



EUROPEAN COMMISSION  
HEALTH AND CONSUMERS DIRECTORATE-GENERAL

Director General

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

## **Survey programme for Avian Influenza**

**Bulgaria**

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

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



MINISTRY OF AGRICULTURE AND FOOD

BULGARIAN FOOD SAFETY AGENCY

✉ Sofia, 1606, "Pencho Slaveikov" blvd. 15A

☎ +359 (0) 2 915 98 20, 📠 +359 (0) 2 954 95 93, [www.babh.government.bg](http://www.babh.government.bg)

**PROGRAMME  
FOR  
SURVEILLANCE OF AVIAN INFLUENZA IN  
DOMESTIC POULTRY AND WILD BIRDS IN THE REPUBLIC OF BULGARIA  
FOR THE YEAR OF 2013**

**1. IDENTIFICATION OF THE PROGRAMME:**

**Member State:** Republic of Bulgaria

**Disease:** Avian Influenza

**Year of implementation:** 2013

**Reference to this document:**

- **Law on veterinary activity** (SG 87/1 November 2005 in force since 1 May 2006)  
"Art. 123. (1) The NVS shall draft national programs for epizootic surveillance of some specific contagious diseases.  
(2) The Minister of Agriculture and Forestry shall approve the programs under paragraph 1 upon a proposal of the Executive Director General of the BFSE."
- **Ordinance № SG-103** of 21 August 2006 on the measures for prevention, control and eradication of Avian Influenza (flu) disease; issued by the Ministry of Agriculture and Forestry and entered into force from 01.07.2007, SG No 83 of 13 October 2006 (harmonized with Council Directive 2005/94 EEC).
- **Commission Decision 2010/367/EU** on by Member States of surveillance programmes for avian influenza in poultry and wild birds.

**Contact:**

Dr Yordan Voynov

Executive Director

Bulgarian Food Safety Agency

15A "Pencho Slaveikov" blvd.

1606 Sofia, Bulgaria

tel. ++359 2 915 98 20

fax: ++359 2 952 38 35

E-mail: [y\\_voinov@nvms.government.bg](mailto:y_voinov@nvms.government.bg)

**Date sent to the Commission:** 30.04.2012

## **2. DESCRIPTION OF THE SURVEILLANCE PROGRAMME IN POULTRY:**

### **2.1 Objectives, general requirements and criteria, target populations**

#### **A. Objectives:**

The objectives of the surveillance programmes for avian influenza in poultry are to detect circulation of avian influenza virus with a view to controlling the disease in accordance with Directive 2005/94/EC by the annual detection through active surveillance for:

- (a) low pathogenic avian influenza (LPAI) of subtypes H5 and H7 in gallinaceous birds (chickens, turkeys, guinea fowl, pheasants, partridges and quails) and ratites.
- (b) LPAI of subtypes H5 and H7 and highly pathogenic avian influenza (HPAI) in domestic waterfowl (ducks, geese and mallards for re-stocking supplies of game);

#### **B. General requirements and criteria:**

1. Sampling and serological testing in poultry holdings shall be carried out in order to detect the presence of antibodies to avian influenza, as defined in Directive 2005/94/EC.
2. Animal disease surveillance shall be based on the risk and on the representative sampling scheme.

#### **C. Target populations**

The sampling of the following poultry species and production categories shall be included in the surveillance programme:

- (a) laying hens;
- (b) free range laying hens;
- (c) chicken breeders;
- (d) turkey breeders;
- (e) duck breeders;
- (f) geese breeders;
- (g) fattening turkeys;
- (h) fattening ducks;
- (i) fattening geese;
- (j) farmed game birds (gallinaceous) focusing on adult birds such as breeding birds;
- (k) farmed game birds (waterfowl);
- (l) ratites.

However, some broiler holding will be included because(1) they are kept in significant numbers in free range production and (2) they are considered to pose a higher risk of infection with avian influenza.

### **2.2 DESIGN AND IMPLEMENTATION:**

### **2.2.1 Surveillance design**

The surveillance design in the programme is based on two approaches- risk based sampling and the representative sampling.

#### **2.2.1.1 Risk-based surveillance:**

The criteria and risk factors used to draft the risk-based surveillance design are the surveillance data in the country, AI cases recorded in the country and neighbor countries in past years and location of the poultry holding in areas with a high density of migratory wild birds or areas where the migratory wild water birds may gather.

In 2006 AI has been found in swans in four regions in the country – Vidin, Dobrich, Varna and Burgas. Concerning the epidemiological situation in the country in last years, please see point 5 in the programme.

All regions bordering on Romania are considered as regions with high risk of AI because of the AI cases recorded in Romania and in the Danube Delta.

Concerning the migratory wild birds, the regions of Silistra , Dobrich, Varna and Burgas are the regions where pass a migratory route ( named Via Pontica).

Based on these facts there are 10 administrative regions identified as such of higher risk with regards to AI ( Vidin, Montana, Vratsa, Pleven, Veliko Turnovo, Ruse, Silistra, Dobrich, Varna and Burgas). Samples for serological surveillance will be taken from all poultry holdings located in these 10 administrative regions.

#### **2.2.1.2 Surveillance based on Representative Sampling:**

Other regions of the country have also been included in the programme as the surveillance design in these regions is based on the representative sampling. The number of poultry holdings to be sampled under the programme has been determined so that this sampling to be considered as representative for the whole of the country.

The numbers of poultry holdings, per poultry production category located in the country and included in the programme are as follow:

Laying hens : There are 107 laying hen holdings with 2 346 142 poultry and 31 breeding flock holdings with 1 361 889 poultry, totally 138 holdings. 53 holdings from them will be sampled (according to the Table 1, point 5.1.1 of the Annex I of Decision 2010/367/EC) with 3 091 samples for serological surveillance in a total. The numbers of holdings to be sampled has been defined in accordance with the sampling procedures laid down in point 5.2.1 of the Annex I of Decision 2010/367/EC.

Turkey: There are one turkey breeding holding with 2600 and one fattening turkey holding with 3800. Totally 2 sites with 6 400 birds and 117 samples will be taken for serological surveillance in a total.

Farmed game: Samples will be taken from holdings breeding rock partridges and pheasants (aviaries) .There are five aviaries in the country and 295 samples will be taken for serological surveillance in a total.

Broilers: In Bulgaria broilers are reared indoors and therefore they are not included in the program. There are 179 broiler holdings rearing 9,500,000 broilers for a period of one year.

Backyards holdings There are 307 034 holdings rearing 1,688,687 birds. These holdings are not included in the program because they play a minor role in virus circulation and spread of avian influenza and sampling them require a lot of resources. In case of suspicion or/and increased mortality in backyard birds, samples must be taken.

Waterfowl - geese and mallards: There are 150 waterfowl holdings with a total of 1,538,856 fattening and 3 sites with 39,460 breeding. 80 holdings from them will be sampled (according to the Table 2, point 5.1.2 of the Annex I of Decision 2010/367/EC) as 720 samples will be taken for serological surveillance in a total. The numbers of holdings to be sampled has been defined in accordance with the sampling procedures laid down in point 5.2.2 of the Annex I of Decision 2010/367/EC.

### **2.2.2 Sampling procedures in domestic poultry.**

The number of poultry holdings (for each poultry production category, except those of ducks, geese and mallards) to be sampled is defined so as to ensure the identification of at least one infected poultry holding where the prevalence of infected poultry holdings is at least 5 %, with a 95 % confidence interval.

The number of duck, goose and mallard holdings to be sampled is defined so as to ensure the identification of at least one infected poultry holding where the prevalence of infected poultry holdings is at least 5 %, with a 99 % confidence interval.

#### **2.2.2.1. Sampling procedures for serological testing**

Serological testing for Avian influenza shall be carried out in the following species and birds category:

a) Domestic poultry hens, kept in non-commercial holdings ( back yards) or in industrial holdings

- the gallinaceous species /breeding stocks, laying hens, turkeys, ratites/;
- the waterfowls species / breeders and fattening ducks and geese/;

b) Birds, reared and used for hunting (pheasants, partridge, quails, half-savage birds) ((gallinaceous) focusing on adult birds such as breeding birds and waterfowl);

#### **2.2.2.2. Sampling for virological testing**

Sampling for virological testing for avian influenza shall not be used as an alternative to serological testing and must be performed solely within the framework of investigations to follow-up serological positive testing results for avian influenza.

#### **2.2.3. Frequency and period for testing**

The sampling of poultry holdings shall be carried out annually. The time period for sampling in the poultry holding shall coincide with seasonal production for each poultry production category.

In order to optimise efficiency and also to avoid the unnecessary entry of persons onto poultry holdings, whenever it possible sampling may be combined with sampling for other purposes, such as within the framework of *Salmonella* control.

Sampling shall be carried out in accordance with the approved surveillance programme from 1 January to 31 December 2013.

### **SAMPLE SELECTION, COLLECTION AND SENDING:**

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

- **Blood** obtained by a single-use closed blood sampling system. The blood is collected of the internal part of the wing from v. cutanea ulnaris and v. Brachialis, using vacuum container type butterfly.

The samples are chilled immediately on ice and submitted to the laboratory as quickly as possible. If rapid transportation can not be guaranteed the samples can be stored for 48 to 72 hours at 0 - 4°C and for a longer period – at -70° C. The specimens for virological sampling should not be transported on dry ice, since the CO<sub>2</sub> inactivate immediately the avian influenza virus.

The plan for laboratory surveillance for 2013 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.

**Table I Poultry holdings (except ducks and geese):**

<b>NUTS code</b>	<b>Region</b>	<b>Total number of poultry holdings (breeders and laying hens)</b>	<b>Number of poultry holdings included in the programme (number of poultry holdings to be Sampled)</b>	<b>Poultry production category</b>	<b>Settlements</b>	<b>Number of samples per holdings</b>
<u>BG413</u>	Blagoevgrad	1	1	laying hens	Leshnitsa village	58
<u>BG341</u>	Bourgas	3	3	laying hens	Aitos city	59
				laying hens	Burgas city	57
				laying hens	Medovo village	57
				laying hens	Slanchevo village	59
<u>BG331</u>	Varna	4	4	laying hens	Osenovo village	59
				laying hens	Varna city	59
				breeders	Konstantinovo village	59
				laying hens	Gorna Oryahovitsa city	56
<u>BG321</u>	V.Tarnovo	13	2	breeders	Dzhulyunitsa village	59
<u>BG311</u>	Vidin	1	1	laying hens	Ivanovtsi village	58
<u>BG313</u>	Vratsa	4	4	laying hens	Kozlodui city	59
				laying hens	Kozlodui city	59
				laying hens	Miziya city	59

				breeders	Mramoren village	59
<u>BG322</u>	Gabrovo	4	1	breeders	Stoevtsi village	58
<u>BG332</u>	Dobrich	6	6	laying hens	Donchevo village	59
				laying hens	Donchevo village	59
				laying hens	General Toshevo village	59
				breeders	Paskalevo village	59
				breeders	Dobrich, Riltsi district	59
				breeders	Donchevo village	59
<u>BG425</u>	Kardzjali	5	1	laying hens	Gluhar village	59
<u>BG415</u>	Kyustendil	3	1	laying hens	Shishkovtci village	59
<u>BG315</u>	Lovech	9	2	laying hens	Apriltsi village	54
				breeders	Kazatchevo village	58
<u>BG312</u>	Montana	4	2	breeders	Blagovo village	59
				breeders	Blagovo village	59
<u>BG423</u>	Pazardzjik	5	1	laying hens	Peshtera city	59
<u>BG414</u>	Pernik	3	1	laying hens	Radomir city	57
<u>BG314</u>	Pleven	9	2	laying hens	Slavyanovo city	58
				breeders	Radishevo city	59
<u>BG421</u>	Plovdiv	6	2	laying hens	Tsarimir city	58
				laying hens	Rakovski city	58
<u>BG324</u>	Razgrad	1	1	laying hens	Kichenitsa village	59
<u>BG323</u>	Rouse	3	3	laying hens	Chervena voda city	59
				laying hens	Buzovets village	59
				breeders	Rouse village	59
<u>BG325</u>	Silistra	5	5	laying hens	Kalipetrovo village	59
				laying hens	Alfatar city	58
				laying hens	Smilets village	59
				laying hens	Tsar Asen village	59
				breeders	Zafirovo villlage	58
<u>BG342</u>	Sliven	2	1	breeders	Kermen village	58
<u>BG424</u>	Smolyan	2	1	laying hens	Smolyan city	59
<u>BG411</u>	Sofia- city	5	1	laying hens	Bankya city	57
<u>BG412</u>	Sofia- district	12	1	laying hens	Kostinbrof city	59
<u>BG344</u>	Stara Zagora	9	1	laying hens	Elenino village	58
<u>BG334</u>	Targovishte	5	1	breeders	Popovo city	58
<u>BG422</u>	Haskovo	6	1	laying hens	Brod village	57
<u>BG333</u>	Shoumen	2	1	breeders	Panayot Volov village	59
<u>BG343</u>	Yambol	6	2	laying hens	Malomir village	56
				laying hens	Chernozem village	56
<b>Toatal</b>		<b>138</b>	<b>53</b>			<b>3091</b>

Table III Turkey holdings to be sampled:

NUTS code	Region	Total number of turkey holdings (breeders and fattening turkey)	Number of poultry holdings included in the programme (number of poultry holdings to be	Poultry production category	Settlements	Number of samples per holdings
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			sampled)			
<a href="#">BG344</a>	Stara Zagora	2	2	breeders	Malko Kadievo	58
				fattening	Stara Zagora	59
<b>Total</b>		<b>2</b>	<b>2</b>			<b>117</b>

Table IV **Farmed game holdings to be sampled**

NUTS code	Region	Total number of farmed game holdings	Number of holdings included in the programme (number of farmed game holdings to be sampled)	Poultry production category	Settlements	Number of samples per holdings
<a href="#">BG314</a>	Плевен	1	1	pheasants	“Dren” area	59
<a href="#">BG343</a>	Yambol	1	1	pheasants	Yambol city	59
		1	1	pheasants	Elhovo city	59
<a href="#">BG344</a>	Stara Zagora	1	1	pheasants	Tryunkovo village	59
<a href="#">BG342</a>	Sliven	1	1	guails	Sliven city	59
<b>Total</b>		<b>5</b>	<b>5</b>			<b>295</b>

Table V **Duck and geese holdings to be sampled:**

NUTS code	Region	Total number of duck and geese holdings	Number of holdings included in the programme (number of duck and geese holdings to be sampled)	Poultry production category	Settlements	Number of samples per holdings
<a href="#">BG341</a>	Bourgas	1	1	fattening	Podvis	9
<a href="#">BG331</a>	Varna	14	14	fattening	Botevo	9
				fattening	Lyuben Karavelovo	9
				fattening	Lyuben karavelovo	9
				fattening	Slunchevo	9
				fattening	Beloslav	9
				fattening	Gospodinovo	9
				fattening	Dyulino	9
				fattening	Dolni Chiflik	9
				fattening	Rudnik	9
				fattening	Rudnik	9



				fattening	Krivnya	9
				fattening	Banovo	9
				fattening	Levski	9
				fattening	Chernovo	9
<u>BG332</u>	Dobrich	3	3	fattening	Malina	9
				fattening	Branishte	9
				fattening	Stefanovo	9
<u>BG315</u>	Lovech	6	3	fattening	Yoglav	9
				fattening	Lisec	9
				breeders	Slatina	9
<u>BG423</u>	Pazardzjik	5	2	fattening	Gelemenovo	9
				fattening	Chernogorovo	9
<u>BG314</u>	Pleven	3	2	fattening	Slavyanovo	9
				fattening	Slayanovo	9
<u>BG421</u>	Plovdiv	45	20	fattening	Brezovo	9
				fattening	Drangovo	9
				fattening	Begovo	9
				fattening	Karavelovo	9
				fattening	Sokolitsa	9
				fattening	Manole	9
				fattening	Skutare	9
				fattening	Gradina	9
				fattening	Karadzhalovo	9
				fattening	Krushevo	9
				fattening	Purvomai	9
				fattening	Belozem	9
				fattening	Momino selo	9
				fattening	Rakovski	9
				fattening	Stryama	9
				fattening	Chalukovi	9
				fattening	Popovitsa	9
				fattening	Seltsi	9
				fattening	Tseretelovo	9
				fattening	Staro Zherezare	9
<u>BG324</u>	Razgrad	2	2	fattening	Terter	9
				fattening	Balkanski	9
<u>BG323</u>	Rouse	2	2	fattening	Koprivets	9
				breeders	Koprivets	9
<u>BG325</u>	Silistra	2	2	fattening	Tyrnovtsi	9
				fattening	Tyrnovtsi	9
<u>BG342</u>	Sliven	7	4	fattening	Zhelyu Voivoda	9
				fattening	Zhelyu Voivoda	9
				fattening	Zhelyu Voivoda	9
				fattening	Krushare	9
<u>BG412</u>	Sofia- district	1	1	fattening	Malo Malovo	9
<u>BG344</u>	Stara Zagora	22	9		Bratya Daskalovi	9
					Orizovo	9
					Pravoslav	9
					Cyedinenie	9
					Cherna gora	9
					Yagoda	9
					Bozduganovo	9

					Kaloyanovets	9
					Gita	9
<u>BG422</u>	Haskovo	35	12	fattening	Dimitrovgrad	9
				fattening	Dobrich	9
				fattening	Konstantinovo	9
				fattening	Golyam Izvor	9
				fattening	Zhulti Bryag	9
				fattening	Tunkovo	9
				fattening	Vylgarovo	9
				fattening	Garvanovo	9
				fattening	Knizhovnik	9
				fattening	Manastir	9
				fattening	Uzundzhovo	9
<u>BG343</u>	Yambol	5	3	breeders	Gorski Izvor	9
				fattening	Zimnitsa	9
				fattening	General Inzovo	9
				fattening	Okop	9
<b>Total</b>		<b>153</b>	<b>80</b>			<b>720</b>

Table VI **Backyard flocks:**

NUTS code	Region	Number of Backyards holdings	Number of birds
<u>BG413</u>	Blagoevgrad	16 133	88 732
<u>BG341</u>	Bourgas	9 169	50 430
<u>BG331</u>	Varna	12 040	66 220
<u>BG321</u>	V. Tarnovo	15 571	85 641
<u>BG311</u>	Vidin	8 544	46 992
<u>BG313</u>	Vratsa	17 974	98 857
<u>BG322</u>	Gabrovo	3 940	21 670
<u>BG332</u>	Dobrich	12 873	70 802
<u>BG425</u>	Kardzjali	15 525	85 388
<u>BG415</u>	Kyustendil	8 946	49 203
<u>BG315</u>	Lovech	12 723	69 977
<u>BG312</u>	Montana	15 524	85 382
<u>BG423</u>	Pazardzhik	10 893	59 912
<u>BG414</u>	Pernik	2 751	15 131
<u>BG314</u>	Pleven	22 324	122 782
<u>BG421</u>	Plovdiv	15 295	84 123
<u>BG324</u>	Razgrad	66	363
<u>BG323</u>	Rouse	17 592	96 756
<u>BG325</u>	Silistra	11 268	61 974
<u>BG342</u>	Sliven	9 581	52 696
<u>BG424</u>	Smolyan	1 870	10 285
<u>BG411</u>	Sofia- city	1 541	8 476
<u>BG412</u>	Sofia- district	7 298	40 139
<u>BG344</u>	Stara Zagora	14 790	81 345
<u>BG334</u>	Targovishte	10 420	57 310

<u>BG422</u>	Haskovo	8 526	46 893
<u>BG333</u>	Shoumen	14 069	77 380
<u>BG343</u>	Yambol	9 788	53 834
<b>Total</b>		<b>307 034</b>	<b>1 688 687</b>

**Note:** Backyards flocks are not included in the programme because they play a minor role in virus circulation and spread and sampling them is resource intensive. Compulsory sampling in backyard flocks shall be carried out in case of suspicion or/and increased mortality.

Total number of sample per method:

Gallinaceous species: ELISA- 3 091; AGID- 412;

Waterfowls: HI- 720

### **2.3 LABORATORY TESTING: DESCRIPTION OF THE LABORATORY TESTS:**

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. 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 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:

a) for H5 subtype:

- initial testing using teal/England/7894/06 (H5N3);

- testing of all positives with chicken/Scotland/59(H5N1) to eliminate N3 cross reactive antibodies;

b) for H7 subtype:

- initial testing using turkey/England/647/77 (H7N7);

- testing of all positive with African starling/983/79 (H7N1) to eliminate N7 cross reactive antibodies.

All positive serological findings must be followed up at the poultry holding by epidemiological investigations and further sampling for testing by virological methods in order to determine, if active infection of avian influenza virus is present on the poultry holding. The conclusions of all those investigations shall be reported to the Commission.

All avian influenza virus isolates shall be submitted to the EURL in accordance with Union legislation according to the functions and the duties of the National reference laboratories as laid down in Annex VIII to Directive 2005/94/EC, unless a derogation has been granted as provided for in paragraph 4(d) of Chapter V of the Diagnostic Manual. Viruses of the H5/H7 subtype shall be submitted to the EURL without delay and shall be subjected to the standard characterisation tests (nucleotide sequencing/IVPI) according to the Diagnostic Manual.

The specific protocols provided by the EURL for the submission of samples and diagnostic material shall be used. The samples should be addressed to:

Avian Virology, VLA Weybridge, New Haw, Addlestone, and Surrey KT15 3NB, United Kingdom

Community Reference Laboratory contacts

Ian H. Brown, Director of the Reference Laboratory

Direct TEL: +44 1932 357 339;

Direct FAX: +44 1932 357 239;

Email: [i.h.brown@vla.defra.gsi.gov.uk](mailto:i.h.brown@vla.defra.gsi.gov.uk)

Ruth Manvell, Reference Laboratory Manager

Direct TEL: +44 1932 357 736 or +44 1932 357 708

Direct FAX: +44 1932 357 856

Email: [r.manvell@vla.defra.gsi.gov.uk](mailto:r.manvell@vla.defra.gsi.gov.uk)

### **3. DESCRIPTION OF THE SURVEILLANCE PROGRAMME IN WILD BIRDS:**

#### **3.1 Objectives, general requirements and criteria:**

- **A. Objectives:**

The objective of the surveillance programme for avian influenza in wild birds is the timely detection of HPAI of the subtype H5N1 in wild birds in order to protect poultry in poultry holdings and safeguard veterinary public health.

- **B. General requirements and criteria:**

1. Sampling shall not extend beyond 31 December 2013.
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 avian influenza virus isolates shall be submitted to the Community Reference Laboratory.

The samples should be addressed to:

Avian Virology, VLA Weybridge, New Haw, Addlestone, and Surrey KT15 3NB, United Kingdom

Community Reference Laboratory contacts

Ian H. Brown, Director of the Reference Laboratory

Direct TEL: +44 1932 357 339;

Direct FAX: +44 1932 357 239;

Email: [i.h.brown@vla.defra.gsi.gov.uk](mailto:i.h.brown@vla.defra.gsi.gov.uk)

Ruth Manvell, Reference Laboratory Manager

Direct TEL: +44 1932 357 736 or +44 1932 357 708

Direct FAX: +44 1932 357 856

Email: [r.manvell@vla.defra.gsi.gov.uk](mailto:r.manvell@vla.defra.gsi.gov.uk)

**Table 3.1.1. List of wild bird species to be targeted for sampling and testing for avian influenza—‘target species’ (TS)**

No	Scientific name	Common name
1.	Accipiter gentilis	Northern Goshawk

2.	<i>Accipiter nisus</i>	Eurasian Sparrowhawk
3.	<i>Anas acuta</i>	Northern Pintail
4.	<i>Anas clypeata</i>	Northern Shoveler
5.	<i>Anas crecca</i>	Common Teal
6.	<i>Anas penelope</i>	Eurasian Wigeon
7.	<i>Anas platyrhynchos</i>	Mallard
8.	<i>Anas querquedula</i>	Garganey
9.	<i>Anas strepera</i>	Gadwall
10.	<i>Anser albifrons albifrons</i>	Greater White-fronted Goose (European race)
11.	<i>Anser anser</i>	Greylag Goose
12.	<i>Anser brachyrhynchus</i>	Pink-footed Goose
13.	<i>Anser erythropus</i>	Lesser White-fronted Goose
14.	<i>Anser fabalis</i>	Bean Goose
15.	<i>Ardea cinerea</i>	Grey Heron
16.	<i>Aythya ferina</i>	Common Pochard
17.	<i>Aythya fuligula</i>	Tufted Duck
18.	<i>Branta bernicla</i>	Brent Goose
19.	<i>Branta canadensis</i>	Canada Goose
20.	<i>Branta leucopsis</i>	Barnacle Goose
21.	<i>Branta ruficollis</i>	Red-breasted Goose
22.	<i>Bubo bubo</i>	Eurasian Eagle-Owl
23.	<i>Buteo buteo</i>	Common Buzzard
24.	<i>Buteo lagopus</i>	Rough-legged Buzzard
25.	<i>Cairina moschata</i>	Muscovy Duck
26.	<i>Ciconia ciconia</i>	White Stork
27.	<i>Circus aeruginosus</i>	Eurasian Marsh Harrier
28.	<i>Cygnus columbianus</i>	Bewick's Swan
29.	<i>Cygnus cygnus</i>	Whooper swan
30.	<i>Cygnus olor</i>	Mute Swan
31.	<i>Falco peregrinus</i>	Peregrine Falcon
32.	<i>Falco tinnunculus</i>	Common Kestrel
33.	<i>Fulica atra</i>	Eurasian Coot
34.	<i>Larus canus</i>	Common Gull
35.	<i>Larus ridibundus</i>	Black-headed Gull
36.	<i>Limosa limosa</i>	Black-tailed Godwit

37.	Marmaronetta angustirostris	Marbled Teal
38.	Mergus albellus	Smew
39.	Milvus migrans	Black Kite
40.	Milvus milvus	Red Kite
41.	Netta rufina	Red-crested Pochard
42.	Phalacrocorax carbo	Great Cormorant
43.	Philomachus pugnax	Ruff
44.	Pica pica	Eurasian Magpie
45.	Pluvialis apricaria	Eurasian Golden Plover
46.	Podiceps cristatus	Great Crested Grebe
47.	Podiceps nigricollis	Black-necked Grebe
48.	Porphyrio porphyrio	Purple Swamphen
49.	Tachybaptus ruficollis	Little Grebe
50.	Vanellus vanellus	Northern Lapwing

**Table 3.1.2- List of birds living in proximity to domestic poultry**

Species	Latin name	EURING code
Domestic Goose	<i>Anser anser domesticus</i>	01610
Domestic mallard	<i>Anas platyrhynchos</i>	01860
Domestic Muscovy Duck	<i>Cairina moschata</i>	01750
Feral Pigeon	<i>Columba livia</i>	06650
House Sparrow	<i>Passer domesticus</i>	15910

### 3.2 DESIGN AND IMPLEMENTATION:

(a) A risk-based surveillance (RBS) shall be implemented as a ‘passive’ surveillance system by laboratory investigation of moribund wild birds or birds found dead and it shall be specifically directed towards water bird species.

(b) Wild birds, in particular migratory water birds, that have been shown to be at a higher risk of becoming infected with, and transmitting the HPAI H5N1 virus, the ‘target species’ (TS) ( listed in Table 3.1.1), shall be specifically targeted.

(c) Areas close to the sea, lakes and waterways where birds were found dead; and in particular when these areas are in close proximity to poultry holdings ( listed in Table 3.1.2) , especially in areas where there is a high density of poultry holdings, shall be targeted.

(d) 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.

(e) If the epidemiological situation for the HPAI H5N1 virus so requires, surveillance activities shall be enhanced by awareness raising and active searching and monitoring for dead or moribund wild birds, in particular for those belonging to TS. This could be triggered by the detection of the HPAI H5N1 virus in poultry and/or wild birds in neighbouring Member States and third countries or in countries which are linked via the movement of migratory wild birds, in particular those of TS, to the Member State concerned. In that case the specific migration patterns and wild bird species, which may vary in different Member States shall be taken into account.

A detailed description of the number of samples per villages, please see Table 3.2.1.

The Bulgarian Food Safety Agency 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”.

**Sampling procedures:**

- a) Sampling procedures shall be carried out in accordance with the Diagnostic Manual.
- (b) Cloacal and tracheal/oropharyngeal swabs and/or tissues from wild birds found dead or moribund shall be sampled for molecular detection (PCR) and/or virus isolation.
- (c) Specific care must be taken for the storage and transport of samples in accordance with paragraphs 5 and 6 of Chapter IV of the Diagnostic Manual. All avian influenza virus isolates of cases in wild birds shall be submitted to the EURL, unless a derogation has been granted as provided for in paragraph 4(d) of Chapter V of the Diagnostic Manual. Viruses of the H5/H7 subtype shall be submitted to the EURL without delay and shall be subjected to the standard characterisation tests (nucleotide sequencing/IVPI) according to the Diagnostic Manual.

**Table 3.2.1**

**Wild birds:**

NUTS code	Number of samples for passive surveillance
<u>BG311</u>	10
<u>BG312</u>	10
<u>BG313</u>	10
<u>BG314</u>	10
<u>BG315</u>	10
<u>BG321</u>	15
<u>BG322</u>	10
<u>BG323</u>	15
<u>BG324</u>	10
<u>BG325</u>	10

BG331	10
BG332	10
BG333	20
BG334	15
BG341	10
BG342	10
BG343	15
BG344	5
BG411	10
BG412	5
BG413	20
BG414	10
BG415	15
BG421	5
BG422	10
BG423	5
BG424	5
BG425	5
<b>Total number of samples</b>	<b>295</b>

### **3.3 LABORATORY TESTING:**

1. Laboratory tests shall be carried out in accordance with the Diagnostic Manual (Commission Decision 2006/437/EC).
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.

Initial screening using M gene PCR shall be carried out, followed by rapid testing of positive findings for H5 which shall be carried out within a period of not more than 2 weeks. In case of a positive finding for H5, an analysis of the cleavage site shall be undertaken as soon as possible to determine whether or not it has a highly pathogenic avian influenza (HPAI) or a low pathogenic avian influenza (LPAI) motif. Where H5 HPAI is confirmed, further analysis to determine the N type must be done rapidly, even though this can only provide evidence to eliminate N1.

3. 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
4. In case of confirmed positive cases of HPAI H5 (N1)\*, the control measures laid down in Commission Decision 2006/563/EC of 11 August 2006 concerning certain protection measures in relation to highly pathogenic avian influenza of subtype H5N1 in wild birds in the Community and repealing Decision 2006/115/EC shall apply.

\*disease control measures are to be implemented based on confirmation of HPAI H5 and suspicion of N1)=

### **4. DESCRIPTION OF THE EPIDEMIOLOGICAL SITUATION OF THE DISEASE IN POULTRY DURING THE LAST FIVE YEARS:**

4. 1. 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.

4.1.1. 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.

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

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

## **5. DESCRIPTION OF THE EPIDEMIOLOGICAL SITUATION OF THE DISEASE IN WILD BIRDS DURING THE LAST FIVE YEARS:**

5. 1. Each year since 2000, an annual AI Surveillance Programme in wild birds has been implemented.

Measures included in the programme for wild birds surveillance:

- ✚ 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:

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

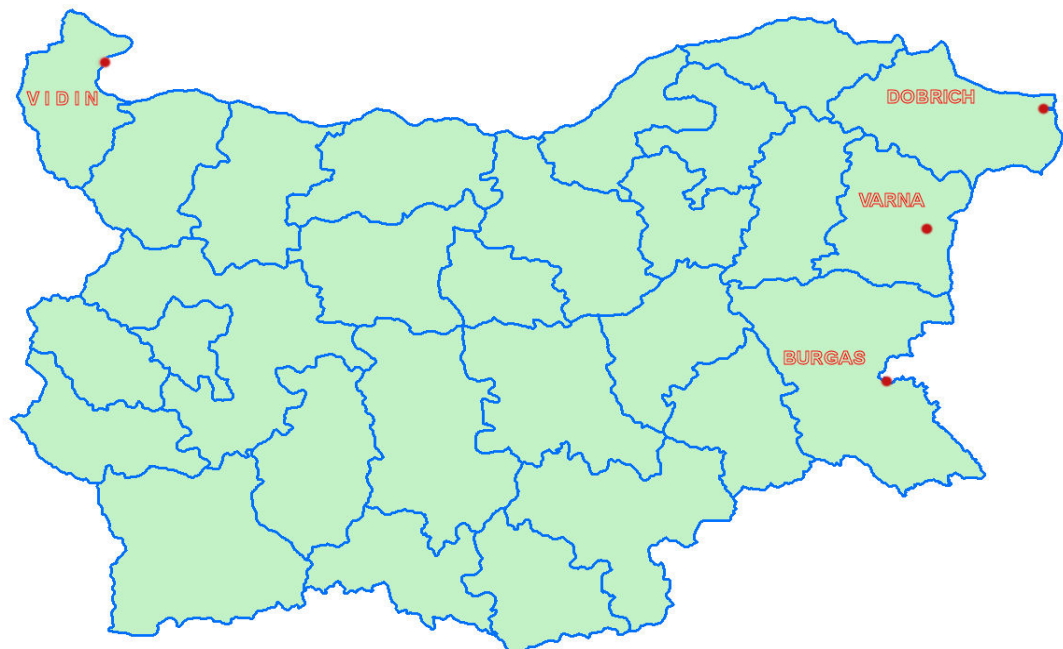
On 31.01.2006 in river Danube near the town of Vidin a sick swan was found. AI virus, strain H5 was isolated from the swan at the National Reference Laboratory on AI in Sofia. The isolate was sent to Central Reference Laboratory of the European Community in Waybridge, Great Britain and on 10.2.2006 the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

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.

Regions of Bulgaria where influenza in swans (Cygnus olor) was found out:



All data for surveillance of wild birds for 2007 were on-line submitted to DG SANCO;

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.

- 5.1.1 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.
- 5.1.2 The Programme is been implemented over the territory of the whole country. Based on the AI risk analysis 10 administrative regions have been considered as such of higher risk with regards to AI and samples for serological surveillance will be taken from all poultry holdings located in these regions. In the other regions of the country the number of poultry holdings to be sampled under the programme has been determined so that this sampling to be representative for the whole of the country.
- 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.

## **6. MEASURES IN PLACE AS REGARDS THE NOTIFICATION OF THE DISEASE:**

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

## **7. COSTS:**

### **7.1 Detailed analysis of the costs:**

#### **7.1.1 Poultry:**

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

#### **7.1.2. Wild birds:**

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

### **7.2 Summary of the costs:**

#### **7.2.1 Poultry surveillance**

Measures eligible for co- financing surveillance in poultry			
Methods of laboratory analysis	Numbers of tests perform per method	Unitary test cost (per method)	Total cost
Serological pre-screening:			
ELISA	3 091	1,00	3 091,00
AGID	412	5,00	2 060,00
HI for H5/H7	720	9,00	6 480,00
PCR test	500	9,00	4 500,00
Virus isolation test	500	10,00	5 000,00
Other measures to be covered	Specify activities		
Sampling	4 223	0,50	2 111,50
Others /transport	4 223	1,00	4 223,00
Total			<b>27 465,50</b>

### 7.2.2 Wild bird surveillance

Measures eligible for co- financing surveillance in wild birds			
Methods of laboratory analysis	Numbers of tests perform per method	Unitary test cost (per method)	Total cost
PCR test	295	9,00	2 655,00
Virus isolation test	50	10,00	500,00
Other measures to be covered	Specify activities		
Sampling	295	5,00	1 475,00
Others /transport	295	1,00	295,00
Total			<b>4 925,00</b>

**TOTAL AMOUNT UNDER THE AVIAN INFLUENZA SURVEILLANCE PROGRAMME OF R. OF BULGARIA FOR 2013 – 32 390,50 €**