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

**Survey programme for Avian Influenza in
poultry and wild birds**

Approved* for 2010 by Commission Decision 2009/883/EC

Malta

* in accordance with Council Decision 2009/470/EC

SURVEILLANCE PROGRAMME FOR AVIAN INFLUENZA IN POULTRY AND WILD BIRDS

Commission Decision 90/424/EC Annex IV

Country: Malta
Disease: Avian influenza
Year: 2010

1. Identification of the programme

Member state	Malta
Disease	Avian Influenza
Year of implementation	2010
Reference of this document	MT-AI-10
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2. Description of the surveillance programme in poultry

2.1 Objectives, general requirements and criteria

The objective of the programme includes:

- Achieving harmonization with other EU countries in veterinary control and surveillance programmes;
- The strengthening of veterinary epidemiological surveillance measures in accordance with EU legislation;
- Ensuring the early recognition of sub clinical infections of Low Pathogenic Avian Influenza within the local animal population;
- The rapid implementation of investigation protocols with all relevant restrictions on the movement of animals and animal products coming into force until confirmatory results are received.
- Contribute to achieving a disease free status for Malta from notifiable Avian Influenza
- To conform to community legislation with regards the surveillance of avian influenza in poultry and wild birds EC/94/2005.
- To enhance the surveillance of Avian influenza in wild bird species through increased collaboration with hunting organisations and conservation groups.

2.2 Design and implementation

Sampling strategy

- Sampling shall take place between January and December 2010. For poultry flocks sampling shall be carried out during the relevant production periods.
- Samples shall be tested at the National Veterinary Laboratory in Malta using ELISA and any positive samples sent to the CRL for confirmatory testing.
- Any Confirmed positive holdings will be retrospectively investigated by the Veterinary Regulation, Fisheries Conservation and Control Division.

Poultry flocks

(I) EGG LAYER HOLDINGS

REGION	NO.OF HOLDINGS TO BE SAMPLED	NUMBER OF SAMPLES (15 birds/holding)
MALTA	52	780
GOZO	8	120
TOTAL	60	900

(II) MIXED POULTRY FARMS

REGION	NO.OF HOLDINGS TO BE SAMPLED	NUMBER OF SAMPLES (15 birds/holding)
MALTA	17	255
GOZO	8	120
TOTAL	25	375

(III) TURKEY HOLDINGS (two sheds per holding)

REGION	TOTAL NUMBER OF HOLDINGS	NUMBER OF SAMPLES (20/holding)
MALTA	1	20
GOZO	0	0
TOTAL	1	20

Migratory/ wild birds

SPECIES	NUMBER OF SAMPLES TAKEN
Waterfowl	100
Shorebirds	40
Others	10
Total	150

Table 2.2.1 POULTRY HOLDINGS^(a) LAYING HENS TO BE SAMPLED

Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC¹ on laying hens

NUTS (2) code ^(b)	Total number of holdings ^(c)	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.
MT1	60	60	15	900	ELISA
Total	60	60	15	900	

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) 2 can not be used, coordinates (long/lat- to write out) are requested.

(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

¹ O J L 115, 3.5.2007, p. 3.

Table 2.2.1.2 POULTRY HOLDINGS^(a) LAYING HENS/BROILER (MIXED FARMS) TO BE SAMPLED

Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC² on laying hens/broilers mixed farms

NUTS (2) code ^(b)	Total number of holdings ^(c)	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.
MT1	25	25	15	375	ELISA
Total	25	25	15	375	

² O J L 115, 3.5.2007, p. 3.

Table 2.2.1.3 POULTRY HOLDINGS ^(a) TURKIES TO BE SAMPLED
Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC³ on turkeys

NUTS (2) code ^(b)	Total number of holdings ^(c)	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.
MT1	1	1	20	20	HI
Total	1	1	20	20	

³ O J L 115, 3.5.2007, p. 3.

Table 2.2.2 DUCK AND GEESE HOLDINGS TO BE SAMPLED^(a) according to point C of Annex I to Decision 2007/268/EC

Serological investigation

NUTS 2 code ^(b)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis.
MT1	0	0	0	0	na
Total	0				

(a) Holdings or herds or flocks or establishments as appropriate.
 (b) Refers to the location of the holding of origin. In case NUTS 2 code can not be used, coordinates (long/lat – to write out) are requested.

2.3 Laboratory testing: description of the laboratory tests used

- The initial screening of the blood samples will be carried out at the National Veterinary Laboratory of the Veterinary Regulation Fisheries Conservation and Control Division using the IDEXX ELISA kits.
- Any positive samples to the ELISA screening test will be sent to the Community Reference Laboratory for avian influenza in Weybridge, UK;
- Virus isolation and PCR on faecal and tracheal samples from wild birds shall be carried out by the Community reference laboratory for avian influenza in Weybridge, UK.

3. Description of the surveillance programme in wild birds:

3.1 Objectives, general requirements and criteria

The objectives of the programme are to maintain vigilance for the appearance of strains of Avian Influenza in local and migratory wild bird species through active and passive surveillance.

Around 380 species have been recorded in the islands. About 50 are winter visitors, 112 more or less regular migrants and the rest rare and irregular migrants or vagrants. The presence of birds in summer months is rather low with the peak of activity attained in spring and autumn. Although there is a consistent migration of birds throughout the islands in both seasons, weather conditions greatly affect the numbers of migrants. On some days during migration the islands may experience a large influx of birds, while at other times there may be very little movement in evidence.

The migrants include both species that winter south of the Sahara and those that go no further than the Mediterranean basin. During late summer, herons, raptors, waders, hirundines, several warblers and chats are present on the island.

These increase dramatically in September and October. In November the migration of trans-Saharan migrants is over and replaced by influxes of the wintering species, some waterfowl and plovers, finches and other passerines.

In spring a similar progression, but in reverse order, can be observed between early

March and late May. Hoopoes, Marsh Harriers, Grey and Night Herons and Swallows and Martins in transit are amongst the first to appear in Spring. They are followed by small passerines such as Subalpine, Great Reed and Icterine Warblers and later by Golden Orioles, Bee Eaters, Woodchat Shrikes and the occasional Roller.

3.2 Design and implementation

Wild ducks and other migratory birds shall be sampled by means of cloacal swabs, tracheal swabs and/or faecal samples, which shall be sent to the CRL in Weybridge for testing by means of PCR and viral isolation. The collaboration with hunting associations, bird conservation groups, bird parks and bird sanctuaries will be maintained. This will ensure a continuous supply of samples from migratory wild bird species for active and passive surveillance.

In the Maltese Islands there are two establishments that function as a bird park and as a falconry center. Close contact with these centers is maintained as the presence of the captive birds in these establishments may act as an attraction to migrating bird species.

There are also two main bird sanctuaries one in Mistra, the Simar reserve, and one in Mellieha, the Ghadira reserve, which are run by local conservation groups where wild birds may aggregate. Samples from these parks are also taken through collaboration with the conservation groups involved. Due to the banning of the spring hunting season the number of bird activity appears to be on the increase in certain areas.

The VRFCCD also has in place a help line through which the public can notify the division with regards to any wild birds found dead in the countryside or the coastline.

Table 3.2.1 WILD BIRDS - investigation according to the surveillance programme for avian influenza in wild birds set out in Annex II to Decision 2007/268/EC

NUTS (2) code/region ^(a)	Wild birds to be sampled ^(b)	Total number of birds to be sampled	Total number of samples to be taken for active surveillance	Total number of samples to be taken for passive surveillance
Malta and Gozo	Water Birds	100	50	50
	Shore Birds	40	20	20
	Others	10	5	5
Total		150		

(a) Refers to the place of collection of birds/samples. In case NUTS 2 code can not be used, region as defined in the programme by the Member State

(b) General description of the wild birds are intended to be sampled in the framework of the active and passive surveillance.

3.3 Laboratory testing: description of the laboratory tests used

- Virus isolation and PCR on faecal, cloacal and tracheal samples from wild birds shall be carried out by the Community Reference Laboratory for avian influenza in Weybridge, UK.
- Swabs will be dispatched by fast courier to the CRL under suitable conditions to ensure the survival of the virus if this is present in the sample.

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

Surveillance programme 2002

In 2002 an EU funded epidemiological survey was carried out on the poultry population of Malta and Gozo. Sampling was carried out at slaughter houses in most of the cases. All the 139 farms tested were negative. In total 1680 samples were tested in 2002.

Surveillance programme 2003

No AI surveillance was carried out in 2003

Surveillance programme 2004

A total of 38 poultry holdings were sampled and tested in 2004. A total of 341 birds were tested using IDEXX ELISA. Thirty of the sera were sent to the CRL for confirmatory tests. None of the holdings or samples tested were positive.

Surveillance programme 2005

A total of 63 poultry farms in Malta and 9 farms in Gozo were tested during the surveillance programme carried out during 2005. The blood samples were tested locally using the IDEXX kit for avian Influenza. Samples from 33 holdings in Malta and 3 in Gozo gave positive results. These were sent to the CRL for AI in Weybridge, UK for confirmation using the haemagglutination-inhibition tests for H5/H7. All samples resulted negative to the confirmatory test.

Surveillance programme 2006

The surveillance of poultry flocks was similar to that for the year 2005. An intensification of the number of samples from poultry holdings has been undertaken. The number of holdings sampled in 2006 was 71, while the number of birds sampled was 1239.

Surveillance programme 2007

In 2007, 74 layer holdings were sampled. A total of 709 samples were collected and tested during this year.

None of the samples tested in 2007 tested positive for Avian Influenza.

Surveillance programme 2008

In 2008 layer holdings were sampled and tested using IDEXX ELISA kits. A total of 276 samples were collected and tested during this year.

None of the samples tested in 2008 tested positive for Avian Influenza.

Surveillance programme 2009

The surveillance of poultry flocks is similar to that of the previous years. Layer flocks will be sampled and tested by the National Veterinary Laboratory using IDEXX ELISA kits.

Wild ducks and other migratory birds are sampled by means of cloacal swabs, tracheal swabs and/or faecal samples, which shall be sent to the CRL in Weybridge for testing by means of PCR and viral isolation. The collaboration with hunting associations, bird conservation groups, bird parks and bird sanctuaries will be maintained. This will ensure a continuous supply of samples from migratory wild bird species for active and passive surveillance.

4.1 Measures included in the programme for surveillance in poultry

4.1.1 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

The Veterinary Regulation, Fisheries Conservation and Control Division (VRFCCD), Albertown, Marsa is responsible for the programme. The National Veterinary Laboratory is responsible for testing and dispatch of samples to the CRL.

4.1.2 System in place for the registration of holdings

There is no direct national legislation obliging egg-laying flock holders to register their farm. However other regulations request commercial egg producers to have an approval mark and compensation schemes indirectly enforce the registration of egg-laying farms. There is the Egg Marking Regulation 345/2003 which requires that all eggs sold at retail level, excluding those sold directly to the consumers on farm, have to be marked by a unique identity number. This unique number is issued by the competent authority, which is the VRFCCD. The control at retail level falls under the supervision of the Environmental Health Department which falls under the Directorate of Public Health under the Ministry of Social Policy.

Farms not registered with the competent authority can not be given this unique identity number.

There is also the Special Marketing Policy Programme Maltese Agriculture (SMPPMA) which entitles only registered business operators to a refund of 16 euro cents per dozen eggs sold.

	MALTA	GOZO
BROILER FLOCKS	104	27
LAYER FLOCKS	52	8
MIXED (broiler/layer)	17	2
TURKEY FLOCKS	1	0

- There are no breeding parent flock on the Island.
- There are no free-range farms or outdoor holdings.
- The layer flocks are all multi-age systems with a minimum production period of 1.5 years to a maximum of 3 years.
- Ratites, ducks, quails and pheasants are not bred in Malta.
- A registration of backyard flocks of poultry and waterfowl in the Maltese territory was carried out during October 2005.

4.1.3 Data on vaccination carried out

No vaccination for AI is carried out in the Maltese Islands

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

Surveillance programme 2005

32 samples were taken from wild birds. Apart from organ samples from two dead birds found on a cargo ship originating from Taiwan, which were tested by viral isolation, all other samples were sera from wild ducks. All samples were sent to the CRL in Weybridge, UK and resulted negative.

Surveillance programme 2006

In 2006 the number of wild ducks and other migratory birds sampled by means of cloacal swabs and/or faecal samples, and sent to the CRL in Weybridge for testing by means of PCR and viral isolation was 90. A number of other wild and semi captive ducks, 36, were tested by serology.

Surveillance programme 2007

A number Wild ducks and other migratory birds were also sampled by means of cloacal swabs, tracheal swabs and/or faecal samples, which were then sent to the CRL in Weybridge for testing by means of PCR and viral isolation.

Surveillance programme 2009

Wild ducks and other migratory birds shall be sampled by means of cloacal swabs, tracheal swabs and/or faecal samples, which shall be sent to the CRL in Weybridge for testing by means of PCR and viral isolation. The collaboration with hunting associations, bird conservation groups, bird parks and bird sanctuaries will be maintained. This will ensure a continuous supply of samples from migratory wild bird species for active and passive surveillance.

5.1. Measures included in the programme for surveillance in wild birds

5.1.1 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

Veterinary Regulation, Fisheries Conservation and Control Division (VRFCCD), Alberttown, Marsa.

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

- The surveillance programme will apply to the Islands of Malta and Gozo;
- The two islands are going to be considered as one region

5.1.3 Estimation of the local and/or migratory wildlife population

The following table indicates the species hunted or trapped in the Maltese Islands during the year. The data is taken from the “Carnet de Chasse” compiled by the “Malta Environment and Planning Authority” (MEPA) in 2004.

Bird Species	Number hunted or trapped	Bird Species	Number hunted or trapped	Bird Species	Number hunted or trapped
Anas acuta	13	Rallus aquaticus	19	Carduelis caerulea	497
Anas clypeata	14	Fulica atra	64	Carduelis chloris	2494
Anas crecca	62	Pluvialis apricaria	1192	Carduelis spinus	296
Anas Penelope	22	Pluvialis squatarola	59	Coccothraustes coccothraustes	94
Anas platyrhynchos	38	Vanellus vanellus	97	Fringilla coelebs	3746
Anas querquedula	6	Gallinago gallinago	121	Serinus serinus	1599
Anas strepera	29	Lymonocryptes minimus	39	Sturnus vulgaris	25348
Anser anser	21	Philomachus pugnax	41	Turdus philomelos	39263
Anser fabalis	29	Scolopax rusticola	1504	Turdus viscivorus	324
Aythya farina	6	Columba palumbus	31	Turdus pilaris	834
Aythya fuligula	7	Streptopelia turtur	36675	Carduelis cannabina	14362
Mergus serrator	9	Alauda arvensis	24022	Gallinula chloropus	77
Coturnix coturnix	18792	Turdus iliacus	543	Turdus merula	573

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

Chapter 437 Articles 5, 6,7,8,9 16, 18, 19, 35 and 37 and the second, third and fifth schedule of the Veterinary Services lay down Local legislation that deals with the notification of Avian Influenza.

7.

Costs

7.1. Detailed analysis of the costs:

7.1.1 Poultry

7.1.2 Wild birds

7.2 Summary of the costs

7.2.1 Poultry surveillance

Measures eligible for co-financing surveillance in poultry			
Methods of laboratory analysis	Number of tests to perform per method	Unitary test cost (per method)	Total cost
Serological pre-screening ⁴	1275	2 Euro	2550Euro
Haemagglutination-inhibition-test (HI) for H5/H7 ⁵	100	6.50 Euro	650 Euro
Virus isolation test			
PCR test			
AGID test	100	9 Euro	900 Euro
Other measures to be covered	Specify activities		
Sampling			
Others			
Total	1475		4100

⁴ Specify the laboratory test to be used.

⁵ Specify number of tests for H5 and for H7.

7.2.2 Wild bird surveillance

Measures eligible for co-financing surveillance wild birds			
Methods of laboratory analysis	Number tests to perform per method	Unitary test cost (per method)	Total cost
Serological pre-screening			
Haemagglutination-inhibition-test (HI) for H5/H7			
Virus isolation test	150	30 Euro	4500 Euro
PCR test	150	15 Euro	2250 Euro
Other measures to be covered	Specify activities		
Sampling			
Others			
Total	300		6750