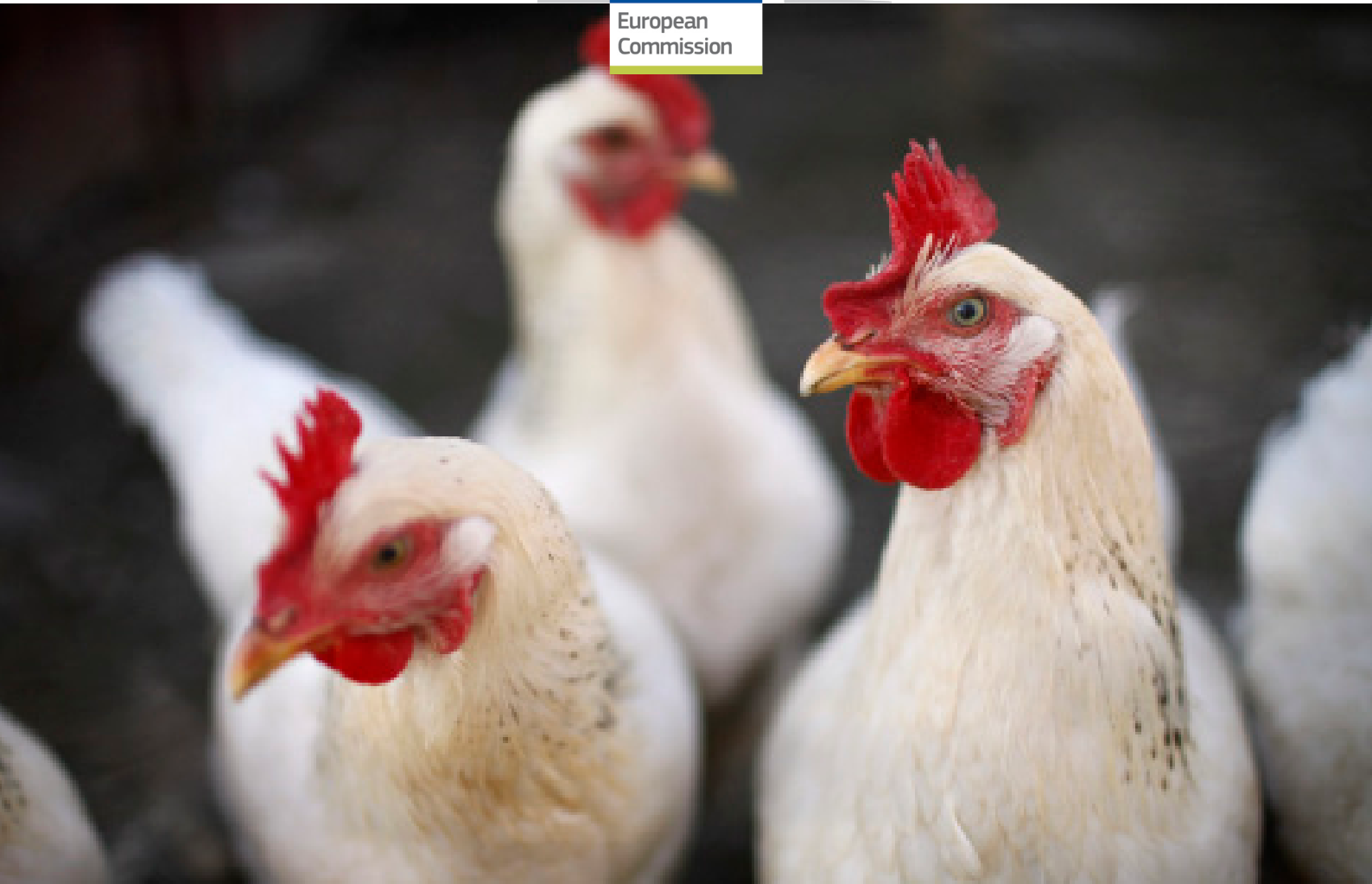




European  
Commission



**Annual Report** on surveillance  
for avian influenza in **poultry** in Member  
States of the **European Union** in 2011



Health and  
Consumers



**Annual Report**  
**on surveillance for avian influenza in**  
**poultry in Member States of the**  
**European Union in 2011**

**EUROPEAN UNION REFERENCE LABORATORY FOR**  
**AVIAN INFLUENZA**





## About the report

The work of EU Member States' veterinary administrations, veterinary laboratories and others involved in sampling, laboratory testing and gathering of data for the avian influenza surveys in poultry is specifically acknowledged.

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[http://ec.europa.eu/food/animal/diseases/controlmeasures/avian/eu\\_resp\\_surveillance\\_en.htm](http://ec.europa.eu/food/animal/diseases/controlmeasures/avian/eu_resp_surveillance_en.htm)

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## 1 EXECUTIVE SUMMARY

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Avian influenza (AI) is an infectious viral disease of poultry. The majority of AI infections in poultry are of low pathogenicity, causing mild to moderate clinical signs. Some AI viruses (subtypes H5 and H7) have the potential to mutate into highly pathogenic strains that can cause very high mortality in some poultry species. In 2003 the European Union (EU) introduced an annual serological survey with two objectives: firstly to detect subclinical or prior infection with AI of subtypes H5 and H7, to complement early detection systems; secondly, to contribute to demonstration of disease free status of a country, region or compartment from notifiable avian influenza, according to the rules of the World Organisation for Animal Health (OIE).

The present survey was conducted between January and December 2011 according to Council Directive 2005/94/EC on Community measures to control avian influenza. EU Member States (MS) had the option of following the specific guidelines laid down in Commission Decision 2007/268/EC, as in 2008-2010, or following the new guidelines laid down in Commission Decision 2010/367/EU.

Twenty-seven EU MS participated in the survey in 2011. In addition, one non-EU MS, Switzerland (CH), undertook active surveillance of avian influenza in poultry in 2011 and submitted data for this report. Seven MS followed the new guidelines laid down in Commission Decision 2010/367/EU. A total of 29,806 poultry holdings was sampled, which compares to 29,484 in 2010, 35,016 in 2009 and 34,985 in 2008. The most frequently sampled poultry category was Laying Hens (conventional and free-range), making up 30.5% of the total holdings sampled by EU MS, followed by Backyard Flocks (17.8% of total holdings sampled) and Chicken Breeders (17.0% of total holdings sampled). The least sampled poultry category was Ratites (0.7%), reflecting the low proportion of ratite holdings across the EU (0.02% of total holdings).

In the 2011 EU serological survey for avian influenza in poultry, evidence of previous infection with H5 or H7 avian influenza according to Directive 2005/94/EC was detected in 65 holdings (0.22% of total holdings sampled). Fifty holdings were serologically positive for subtype H5 and 15 for subtype H7. The detection rate in Breeder Ducks (10.3%) and Breeder Geese (5.4%) was considerably higher than other poultry categories across the EU. Fattening Ducks had the third highest detection rate at 0.9%.

In 2011, 50 holdings were serologically positive for subtype H5 (0.17% of holdings sampled). This is comparable to 2010 when 48 holdings were found serologically positive for H5, and 2009 and 2008, when 52 holdings each year were reported as serologically positive for H5. Of the 50 holdings reported to be seropositive in 2011, 35 underwent follow-up testing for the presence of active infection and two tested positive for subtype H5 by PCR or virus isolation. This indicated that in at least 5.7% of the holdings seropositive for subtype H5, infection was still active. In addition, a holding was seropositive for H7, but sero-negative for H5, tested PCR positive for subtype H5.

In 2011, there were 15 holdings serologically positive for subtype H7 (0.05% of holdings sampled). This is comparable to 2010 when 11 holdings were found serologically positive for H7, but lower than in 2009 and 2008, when 38 and 21 holdings respectively were reported serologically positive for H7. Five of the 15 seropositive holdings in 2011 underwent follow-up testing for the presence of active infection and none tested positive for subtype H7 by PCR or virus isolation (an indicator of active infection). However, as mentioned above one of the H7 seropositive holdings, tested PCR positive for subtype H5.

The survey continues to improve knowledge on which sectors of the poultry industry are more likely to be infected by H5 or H7 avian influenza viruses (e.g. Breeder Ducks and Breeder Geese) and identified other sectors which are consistently less likely to be affected (e.g. Broilers (conventional and free-range) and Turkey Breeders). The on-going review of the results of avian influenza surveillance, together with the global picture of avian influenza and scientific research in this field, accompanied by the recent revision of the EU guidelines for AI surveillance to strengthen targeting, will further improve AI disease prevention whilst ensuring development of resource efficient programmes consistent with the overall objectives.

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## GLOSSARY AND ABBREVIATIONS

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**Table 1 Key to Member State abbreviations**

Abb.	Country
AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovak Republic
UK	United Kingdom
CH*	Switzerland

**\*Non-EU MS**

**ADNS:** Animal Disease Notification System

**AI:** Avian Influenza as defined in Directive 2005/94/EC (EC 2006a)

**EURL:** European Union Reference Laboratory for avian influenza

**DG SANCO:** Directorate General for Health and Consumers

**EU:** European Union

**EU 27:** Refers to the 27 Member States of the European Union

**HPAI:** Highly Pathogenic Avian Influenza

**HPAIV:** Highly Pathogenic Avian Influenza virus

**LPAI:** Low Pathogenicity Avian Influenza defined as LPAI caused by AI viruses of the H5 and H7 subtype (according to Directive 2005/94/EC)

**LPAIV:** Low Pathogenicity Avian Influenza virus of the H5 and H7 subtype

**LPAIV of 'other subtype':** Low Pathogenicity Avian Influenza virus of subtype other than H5 or H7

**MS:** Member State(s)

**NAI:** Notifiable Avian Influenza. Influenza A virus of subtypes H5 or H7 according to the World Organisation for Animal Health (OIE) definition.

**NRL:** National Reference Laboratory for avian influenza

**NUTS:** Nomenclature of Units for Territorial Statistics. For example, at NUTS 3 level this refers to a region, district, county, municipal or unitary authority (depending on the MS).

**PCR:** Polymerase chain reaction is a laboratory methodology that acts through the amplification of specific viral nucleic acid from clinical specimens.

**Positive/ Infected:** For the purpose of this report, a positive or infected case of avian influenza is defined as a poultry holding, from which at least one sample tested positive on either serology or PCR or viral isolation.

**VI:** Virus isolation is a laboratory methodology that enables the propagation of infectious virus directly from clinical specimens.



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## 2 INTRODUCTION

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### 2.1 Objectives

The objectives of the surveillance programme for avian influenza in poultry are to inform the competent authority of circulating 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 (namely chickens, turkeys, guinea fowl, pheasants, partridges and quails) and ratites thereby complementing other existing early detection systems;

(b) LPAI of subtypes H5 and H7 and highly pathogenic avian influenza (HPAI) in domestic waterfowl (namely ducks, geese and mallards for re-stocking supplies of game);

### 2.2 Framework of Reporting

Low pathogenicity avian influenza viruses of the H5 and H7 subtypes have the potential to mutate to highly pathogenic strains while circulating within poultry populations.

The Scientific Committee on Animal Health and Animal Welfare (SCAHAW) recommended the implementation of serological surveys of poultry populations in MS in order to detect the presence of low pathogenic avian influenza (LPAI) viruses of H5 and H7 subtypes.

Surveys for avian influenza in poultry and wild birds in MS were first carried out in 2003 under Commission Decision [2002/649/EC \(EC 2002\)](#).

Directive [2005/94/EC \(EC 2006a\)](#) on Community measures to control avian influenza introduced with Article 4, a new legal basis for the obligatory conduct of surveillance programmes in poultry populations, to detect infections with LPAI of H5 and H7 subtype.

In 2010, 2009 and 2008, the surveys were performed according to the guidelines laid down in Commission Decision [2007/268/EC \(EC 2007\)](#), which are available under:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:115:0003:0017:EN:PDF>

In 2011, MS had the option of following the guidelines laid down in Commission Decision [2007/268/EC \(EC 2007\)](#) or following new guidelines laid down in Commission Decision [2010/367/EU \(EC 2010a\)](#), which are available under:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:166:0022:0032:EN:PDF> and are described in section 3.1.

For 2011, the survey programmes of the MS were evaluated and approved for co-financing through Decision [2010/712/EU \(EC 2010b\)](#):

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:309:0018:0030:EN:PDF>

Details of the survey programmes for each MS are available on the internet at: [http://ec.europa.eu/food/animal/diseases/eradication/programme2011/2010\\_712\\_eu\\_en.pdf](http://ec.europa.eu/food/animal/diseases/eradication/programme2011/2010_712_eu_en.pdf)

Samples were tested in accordance with the [diagnostic Manual for avian influenza \(EC 2006\)](#).

Previous Annual Reports on surveillance for avian influenza in poultry can be found at: [http://ec.europa.eu/food/animal/diseases/controlmeasures/avian/eu\\_resp\\_surveillance\\_en.htm](http://ec.europa.eu/food/animal/diseases/controlmeasures/avian/eu_resp_surveillance_en.htm)

## 2.3 *Structure of Report*

This report provides information on the surveillance of poultry undertaken by the EU MS. It is structured to provide summary information on sampling and results in addition to more detailed analysis.

- The Executive Summary provides an outline of the main findings and conclusions that can be drawn from these.
- The Introduction gives information on the objectives and framework for the surveillance carried out by the MS and also provides links to the Commission Decisions on which the surveillance is based.
- The Overview section provides general information and conclusions on the sampling carried out across the EU for this survey and on the results in 2011.
- The Results section contains more detailed information on the results by poultry category and MS.
- The Discussion section provides a summary of the findings and information on their importance in relation to the objectives of the survey.
- The Methods section gives information on the data received from the MS, its limitations and methods of analysis of this data.
- The Annexes contain additional detailed tables on the sampling and test results.

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## 3 OVERVIEW

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### 3.1 *Survey Design and Sampling*

#### 3.1.1 **Survey design**

MS sampled holdings and submitted data for some or all of the following poultry categories:

- Chicken Breeders (CB)
- Conventional Laying Hens (LH) and Free-range Laying Hens (FR LH)
- Conventional Broilers (B) and Free-range Broilers (FR B)
- Fattening Turkeys (FT)
- Turkey Breeders (TB)
- Fattening Ducks (FD)
- Breeder Ducks (BD)
- Fattening Geese (FG)
- Breeder Geese (BG)
- Backyard Flocks (BYF)
- Farmed Game Birds (FGB)
- Ratites (R)
- Others/Other Poultry (O)

Where the survey design was based upon the surveillance guidelines of Commission Decision [2007/268/EC \(EC 2007\)](#), the required number of holdings to be sampled for specified poultry categories was determined according to [Tables 2](#) and [3](#) below.

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**Table 2 Number of holdings to be sampled of each poultry category (except turkey, duck and goose holdings)**

---

<b>Number of holdings per poultry category per Member State</b>	<b>Number of holdings to be sampled</b>
Up to 34	All
35 –50	35
51-80	42
81-250	53
>250	60

---

Note: The number of holdings to be sampled is defined to ensure the identification of at least one infected holding if the prevalence of infected holdings is at least 5 %, with a 95 % confidence interval.

**Table 3 Number of turkey, duck and goose holdings to be sampled**

<b>Number of holdings per poultry category per Member State</b>	<b>Number of holdings to be sampled</b>
Up to 46	All
47 -60	47
61-100	59
101-350	80
>350	90

Note: The number of turkey, duck and goose holdings to be sampled is defined to ensure the identification of at least one infected holding if the prevalence of infected holdings is at least 5 %, with a 99 % confidence interval.

Where the survey design was based upon the surveillance guidelines of Commission Decision 2010/367/EU (EC 2010a), the following criteria and risk factors would be considered:

- 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' for HPAI H5N1 detection (EC 2010a):
  - (a) The location of the poultry holding in proximity to wet areas, ponds, swamps, lakes, rivers or sea shores where migratory wild water birds may gather.
  - (b) The location of the poultry holding in areas with a high density of migratory wild birds, in particular of those birds that are characterised as 'target species'.
  - (c) The location of poultry holding in proximity to resting and breeding places of migratory wild water birds, in particular where these areas are linked through migratory birds' movements to areas where HPAI H5N1 is known to occur in wild birds or poultry.
  - (d) Poultry holdings with free range production, or poultry holdings where poultry or other captive birds are kept in the open-air in any premises in which contact with wild birds cannot be sufficiently prevented.
  - (e) Low biosecurity level in the poultry holding, including the method of storage of feed and the use of surface water.
- Criteria and risk factors for virus spread within the poultry holding and between poultry holdings, as well as the consequences (impact) of the spread of avian influenza from poultry to poultry and between poultry holdings:
  - (a) The presence of more than one poultry species in the same poultry holding, in particular the presence of domestic ducks and geese together with other poultry species.
  - (b) The type of poultry production and the poultry species on the holding for which surveillance data have shown an increased detection rate of avian influenza infection in the Member State, such as duck holdings and poultry intended for re-stocking supplies of game (in particular farmed mallards).
  - (c) The location of the poultry holding in areas with high densities of poultry holdings.

- (d) Trade patterns, including imports and related intensity of movements, both direct and indirect, of poultry and other factors including vehicles, equipment and persons.
- (e) The presence of long lived poultry categories and multi-age groups of poultry on the holding (such as layers).

In addition, in terms of targeting of populations at risk:

- The level of targeting must reflect the number and local weighting of risk factors present on the poultry holding.
- The competent authority may consider other risk factors in its assessment in designing its surveillance design, which must be duly indicated and justified in their surveillance programme.
- Broilers should only be included when: (i) they are kept in significant numbers in free range production and (ii) they are considered to pose a higher risk of infection with avian influenza.
- Backyard Flocks generally play a minor role in virus circulation and spread and sampling them is resource intensive; however, in certain Member States Backyard Flocks may pose a higher risk of avian influenza due to their presence in significant numbers, their proximity to commercial poultry holdings, involvement in local/regional trade and other criteria and risk factors.

### 3.1.2 Sampling

All totals and overall proportions refer to 27 EU MS.

- In 2011, a total of 1,649,255 poultry holdings were reported to be present among all EU MS, and 29,806 of these were sampled by the MS in their approved AI surveillance programmes. This compares to 29,484 holdings sampled in 2010, 35,016 holdings sampled in 2009, 34,985 holdings sampled in 2008, and 126,912 holdings sampled in 2007.
- In addition, Switzerland submitted data for 65 holdings for the 2011 EU Poultry Survey.
- Of the 27 MS undertaking AI surveillance in poultry in 2011, seven (ES, FR, LV, RO, SK, SE and UK) carried out a risk-based sampling approach, as per the new Commission Decision (EC 2010a).
- There was considerable variation in the number of holdings sampled among MS, varying from 19 holdings in Estonia to 8750 holdings in Italy. Fifteen MS sampled more holdings in total when compared to 2010 (AT, BE, BG, CZ, EE, HU, IE, LU, LV, MT, NL, PL, PT, SE, and SK), while 12 MS (CY, DE, DK, EL, ES, FI, FR, IT, LT, RO, SI, and UK) sampled less holdings in 2011. Some MS sampled individual holdings more than once during the period of the survey and hence the total reported number of holdings sampled during the survey exceeded the total number of holdings present for MS in certain poultry categories.
- All 27 MS sampled Laying Hens. This category (conventional and free-range) was the most frequently sampled poultry category (9083 of 29,806), mainly sampled in NL (4217) and IT (2379).
- Twenty-one MS sampled Chicken Breeders (17.0%) and Fattening Turkeys and Turkey Breeders (10.4%); 20 MS sampled Fattening Ducks and Breeder Ducks (3.8%); 18 MS sampled Game Birds (5.5%); 17 MS sampled Fattening Geese and Breeder Geese (1.8%); 15 MS sampled Ratites (0.7%); 14 MS sampled Broilers (conventional and free-

range) (5.4%); 13 MS sampled Backyard Flocks (17.8%) and eight MS sampled Other poultry flocks (7.3%) – further details are given in section 6.

- Some MS targeted sampling towards Free-range holdings of Layers and Broilers by sampling more Free-range than conventional holdings in these poultry categories. Sixteen MS sampled Free-range Laying Hen holdings. Of these, four MS (CY, DK, FR, and IE) sampled more Free-range Laying Hen holdings than conventional Laying Hen holdings. Eleven MS that sampled Laying Hen holdings did not sample Free-range Laying Hen holdings.
- During 2011, 14 MS sampled Broiler holdings (conventional and/or Free-range broiler holdings). Eight MS sampled Free-range Broiler holdings, and of these DK, EL, FR, IE, LT and PT sampled more Free-range than conventional Broiler holdings. Six MS only sampled conventional Broiler holdings.
- The total numbers of holdings present and numbers sampled by MS in 2011 are displayed by poultry category in Table 4.

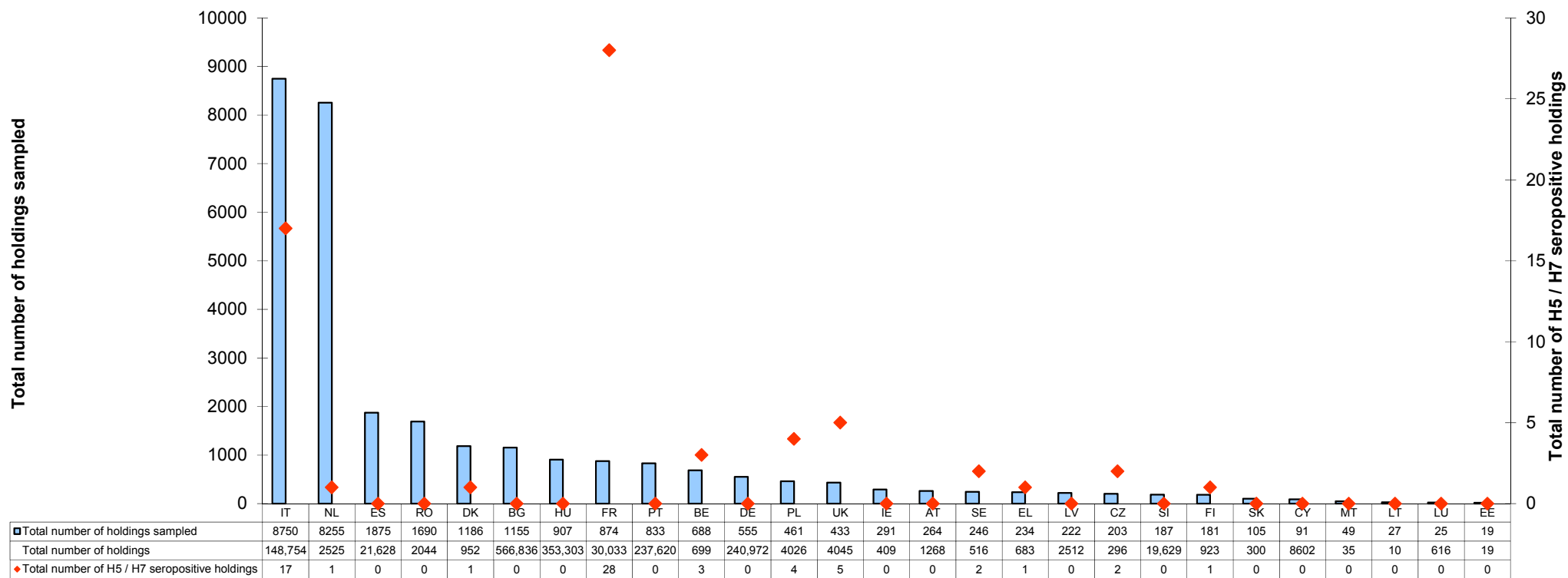


**Table 4 Number of holdings sampled and total holdings reported, by poultry category across Member States in 2011**

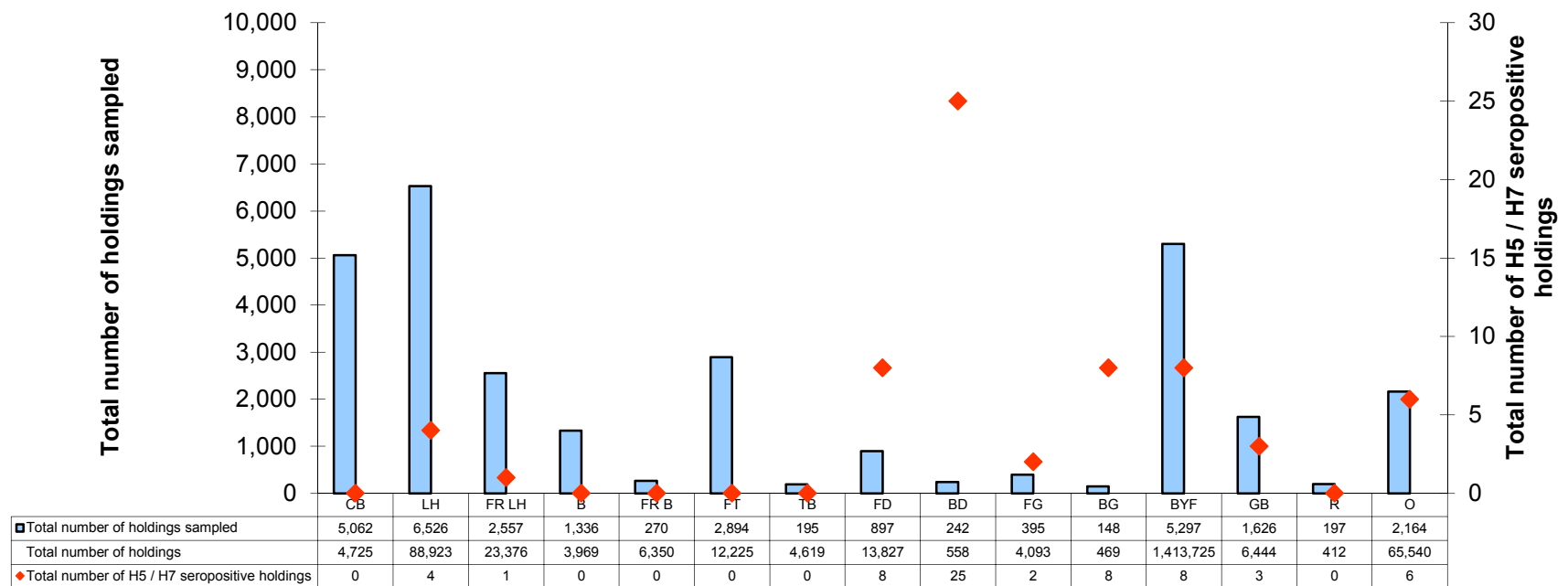
	Number sampled (total holdings)											Total Holdings sampled and proportion of EU total	Total Holdings reported and proportion of EU total
	Chicken Breeders	Conventional Laying Hens and Free-range Laying Hens	Conventional Broilers and Free-range Broilers	Fattening Turkeys and Turkey breeders	Fattening Ducks and Breeder Ducks	Fattening Geese and Breeder Geese	Backyard Flocks	Game Birds	Ratites	Others			
AT	10 (10)	120 (1063)		53 (111)	9 (9)	71 (71)			1 (4)		264 0.89%	1268 0.08%	
BE	184 (197)	412 (422)		46 (37)	20 (22)	4 (3)		22 (18)			688 2.31%	699 0.04%	
BG	7 (25)	57 (144)	7 (174)		93 (118)		990 (566,369)			1 (6)	1155 3.88%	566,836 34.37%	
CY	7 (16)	50 (41)		6 (8)			18 (8530)	9 (6)	1 (1)		91 0.31%	8602 0.52%	
CZ		60 (140)		36 (48)	43 (44)	11 (11)		53 (53)			203 0.68%	296 0.02%	
DE	1 (7)	112 (94,125)	10 (1764)	98 (8724)	130 (8439)	37 (2466)	29 (64,886)			138 (60,561)	555 1.86%	240,972 14.61%	
DK	534 (452)	336 (144)	9 (18)	28 (44)	17 (57)	6 (24)		256 (213)			1186 3.98%	952 0.06%	
EE		18 (18)						1 (1)			19 0.06%	19 0.001%	
EL	53 (101)	47 (360)	47 (48)	23 (52)				6 (9)	2 (2)	56 (111)	234 0.79%	683 0.04%	
ES	126 (395)	239 (937)	168 (933)	103 (445)	56 (63)	3 (6)	301 (15,399)	389 (522)	33 (69)	457 (2859)	1875 6.29%	21,628 1.31%	
FI	49 (69)	73 (788)		45 (44)	3 (7)	1 (1)		8 (12)	2 (2)		181 0.61%	923 0.06%	
FR	57 (1000)	116 (7030)	67 (6000)	186 (4300)	234 (4550)	17 (133)	49 (3000)	145 (4000)	3 (20)		874 2.93%	30,033 1.82%	
HU	35 (137)	86 (490)		74 (320)	70 (314)	105 (502)	500 (351,499)	34 (38)	3 (3)		907 3.04%	353,303 21.42%	
IE	79 (86)	116 (180)	48 (23)	45 (115)	2 (3)	1 (2)					291 0.98%	409 0.02%	
IT	690 (344)	2379 (1491)		1805 (896)	181 (161)	79 (79)	1629 (143,286)	478 (469)	72 (151)	1437 (1877)	8750 29.36%	148,754 9.02%	
LT		1 (1)	21 (4)				4 (4)			1 (1)	27 0.09%	10 0.001%	
LU		7 (7)	5 (5)				8 (600)		4 (1)	1 (3)	25 0.08%	616 0.04%	
LV		44 (44)			4 (4)	3 (3)	171 (2461)				222 0.74%	2512 0.15%	
MT		49 (35)									49 0.16%	35 0.002%	
NL	2920 (490)	4217 (1253)	836 (661)	188 (58)	94 (63)						8255 27.70%	2525 0.15%	
PL	64 (690)	60 (1144)		95 (867)	61 (147)	99 (998)		34 (56)	48 (124)		461 1.55%	4026 0.24%	
PT	65 (97)	63 (156)	71 (238)	93 (143)	12 (14)		387 (236,735)	65 (111)	4 (4)	73 (122)	833 2.79%	237,620 14.41%	
RO	61 (41)	163 (171)	274 (264)	8 (8)	4 (2)	8 (8)	1152 (1534)	18 (14)	2 (2)		1690 5.67%	2044 0.12%	
SE	36 (37)	91 (359)	39 (39)	25 (26)	6 (6)	20 (20)		24 (24)	5 (5)		246 0.83%	516 0.03%	
SI	10 (10)	59 (138)		46 (46)			59 (19,422)	6 (6)	7 (7)		187 0.63%	19,629 1.19%	
SK	9 (11)	39 (64)	4 (148)	12 (16)	4 (5)	2 (4)		25 (35)	10 (17)		105 0.35%	300 0.02%	
UK	65 (510)	69 (1554)		74 (536)	96 (357)	76 (231)		53 (857)			433 1.45%	4045 0.25%	
EU Total (%)	5062 (4725) 17.0%	9083 (112,299) 30.5%	1606 (10,319) 5.4%	3089 (16,844) 10.4%	1139 (14,395) 3.8%	543 (4562) 1.8%	5297 (1,413,725) 17.8%	1626 (6444) 5.5%	197 (412) 0.7%	2164 (65,540) 7.3%	29,806	1,649,255	
CH		40 (3523)		25 (63)							65	3586	

1. Numbers of holdings can vary throughout the year; this might result in less holdings sampled than was originally indicated in the submitted programme.

2. Proportion figures for the total number of holdings sampled and total number of holdings calculated are based on the proportion of the EU total reported to the survey.



**Figure 1 Total numbers of holdings sampled and found seropositive for influenza A virus subtypes H5 or H7 by Member State in 2011**



**Figure 2 Total numbers of holdings sampled and found seropositive for influenza A virus subtypes H5 or H7 by poultry category in 2011**

See [Page 10](#), 3.1.1 'Survey Design', for abbreviations of poultry categories

### 3.2 Results

A total of 65 holdings tested positive by serology for previous exposure to AI virus (H5 and H7 subtypes), and eight holdings tested positive by PCR/VI - three holdings positive for subtype H5, one for subtype H7, and four for influenza A virus with subtype undetermined. One holding was positive for both subtypes H5 and H7 (H5 PCR positive and H7 seropositive). This compares to 59 holdings found seropositive for H5 or H7 in 2010, 90 holdings in 2009 and 72 holdings in 2008.

The non-EU MS Switzerland did not detect any positive holdings in 2011, as was the case in 2010, but not 2009, when one H5 and one H7 seropositive holding were reported.

Overall 11 MS reported H5 or H7 positive holdings in 2011. Eight of the MS that detected H5 or H7 positive holdings in 2011 (BE, DK, FR, IT, NL, PL, SE and UK) also reported positives in 2010. Three additional MS also reported H5 or H7 positive holdings in 2011 (CZ, EL and FI).

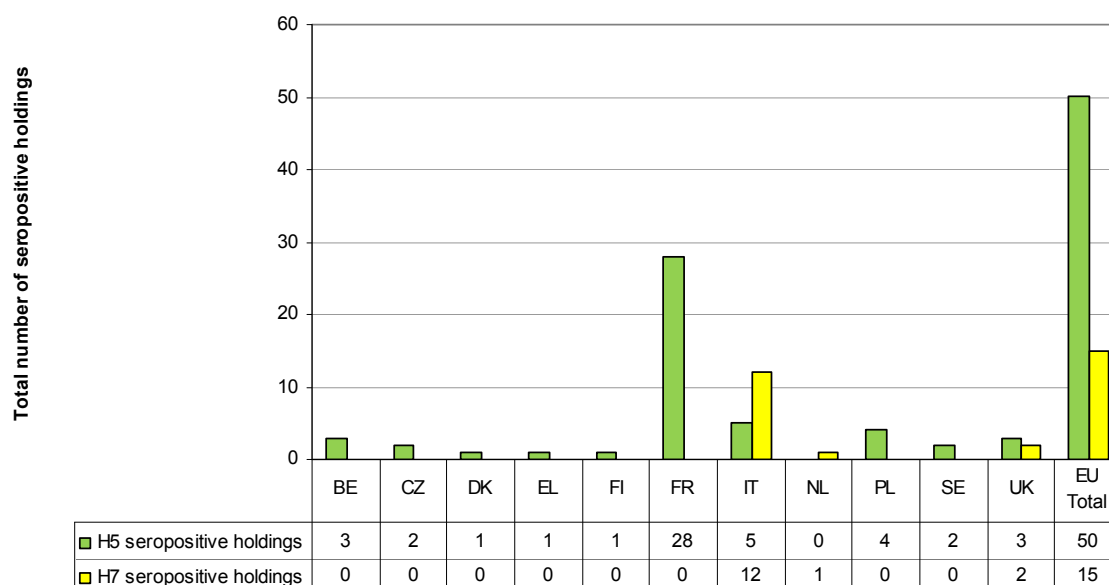
The total numbers of holdings sampled and found seropositive for influenza A virus subtypes H5 or H7 by MS in 2011 are displayed in [Figure 1](#).

The total numbers of holdings sampled and found seropositive for influenza A virus subtypes H5 or H7 by poultry category in 2011 are displayed in [Figure 2](#).

[Figure 3](#) displays the total number of H5 and H7 serologically positive holdings by MS in 2011.

[Figure 4](#) displays the intensity of sampling, as well as the holdings found seropositive in this survey, for subtype H5 (indicated by red circles) and subtype H7 (indicated by green circles).

[Table 5](#) shows the number of holdings that tested positive by serology and/or PCR/VI for subtypes H5 and H7 by MS in 2011.



**Figure 3 Total H5 and H7 serologically positive holdings by Member State in 2011**

### 3.2.1 H5 Influenza

In 2011, 51 holdings (in ten MS) returned positive results for subtype H5 (0.17% of EU holdings sampled). Of these, 50 were serologically positive, with a high proportion (28/50, 56.0%) being found in FR (as was the case in 2010). One holding that was seropositive for H7 and sero-negative for H5, tested PCR positive for subtype H5. Of the 50 holdings reported to be seropositive in 2011, 35 underwent follow-up testing for the presence of active infection and of these two tested positive for subtype H5 by PCR or virus isolation. This indicated that in at least 5.7% of the holdings seropositive for subtype H5, infection was still active.

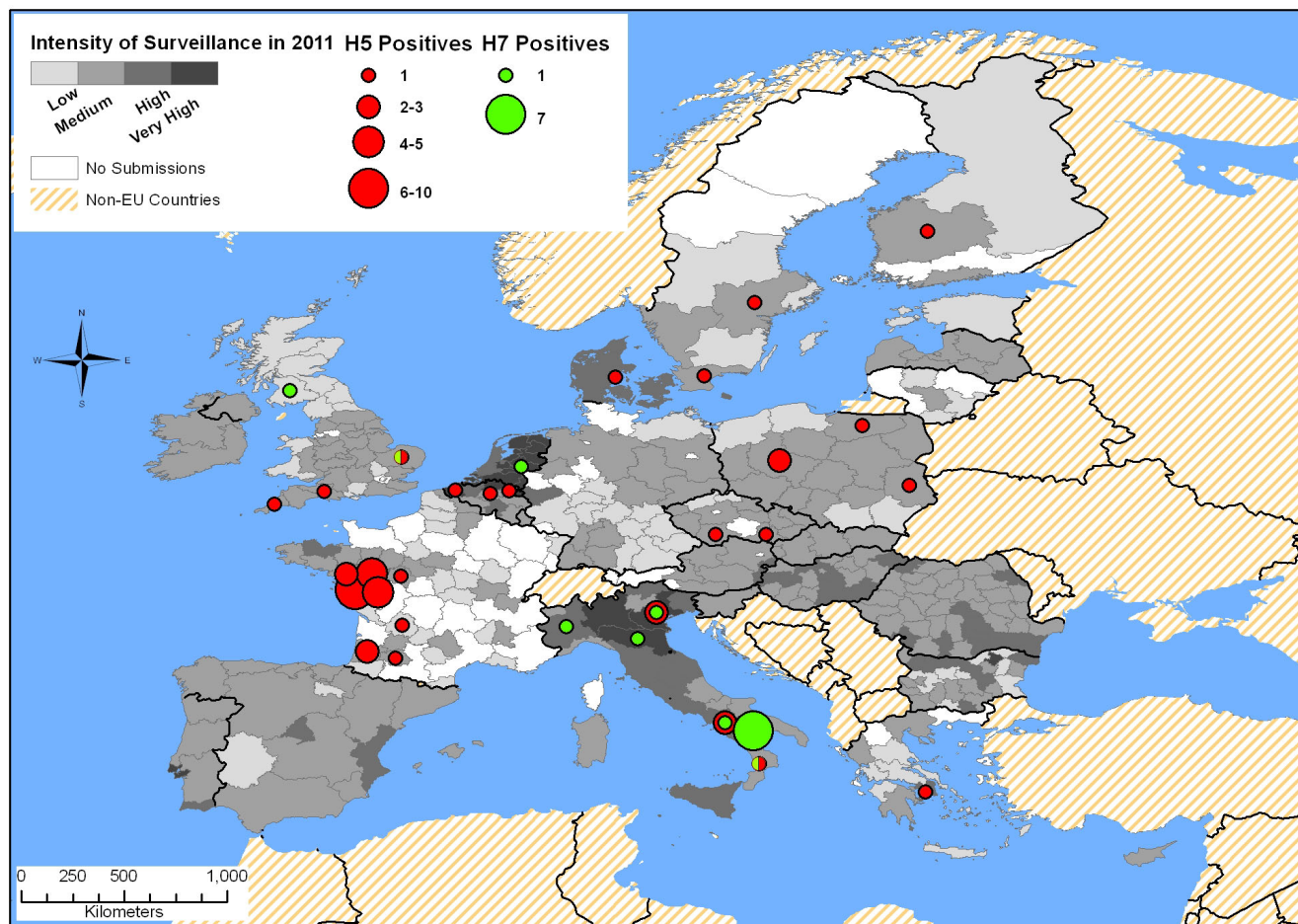
The number of H5 seropositive holdings reported in 2011 is comparable to 2010, when 48 holdings were found serologically positive for H5, and 2009 and 2008, when 52 holdings in each year were reported serologically positive for H5. Most of the H5 seropositive holdings were Breeder Ducks (24/50, 48.0%), followed by Breeder Geese (8/50, 16.0%) and Fattening Ducks (8/50, 16.0%).

### 3.2.2 H7 Influenza

In 2011, 16 holdings (in three MS) returned positive results for subtype H7 (0.05% of EU holdings sampled). Of these, 15 were serologically positive, with the majority (12/15, 80.0%) being found in IT (as was the case in 2010). Of the 15 holdings reported to be seropositive in 2011, five underwent follow-up testing for the presence of active infection and none tested positive for subtype H7 by PCR or virus isolation (an indicator of active infection). However, one of the H7 seropositive holdings, tested PCR positive for subtype H5 (as mentioned above). In addition, one further holding tested PCR positive for subtype H7 (although serology and virus isolation were not performed).

The number of H7 seropositive holdings reported in 2011 is comparable to 2010, when 11 holdings were found serologically positive for H7, and is lower than in 2009 and 2008, when 38 and 21 holdings respectively were reported serologically positive for H7. Most of the H7 seropositive holdings detected in 2011 were Backyard Flocks (6/15, 40.0%) and Others (4/15, 26.7%).

**Figure 4 A map of the intensity of sampling in the EU AI poultry survey and holdings testing serologically positive for H5 and H7 in 2011**  
The classification of intensity of surveillance is grouped by holdings sampled per 100km<sup>2</sup>  
Low: >0 and <10, Medium: >10 and <100, High: >100-<500, Very high: >500



**Table 5 Number of serological and virological H5 and H7 positive holdings by Member State in 2011**

MS	Total H5/H7 positive holdings	Number of H5 seropositive holdings	Number of H5 PCR/ VI positive holdings	Number of H7 seropositive holdings	Number of H7 PCR/ VI positive holdings	Total holdings sampled	Total Holdings Reported
AT	0	0	0	0	0	264	1268
BE	3	3	0	0	0	688	699
BG	0	0	0	0	0	1155	566,836
CY	0	0	0	0	0	91	8602
CZ	2	2	0	0	0	203	296
DE	0	0	0	0	0	555	240,972
DK	1	1	0	0	0	1186	952
EE	0	0	0	0	0	19	19
EL	1	1	0	0	0	234	683
ES	0	0	0	0	0	1875	21,628
FI	1	1	0	0	0	181	923
FR	28	28	0	0	0	874	30,033
HU	0	0	0	0	0	907	353,303
IE	0	0	0	0	0	291	409
IT	18	5	3	12	1	8750	148,754
LT	0	0	0	0	0	27	10
LU	0	0	0	0	0	25	616
LV	0	0	0	0	0	222	2512
MT	0	0	0	0	0	49	35
NL	1	0	0	1	0	8255	2525
PL	4	4	0	0	0	461	4026
PT	0	0	0	0	0	833	237,620
RO	0	0	0	0	0	1690	2044
SE	2	2	0	0	0	246	516
SI	0	0	0	0	0	187	19,629
SK	0	0	0	0	0	105	300
UK	5	3	0	2	0	433	4045
EU Total	66	50	3	15	1	29,806	1,649,255
CH	0	0	0	0	0	65	3586

**Notes on virological data**

BE: Two of the H5 seropositive holdings in BE were PCR positive for influenza A; one of these was also VI positive for influenza A (not shown in table).

EL: One holding was PCR positive for influenza A virus (serology not performed / VI negative) (not shown in table).

IT: Two holdings were serologically and virologically positive for H5 (one PCR/VI positive and one PCR positive / VI not performed). One holding was PCR positive for H5 (serology negative / VI not performed) and also seropositive for H7, and this has been included in the relevant columns. However, in the total H5/H7 positives holding column it has only been counted once. One holding was reported as H7 PCR positive (serology / VI not performed).

RO: One holding was PCR positive for influenza A virus (serology / VI negative) (not shown in table).

### 3.2.3 Other LPAI subtypes

As part of the 2011 survey, no holdings were reported as positive for avian influenza subtypes other than H5 or H7, by serology and/or PCR/virus isolation. This differs from 2010 when 16 holdings were reported as positive (by serology and/or PCR/virus isolation) for other subtypes, including H6, H4 and H3, from two MS (BG and CZ). In 2009, other subtypes were detected from four MS (13 holdings).

However, there were two holdings that tested positive by PCR (only) for influenza A virus. This included one Backyard Flock holding from RO (serology negative/virus isolation negative) and one Others holding from EL (serology not performed/virus isolation negative). There were also a further two Breeder Geese holdings (from BE) that tested PCR positive for influenza A (one was virus isolation positive for influenza A as well), and these were also both seropositive for subtype H5.

### 3.2.4 Poultry categories

The most frequently sampled poultry category was Laying Hens (conventional and free-range), making up 30.5% of the total holdings sampled by EU MS in 2011, followed by Backyard Flocks (17.8%) and Chicken Breeders (17.0%). This differed to 2010 when Backyard Flocks were the most sampled poultry category (26.8% of EU total), followed by Laying Hens (conventional and free-range) (23.1%).

Overall, in 2011, there was an increase in the number of holdings sampled from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Conventional Broilers, Fattening Ducks, Breeder Ducks, Fattening Geese and Breeder Geese, compared to 2010, while all other poultry categories saw a decrease in the number of holdings sampled in 2011. Percentage increases in the number of holdings sampled compared with 2010 varied from 0.8% (Fattening Ducks) to 62.9% (Free-range Laying Hens).

The poultry category with the highest number of holdings positive for H5 subtypes by serology was Breeder Ducks (24/50, 48.0%), followed by Breeder Geese (8/50, 16.0%) and Fattening Ducks (8/50, 16.0%). In 2010, the poultry category with the highest number of holdings seropositive for H5 was also Breeder Ducks (22/48, 45.8%), followed by Game Birds (12/48, 25.0%) and Breeder Geese (8/48, 16.7%).

The poultry category with the highest number of holdings seropositive for H7 was Backyard Flocks (6/15, 40%), followed by Others (4/15, 26.7%). In 2010, the poultry categories with the most holdings seropositive for H7 were Conventional Laying Hens (3/11, 27.3%), Backyard Flocks (3/11, 27.3%) and Game Birds (3/11, 27.3%).

In addition in 2011, two holdings tested positive by PCR (only) for influenza A virus. This included one Backyard Flock holding (serology negative/virus isolation negative) and one Others holding (serology not performed/virus isolation negative).

## 3.3 Conclusions

- In 2011, 29,806 poultry holdings were sampled by 27 EU MS. This is a small increase compared to the number of holdings sampled in 2010, and is less than were sampled in 2009-2008. In addition, one non-EU MS provided data on poultry holdings sampled, CH (n = 65).
- The most frequently sampled poultry category was Laying Hens (conventional and free-range), making up 30.5% of the total holdings sampled by EU MS, followed by Backyard Flocks (17.8%) and Chicken Breeders (17.0%). There was a large variation in the total holdings sampled by each MS.



- A total of 65 holdings tested positive for H5 or H7 subtypes by serological testing, 50 of subtype H5 and 15 of subtype H7.
- A high proportion of H5 seropositive holdings were found in France (28/50, 56%) and the poultry categories with the most detections were Breeder Ducks (24/50, 48.0%), Breeder Geese (8/50, 16.0%) and Fattening Ducks (8/50, 16.0%).
- Most H7 seropositive holdings were found in Italy (12/15, 80%) and the poultry categories with the most detections were Backyard flocks (6/15, 40%) and Others (4/15, 26.7%).
- As in previous years, evidence of H5 infection was detected more frequently than H7. The number of seropositive H5 (n = 50) and H7 (n = 15) holdings detected in 2011 is similar to 2010 (when 48 H5 and 11 H7 seropositive holdings were detected). However, in 2009, more H7 seropositive holdings were reported (n = 38), although the number of H5 seropositive holdings was similar (n = 52).

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## 4 RESULTS

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### 4.1 Poultry Categories

Tables 6a and 6b show the total number of holdings sampled and the number found to be seropositive for subtypes H5 and H7 by poultry category in the years 2011 and 2010. The number of holdings found serologically positive for subtypes H5 or H7 by poultry category across MS in 2011 is also displayed in Figure 5.

#### Descriptive results of the 2011 poultry survey by poultry category

Detailed tables displaying the number of holdings, holdings sampled and holdings testing positive by poultry category across MS are shown in Annex I.

##### Chicken Breeders

- Chicken Breeder holdings made up 17.0% of total holdings sampled in the EU in 2011. This compares to 13.2% in 2010 and 15.5% in 2009.
- Chicken Breeder holdings were sampled in 21 MS, which was higher than in 2010 and 2009, when Chicken Breeder holdings were sampled in 18 and 20 MS respectively. The number of holdings sampled varied from one holding (DE) to 2920 (NL). Some holdings in NL were sampled more than once (490 holdings overall). Over 1100 more holdings were sampled in 2011 compared to 2010.
- No positive holdings were reported in this category in 2011. This was also the case in 2010, but in 2009 one holding was reported positive for the H7 subtype (IT) in this category.

##### Conventional Laying Hens and Free-range Laying Hens

- As in 2010 and 2009, the Laying Hens category was split into Conventional Laying Hens and Free-range Laying Hens. Conventional Laying Hens made up 72.0% of the total holdings sampled in these categories, which was slightly lower than in 2010 and 2009 (77%).
- Overall, Laying Hen holdings (conventional and free-range combined) made up 30.5% of the total holdings sampled in the EU in 2011. Conventional holdings made up 21.9% of those sampled, which compares to 17.8% in 2010 and 18.6% in 2009. Free-range Laying Hen holdings made up 8.6% of the total holdings sampled, which was higher than in 2010 (5.3%) and 2009 (5.5%).
- Conventional Laying Hen holdings were sampled in all 27 MS, which was slightly more than in 2010 and 2009, when Conventional Laying Hen holdings were sampled in 25 MS (excluding FR and MT, where only Free Range Laying Hen holdings were sampled during these years). The number of holdings sampled varied from one (LT) to 2669 (NL). A total of 16 MS sampled Free-range Laying Hens, plus CH. Again this was slightly higher than in 2010 and 2009, when Free-range Laying Hen holdings from 14 MS were sampled, plus CH. The number of holdings sampled varied from two (HU) to 1548 (NL).
- Four Conventional Laying Hen holdings were seropositive for influenza A virus, two for subtype H5 (one of these was also PCR/virus isolation positive), and two for subtype H7. In addition, one Free-range Laying Hen holding was seropositive for subtype H7. The total number of positive Conventional Laying Hen/Free-range Laying Hen holdings (n = 5) was similar to 2010 (n = 5) and 2009 (n = 4), although the percentage positive in 2011 was marginally lower (0.06% of total Laying Hen/Free-range Laying Hen holdings

sampled), than in 2010 and 2009 (0.07% of total Laying Hen/Free-range Laying Hen holdings sampled).

- Two MS detected H5 or H7 positive holdings in 2011; IT in Conventional Laying Hens and NL in Free-range Laying Hens. This is similar to 2010 and one less MS than in 2009.

### **Conventional Broilers and Free-range Broilers**

- As in 2010 and 2009, the Broiler poultry category was split into Conventional and Free-range Broilers. Conventional Broilers made up 83.2% of the total holdings sampled in these poultry categories. This is a slight increase from 2010 (79.7%) and a slight decrease from 2009 (84.2%).
- Overall, Broiler holdings (conventional and free-range combined) made up 5.4% of the total holdings sampled in the EU in 2011. Conventional Broiler holdings made up 4.5% of those sampled, which compares to 4.2% in 2010 and 4.8% in 2009. Free-range Broiler holdings made up just 0.9% of the total holdings sampled, which is comparable to 1.1% in 2010 and 0.9% in 2009.
- Conventional Broiler holdings were sampled in eight MS. This was also the case in 2010, and was lower than in 2009, when sampling was carried out in ten MS. The number of holdings sampled varied from three holdings (LU) to 836 (NL). A total of eight MS sampled Free-range Broiler holdings, which compares to seven in 2010 and nine in 2009. The number of holdings sampled varied from two holdings (LU) to 71 (PT).
- No positive holdings were reported in this category in 2011, which was also the case in 2010 and 2009.

### **Fattening Turkeys and Turkey Breeders**

- Overall, Turkey holdings (Fattening and Breeder combined) made up 10.4% of the total holdings sampled in the EU in 2011. Fattening Turkey holdings made up 9.7% of those sampled, which compares to 10.3% in 2010 and 9.6% in 2009. Turkey Breeder holdings made up just 0.7% of total holdings sampled in the EU in 2011, which is comparable to 0.8% in 2010 and 0.9% in 2009.
- Fattening Turkey holdings were sampled in 21 MS, plus CH, compared to 22 MS in 2010, and 20 MS, plus NO, in 2009. The number of holdings sampled varied from six holdings (CY and SK) to 1733 (IT). A total of 12 MS sampled Turkey Breeder holdings, compared to 13 and 11 MS in 2010 and 2009 respectively. The number of holdings sampled varied from one holding (CZ and DE) to 72 (IT).
- No positive Fattening Turkey holdings were reported in 2011, which was also the case in 2010. However, in 2009, a total of six positive holdings were detected; these were four H5 and one H7 positive holdings in IT, and one holding positive for other subtypes detected in ES.
- For Turkey Breeders, no positive holdings were reported in 2011, which was also the case in 2010 and 2009.

### **Fattening Ducks and Breeder Ducks**

- Overall, Duck holdings (Fattening and Breeder combined) made up 3.8% of the total holdings sampled in the EU in 2011. Fattening Duck holdings made up 3.0% of those sampled, which compares to 3.0% in 2010 and 2.6% in 2009. Breeder Ducks made up just 0.8% of the total holdings sampled, which is similar to 2010 (0.8%) and 2009 (0.6%).

- Fattening Duck holdings were sampled in 20 MS, compared to 18 and 17 MS in 2010 and 2009 respectively. The number of holdings sampled varied from two holdings (IE and LV) to 160 (FR). A total of 12 MS sampled Breeder Duck holdings, which compares to nine in 2010 and 11 in 2009. The number of holdings sampled varied from one holding (DE) to 74 (FR).
- Overall 33 Duck holdings were found to be seropositive for influenza A virus of subtypes H5 or H7 in 2011. This accounted for half (50.8%) of the seropositive holdings in 2011 (65 in total). Of the 33 positive holdings, most were H5 seropositive (eight Fattening Duck holdings and 24 Breeder Duck holdings). One additional Breeder Duck holding was H7 seropositive. In fact 64.0% (32/50) of the H5 seropositive holdings were from Duck holdings. In 2010, 26 Duck holdings were serologically positive for subtype H5, including four Fattening Duck holdings and 22 Breeder Duck holdings, which is slightly less than in 2011.
- Overall holdings found to be positive for influenza A virus of subtypes H5 and H7 were reported from 11 MS. Of these, six MS reported positives from Duck holdings. This compares to 3 MS in 2010.

### **Fattening Geese and Breeder Geese**

- Overall, Geese holdings (Fattening and Breeder combined) made up 1.8% of the total holdings sampled in the EU in 2011. Fattening Geese holdings made up 1.3% of those sampled, which compares to 1.2% in 2010 and 1.3% in 2009. Breeder Geese made up just 0.5% of the total holdings sampled and is comparable to 2010 (0.4%) and 2009 (0.3%).
- Fattening Geese were sampled in 15 MS, which is higher than in 2010 and 2009, when sampling was carried out in 11 MS. The number of holdings sampled varied from one holding (FI and IE) to 74 (HU). A total of seven MS sampled Breeder Geese holdings, compared to eight in 2010 and nine in 2009. The number of holdings sampled varied from four holdings (BE) to 47 (PL).
- Overall ten Geese holdings tested serologically positive for influenza virus subtypes H5 or H7; eight Breeder Geese holdings were H5 seropositive and two Fattening Geese holdings were seropositive (one H5 subtype and one H7). Two Breeder Geese holdings were also virologically positive for influenza A virus – one was PCR/ virus isolation positive for influenza A virus, while the other was PCR positive for influenza A virus/ virus isolation negative. The detection rate in Breeder Geese (8 seropositive holdings/148 holdings sampled, 5.4%) was the second highest after Breeder Ducks (10.3%), and 16.0% (8/50) of the H5 seropositive holdings were from Breeder Geese. In 2010, eight Breeder Geese holdings were also serologically positive for subtype H5, but no positives were detected in Fattening Geese.
- Two MS detected H5/H7 Fattening Geese seropositive holdings in 2011, which were FI and UK. This is more than in 2010 when no seropositives were detected in Fattening Geese. For Breeder Geese four MS reported H5/H7 seropositive holdings in 2011, including BE, CZ, FR and PL. This compares to two MS (FR and PL) in 2010.

### **Backyard Flocks**

- Backyard flocks are the largest poultry category reported in the EU with 1,413,725 holdings (86%), most of which (96%) are reported in BG, HU, PT, IT and DE. Backyard Flocks made up 17.8% of total holdings sampled in the EU in 2011. This is considerably lower than in 2010 and 2009 when 26.8% and 26.7% respectively of holdings sampled were Backyard Flocks, reflecting the revision of the guidelines.

- Backyard Flocks were sampled in 13 MS, which is comparable to 2010 (12 MS, plus CH) and 2009 (14 MS). The number of holdings sampled varied from four holdings (LT) to 1629 (IT). Three MS sampled the majority of Backyard Flock holdings; IT (1629, 30.8%), RO (1152, 21.7%) and BG (990, 18.7%). This is similar to previous years, although ES previously sampled a high proportion of the Backyard Flocks, but in 2011 reflecting the revision to the guidelines ES sampled only 301 holdings (compared to 2337 holdings in 2010 and 3336 holdings in 2009).
- Eight Backyard Flock holdings tested serologically positive for influenza A virus, two for subtype H5 and six for subtype H7, all from IT (which was also the case in 2010). In fact, almost half of the H7 seropositive holdings were from Backyard Flocks (6/15, 40.0%). In addition, one Backyard Flock from RO also tested PCR positive for influenza A virus (serology/virus isolation negative). Fewer sero-positives were reported in 2010, including one H5 and three H7 seropositive holdings. However, in 2009, substantially more sero-positives were detected, including two H5 and 24 H7 positive holdings, as well as one H5 and one H7 positive holdings from Switzerland.

### **Game Birds**

- Game Bird holdings made up 5.5% of total holdings sampled in the EU in 2011. This compares to 6.3% in 2010 and 5.5% in 2009.
- Game Bird holdings were sampled in 18 MS, which was the same as in 2010 and one less than in 2009. The number of holdings sampled varied from one holding (EE) to 478 (IT).
- Three Game Bird holdings, from two MS (IT, SE), were seropositive for influenza A virus subtype H5 in 2011. This is considerably lower than in 2010, when 12 H5 and 3 H7 seropositive holdings from four MS were detected. In 2009, 10 Game Bird holdings, from five MS, tested positive for avian influenza.

### **Ratites**

- Ratite holdings made up just 0.7% of total holdings sampled in the EU in 2011. This compares to 0.8% in 2010 and 2009.
- Ratite holdings were sampled in 15 MS, which was similar to 2010 (15 MS) and 2009 (14 MS). The number of holdings sampled varied from one holding (AT and CY) to 72 (IT), although the majority of MS (12/15) sampled  $\leq 10$  holdings. Three MS sampled the majority of Ratite holdings; IT (72, 36.5%), PL (48, 24.4%), and ES (33, 16.8%).
- No positive holdings were detected in this category in 2011, which was also the case in 2010 and 2009.

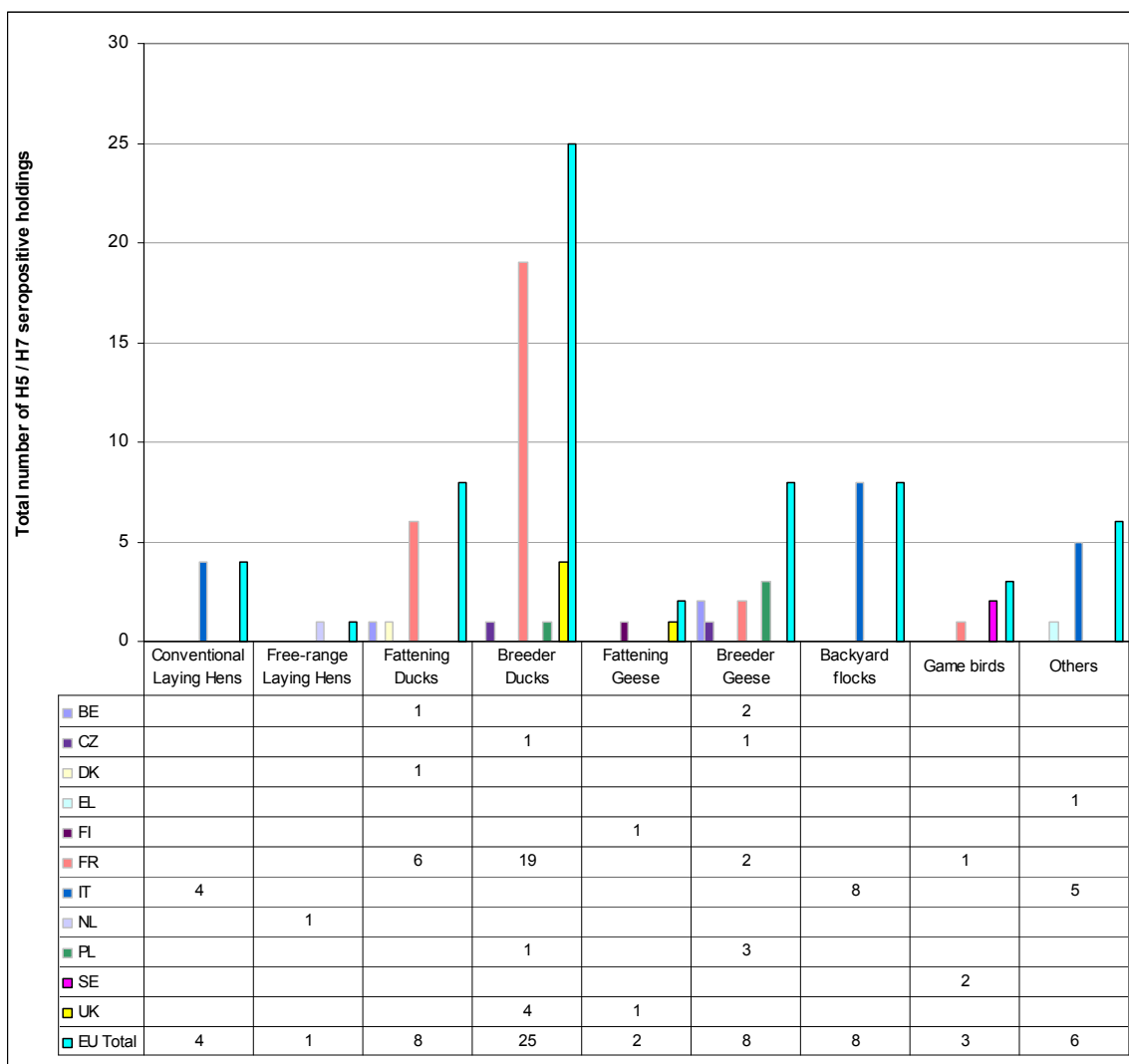
### **Others**

- Others holdings made up 7.2% of total holdings sampled in the EU in 2011. This compares to 7.8% in 2010 and 6.4% in 2009.
- Where details were provided, the types of poultry reported in this category included: incubators, hatcheries, exotic birds, poultry (mainly chicken) reared and sold as backyard, pigeon, fighting cock, guinea fowl, quail, peacock, ducks, zoos, pet shops, and quails for human consumption. For more information on this please see Section 6.2.1 on Data Processing (p.51-52).

- Others holdings were sampled in eight MS, compared to six and seven MS in 2010 and 2009 respectively. The number of holdings sampled varied from one holding (BG) to 1437 (IT). As in 2010-2009, two MS sampled the majority of Others holdings; IT (1437, 66.4%) and ES (457, 21.1%).
- Six Others holdings were serologically positive for influenza A virus, two for subtype H5 (one of these was also PCR positive) and four for subtype H7. In addition, one holding (Others, dealer) was PCR positive for the H5 subtype, as well as being serologically positive for the H7 subtype, and one holding was PCR (only) positive for the H7 subtype (serology/virus isolation not performed). There was also one Others holding that tested PCR positive for influenza A virus (serology not performed/virus isolation negative). Overall, more Others holdings were reported as seropositive for H5/H7 in 2011, compared to 2010, when only one holding was seropositive for H7 (although an additional four holdings were positive for H5/H7 by PCR/virus isolation).
- Two MS detected H5 or H7 positive holdings in 2011 – IT and EL, with the majority (5/6 sero-positives) found in IT. In 2010, positives were only detected in IT.

Poultry Category	Table 6a Total number of LP H5 seropositive and sampled holdings in 2011 and 2010 by poultry category	
	2011	2010
	Seropositive / sampled	Seropositive / sampled
Chicken Breeders	0 / 5062	0 / 3901
Conventional Laying Hens and Free-range laying hens	2 / 9083 <sup>1</sup>	1 / 6799
Conventional Broilers and Free-range Broilers	0 / 1606	0 / 1570
Fattening Turkeys and Turkey Breeders	0 / 3089	0 / 3305
Fattening and Breeder Ducks	32 / 1139	26 / 1123
Fattening and Breeder Geese	9 / 543 <sup>2</sup>	8 / 480
Backyard Flocks	2 / 5297 <sup>3</sup>	1 / 7910
Game Bird	3 / 1626	12 / 1861
Ratite	0 / 197	0 / 240
Other	2 / 2164 <sup>4</sup>	0 / 2289
<b>EU Total (excluding CH and NO)</b>	<b>50 / 29,806</b>	<b>48 / 29,484</b>
<u>2011 notes on virological data</u> <sup>1</sup> LH: One holding serologically and PCR/VI positive for H5. <sup>2</sup> BG: Two H5 seropositive holdings PCR positive for influenza A virus; one of these was also VI positive for influenza A virus. <sup>3</sup> BYF: One holding PCR positive for influenza A virus (serology / VI negative). <sup>4</sup> O: One holding serologically and PCR positive for H5. One holding PCR positive for H5 (serology negative / VI not performed) and also seropositive for H7. One holding PCR positive for influenza A virus (serology not performed / VI negative).		

Poultry Category	Table 6b Total number of LP H7 seropositive and sampled holdings in 2011 and 2010 by poultry category	
	2011	2010
	Seropositive / sampled	Seropositive / sampled
Chicken Breeders	0 / 5062	0 / 3901
Conventional Laying Hens and Free-range laying hens	3 / 9083	4 / 6799
Conventional Broilers and Free-range Broilers	0 / 1606	0 / 1570
Fattening Turkeys and Turkey Breeders	0 / 3089	0 / 3305
Fattening and Breeder Ducks	1 / 1139	0 / 1123
Fattening and Breeder Geese	1 / 543	0 / 480
Backyard Flocks	6 / 5297 <sup>1</sup>	3 / 7910
Game Bird	0 / 1626	3 / 1861
Ratite	0 / 197	0 / 240
Other	4 / 2164 <sup>2</sup>	1 / 2289
<b>EU Total (excluding CH and NO)</b>	<b>15 / 29,806</b>	<b>11 / 29,484</b>
<u>2011 notes on virological data</u> <sup>1</sup> BYF: One holding PCR positive for influenza A virus (serology / VI negative). <sup>2</sup> O: One holding H7 PCR positive (serology / VI not performed). One holding seropositive for H7 and PCR positive for H5. One holding PCR positive for influenza A virus (serology not performed / VI negative).		



**Figure 5 Total numbers of holdings found serologically positive for influenza A virus subtypes H5 or H7 by poultry category across Member States in 2011**



Member States	Table 7 Total number of sampled and seropositive holdings by poultry category across Member States in 2011															
	Chicken Breeders	Conventional Laying Hens	Free-range Laying Hens	Conventional Broilers	Free-range Broilers	Fattening Turkeys	Turkey Breeders	Fattening Ducks	Breeder Ducks	Fattening Geese	Breeder Geese	Backyard Flocks	Game Birds	Ratites	Others	Total
AT	10	64	56			53		9		71				1		264
BE	184	296	116			46		1/20			2/4		22			688
BG	7	57		7				91	2			990			1	1155
CY	7	22	28			6						18	9	1		91
CZ		54	6			35	1	24	1/19	4	1/7		53			203
DE	1	109	3	10		97	1	129	1	37		29			138	555
DK	534	53	283		9	28		1/15	2	6			256			1186
EE		18											1			19
EL	53	47			47	20	3						6	2	1/56	234
ES	126	186	53	163	5	90	13	56		3		301	389	33	457	1875
FI	49	62	11			45		3		1/1			8	2		181
FR	57	51	65		67	124	62	6/160	19/74		2/17	49	1/145	3		874
HU	35	84	2			58	16	60	10	74	31	500	34	3		907
IE	79	46	70		48	43	2	2		1						291
IT	690	2/2108 2/2108	271			1733	72	156	25	49	30	2/1629 6/1629	478	72	1/1437 4/1437	8750
LT		1			21							4			1	27
LU		4	3	3	2							8		4	1	25
LV		44						2	2	3		171				222
MT		49														49
NL	2920	2669	1/1548	836		188		54	40							8255
PL	64	60				85	10	47	1/14	52	3/47		34	48		461
PT	65	63			71	93		10	2			387	65	4	73	833
RO	61	163		274		8		4		8		1152	18	2		1690
SE	36	61	30	39		22	3	6		20			2/24	5		246
SI	10	59				46						59	6	7		187
SK	9	39		4		6	6	4		2			25	10		105
UK	65	57	12			68	6	45	3/51 1/51	1/64	12		53			433
EU Total	5062	6526	2557	1336	270	2894	195	897	242	395	148	5297	1626	197	2164	29,806
Total H5/ H7 positive	0	4	1	0	0	0	0	8	25	2	8	8	3	0	6	65
% positive	0.00%	0.06%	0.04%	0.00%	0.00%	0.00%	0.00%	0.89%	10.33%	0.51%	5.41%	0.15%	0.18%	0.00%	0.28%	0.22%
CH			40			25										65

 Seropositive H5
  Seropositive H7

2011 notes on virological data

BE: The two H5 seropositive Breeder Geese holdings were PCR positive for influenza A; one was also VI positive for influenza A.

EL: One Others holding was PCR positive for influenza A virus (serology not performed / VI negative).

IT: One Laying Hens holding was serologically and PCR/VI positive for H5, and one Others holding was serologically and PCR positive for H5 (VI not performed). One Others holding was PCR positive for H5 (serology negative / VI not performed) and also seropositive for H7. One Others holding was also reported as H7 PCR positive (serology / VI not performed).

RO: One Backyard Flock holding was PCR positive for influenza A virus (serology / VI not performed).

## 4.2 Member States

Table 7 shows the number of holdings sampled and the number of seropositive H5 and H7 holdings by poultry category across MS in 2011.

### Descriptive results relating to individual Member State's programmes

The total number of holdings reported for each poultry category per MS is given in parentheses in the text below. Where the number of sampled holdings exceeds the total number of holdings reported, holdings are assumed to have been sampled more than once.

#### Austria

- Austria carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Fattening Turkeys, Fattening Ducks, Fattening Geese, and Ratites.
- Ten Chicken Breeder holdings were sampled (Ten total).
- 64 Conventional Laying Hen holdings were sampled (428 total).
- 56 Free-range Laying Hen holdings were sampled (635 total).
- 53 Fattening Turkey holdings were sampled (111 total).
- Nine Fattening Duck holdings were sampled (Nine total).
- 71 Fattening Geese holdings were sampled (71 total).
- One Ratite holding was sampled (Four total).
- Austria reported from six regions. The number of regions sampled varied across poultry categories.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

#### Belgium

- Belgium carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Fattening Turkeys, Fattening Ducks, Breeder Geese, and Game Birds. Birds that were submitted in the Others category as Fattening pigeons and Guinea fowl were reassigned to Game Birds.
- 184 Chicken Breeder holdings were sampled (197 total).
- 296 Conventional Laying Hen holdings were sampled (323 total).
- 116 Free-range Laying Hen holdings were sampled (99 total).
- 46 Fattening Turkey holdings were sampled (37 total).
- 20 Fattening Duck holdings were sampled (22 total).

- Four Breeder Geese holdings were sampled (Three total).
- 22 Game Bird holdings were sampled (18 total).
- Belgium reported from ten regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, as was the case in 2010, but not 2009.**
- **Three holdings were reported as positive in 2011. One Fattening Duck holding and two Breeder Geese holdings tested serologically positive for influenza A virus subtype H5. The two Breeder Geese holdings also both tested virologically positive for influenza A virus (one was PCR/virus isolation positive for influenza A virus, while the other was PCR positive for influenza A virus/virus isolation negative).**
- *In 2010, one Fattening Duck holding was serologically and PCR positive for influenza A virus, subtype H5.*

## Bulgaria

- Bulgaria carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Conventional Broilers, Backyard Flocks, Fattening Ducks, Breeder Ducks, and Others. Ducks, and Partridges, Pheasants and Quails, and Ostriches reported in the Others category were reassigned to Fattening Ducks, Game Birds, and Ratites respectively. However, please note that no samples were taken in the newly reassigned Game Birds and Ratites categories and so they have not been included below.
- Seven Chicken Breeder holdings were sampled (25 total).
- 57 Conventional Laying Hen holdings were sampled (144 total).
- Seven Conventional Broiler holdings were sampled (174 total).
- 990 Backyard Flock holdings were sampled (566,369 total).
- 91 Fattening Duck holdings were sampled (115 total).
- Two Breeder Duck holdings were sampled (Three total).
- One Other holding was sampled (Six total).
- Bulgaria reported from 23 regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2011, unlike in 2010 and 2009.**
- *In 2010, 15 Fattening Duck holdings were reported serologically and PCR/virologically positive for influenza A virus subtypes H3, H4 and H6.*
- *In 2009, ten Fattening Duck holdings were reported virologically positive for influenza A virus subtypes H3, H4 and H6.*

## Cyprus

- Cyprus carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Fattening Turkeys, Backyard Flocks, Game Birds, and Ratites.
- Seven Chicken Breeder holdings were sampled (16 total).
- 22 Conventional Laying Hen holdings were sampled (26 total).
- 28 Free-range Laying Hen holdings were sampled (15 total).
- Six Fattening Turkey holdings were sampled (Eight total).
- 18 Backyard Flock holdings were sampled (8,530 total).
- Nine Game Bird holdings were sampled (Six total).
- One Ratite holding was sampled (One total).
- Cyprus reported as one region.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

## Czech Republic

- The Czech Republic carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Conventional Laying Hens, Free-range Laying Hens, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Breeder Ducks, Fattening Geese, Breeder Geese, and Game Birds.
- 54 Conventional Laying Hen holdings were sampled (134 total).
- Six Free-range Laying Hen holdings were sampled (Six total).
- 35 Fattening Turkey holdings were sampled (47 total).
- One Turkey Breeder holding was sampled (One total).
- 24 Fattening Duck holdings were sampled (24 total).
- 19 Breeder Duck holdings were sampled (20 total).
- Four Fattening Geese holdings were sampled (Four total).
- Seven Breeder Geese holdings were sampled (Seven total).
- 53 Game Bird holdings were sampled (53 total).
- The Czech Republic reported from 13 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

- **Two holdings were reported as positive in 2011. One Breeder Duck holding and one Breeder Geese holding tested serologically positive for influenza A virus subtype H5.**
- *In 2010, one Game Bird holding was virologically (PCR) positive for influenza A virus other subtype H6.*
- *In 2009, two Breeder Duck holdings were serologically positive for influenza A virus, one for subtype H5 and one for other subtype H6. Two Breeder Geese holdings were serologically positive for subtype H5, and one virologically (PCR) positive for subtype H7. In addition, one Game Bird holding was virologically positive for subtype H5.*

## Denmark

- Denmark carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Free-range Broilers, Fattening Turkeys, Fattening Ducks, Breeder Ducks, Fattening Geese, and Game Birds.
- 534 Chicken Breeder holdings were sampled (452 total).
- 53 Conventional Laying Hen holdings were sampled (35 total).
- 283 Free-range Laying Hen holdings were sampled (109 total).
- Nine Free-range Broiler holdings were sampled (18 total).
- 28 Fattening Turkey holdings were sampled (44 total).
- 15 Fattening Duck holdings were sampled (56 total).
- Two Breeder Duck holdings were sampled (One total).
- Six Fattening Geese holdings (24 total).
- 256 Game Bird holdings were sampled (213 total).
- Denmark reported as one region.
- **Positive holdings were reported in 2011, which was also the case in 2010 and 2009.**
- **In 2011, one Fattening Duck holding tested serologically positive for influenza A virus subtype H5.**
- *In 2010, five Game Bird holdings were reported as positive for influenza A virus. Two holdings were reported serologically positive for influenza A virus, subtype H5, and one of these was also virologically positive for H7 subtype. Another three holdings were serologically positive for influenza A virus, subtype H7, and one of these was also virologically (PCR) positive for the same subtype (H7).*
- *In 2009, four holdings were reported as positive. One Breeder Duck holding was serologically positive for influenza A virus, subtype H5. The same holding was also serologically positive for subtype H5 in the Breeder Geese category. In addition, two Game Bird holdings were serologically positive for influenza A virus, one for H5 and one for H5 and H7 subtypes.*

## Estonia

- Estonia carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Conventional Laying Hens. In addition, birds that were submitted in the Others category as Quails were reassigned to Game Birds.
- 18 Conventional Laying Hen holdings were sampled (18 total).
- One Game Bird holding was sampled (One total).
- Estonia reported from one region.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

## Finland

- Finland carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Fattening Turkeys, Fattening Ducks, Fattening Geese, Game Birds, and Ratites.
- 49 Chicken Breeder holdings were sampled (69 total).
- 62 Conventional Laying Hen holdings were sampled (761 total).
- 11 Free-range Laying Hen holdings were sampled (27 total).
- 45 Fattening Turkey holdings were sampled (44 total).
- Three Fattening Duck holdings were sampled (Seven total).
- One Fattening Geese holding was sampled (One total).
- Eight Game Bird holdings were sampled (12 total).
- Two Ratite holdings were sampled (Two total).
- Finland reported from four regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, unlike in 2010 and 2009.**
- **In 2011, one Fattening Geese holding tested serologically positive for influenza A virus subtype H5.**

## France

- France carried out surveillance according to the new guidelines of Commission Decision 2010/367/EU (EC 2010a).

- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Free-range Broilers, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Breeder Ducks, Breeder Geese, Backyard Flocks, Game Birds, and Ratites.
- 57 Chicken Breeder holdings were sampled (1000 total).
- 51 Conventional Laying Hen holdings were sampled (6000 total).
- 65 Free-range Laying Hen holdings were sampled (1030 total).
- 67 Free-range Broiler holdings were sampled (6000 total).
- 124 Fattening Turkey holdings were sampled (4070 total).
- 62 Turkey Breeder holdings were sampled (230 total)
- 160 Fattening Ducks holdings were sampled (4300 total).
- 74 Breeder Duck holdings were sampled (250 total).
- 17 Breeder Geese holdings were sampled (133 total).
- 49 Backyard Flock holdings were sampled (3000 total)
- 145 Game Bird holdings were sampled (4000 total).
- Three Ratite holdings were sampled (20 total).
- France reported from 39 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, which was also the case in 2010 and 2009.**
- **Twenty-eight holdings were reported as positive in 2011. Six Fattening Duck holdings, 19 Breeder Duck holdings, two Breeder Geese holdings and one Game Bird holding tested serologically positive for influenza A virus subtype H5.**
- *In 2010, 33 holdings were reported as positive. Influenza A viruses were detected in Breeder Ducks (19 holdings), Fattening Ducks (three holdings), Breeder Geese (six holdings) and Game Birds (five holdings), all of which were serologically positive for subtype H5.*
- *In 2009, 32 holdings were reported as positive. Influenza A viruses were detected in Backyard Flocks (one), Fattening Ducks (nine), Breeder Ducks (14), Breeder Geese (four) and Game Birds (four), all of which were positive by serology for subtype H5.*

## Germany

- Germany carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Conventional Broilers, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Breeder Ducks, Fattening Geese, Backyard Flocks, and Others.
- One Chicken Breeder holding was sampled (Seven total).

- 109 Conventional Laying Hen holdings were sampled (73,784 total).
- Three Free-range Laying Hen holdings were sampled (20,341 total).
- Ten Conventional Broiler holdings were sampled (1764 total).
- 97 Fattening Turkey holdings were sampled (4456 total).
- One Turkey Breeder holding was sampled (4268 total).
- 129 Fattening Duck holdings were sampled (8435 total).
- One Breeder Duck holding was sampled (Four total).
- 37 Fattening Geese holdings were sampled (2466 total).
- 29 Backyard Flock holdings were sampled (64,886 total).
- 138 Other holdings were sampled (60,561 total).
- Germany reported from 24 regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

## Greece

- Greece carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Broilers, Fattening Turkeys, Turkey Breeders, Game Birds, Ratites, and Others.
- 53 Chicken Breeder holdings were sampled (101 total).
- 47 Conventional Laying Hen holdings were sampled (360 total).
- 47 Free-range Broiler holdings were sampled (48 total).
- 20 Fattening Turkey holdings were sampled (48 total).
- Three Turkey Breeder holdings were sampled (Four total).
- Six Game Bird holdings were sampled (Nine total).
- Two Ratite holdings were sampled (Two total).
- 56 Other holdings were sampled (111 total).
- Greece reported from nine regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, unlike in 2010 and 2009.**
- **Two holdings were reported as positive in 2011. One 'Other' holding (geese reared and sold for use as backyard) tested serologically positive for influenza A virus subtype H5. In addition, another 'Other' holding (quails and pheasants reared and**



**sold for use as backyard) tested PCR positive for influenza A virus (serology not performed/virus isolation negative).**

## **Hungary**

- Hungary carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Breeder Ducks, Fattening Geese, Breeder Geese, Backyard Flocks, Game Birds, and Ratites.
- 35 Chicken Breeder holdings were sampled (137 total).
- 84 Conventional Laying Hen holdings were sampled (487 total).
- Two Free-range Laying Hen holdings were sampled (Three total).
- 58 Fattening Turkey holdings were sampled (301 total).
- 16 Turkey Breeder holdings were sampled (19 total).
- 60 Fattening Duck holdings were sampled (287 total).
- Ten Breeder Duck holdings were sampled (27 total).
- 74 Fattening Geese holdings were sampled (443 total).
- 31 Breeder Geese holdings were sampled (59 total).
- 500 Backyard Flock holdings were sampled (351,499).
- 34 Game Bird holdings were sampled (38 total).
- Three Ratite holdings were sampled (Three total).
- Hungary reported from 20 regions. The number of regions sampled varied across poultry categories.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

## **Ireland**

- Ireland carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Free-range Broilers, Fattening Turkeys, Turkey Breeders, Fattening Ducks, and Fattening Geese.
- 79 Chicken Breeder holdings were sampled (86 total).
- 46 Conventional Laying Hen holdings were sampled (83 total).
- 70 Free-range Laying Hen holdings were sampled (97 total).

- 48 Free-range Broiler holdings were sampled (23 total).
- 43 Fattening Turkey holdings were sampled (107 total).
- Two Turkey Breeder holdings were sampled (Eight total).
- Two Fattening Duck holdings were sampled (Three total).
- One Fattening Geese holdings was sampled (Two total).
- Ireland reported from two regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2011, as was the case in 2010, but not 2009.**
- *In 2009, one Free-range Laying Hen holding was serologically positive for influenza A virus of subtype H5.*

## Italy

- Italy carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Breeder Ducks, Fattening Geese, Breeder Geese, Backyard Flocks, Game Birds, Ratites, and Others.
- 690 Chicken Breeder holdings were sampled (344 total).
- 2108 Conventional Laying Hen holdings were sampled (1279 total).
- 271 Free-range Laying Hen holdings were sampled (212 total).
- 1733 Fattening Turkey holdings were sampled (855 total).
- 72 Turkey Breeder holdings were sampled (41 total).
- 156 Fattening Duck holdings were sampled (147 total).
- 25 Breeder Duck holdings were sampled (14 total).
- 49 Fattening Geese holdings were sampled (67 total).
- 30 Breeder Geese holdings were sampled (12 total).
- 1629 Backyard Flock holdings were sampled (143,286 total).
- 478 Game Bird holdings were sampled (469 total)
- 72 Ratite holdings were sampled (151 total).
- 1437 Other holdings were sampled (1877 total).
- Italy reported from 21 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

- **Eighteen holdings were reported as positive in 2011. Four Conventional Laying Hen holdings tested serologically positive for influenza A virus, two for subtype H5 (one of these was also PCR/virus isolation positive), and two for subtype H7. Eight Backyard Flock holdings tested serologically positive for influenza A virus, two for subtype H5 and six for subtype H7. In addition, six 'Other' holdings were reported positive for influenza A virus; one (Others, dealer) was PCR positive for the H5 subtype (serology negative/virus isolation not performed), as well as being serologically positive for the H7 subtype; one was serologically and PCR positive (virus isolation not performed) for the H5 subtype; and four were positive for the H7 subtype (three were serologically positive and one was PCR positive (serology/virus isolation not performed)).**
- *In 2010, a total of 12 holdings were reported positive. Four Backyard Flock holdings were serologically positive for influenza A virus, one for subtype H5, and three for subtype H7. Three Conventional Laying Hen holdings were serologically positive for influenza A virus, again one for H5 subtype, and two for H7 (one of these was also PCR/virologically positive). In addition, five 'Other' holdings were reported positive for influenza A virus; two were virologically (PCR) positive for H5 subtype, and three holdings were positive for subtype H7 (one of these was serologically and virologically positive, and two were virologically positive).*
- *In 2009 a total of 45 holdings tested positive. One Chicken Breeder holding was serologically positive for influenza A virus for subtype H7. One Conventional Laying Hen holding was also positive for subtype H5. Five Fattening Turkey holdings were serologically positive, four for subtype H5 and one for H7. A total of 24 Backyard Flock holdings were serologically positive for subtype H7. One Fattening Duck holding tested positive by virology for subtype H2, this holding was not tested by serology. Two Game bird holdings were positive for subtype H5 by serology. In addition, a total of eleven 'Other' holdings were positive for subtype H7; one holding was positive twice for H7 (only counted once), six holdings were positive by serology and virology (PCR), three holdings were serology positive and two holdings were positive by virology (PCR) alone.*

## Latvia

- Latvia carried out surveillance according to the new guidelines of Commission Decision 2010/367/EU (EC 2010a).
- Test results from holdings sampled were reported from Conventional Laying Hens, Fattening Ducks, Breeder Ducks, Fattening Geese, and Backyard Flocks.
- 44 Conventional Laying Hen holdings were sampled (44 total).
- Two Fattening Duck holdings were sampled (Two total).
- Two Breeder Duck holdings were sampled (Two total).
- Three Fattening Geese holdings were sampled (Three total).
- 171 Backyard Flock holdings were sampled (2461 total).
- Latvia reported from six regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

## Lithuania

- Lithuania carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Conventional Laying Hens, Free-range Broilers, Backyard Flocks, and Others.
- One Conventional Laying Hen holding was sampled (One total).
- 21 Free-range Broiler holdings were sampled (Four total).
- Four Backyard Flock holdings were sampled (Four total).
- One Other holding was sampled (One total).
- Lithuania reported from five regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

## Luxembourg

- Luxembourg carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Conventional Laying Hens, Free-range Laying Hens, Conventional Broilers, Free-range Broilers, Backyard Flocks, Ratites, and Others.
- Four Conventional Laying Hen holdings were sampled (Four total).
- Three Free-range Laying Hen holdings were sampled (Three total).
- Three Conventional Broiler holdings were sampled (Three total).
- Two Free-range Broiler holdings were sampled (Two total).
- Eight Backyard Flock holdings were sampled (600 total).
- Four Ratite holdings were sampled (One total).
- One Other holding was sampled (Three total).
- Luxembourg reported from one region.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

## Malta

- Malta carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Conventional Laying Hens.

- 49 Conventional Laying Hen holdings were sampled (35 total).
- Malta reported from one region.
- **No positive holdings were reported in 2011, which was also the case in 2009. (In 2010 Malta did not submit data for the annual poultry surveillance).**

## The Netherlands

- The Netherlands carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Conventional Broilers, Fattening Turkeys, Fattening Ducks and Breeder Ducks.
- 2920 Chicken Breeder holdings were sampled (490 total).
- 2669 Conventional Laying Hen holdings were sampled (965 total).
- 1548 Free-range Laying Hen holdings were sampled (288 total).
- 836 Conventional Broiler holdings were sampled (661 total).
- 188 Fattening Turkey holdings were sampled (58 total).
- 54 Fattening Duck holdings were sampled (52 total).
- 40 Breeder Duck holdings were sampled (11 total).
- The Netherlands reported from 12 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, as was the case in 2010, but not 2009.**
- **In 2011, one Free-range Laying Hen holding tested serologically positive for influenza A virus subtype H7.**
- *In 2010, two positive holdings were reported. One Conventional Laying Hen holding was serologically and virologically (PCR) positive for influenza A virus subtype H7. Whilst one Free-range Laying Hen holding was serologically positive, also for subtype H7.*

## Poland

- Poland carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Breeder Ducks, Fattening Geese, Breeder Geese, Game Birds, and Ratites.
- 64 Chicken Breeder holdings were sampled (690 total).
- 60 Conventional Laying Hen holdings were sampled (1144 total).
- 85 Fattening Turkey holdings were sampled (852 total).

- Ten Turkey Breeder holdings were sampled (15 total).
- 47 Fattening Duck holdings were sampled (113 total).
- 14 Breeder Duck holdings were sampled (34 total).
- 52 Fattening Geese holdings were sampled (780 total).
- 47 Breeder Geese holdings were sampled (218 total).
- 34 Game Bird holdings were sampled (56 total).
- 48 Ratite holdings were sampled (124 total).
- Poland reported from 16 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, which was also the case in 2010 and 2009.**
- **Four holdings were reported as positive in 2011. One Breeder Duck holding and three Breeder Geese holdings tested serologically positive for influenza A virus subtype H5.**
- *In 2010, two Breeder Geese holdings tested positive by serology for H5 influenza A virus.*
- *In 2009, one Breeding Geese holding tested positive by serology for H5 influenza A virus.*

## Portugal

- Portugal carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Broilers, Fattening Turkeys, Fattening Ducks, Breeder Ducks, Backyard Flocks, Game Birds, Ratites and Others.
- 65 Chicken Breeder holdings were sampled (97 total).
- 63 Conventional Laying Hen holdings were sampled (156 total).
- 71 Free-range Broiler holdings were sampled (238 total).
- 93 Fattening Turkey holdings were sampled (143 total).
- Ten Fattening Duck holdings were sampled (12 total).
- Two Breeder Duck holdings were sampled (Two total).
- 387 Backyard Flock holdings were sampled (236,735 total).
- 65 Game Bird holdings were sampled (111 total).
- Four Ratite holdings were sampled (Four total).
- 73 Other holdings were sampled (122 total).
- Portugal reported from seven regions. The number of regions sampled varied by poultry category.

- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

## Romania

- Romania carried out surveillance according to the new guidelines of Commission Decision 2010/367/EU (EC 2010a).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Conventional Broilers, Fattening Turkeys, Fattening Ducks, Fattening Geese, Backyard Flocks, Game Birds and Ratites. Pheasants and Quails, and Ostriches reported in the Others category were reassigned to Game Birds and Ratites respectively.
- 61 Chicken Breeder holdings were sampled (41 total).
- 163 Conventional Laying Hen holdings were sampled (171 total).
- 274 Conventional Broiler holdings were sampled (264 total).
- Eight Fattening Turkey holdings were sampled (Eight total)
- Four Fattening Duck holdings were sampled (Two total).
- Eight Fattening Geese holdings were sampled (Eight total).
- 1152 Backyard Flock holdings were sampled (1,534 total).
- 18 Game Bird holdings were sampled (14 total).
- Two Ratite holdings were sampled (Two total).
- Romania reported from 42 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, which was also the case in 2009, but not 2010.**
- **In 2011, one Backyard Flock holding (fattening geese, sentinel birds) tested PCR positive for influenza A virus (serology negative/virus isolation negative).**
- *In 2009, one Breeder Duck holding was found serologically and virologically (PCR) positive for H5 influenza A virus.*

## Slovak Republic

- The Slovak Republic carried out surveillance according to the new guidelines of Commission Decision 2010/367/EU (EC 2010a).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Conventional Broilers, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Fattening Geese, Game Birds, and Ratites.
- Nine Chicken Breeder holdings were sampled (11 total).
- 39 Conventional Laying Hen holdings were sampled (64 total)
- Four Conventional Broiler holdings were sampled (148 total).

- Six Fattening Turkey holdings were sampled (Ten total).
- Six Turkey Breeder holdings were sampled (Six total).
- Four Fattening Duck holdings were sampled (Five total).
- Two Fattening Geese holding were sampled (Four total).
- 25 Game Bird holdings were sampled (35 total).
- Ten Ratite holdings were sampled (17 total).
- Slovak Republic reported from four regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

### Slovenia

- Slovenia carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Fattening Turkeys, Backyard Flocks, Game Birds, and Ratites.
- Ten Chicken Breeder holdings were sampled (Ten total).
- 59 Conventional Laying Hen holdings were sampled (138 total).
- 46 Fattening Turkey holdings were sampled (46 total).
- 59 Backyard Flock holdings were sampled (19,422 total).
- Six Game Bird holdings were sampled (Six total).
- Seven Ratite holdings were sampled (Seven total).
- Slovenia reported from one region.
- **No positive holdings were reported in 2011, which was also the case in 2010 and 2009.**

### Spain

- Spain carried out surveillance according to the new guidelines of Commission Decision 2010/367/EU (EC 2010a).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Conventional Broilers, Free-range Broilers, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Fattening Geese, Backyard Flocks, Game Birds, Ratites, and Others.
- 126 Chicken Breeder holdings were sampled (395 total).
- 186 Conventional Laying Hen holdings were sampled (863 total).



- 53 Free-range Laying Hen holdings were sampled (74 total).
- 163 Conventional Broiler holdings were sampled (916 total).
- Five Free-range Broiler holdings were sampled (17 total).
- 90 Fattening Turkey holdings were sampled (436 total).
- 13 Turkey Breeder holdings were sampled (Nine total).
- 56 Fattening Duck holdings were sampled (63 total).
- Three Fattening Geese holdings were sampled (Six total).
- 301 Backyard Flock holdings were sampled (15,399 total).
- 389 Game Bird holdings were sampled (522 total).
- 33 Ratite holdings were sampled (69 total).
- 457 Other holdings were sampled (2859 total).
- Spain reported from 17 regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2011, as was the case in 2010, but not 2009.**
- *In 2009, a total of five holdings were reported positive. Two Conventional Laying Hen holdings were positive for influenza A virus, one of subtype H5 (by serology) and one of subtype H7 (positive by virology/ PCR, serology not performed). One Fattening Turkey holding was found positive for influenza A virus of a subtype other than H5 or H7 (no subtype given), by virology (PCR) but negative by serology. This was the same holding as one Fattening Duck holding reported as positive (not H5 or H7). One further Fattening Duck holding tested positive by virology/ PCR (serology negative) for subtype H5. In addition, one Other holding tested positive by serology for influenza A virus of subtype H5.*

## Sweden

- Sweden carried out surveillance according to the new guidelines of Commission Decision 2010/367/EU (EC 2010a).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Conventional Broilers, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Fattening Geese, Game Birds, and Ratites.
- 36 Chicken Breeder holdings were sampled (37 total).
- 61 Conventional Laying Hen holdings were sampled (264 total).
- 30 Free-range Laying Hen holdings were sampled (95 total).
- 39 Conventional Broiler holdings were sampled (39 total).
- 22 Fattening Turkey holdings were sampled (22 total).
- Three Turkey Breeder holdings were sampled (Four total).
- Six Fattening Duck holdings were sampled (Six total).

- 20 Fattening Geese holdings were sampled (20 total).
- 24 Game Bird holdings were sampled (24 total).
- Five Ratite holdings were sampled (Five total).
- Sweden reported from six regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, which was also the case in 2010 and 2009.**
- **Two Game Bird (mallard) holdings were reported as serologically positive for influenza A virus subtype H5 in 2011.**
- *In 2010, four Game Bird holdings tested serologically positive for influenza A virus, subtype H5 (two of these also tested virologically (PCR) positive for influenza A virus).*
- *In 2009, two holdings tested positive. One Backyard Flock tested positive by serology for influenza A virus of subtype H5. In addition, one Game Bird holding also tested positive for subtype H5 by serology.*

## United Kingdom

- The United Kingdom carried out surveillance according to the new guidelines of Commission Decision 2010/367/EU (EC 2010a).
- Test results from holdings sampled were reported from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Fattening Turkeys, Turkey Breeders, Fattening Ducks, Breeder Ducks, Fattening Geese, Breeder Geese, and Game Birds.
- 65 Chicken Breeder holdings were sampled (510 total).
- 57 Conventional Laying Hen holdings were sampled (1212 total).
- 12 Free-range Laying Hen holdings were sampled (342 total).
- 68 Fattening Turkey holdings were sampled (522 total).
- Six Turkey Breeder holdings were sampled (14 total).
- 45 Fattening Duck holdings were sampled (167 total).
- 51 Breeder Duck holdings were sampled (190 total).
- 64 Fattening Geese holdings were sampled (194 total).
- 12 Breeder Geese holdings were sampled (37 total).
- 53 Game Bird holdings were sampled (857 total).
- The UK reported from 33 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2011, which was also the case in 2010 and 2009.**
- **Five holdings were reported as positive in 2011. Four Breeder Duck holdings tested serologically positive for influenza A virus, three for subtype H5 and one for subtype H7. In addition, one Fattening Geese holding tested serologically positive for influenza A virus subtype H7.**

- *In 2010, four holdings tested positive. Three Breeder Duck holdings tested serologically positive for influenza A virus subtype H5. In addition, one Game Bird holding (Ducks) also tested serologically positive for influenza A virus H5 subtype.*
- *In 2009, two holdings tested positive. Two Breeder Duck holdings tested positive by serology for influenza A virus, one of subtype H5 and one H7.*

## **Non-EU MS**

### **Switzerland**

- Switzerland carried out surveillance according to the guidelines of Commission Decision 2007/268/EC (EC 2007).
- Test results from holdings sampled were reported from Free-range Laying Hens and Fattening Turkeys.
- 40 Free-range Laying Hen holdings were sampled (3523 total).
- 25 Fattening Turkey holdings were sampled (63 total).
- Switzerland reported from six regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2011, as was the case in 2010, but not 2009.**
- *In 2009, two Backyard Flock holdings were serologically positive for influenza A virus, one of subtype H5 and one H7.*

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## 5 DISCUSSION

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In 2011 active surveillance for avian influenza in poultry holdings was carried out in 27 MS according to Directive 2005/94/EC. In addition, one non-EU MS, Switzerland (CH), submitted data for this report.

Seven MS carried out active sero-surveillance of avian influenza in poultry according to guidelines of Commission Decision 2010/367/EC (EC 2010a).

A total of 28,806 poultry holdings was sampled, which compares to 29,484 in 2010, 35,016 in 2009 and 34,985 in 2008. The most frequently sampled poultry category in 2011 was Laying Hens (conventional and free-range), making up 30.5% of the total holdings sampled by MS, followed by Backyard Flocks (17.8% of total holdings sampled) and Chicken Breeders (17.0% of total holdings sampled). The least sampled poultry category was Ratites (197, 0.7%) reflecting the low proportion of holdings in this category (0.02% of total holdings across the EU).

The number of holdings sampled by each MS varied from 19 in Estonia to 8750 in Italy. Italy also sampled the most holdings in 2010 ( $n = 9174$ ), 2009 ( $n = 10,254$ ) and 2008 ( $n = 9,025$ ). There was an increase in the number of holdings sampled from Chicken Breeders, Conventional Laying Hens, Free-range Laying Hens, Conventional Broilers, Fattening Ducks, Breeder Ducks, Fattening Geese and Breeder Geese, compared to 2010, while all other poultry categories saw a decrease in the number of holdings sampled in 2011. Percentage increases in the number of holdings sampled compared with 2010 varied from 0.8% (Fattening Ducks) to 62.9% (Free-range Laying Hens). Some MS targeted sampling towards Free-range holdings of Layers and Broilers by sampling more Free-range than conventional holdings in these poultry categories. Targeting of Free-range flocks was carried out for Layers in Cyprus, Denmark, France, and Ireland, and for Broilers in Denmark, Greece, France, Ireland, Lithuania, and Portugal.

In 2011, evidence of previous infection with H5 or H7 avian influenza was detected in 65 holdings, which is 0.22% of total holdings sampled. This is a similar rate of detection to 2010, when 59 of 29,484 holdings were serologically positive for H5 or H7 (0.20%). In 2011, detection of antibodies to avian influenza (H5 and H7 subtypes) occurred in Conventional Laying Hens, Free-range Laying Hens, Fattening Ducks, Breeder Ducks, Fattening Geese, Breeder Geese, Backyard Flocks, Game Birds and Other Poultry. Antibodies to subtype H5 infection were detected most often in Breeder Duck and Breeder Geese holdings, whereas antibodies to H7 subtype infection were most often detected in Backyard Flocks.

In 2011, there were 50 holdings found positive for H5 by serological testing. This is comparable to 2010 when 48 holdings were found serologically positive for H5, and 2009 and 2008, when 52 holdings in each year were reported serologically positive for H5. Of the 50 holdings reported to be seropositive in 2011, 35 underwent follow-up testing for the presence of active infection and two tested positive for subtype H5 by PCR or virus isolation. This indicated that in at least 5.7% of the holdings seropositive for subtype H5, infection was still active. In addition, one holding that was seropositive for H7 and sero-negative for H5, tested PCR positive for subtype H5. In comparison in 2010 one holding (2.08% of those seropositive for H5) tested positive for subtype H5 by PCR or virus isolation.

In 2011, 15 holdings were found positive for H7 by serological testing. This is comparable to 2010, when 11 holdings were found serologically positive for H7, but is lower than in 2009 and 2008, when 38 and 21 holdings respectively were reported serologically positive for H7. Five of the 15 seropositive holdings in 2011 underwent follow-up testing for the presence of active infection and none tested positive for subtype H7 by PCR or virus isolation (an indicator of active infection). However, one of the H7 seropositive holdings, tested PCR positive for subtype H5. In comparison in 2010 four holdings (36.4% of those seropositive for H7) tested positive for subtype H7 by PCR or virus isolation.

In many species infection with LPAI can result in only mild clinical signs and may not be detected by poultry keepers and veterinary practitioners. A positive PCR or virus isolation result indicates that the infection is still active and potential risk of transmission exists. Such a test result will lead

to the implementation of measures and restrictions in accordance with Council Directive 2005/94/EC.

All the MS that detected H5 or H7 positive holdings in 2010 (BE, DK, FR, IT, NL, PL, SE and UK) also reported positives in 2011. Three additional MS also reported H5 or H7 positive holdings in 2011 (CZ, EL and FI). A high proportion of the H5 seropositive holdings (56.0%) were detected in France, particularly in Breeder Ducks. The majority of H7 seropositive holdings (80.0%) were detected in Italy, mainly in Backyard Flocks and Other holdings (as was the case in 2010).

The detection rate in Breeder Ducks (10.3%) and Breeder Geese (5.4%) was considerably higher than other poultry categories across the EU, and Fattening Ducks had the third highest detection rate at 0.9%. The high rate of detections in these categories may be due to the following factors: Ducks and Geese are less likely to show clinical signs than other poultry species so infection is less likely to have been detected earlier by passive surveillance, while in other species clinical disease due to AI may lead to earlier detection and removal of the flock. The Breeder Duck and Breeder Geese birds tend to have a longer lifespan than birds of other poultry categories, and therefore a longer time period in which they could have been exposed to the virus. Ducks and Geese are frequently kept outdoors and therefore may have a higher probability of contact with wild birds, either directly or indirectly, and hence possibly a greater risk of exposure to AI virus. The last factor may also apply to the categories: Fattening Geese, Others, Game Birds, and Backyard Flocks, which had the next highest rates of detections, albeit considerably lower than Breeder Ducks or Breeder Geese.

The sampling regimes among MS are diverse with different degrees of targeting and testing frequencies, varying numbers of samples collected in each flock and likely variance of within-flock sero-prevalence at the time of sampling. Hence differences in between flock detection rates for poultry categories or MS need to be interpreted with great caution.

The recently published guidelines on surveillance in poultry for the EU surveillance programme encourage a risk-based approach. Criteria and risk-factors suggested for incorporation include those associated with virus introduction into poultry holdings due to direct or indirect exposure to wild birds and also those for virus spread within the poultry holding and between poultry holdings, as well as the consequences (impact) of the spread of avian influenza from poultry to poultry and between poultry holdings. It is recognised that to carry out risk-based surveillance incorporating such risk factors, an evidence-base applicable to the individual Member State is required. If insufficient evidence is available to develop a risk-based surveillance plan, then representative sampling is recommended as in previous years. The move towards risk-based surveillance should increase the sensitivity of the surveillance programme and/or provide greater efficiency in terms of targeting effort and resource to sampling the holdings that are most likely to have been infected with avian influenza.

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## 6 METHODS

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### 6.1 *Methods*

This report is restricted to data that were collected and submitted to the EC database, in the required format, in 2011 to the Commission under Decisions 2010/367/EU ([EC 2010a](#)) or 2007/268/EC ([EC 2007](#)) and 2010/712/EC ([EC 2010b](#)).

Data extracted from the EC database were checked and analysed by the EURL.

### 6.2 *Data Received*

Data received from the MS were extracted in a standardised format, containing laboratory testing information and more detailed information on the positive holdings found for each poultry category that the MS sampled.

#### 6.2.1 **Data Processing**

All 27 EU MS submitted data for the 2011 poultry survey. In addition, non-EU MS Switzerland submitted data for the poultry survey. The standardised format for submission of data ensured that in the majority of MS the data were complete and could be analysed effectively.

If the total number of holdings reported by a MS was not consistently reported across quarter periods, the information was supplemented by the 2011 survey programme for the respective MS. The total holdings figure was calculated using the holding figure given for each NUTS region and poultry category where data had been submitted. Where the total holding figure for a particular NUTS region and poultry category varied through the year, the total holding figure given for Q4 (or the last quarter in which the category/NUTS code was sampled) during analysis was used.

Where positives were found in two or more poultry categories on the same holding, they were each reported in the corresponding category as a positive holding.

For the comparison of survey results according to poultry categories across years, Free-range and indoor categories were combined, as were fatteners and breeders for Turkeys, Ducks and Geese.

A number of MS that submitted data in the Others category provided further species details. In light of this information, if queries arose concerning whether a type of poultry should be included under Others or another category, they were referred to the relevant MS. For BE, BG, EE and RO, the following data submitted in the Others category were reassigned to Game Birds:

BE - Fattening pigeons and Guinea fowl, BG – Partridges, Pheasants and Quail, EE - Quail, and RO - Pheasants and Quails.

In addition, BG submitted Duck and Ostrich holdings under Others that were reassigned to Fattening Ducks and Ratites respectively. RO also submitted Ostrich holdings under Others that were reassigned to Ratites.

Where extra details were given in the data, the type of holdings included under Others were:

Member State	Category species detail included	Comments
BG	Incubators, hatcheries and exotic birds	
EL	Poultry (mainly chicken) reared and sold for use as backyard	This poultry category is exclusively farmed indoors in "authorised holdings" with no access to the outside. At a certain age the birds are distributed by authorised merchants to rural areas where they are kept outside as backyard poultry. Due to this unique production system, EL reported under "Others" instead of reassigning.
ES	Pigeon and fighting cock	
IT	Guinea fowl and quail dealer, hobby flocks	Due to the particular production system, IT reported under Others and chose not to reassign to another category.
LT	Peacock	
LU	Ducks	In LU no fattening duck holdings exist and therefore LU chose to report under "Others".
PT	Zoos, pet shops, racing pigeons and quails for human consumption	Quails are reared under intensive conditions for human consumption purposes only. Due to the particular production system PT reported under "Others".

Maps were produced using the ArcMap function of Arc GIS version 10.

Samples are displayed at NUTS 2 level and positive holdings at NUTS 2 or 3 (NUTS 1 for the DK H5 positive). However, if the NUTS codes reported were not valid/did not match, holding and sampled numbers were averaged and displayed at NUTS 1 or NUTS 0. The intensity of surveillance was determined by calculating the density of holdings sampled.

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## 7 REFERENCES

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EC (2002) Commission Decision 2002/649/EC of 5 August 2002 on the implementation of surveys for avian influenza in poultry and wild birds in the Member States, *Official Journal of the European Union* L 213 , 9.8.2002, p.38.

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EC (2006b) Commission Decision 2006/437/EC of 4 August 2006 approving a Diagnostic Manual for avian influenza as provided for in Council Directive 2005/94/EC, *Official Journal of the European Union*, L 237, 31.8.2006, p. 1.

EC (2007) Commission Decision 2007/268/EC of 13 April 2007 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, *Official Journal of the European Union* L115, 3.5.2007, p. 3.

EC (2010a) Commission Decision 2010/367/EU of 25 June 2010 on the implementation by Member States of surveillance programmes for avian influenza in poultry and wild birds, *Official Journal of the European Union*, L 166, 1.7.2010, p. 22.

EC (2010b) Commission Decision 2010/712/EU of 23 November 2010 on approving annual and multiannual programmes and the financial contribution from the Union for the eradication, control and monitoring of certain animal diseases and zoonoses presented by the Member States for 2011 and following years. *Official Journal of the European Union*, L 309, 25.11.2010, p. 18.



## 8 ANNEX I DETAILS OF PREVALENCE BY POULTRY CATEGORY AND MS FOR 2011 AND 2010

Member State	Annex I Table 1 Total number of Chicken Breeder holdings, total number sampled and total number of positive holdings reported for 2011 and 2010 by Member State.									
	2011					2010				
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings		
			Total	H5	H7			Total	H5	H7
AT	10	10	0	0	0					
BE	197	184	0	0	0	202	205	0	0	0
BG	25	7	0	0	0	25	71	0	0	0
CY	16	7	0	0	0	19	15	0	0	0
CZ										
DE	7	1	0	0	0					
DK	452	534	0	0	0	460	590	0	0	0
EE										
EL	101	53	0	0	0	98	59	0	0	0
ES	395	126	0	0	0	379	152	0	0	0
FI	69	49	0	0	0	58	52	0	0	0
FR	1000	57	0	0	0					
HU	137	35	0	0	0	106	26	0	0	0
IE	86	79	0	0	0	86	81	0	0	0
IT	344	690	0	0	0	368	706	0	0	0
LT										
LU										
LV						1	1	0	0	0
MT										
NL	490	2920	0	0	0	451	1705	0	0	0
PL	690	64	0	0	0	531	67	0	0	0
PT	97	65	0	0	0	127	62	0	0	0
RO	41	61	0	0	0					
SE	37	36	0	0	0	39	34	0	0	0
SI	10	10	0	0	0	9	9	0	0	0
SK	11	9	0	0	0	48	10	0	0	0
UK	510	65	0	0	0	315	56	0	0	0
Total	4725	5062	0	0	0	3322	3901	0	0	0
CH										

Member State	Annex I Table 2 Total number of Conventional and Free-range Laying Hen holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State. Virological data is displayed in italics in parentheses. (If a holding was virologically positive for H5/H7 only, further information is provided at the base of the table).																			
	2011									2010										
	Conventional Laying Hens					Free-range Laying Hens				Conventional Laying Hens					Free-range Laying Hens					
	Total No. of Holdings	No. of Holdings Sampled	Holdings			Total No. of Holdings	No. of Holdings Sampled	Holdings			Total No. of Holdings	No. of Holdings Sampled	Holdings			Total No. of Holdings	No. of Holdings Sampled	Holdings		
			Total	H5	H7			Total	H5	H7			Total	H5	H7			Total	H5	H7
AT	428	64	0	0	0	635	56	0	0	0	1562	60	0	0	0					
BE	323	296	0	0	0	99	116	0	0	0	361	231	0	0	0	82	54	0	0	0
BG	144	57	0	0	0						149	60	0	0	0					
CY	26	22	0	0	0	15	28	0	0	0	27	33	0	0	0	10	34	0	0	0
CZ	134	54	0	0	0	6	6	0	0	0	126	51	0	0	0					
DE	73,784	109	0	0	0	20,341	3	0	0	0	55,887	43	0	0	0	11,132	23	0	0	0
DK	35	53	0	0	0	109	283	0	0	0	37	52	0	0	0	112	308	0	0	0
EE	18	18	0	0	0						18	18	0	0	0					
EL	360	47	0	0	0						370	50	0	0	0					
ES	863	186	0	0	0	74	53	0	0	0	943	257	0	0	0	71	43	0	0	0
FI	761	62	0	0	0	27	11	0	0	0	588	47	0	0	0	25	16	0	0	0
FR	6000	51	0	0	0	1030	65	0	0	0						1030	50	0	0	0
HU	487	84	0	0	0	3	2	0	0	0	524	108	0	0	0	10	10	0	0	0
IE	83	46	0	0	0	97	70	0	0	0	83	47	0	0	0	97	56	0	0	0
IT	1279	2108	4(1)	2(1)	2	212	271	0	0	0	1274	2127	3(1)	1	2(1)	257	316	0	0	0
LT	1	1	0	0	0						1	1								
LU	4	4	0	0	0	3	3	0	0	0	4	5	0	0	0	3	4	0	0	0
LV	44	44	0	0	0						33	33	0	0	0					
MT	35	49	0	0	0								0	0	0					
NL	965	2669	0	0	0	288	1548	1	0	1	1088	1404	1(1)	0	1(1)	297	619	1	0	1
PL	1144	60	0	0	0						996	66	0	0	0					
PT	156	63	0	0	0						200	76	0	0	0					
RO	171	163	0	0	0						185	285	0	0	0					
SE	264	61	0	0	0	95	30	0	0	0	294	35	0	0	0	88	27	0	0	0
SI	138	59	0	0	0						138	60	0	0	0					
SK	64	39	0	0	0						50	28	0	0	0					
UK	1212	57	0	0	0	342	12	0	0	0	1188	58	0	0	0	486	10	0	0	0
Total	88,923	6526	4(1)	2(1)	2	23,376	2557	1	0	1	66,126	5235	4(2)	1	3(2)	13,700	1570	1	0	1
CH						3523	40	0	0	0						3523	62	0	0	0

Member State	Annex I Table 3 Total number of Conventional and Free-range Broiler holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State.																			
	2011										2010									
	Conventional Broilers					Free-range Broilers					Conventional Broilers					Free-range Broilers				
	Total No. of Holdings	No.of Holdings Sampled	Holdings			Total No. of Holdings	No.of Holdings Sampled	Holdings			Total No. of Holdings	No.of Holdings Sampled	Holdings			Total No. of Holdings	No.of Holdings Sampled	Holdings		
			Total	H5	H7			Total	H5	H7			Total	H5	H7			Total	H5	H7
AT																				
BE																				
BG	174	7	0	0	0						169	18	0	0	0					
CY																				
CZ																				
DE	1764	10	0	0	0						1271	6	0	0	0					
DK						18	9	0	0	0						19	2	0	0	0
EE																				
EL						48	47	0	0	0						48	45	0	0	0
ES	916	163	0	0	0	17	5	0	0	0	1651	165	0	0	0	33	19	0	0	0
FI																				
FR						6000	67	0	0	0						6000	134	0	0	0
HU																				
IE						23	48	0	0	0						13	36	0	0	0
IT																				
LT						4	21	0	0	0	14	67	0	0	0					
LU	3	3	0	0	0	2	2	0	0	0	3	3	0	0	0	2	2	0	0	0
LV																				
MT																				
NL	661	836	0	0	0						810	475	0	0	0					
PL																				
PT						238	71	0	0	0	1656	0	0	0	0	238	80	0	0	0
RO	264	274	0	0	0						245	494	0	0	0					
SE	39	39	0	0	0						24	24	0	0	0					
SI																				
SK	148	4	0	0	0								0	0	0					
UK																				
Total	3969	1336	0	0	0	6350	270	0	0	0	5843	1252	0	0	0	6353	318	0	0	0
CH																				

Member State	Annex I Table 4 Total number of Fattening Turkey and Turkey Breeder holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State.																			
	2011										2010									
	Fattening Turkeys					Turkey Breeders					Fattening Turkeys					Turkey Breeders				
	Total No. of Holdings	No.of Holdings Sampled	Holdings			Total No. of Holdings	No.of Holdings Sampled	Holdings			Total No. of Holdings	No.of Holdings Sampled	Holdings			Total No. of Holdings	No.of Holdings Sampled	Holdings		
			Total	H5	H7			Total	H5	H7			Total	H5	H7			Total	H5	H7
AT	111	53	0	0	0						138	79	0	0	0					
BE	37	46	0	0	0						34	31	0	0	0					
BG											1	0	0	0	0	2	2	0	0	0
CY	8	6	0	0	0						8	8	0	0	0					
CZ	47	35	0	0	0	1	1	0	0	0	72	55	0	0	0					
DE	4456	97	0	0	0	4268	1	0	0	0	2509	222	0	0	0	7	1	0	0	0
DK	44	28	0	0	0						116	33	0	0	0					
EE																				
EL	48	20	0	0	0	4	3	0	0	0	45	18	0	0	0	1	1	0	0	0
ES	436	90	0	0	0	9	13	0	0	0	434	109	0	0	0	9	13	0	0	0
FI	44	45	0	0	0						53	54	0	0	0					
FR	4070	124	0	0	0	230	62	0	0	0	7590	155	0	0	0	230	86	0	0	0
HU	301	58	0	0	0	19	16	0	0	0	316	76	0	0	0	7	5	0	0	0
IE	107	43	0	0	0	8	2	0	0	0	105	38	0	0	0	8	2	0	0	0
IT	855	1733	0	0	0	41	72	0	0	0	853	1749	0	0	0	52	110	0	0	0
LT											1	5	0	0	0					
LU																				
LV																				
MT																				
NL	58	188	0	0	0						62	101	0	0	0	12	2	0	0	0
PL	852	85	0	0	0	15	10	0	0	0	809	83	0	0	0	16	11	0	0	0
PT	143	93	0	0	0						150	60	0	0	0					
RO	8	8	0	0	0						5	10	0	0	0					
SE	22	22	0	0	0	4	3	0	0	0	23	21	0	0	0	4	3	0	0	0
SI	46	46	0	0	0						45	45	0	0	0					
SK	10	6	0	0	0	6	6	0	0	0	10	6	0	0	0	4	5	0	0	0
UK	522	68	0	0	0	14	6	0	0	0	570	98	0	0	0	29	8	0	0	0
Total	12,225	2894	0	0	0	4619	195	0	0	0	13,949	3056	0	0	0	381	249	0	0	0
CH	63	25	0	0	0															

Annex I Table 5 Total number of Fattening and Breeder Duck holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State. Virological data is displayed in italics in parentheses. (If a holding was virologically positive for H5/H7 only, further information is provided at the base of the table. Information is also provided on virological data other than H5/H7).																				
Member State	2011										2010									
	Fattening Ducks					Breeder Ducks					Fattening Ducks					Breeder Ducks				
	Total No. of Holdings	No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	No. of Holdings Sampled	Holdings		
			Total	H5	H7			Total	H5	H7			Total	H5	H7			Total	H5	H7
AT	9	9	0	0	0						15	15	0	0	0					
BE	22	20	1	1	0						20	14	1(1)	1(1)	0					
BG	115	91	0	0	0	3	2	0	0	0	97	56	15(15) <sup>1</sup>	0	0	5	3	0	0	0
CY																				
CZ	24	24	0	0	0	20	19	1	1	0						15	15	0	0	0
DE	8435	129	0	0	0	4	1	0	0	0	7236	261	0	0	0					
DK	56	15	1	1	0	1	2	0	0	0	54	13	0	0	0	13	4	0	0	0
EE																				
EL																				
ES	63	56	0	0	0						42	39	0	0	0					
FI	7	3	0	0	0						9	6	0	0	0					
FR	4300	160	6	6	0	250	74	19	19	0	3850	149	3	3	0	250	112	19	19	0
HU	287	60	0	0	0	27	10	0	0	0	385	67	0	0	0	7	4	0	0	0
IE	3	2	0	0	0															
IT	147	156	0	0	0	14	25	0	0	0	174	155	0	0	0	11	31	0	0	0
LT																				
LU																				
LV	2	2	0	0	0	2	2	0	0	0	4	4	0	0	0					
MT																				
NL	52	54	0	0	0	11	40	0	0	0	66	25	0	0	0	15	19	0	0	0
PL	113	47	0	0	0	34	14	1	1	0	35	5	0	0	0	54	8	0	0	0
PT	12	10	0	0	0	2	2	0	0	0	12	15	0	0	0	2	2	0	0	0
RO	2	4	0	0	0						2	4	0	0	0					
SE	6	6	0	0	0						4	4	0	0	0					
SI																				
SK	5	4	0	0	0						5	3	0	0	0					
UK	167	45	0	0	0	190	51	4	3	1	167	55	0	0	0	150	35	3	3	0
Total	13,827	897	8	8	0	558	242	25	24	1	12,177	890	19(16)	4(1)	0	522	233	22	22	0
CH																				
<u>2010 notes</u> <sup>1</sup> 15 holdings seropositive and PCR/VI positive for subtypes other than H5 or H7																				

Annex I Table 6 Total number of Fattening and Breeder Geese holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State. Virological data is displayed in italics in parentheses. (If a holding was virologically positive for H5/H7 only, further information is provided at the base of the table. Information is also provided on virological data other than H5/H7).																				
Member State	2011										2010									
	Fattening Geese					Breeder Geese					Fattening Geese					Breeder Geese				
	Total No. of Holdings	No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	No. of Holdings Sampled	Holdings		
			Total	H5	H7			Total	H5	H7			Total	H5	H7			Total	H5	H7
AT	71	71	0	0	0						62	62	0	0	0					
BE						3	4	2(2) <sup>1</sup>	2	0						3	2	0	0	0
BG																				
CY																				
CZ	4	4	0	0	0	7	7	1	1	0						6	6	0	0	0
DE	2466	37	0	0	0						2291	21	0	0	0					
DK	24	6	0	0	0						23	4	0	0	0	9	2	0	0	0
EE																				
EL																				
ES	6	3	0	0	0						9	7	0	0	0					
FI	1	1	1	1	0															
FR						133	17	2	2	0						133	13	6	6	0
HU	443	74	0	0	0	59	31	0	0	0	552	78	0	0	0	19	15	0	0	0
IE	2	1	0	0	0															
IT	67	49	0	0	0	12	30	0	0	0	75	51	0	0	0	10	39	0	0	0
LT																				
LU																				
LV	3	3	0	0	0						1	1	0	0	0					
MT																				
NL																				
PL	780	52	0	0	0	218	47	3	3	0	749	47	0	0	0	310	38	2	2	0
PT																				
RO	8	8	0	0	0															
SE	20	20	0	0	0						11	11	0	0	0					
SI																				
SK	4	2	0	0	0						4	3	0	0	0					
UK	194	64	1	0	1	37	12	0	0	0	154	66	0	0	0	34	14	0	0	0
Total	4093	395	2	1	1	469	148	8(2)	8	0	3931	351	0	0	0	524	129	8	8	0
CH																				

2011 notes

<sup>1</sup>The two H5 seropositive Breeder Geese holdings in BE were PCR positive for influenza A: one was also VI positive for influenza A.

**2011 notes**

<sup>1</sup>The two H5 seropositive Breeder Geese holdings in BE were PCR positive for influenza A; one was also VI positive for influenza A.

Member State	<b>Annex I Table 7 Total number of Backyard Flock holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State.</b> Virological data is displayed in italics in parentheses. (If a holding was virologically positive for H5/H7 only, further information is provided at the base of the table. Information is also provided on virological data other than H5/H7).									
	2011					2010				
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings		
			Total	H5	H7			Total	H5	H7
AT										
BE										
BG	566,369	990	0	0	0	548,985	800	0	0	0
CY	8530	18	0	0	0	8530	31	0	0	0
CZ										
DE	64,886	29	0	0	0	13,680	21	0	0	0
DK										
EE										
EL						3589	55	0	0	0
ES	15,399	301	0	0	0	28,006	2337	0	0	0
FI										
FR	3000	49	0	0	0	3000	98	0	0	0
HU	351,499	500	0	0	0	NK	463	0	0	0
IE										
IT	143,286	1629	8	2	6	146,536	1628	4	1	3
LT	4	4	0	0	0					
LU	600	8	0	0	0					
LV	2461	171	0	0	0	NK	162	0	0	0
MT										
NL										
PL										
PT	236,735	387	0	0	0	236,735	316	0	0	0
RO	1534	1152	1(1) <sup>†</sup>	0	0	1535	1939	0	0	0
SE										
SI	19,422	59	0	0	0	19,422	60	0	0	0
SK										
UK										
Total	1,413,725	5297	9(1)	2	6	1,010,018	7910	4	1	3
CH						322	2	0	0	0
<u>2011 notes</u> <sup>†</sup> One holding PCR positive for influenza A virus (serology / VI negative)										

Member State	<b>Annex I Table 8 Total number of Game Bird holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State.</b> Virological data is displayed in italics in parentheses. (If a holding was virologically positive for H5/H7 only, further information is provided at the base of the table. Information is also provided on virological data other than H5/H7).									
	2011					2010				
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings		
			Total	H5	H7			Total	H5	H7
AT										
BE	18	22	0	0	0	28	10	0	0	0
BG						12	0	0	0	0
CY	6	9	0	0	0	8	7	0	0	0
CZ	53	53	0	0	0	12	12	1(1) <sup>1</sup>	0	0
DE						12	2	0	0	0
DK	213	256	0	0	0	218	300	6(2)	2	4(2) <sup>2</sup>
EE	1	1	0	0	0					
EL	9	6	0	0	0	8	5	0	0	0
ES	522	389	0	0	0	672	269	0	0	0
FI	12	8	0	0	0	18	15	0	0	0
FR	4000	145	1	1	0	3500	167	5	5	0
HU	38	34	0	0	0	47	43	0	0	0
IE										
IT	469	478	0	0	0	764	815	0	0	0
LT										
LU										
LV										
MT										
NL										
PL	56	34	0	0	0	48	34	0	0	0
PT	111	65	0	0	0	121	50	0	0	0
RO	14	18	0	0	0	13	21	0	0	0
SE	24	24	2	2	0	27	23	4(2) <sup>3</sup>	4	0
SI	6	6	0	0	0	7	7	0	0	0
SK	35	25	0	0	0	35	28	0	0	0
UK	857	53	0	0	0	1268	53	1	1	0
Total	6444	1626	3	3	0	6818	1861	17(5)	12	4(2)
CH										
<b>2010 notes</b> <sup>1</sup> One holding PCR positive for subtype other than H5 or H7 <sup>2</sup> Includes one holding PCR/VI (only) positive for H7 <sup>3</sup> Two of the H5 seropositive holdings in SE were also PCR/VI positive for influenza A										



Member State	Annex I Table 9 Total number of Ratite holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State.									
	2011					2010				
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings		
			Total	H5	H7			Total	H5	H7
AT	4	1	0	0	0	4	5	0	0	0
BE										
BG										
CY	1	1	0	0	0	1	0	0	0	0
CZ										
DE						12	2	0	0	0
DK										
EE										
EL	2	2	0	0	0	5	4	0	0	0
ES	69	33	0	0	0	107	41	0	0	0
FI	2	2	0	0	0	2	1	0	0	0
FR	20	3	0	0	0					
HU	3	3	0	0	0	6	6	0	0	0
IE										
IT	151	72	0	0	0	160	92	0	0	0
LT										
LU	1	4	0	0	0	1	4	0	0	0
LV						1	1	0	0	0
MT										
NL										
PL	124	48	0	0	0	171	50	0	0	0
PT	4	4	0	0	0	4	3	0	0	0
RO	2	2	0	0	0	1	4	0	0	0
SE	5	5	0	0	0	6	4	0	0	0
SI	7	7	0	0	0	10	8	0	0	0
SK	17	10	0	0	0	17	15	0	0	0
UK										
Total	412	197	0	0	0	508	240	0	0	0
CH										

Member State	<b>Annex I Table 10 Total number of Other holdings, total number sampled, and total number of positive holdings reported for 2011 and 2010 by Member State.</b> Virological data is displayed in italics in parentheses. (If a holding was virologically positive for H5/H7 only, further information is provided at the base of the table. Information is also provided on virological data other than H5/H7).									
	2011					2010				
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings		
			Total	H5	H7			Total	H5	H7
AT										
BE										
BG	6	1	0	0	0	5	20	0	0	0
CY										
CZ										
DE	60,561	138	0	0	0	10,933	223	0	0	0
DK										
EE										
EL	111	56	2(1) <sup>1</sup>	1	0					
ES	2859	457	0	0	0	2874	635	0	0	0
FI										
FR										
HU						NK	1	0	0	0
IE										
IT	1877	1437	6(3)	2(2) <sup>2</sup>	5(1) <sup>3</sup>	2085	1355	5(4)	2(2) <sup>4</sup>	3(2) <sup>5</sup>
LT	1	1	0	0	0					
LU	3	1	0	0	0					
LV										
MT										
NL										
PL										
PT	122	73	0	0	0	119	55	0	0	0
RO										
SE										
SI										
SK										
UK										
Total	65,540	2164	8(4)	3(2)	5(1)	16,016	2289	5(4)	2(2)	3(2)
CH										

#### 2011 notes

<sup>1</sup>One holding PCR positive for influenza A virus (serology not performed / VI negative)

<sup>2</sup>Includes one holding PCR positive for H5 (serology negative / VI not performed). This holding was also seropositive for H7, and so has only been counted once in the total positives column for IT.

<sup>3</sup>Includes one holding PCR positive for H7 (serology / VI not performed)

#### 2010 notes

<sup>4</sup>Two holdings PCR/VI positive (only) for H5

<sup>5</sup>Includes two holdings PCR/VI positive (only) for H7

## 9 ANNEX II ADDITIONAL INFORMATION ON RESULTS OF THE 2011 SURVEY

Annex II Table 1 Prevalence of holdings positive for subtype H5						
Member State	Poultry Category	Total Holdings	Total Holdings Sampled	Number of H5 Serological Positive Holdings	Number of PCR/Virological Positive Holdings	Comments
BE	Fattening Ducks	22	20	1		
	Breeder Geese	3	4	2	2	Two holdings serologically positive for H5 - one was also PCR/virologically positive for Influenza A and the other was PCR positive (virology negative) for Influenza A.
CZ	Breeder Ducks	20	19	1		
	Breeder Geese	7	7	1		
DK	Fattening Ducks	56	15	1		
EL	Others	111	56	1		
FI	Fattening Geese	1	1	1		
FR	Fattening Ducks	4300	160	6		
	Breeder Ducks	250	74	19		
	Breeder Geese	133	17	2		
	Game Birds	4000	145	1		
IT	Conventional Laying Hens	1279	2108	2	1	One holding serologically and PCR/virologically positive for H5.
	Backyard flocks	143,286	1629	2		
	Others	1877	1437	1	2	One holding both serologically and PCR positive for H5; One holding PCR positive for H5 (serology negative/virology not performed) and also seropositive for H7.
PL	Breeder Ducks	34	14	1		
	Breeder Geese	218	47	3		
SE	Game Birds	24	24	2		
UK	Breeder Ducks	190	51	3		
Total		155,811	5828	50	5	

Annex II Table 2 Prevalence of holdings positive for subtype H7						
Member State	Poultry Category	Total Holdings	Total Holdings Sampled	Number of H7 Serological Positive Holdings	Number of Virological Positive Holdings	Comments
IT	Conventional Laying Hens	1279	2108	2		
	Backyard Flocks	143,286	1629	6		
	Others	1877	1437	4	1	One holding PCR positive for H7 (serology and virology not performed). One holding seropositive for H7 and also PCR positive for H5.
NL	Free-range Laying Hens	288	1548	1		
UK	Breeder Ducks	190	51	1		
	Fattening Geese	194	64	1		
Total		147,114	6837	15	1	

Member State	Annex II Table 3 Number of holdings positive for subtype H5 by serology, serology and PCR/virology or PCR/virology only			
	Poultry Category	Number Serologically Positive only, PCR/Virology negative or not performed	Number Serologically Positive and PCR/Viro positive	Number PCR/Virologically Positive, Serology negative or not performed
BE	Fattening Ducks	1		
	Breeder Geese		2*	
CZ	Breeder Ducks	1		
	Breeder Geese	1		
DK	Fattening Ducks	1		
EL	Others	1		
FI	Fattening Geese	1		
FR	Fattening Ducks	6		
	Breeder Ducks	19		
	Breeder Geese	2		
	Game Birds	1		
IT	Conventional Laying Hens	1	1	
	Backyard Flocks	2		
	Others		1	1**
PL	Breeder Ducks	1		
	Breeder Geese	3		
SE	Game Birds	2		
UK	Breeder Ducks	3		
EU Total		46	4	1

\*One holding PCR/virology positive for Influenza A & one holding PCR positive for Influenza A/virology negative

\*\*One holding PCR positive for H5 and serologically positive for H7

Member State	Annex II Table 4 Number of holdings positive for subtype H7 by serology, serology and PCR/virology or PCR/virology only			
	Poultry Category	Number Serologically Positive only, PCR/ Virology negative or not performed	Number Serologically Positive and PCR/ Virology positive	Number PCR/Virology Positive, Serology negative or not performed
IT	Conventional Laying Hens	2		
	Backyard Flocks	6		
	Others	4*		1
NL	Free-range Laying Hens	1		
UK	Breeder Ducks	1		
	Fattening Geese	1		
EU Total		15	0	1

\*One holding serologically positive for H7 and PCR positive for H5



