



EUROPEAN COMMISSION
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Unit G5 - Veterinary Programmes

SANCO/10767/2012

*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

Bulgaria

* 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 : BULGARIA

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 serological surveillance of highly pathogenic Avian Influenza subtypes H5 and H7 has the following objectives:

- To detect clinical and subclinical infections and to undertake early protection measures for control the spread of the disease and possible mutation of the virus.
- To detect poultry populations infected with H5 and H7, which are susceptible to the disease and are reared in areas where the risk of disease introduction is considered to be higher.
- To prove that a region is free from notifiable avian influenza in the frame of intercommunity trade from 01.01.2008 and in the frame of international trade according to the rules of World Organisation for Animal Health (OIE), Paris

2.2 Design, implementation and target population

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(max. 32000 chars) :

Serological EXAMINATION for Avian influenza of the following species and birds category:

- Domestic hens, kept in non-commercial holdings or in industrial holdings;
- Domestic birds of the gallinaceous species /breeding stocks, laying hens, turkeys, of ratites/;
- Domestic waterfowls /ducks and geese/;
- Birds, reared and used for hunting (pheasants, partridge, quails, half-savage birds);

2.2.1 Risk based surveillance (RBS)

(max. 32000 chars) :

The plan for laboratory surveillance for 2012 is based on a regional principle as regards to the samples which have to be taken from different bird species and sent for analyses. The programme includes examination of live poultry. It is preferable the samples taken from domestic poultry from gallinaceous species and waterfowls to be sent with a separate cover letters. The samples should be taken within the migratory period of the wild birds and can include considerable number of slaughtered domestic poultry.

In case of taking samples from one settlement the latter must be collected from at least three different backyards/ flocks.

2.2.2 Surveillance based on Representative Sampling

(max. 32000 chars) :

For serological analyses serum samples of clinically healthy birds are sent.

3. Target populations

(max. 32000 chars) :

- Domestic hens, kept in non-commercial holdings or in industrial holdings;
- Domestic birds of the gallinaceous species /breeding stocks, laying hens, turkeys, of ratites/;
- Domestic waterfowls /ducks and geese/;
- Birds, reared and used for hunting (pheasants, partridge, quails, half-savage birds);

4. Risk-based surveillance (RBS) method

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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) :

The Programme is been implemented over the territory of the whole country, major share of the total number of samples foreseen therein being taken from all those 10 administrative districts /veterinary regions/ identified as such of higher risk with regards to AI.

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) :

The frequency of the surveillance in the critical points should be identified individually depending on each of the specificity of the critical points and on the type of the disease (infectious agent, sources of the infection, way of transmission, driving forces of the infectious process, incubation period, natural reservoirs, environmental factors, season, agricultural activities and etc).)

The surveillance frequency could be with decreased intensity in regions considered of lower risk.

4.2. Targeting of populations at risk

(max. 32000 chars) :

Measures included in the programme for poultry surveillance:

Observation of health status of the poultry kept in the poultry farms of intensive mode of keeping /the large poultry holdings/;

Observation of health status of the poultry kept in backyards;

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Testing of samples taken from the birds kept in all regions of the country considered to be of higher risk with regards to AI;
Testing of poultry carcasses collected in case of mortality rates higher than the normal poultry ones;
Strict control on the movements of poultry and poultry products;
Thorough disinfection of transport vehicles entering into the country from third countries;
Control on the implementation of bio-security measures.

4.3. Targeting of poultry holdings to be sampled

(max. 32000 chars) :

Backyard flocks
Duck and geese holdings
Turkey holdings
Farmed game holdings
Pheasants holdings
Poultry holdings (except ducks and geese):

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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 : 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
bg	53	53	20	984	ELISA test
BG	53	53	20	76	agar gel immune diffusion test
Total	106	106		1 060	
Add a new row					

(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.

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

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BG	4	4	20	80	ELISA test	X
bg	1	1	20	20	Haemagglutination-inhibition-test (HI)	X
Total	5	5		100		
Add a new row						
<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 : 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	
bg	6	6	20	120	Haemagglutination-inhibition-test (HI)	X
Total	6	6		120		
Add a new row						
<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>						

Add a category

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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
bg	59	59	40	20 380	Haemagglutination-inhibition-test (HI)
Total	59	59		20 380	
Add a new row					

(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.

6. Frequency and period for testing

(max. 32000 chars) :

The plan for laboratory surveillance for 2012 is based on a regional principle as regards to the samples which have to be taken from different bird species and sent for analyses. The programme includes examination of live poultry. It is preferable the samples taken from domestic poultry from gallinaceous species and waterfowls to be sent with a separate cover letters. The samples should be taken within the migratory period of the wild birds and can include considerable number of slaughtered domestic poultry

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7. Laboratory testing

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

1. Laboratory tests shall be carried out in accordance with the avian influenza diagnostic manual (Commission Decision 2006/437/EC) laying down the procedures for the confirmation and differential diagnosis of avian influenza (including examination of sera from ducks and geese by haemagglutination-inhibition (HI) test).
- 2.. All positive serological findings shall be confirmed by the National Laboratories for avian influenza by a haemagglutination-inhibition test, using designated strains supplied by the Community Reference Laboratory for Avian Influenza:
 - H5 (a) initial test using Ostrich/Denmark/72420/96 (H5N2);
 - (b) test all positives with Duck/Denmark/64650/03 (H5N7) to eliminate N2 cross reactive antibody.
 - H7 (a) initial test using Turkey/England/647/77 (H7N7);
 - (b) test all positives with African Starling/983/79 (H7N1) to eliminate N7 cross reactive antibody.

8. Description of the surveillance programme in wild birds

8.1 Objectives of surveillance

(max 32000 chars)

A. Objectives:

- Virological surveillance for avian influenza in wild birds aim to identify the risk of introduction of AI viruses (LPAI and HPAI) to domestic poultry by:
- to ensure early detection of HPAI H5N1 by investigating increased incidence of morbidity and mortality in wild birds, in particular in selected 'higher risk' species.
 - in the event that HPAI H5N1 is detected in wild birds, then surveillance of live and dead wild birds shall be enhanced to determine whether wild birds of other species can act as asymptomatic carriers or 'bridge species' (see table below).
 - to continue a 'baseline' surveillance of different species of free living migratory birds as part of continuous monitoring of LPAI viruses. Anseriformes (water fowl) and Charadriiformes (shorebirds and gulls) shall be the main sampling targets to assess if they carry LPAI viruses of H5 and H7 subtypes (which would in any case also detect HPAI H5N1 and other HPAI, if present). 'Higher risk species' must be targeted in particular.

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B. General requirements and criteria:

1. Sampling shall not extend beyond 31 December 2011.
2. Testing of samples shall be carried out at National Reference Laboratory for Avian Influenza under the National Diagnostic and Research Veterinary Institute /NDRVI/, Sofia National Reference Laboratory for Diagnostics of Avian Influenza and Newcastle Disease in Varna.
3. All results, both serological and virological, shall be sent to the Community Reference Laboratory for Avian Influenza. All isolates positive for Avian Influenza will be submitted to the Community Reference Laboratory.

8.2 Surveillance design

(max. 32000 chars):

1. It is necessary the participation of ornithological institutions and organizations responsible for the ringing of birds. Where necessary this must be done under the supervision of these organizations or by the hunters.
2. The active surveillance in living or hunted birds shall be targeted on:
 - a) populations from different wild birds species presenting a "higher risk" identified on the basis of:
 - origin and the migratory flyways;
 - the number of the wild birds in the Community;
 - the probability of contact with domestic poultry;
 - b) identification of areas of a higher risk based on:
 - mixed sites frequented by high number of different species migratory birds but mostly those in annex 1;
 - in proximity to domestic poultry farms;
 - location of the migratory flyway;
3. The passive surveillance in wild birds, found dead, should be focused on the presence of increased mortality or outbreaks of acute infectious disease:
/a/ in wild birds listed in p.3.1 and other wild birds in contact with them;
/b/ in areas described p. 2 /b/
Increased incidences of mortality of different bird species concentrated in one place is an additional factor that should be taken into consideration.
A detailed description of the number of samples per villages and the sampling method (virological).
The frequency of the surveillance in the critical points should be identified individually depending on each of the specificity of the critical points and on

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the type of the disease (infectious agent, sources of the infection, way of transmission, driving forces of the infectious process, incubation period, natural reservoirs, environmental factors, season, agricultural activities and etc.)

The surveillance frequency could be with decreased intensity in regions considered of lower risk.

The National Veterinary Service has prepared model cover letters, according to the European Commission requirements, for submission of the samples to the National Reference Laboratories "Newcastle disease and Avian Influenza A".

8.3 Sampling procedures

max 32000 chars :

1. Oropharyngeal and cloacal swabs for virological examination shall be taken from apparently healthy free living birds. If for any reason it is impractical to take cloacal swabs from live birds carefully collected fresh faeces samples may serve as an alternative. However, traceability in case of mixed sites frequented by different bird species must be ensured.
2. Cloacal and tracheal/oropharyngeal swabs and/or tissues (namely the brain, heart, lung, trachea, kidney and intestines) from wild birds found dead or shot shall be sampled for virus isolation and molecular detection (PCR).
3. Specific care has to be taken for the storage and transport of samples. Swabs must be chilled immediately on ice or with frozen gel packs and submitted to the laboratory as quickly as possible. Samples must not be frozen unless absolutely necessary. If available, swabs must be placed in antibiotic or specific virus transport medium so that they are fully immersed. Placing samples in medium for transportation must be done in addition to chilling and not as an alternative to chilling. In the absence of such medium, swabs must be returned to their casing and submitted dry. If rapid transport within 48 hours to the laboratory (in transport medium at 4° Celsius) is not guaranteed, samples shall be immediately frozen, stored and then transported on dry ice. Storage and transport of samples may be affected by a variety of factors so the method selected must be fit for purpose.
4. Sampling procedures shall be carried out in accordance with the avian influenza diagnostic manual laying down the procedures for the confirmation and differential diagnostic of avian influenza.

8.4 Laboratory testing

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max 32000 chars :

1. Virus isolation in chick embryos as per the routine procedures for testing of samples from faeces or oro-tracheal swabs.
2. Detection of the nucleic acids of the viruses of Avian Influenza and Newcastle disease through real-time reverse transcriptase Polymerase Chain Reaction assay.
3. Identification of the isolated virus through agar gel precipitation test for avian influenza virus and haemagglutination inhibition test for paramyxovirus.
4. Characterization of the Newcastle disease isolated viruses for identification the type of the strains - velogenic, mesogenic or lentogenic through biological tests: determining the mean death time of 10 days-old chick embryos, determining of intracerebral pathogenicity index in day-old chickens and in case of necessity sending of material for genetic analyses to an international reference laboratory sending of material for genetic analyses to an international reference laboratory.

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

NUTS (2) code/region (a)	Wild birds to be sampled	Total number of birds to be sampled	Estimated total number of samples to be taken for active surveillance	Estimated total number of samples to be taken for passive surveillance	
BG 413	20	20	15	5	X
BG341	60	60	40	20	X
BG331	45	45	40	5	X
BG321	10	10	10	0	X
BG311	50	50	40	10	X
BG313	15	15	10	5	X

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BG322	20	20	15	5	X
BG332	40	40	30	10	X
BG415	55	55	45	10	X
BG425	30	30	25	5	X
BG315	20	20	15	5	X
BG312	40	40	30	10	X
BG423	85	85	65	20	X
BG414	20	20	15	5	X
BG314	20	20	15	5	X
BG421	60	60	45	15	X
BG324	20	20	15	5	X
BG323	30	30	25	5	X
BG325	25	25	20	5	X
BG342	40	40	30	10	X
BG324	20	20	15	5	X
BG412	10	10	10	0	X
BG344	40	40	30	10	X
BG334	30	30	25	5	X

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BG422	85	85	65	20	X
BG333	30	30	25	5	X
BG343	30	30	25	5	X
Total		950	740	210	
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.

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

max 32000 chars :

Each year since 2000, an annual AI Surveillance Programme in poultry has been implemented in Bulgaria.

Measures included in the programme for poultry surveillance:

Observation of health status of the poultry kept in the poultry farms of intensive mode of keeping /the large poultry holdings/;

Observation of health status of the poultry kept in backyards;

Testing of samples taken from the birds kept in all regions of the country considered to be of higher risk with regards to AI;

Testing of poultry carcasses collected in case of mortality rates higher than the normal poultry ones;

Strict control on the movements of poultry and poultry products;

Thorough disinfection of transport vehicles entering into the country from third countries;

Control on the implementation of bio-security measures.

Epidemiological situation in birds throughout the last 5 years:

During the last 5 years not a single case of highly pathogenic Avian influenza (HPAI) has ever been identified in poultry populations in Republic of Bulgaria.

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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 BFSA of Bulgaria is the national competent authority responsible for the implementation of the AI Surveillance Programme.

This Programme is directly performed by registered veterinarians exercising private practice /registered private practitioners/ under the control of the official veterinarians directly responsible for all the country municipalities located within the 28 administrative districts (= 28 veterinary regions) of Bulgaria.

The outcomes of implementation of the AI Surveillance Programme are reported in writing on monthly basis by the 28 "Animal Health" Department Chiefs (with the 28 Regional Food Safety Departments) to the "Animal Health and Welfare " Directorate at the BFSA Central Administration. Each week the National reference Laboratory send information, regarding the samples from the Surveillance Programme to the Animal Health and Welfare Directorate in the BFSA.

9.1.2 System in place for the registration of holdings

(max. 32000 chars) :

All poultry holdings (including backyard poultry) are registered and have an identification number according to the Law of veterinary activity.

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9.1.3 Data on vaccination carried out

(max. 32000 chars) :

The prophylactic vaccination against Avian Influenza is prohibited. In Republic of Bulgaria the vaccination against the disease was never carried on.

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

(max. 32000 chars) :

Each year since 2000, an annual AI Surveillance Programme in wild birds has been implemented. Measures included in the programme for wild birds surveillance:

AI in poultry has never been found out up to 31.01.2006:

On 31.01.2006 in river Danube near the town of Vidin a sick swan was found. AI virus, strain H5 was isolated from the swan at the National Reference Laboratory on AI in Sofia. The isolate was sent to Central Reference Laboratory of the European Community in Waybridge, Great Britain and on 10.2.2006 the isolate was confirmed as influenza A H5N1;

On 09.02.2006 in samples taken from dead swans found in the lake of Durankulak, region of Dobrich, a virus was isolated determined as influenza of the type A-H5;

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On 09.02.2006 virus H5N1 was isolated from a dead swan found out in the dam Tzonevo, region of Varna.

On 11.02.2006 a virus of influenza H5 was confirmed in dead swan found out on the beach of Karimorie residential quarter, town of Burgas.

On 08.02.2008 a Low pathogenic avian influenza virus H7N7 was confirmed in a mallard duck shot near to the village of Han Krum, municipality of Veliki Preslav, administrative district of Shoumen.

On 01.04.2010 a highly pathogenic avian influenza (H5N1) was confirmed in a buzzard (Buteo buteo) found dead at the Black sea coast in Varna region, Bulgaria.

10.1 Measures included in the programme for surveillance in wild birds

(max. 32000 chars):

Monitoring of the wild birds migration;
monitoring of the mortality in wild birds;
capture and taking samples from wild bird;
survey and laboratory testing of samples from wild birds;
Epidemiological situation in wild birds throughout the last 5 years:

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 BFSA is the national competent authority responsible for the implementation of the AI Surveillance Programme. The Programme is been performed under the assistance rendered by the local associations of ornithologists and by the local units of the national Union of Hunters and Anglers of Bulgaria.

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

(max. 32000 chars) :

5.1.2 The Programme is been implemented over the territory of the whole country, major share of the total number of samples foreseen therein being taken from all those 10 administrative districts /veterinary regions/ identified as such of higher risk with regards to AI.5.1.3 Throughout the whole season of intensive wild bird migration, the “Animal Health Welfare” Directorate at the BFSA Central Administration would receive the daily information about the numbers and the health status of the wild birds observed

10.1.3 Estimation of the local and/or migratory wildlife population

(max. 32000 chars) :

N/A

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

(max. 32000 chars) :

The Law on Veterinary Activities, Art.124 and Ordinance No.23 / 14.12.2005 on the order and the way of notification and registration of infectious diseases in animals, which is harmonized with Council Directive 82/894/EEC

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12. Costs

12.1 Detailed analysis of the costs

12.1.1 Poultry

(max. 32000 chars) :

1. Costs related to taking and transportation of samples for testing to diagnostics laboratories
2. Costs for the purchase of the required diagnostics kits
3. Costs for compensations to the owners of compulsively killed or slaughtered birds
4. Costs for remuneration of the labor of the executers of the program

12.1.2 Wild birds

(max. 32000 chars) :

1. Costs related to capture of wild birds
2. Costs related to taking and transportation of samples for testing to diagnostics laboratories
3. Costs for the purchase of the required diagnostics kits
4. Costs for remuneration of the labor of the executers of the program

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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	3 158	1	3158
agar gel immune diffusion test	234	21	4914
Haemagglutination-inhibition-test (HI) for H5 (specify number of tests for H5)	2 160	2	4320
Haemagglutination-inhibition-test (HI) for H7 (specify number of tests for H7)	2 160	2	4320
Virus isolation test	500	15	7500
PCR test	1 000	10	10000
Total	9 212		34 212,00 €
Other measures to be covered			
Sampling	9 213	1	9213
Others /transport	9 213	1	9213
			Add a new row

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Total	2			18 426,00 €
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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	550	15	8250
PCR test	400	10	4000
Other please specify here	0	0	0
Total	950	25,00 €	12 250,00 €
Other measures to be covered			
Sampling	950	3	2850 X
Transport	950	1	950 X
Add a new row			
Total	1900	4,00 €	3 800,00 €

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