive surveillance
HU10	Anseriformes	130	120
	Charidriiformes and others	50	
HU21	Anseriformes	220	210
	Charidriiformes and others	100	
HU22	Anseriformes	220	210
	Charidriiformes and others	100	
HU23	Anseriformes	220	210
	Charidriiformes and others	100	
HU31	Anseriformes	210	190
	Charidriiformes and others	90	
HU32	Anseriformes	220	230
	Charidriiformes and others	100	
HU33	Anseriformes	240	230
	Charidriiformes and others	100	
TOTAL		**2100**	**1400**

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 Central Agricultural 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 Central Agricultural 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.

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 Central Agricultural Office

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

Pf.:123 , Hungary

Tel: +36-1-460-6300

Fax: +36-1-222-6064

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 Goverment 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	40	HI (H5+H7)	12	480
Chicken breeder	530	HI (H5+H7)	12	6360
Fattening turkeys	600	HI (H5+H7)	12	7200
Turkey breeder	180	HI (H5+H7)	12	2160
Ratites	40	HI (H5+H7)	12	480
Farmed feathered game (pheasants, partridges, guinea fowl)	350	HI (H5+H7)	12	4200
Backyard flocks	4900	HI (H5+H7)	12	58800
Farmed feathered game (waterfowls)	100	HI (H5+H7)	12	1200
Duck breeders	640	HI (H5+H7)	12	7680
Fattening ducks	1600	HI (H5+H7)	12	19200
Goose breeders	940	HI (H5+H7)	12	11280
Fattening geese	1800	HI (H5+H7)	12	21600
SUBTOTAL (HI)	**12320**			**147840**
~5% PCR	616	PCR	36	22176
~3% VI	369,6	VI	25	9240
TOTAL (HI+PCR+VI)	**13305,6**			**179256**

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)
Active	2100	PCR	36	75600
Passive	1400	PCR	36	50400
SUBTOTAL (PCR)	**3500**			**126000**
10% VI	350	VI	25	8750
TOTAL (PCR + VI)	**3850**			**134750**

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)	12320 (12320 for H5 and 12320 for H7)	12	147840
Virus isolation test (VI)	369,6	25	9240
PCR test (RT-PCR)	616	36	22176
Other measures to be covered	Specify activities		
Sampling	12320 Blood sampling	0,5	6160
Others	-	-	-
TOTAL	**13305,6**		**185416**

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)	380	25	9500
PCR test (RT-PCR)	3800	36	136800
Other measures to be covered	Specify activities		
Sampling	3800 swab sampling	10	38000
Others	-	-	-
TOTAL			**184300**

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