



ANNUAL REPORT on surveillance for avian influenza in poultry in the EU in 2009

Prepared by the
European Union Reference Laboratory for
Avian Influenza



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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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1 EXECUTIVE SUMMARY

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 infections with low-pathogenicity Avian Influenza (LPAI), 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 OIE rules.

The survey was conducted between January and December 2009 according to Council Directive 2005/94/EC on Community measures to control avian influenza and specific guidelines laid down in Commission Decision 2007/268/EC.

Twenty-seven EU Member States (MS) participated in the survey in 2009. A total of 35,016 poultry holdings were sampled, which compares to 34,985 in 2008, 126,912 in 2007 and 29,005 in 2006. The most frequently sampled poultry category was Backyard Flocks (26.7% of total holdings sampled by EU MS), closely followed by Laying Hens (Free-range and conventional) (24.1%). The least sampled poultry category was Ratites (0.77%) and this poultry category only makes up 0.04% of total holdings across the EU. In addition, two non-EU MS, Norway (NO) and Switzerland (CH), submitted data for this report.

In the 2009 survey of EU poultry for avian influenza evidence of previous infection with low pathogenicity avian influenza according to Directive 2005/94/EC was detected in 90 holdings (0.26% of total holdings sampled). The detection rate in Breeder Ducks (9.1%) and Breeder Geese (8.3%) was considerably higher than other poultry categories across the EU, and Fattening Ducks had the third highest detection rate at 1.2%.

In 2009 there were 52 holdings found positive for subtype H5, as was the case in 2008. In 2007, nearly double the number of H5 positive holdings were serologically positive (n=97). Out of the 52 positive holdings in 2009, five holdings tested positive for subtype H5 by PCR or virus isolation; indicating that in 9.6% of the holdings positive for subtype H5, infection was still active.

In 2009 there were 38 holdings found positive for subtype H7, almost double the number found in 2008 (n=21). In 2007, 36 holdings tested positive for H7 subtypes, but far more holdings were sampled in that survey year (126,912 compared with 35,016 in 2009). Out of the 38 positive holdings in 2009, 16 holdings tested positive by PCR or virus isolation, indicating that in 42% of the H7 positive holdings, the infection was still active.

The survey continues to improve knowledge on which sectors of the poultry industry are more likely to be infected by H5 or H7 LPAIV (e.g. Breeder Ducks and Breeder Geese) and identified other sectors which are consistently less likely to be affected (e.g. Broilers and Turkey Breeders). Ongoing review of the results of avian influenza surveillance, the global picture of avian influenza and scientific research in this field, accompanied by revision of the EU guidelines for AI surveillance will further improve AI disease prevention and control including the appropriate allocation of resources in this area.

GLOSSARY AND ABBREVIATIONS

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
NO*	Norway

*Non-EU MS

ADNS: Animal Disease Notification System

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

EURL: European Union Reference Laboratory for avian influenza

DG SANCO: Directorate General for Health and Consumers

EFSA: European Food Safety Authority

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 Pathogenic Avian Influenza according to Directive 2005/94/EC means LPAI caused by AI viruses of the H5 and H7 subtype

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

LPAIV of 'other subtype': LPAIV 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 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

2.1 Objectives

The objectives of the serological surveillance for LPAI subtypes H5 and H7 in poultry in 2009 are:

1. Detecting sub-clinical infections with LPAI of subtypes H5 and H7 thereby complementing early detection systems and subsequently preventing possible mutation of these viruses to HPAIV.
2. Detecting infections of LPAI H5 and H7 subtypes in specifically targeted poultry populations at specific risk for infection due to their husbandry system or the susceptibility of specific species.
3. Contributing to the demonstration of a free status of a certain country, region or compartment from notifiable avian influenza in the frame of international trade according to OIE rules.

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 \(EC 2005\)](#) 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 2009, as in 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>

For 2009, the survey programmes of the MS were evaluated and approved through the Decision 2008/897/EC (EC 2008).

Details of the survey programmes for each MS are available on the internet at:
http://ec.europa.eu/food/animal/diseases/eradication/programme2009/2009_programmes_pres.pdf

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

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 2008.
- 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 Materials and Methods section gives information on the data received from the MS, its limitations and methods of analysis of this data.
- The Annexes contain more detailed tables on the sampling and testing results.

3 OVERVIEW

3.1 *Survey design and Sampling*

3.1.1 **Survey design**

The survey design was based upon the surveillance guidelines of Commission Decision [2007/268/EC \(EC 2007\)](#).

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

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

The required number of holdings to be sampled for specified poultry categories was determined according to [Tables 2 and 3](#) below as laid down in the EU guidelines. A number of MS did not sample the number of holdings indicated in their programme for specific poultry categories based on the total holding figures given; however this was often by only a few holdings. Conversely, other MS sampled far in excess of the minimum number required.

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

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

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

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

3.1.2 Sampling

Unless specified otherwise, all totals and overall proportions refer to 27 EU MS.

- In 2009, a total of 1,355,847 poultry holdings were reported to be present among all EU MS, and 35,016 of these were sampled by the MS in their approved AI surveillance programmes. This compares to 34,985 holdings sampled in 2008 and 126,912 holdings sampled in 2007. The total number of holdings sampled is comparable to the total sampled in 2008, having only risen by 31.
- In addition, Norway and Switzerland submitted data for the 2009 EU Poultry Survey. Norway sampled 222 holdings and Switzerland 104 holdings.
- The total numbers of holdings sampled and found positive by MS are displayed in [Figure 1](#).
- The total numbers of holdings present and numbers sampled by MS in 2009 are displayed by poultry category in [Table 4](#).
- The most frequently sampled poultry category in 2009 was Backyard Flocks, mainly sampled in ES (3,336) and IT (2,118).
- There was considerable variation in the number of holdings sampled among MS. Some MS sampled only the requested sample size or less, whilst a number of others (for example NL and RO) sampled much higher numbers of holdings. 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.
- The total number of holdings sampled in the survey varied from two (LT) to 10,254 (IT). Ten MS sampled more holdings in total when compared to 2008 (AT, CY, DE, FI, IE, IT, LV, NL, SI, and the UK), the others sampled less holdings in 2009, 16 MS overall (excluding CH and NO as they did not submit data in 2008).
- Some MS targeted sampling towards free-range holdings of Layers and Broilers by sampling more free-range than conventional holdings in these poultry categories. DK and FR 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. A total of ten MS sampled conventional Broiler holdings in 2009, nine of which also sampled Free-Range Broiler holdings. FR, IE and PT sampled more free-range than conventional Broiler holdings.
- A total of 14 MS sampled Broiler holdings (conventional and free-range) in 2009, compared to 13 in 2008.

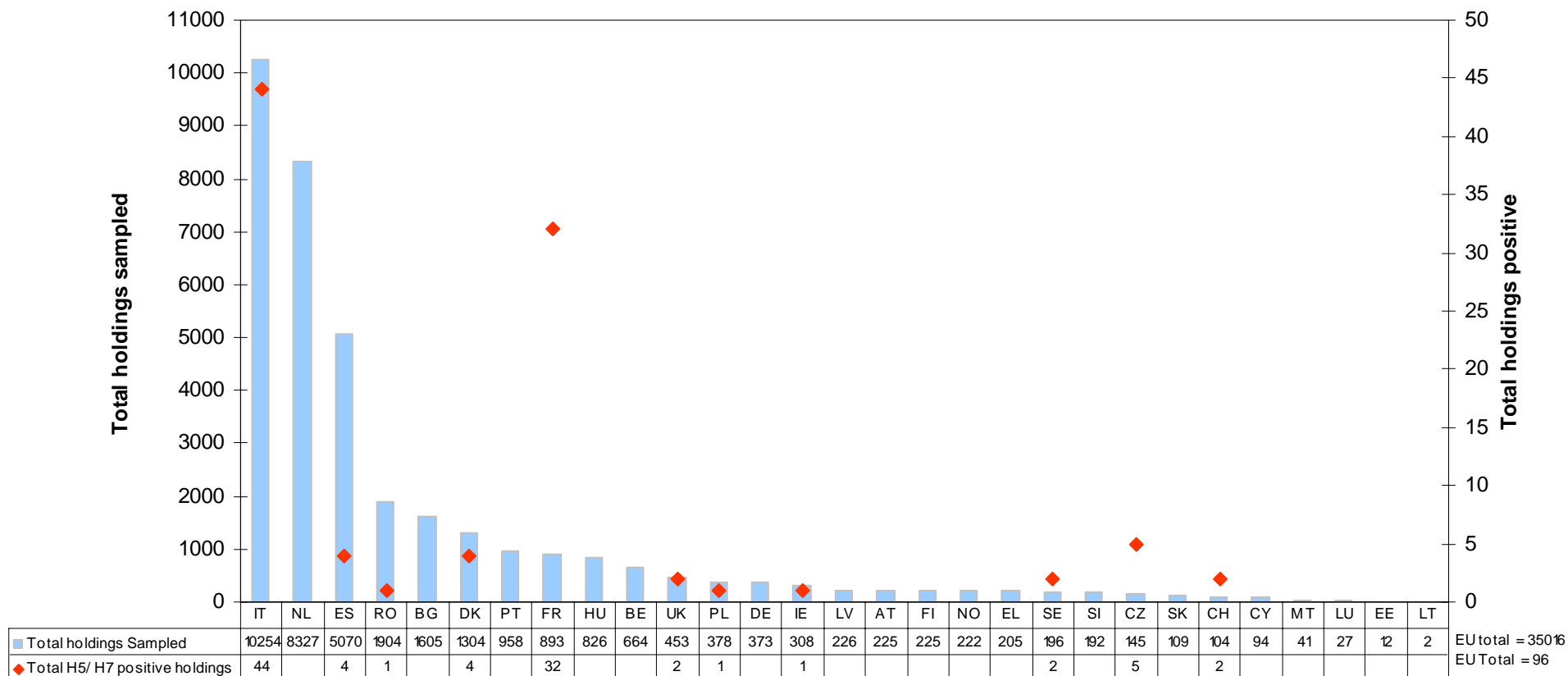


Figure 1. Total holdings sampled and serologically positive for AI H5/H7 across 27 EU MS in 2009

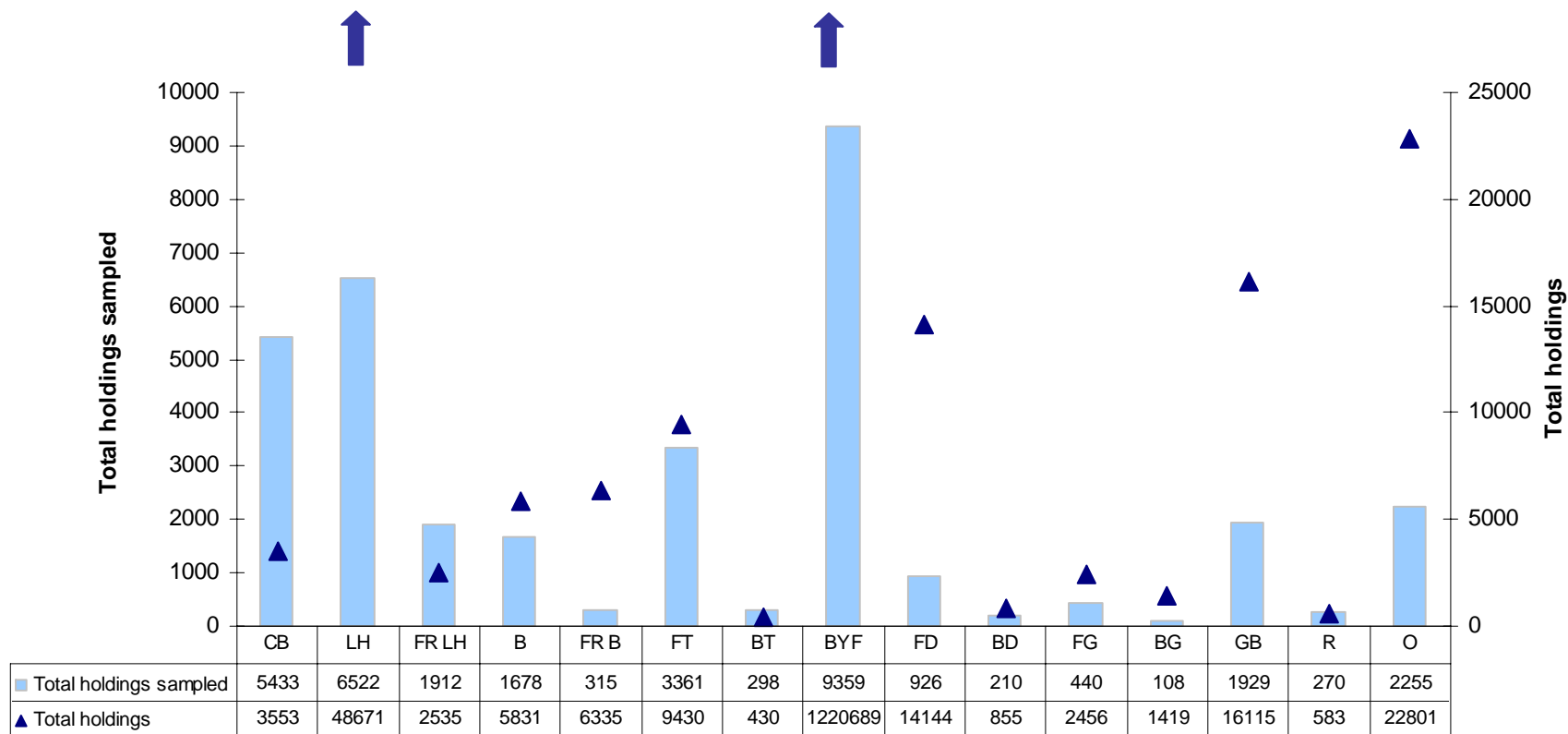


Figure 2. Total holdings reported in the 27 EU MS and total holdings sampled according to poultry category

See [Page 11](#), 3.1.1 'Survey Design' for abbreviations of poultry categories

Table 4 Number of holdings sampled and total holdings reported, according to poultry category and MS.

	Number sampled (total holdings)										Total Holdings sampled and proportion of EU total	Total Holdings reported and proportion of EU total
	Chicken Breeders	Laying Hens and Free Range Laying Hens	Broilers and Free Range Broilers	Turkey Fatteners and Turkey breeders	Backyard Flocks	Fattening Ducks and Breeder Ducks	Fattening Geese and Breeder Geese	Game Birds	Ratites	Others		
AT		65 (1714)		82 (111)		17 (17)	54 (54)		7 (11)		225 0.64%	1907 0.14%
BE	209 (209)	381 (430)		20 (31)		20 (23)	3 (2)	31 (33)			664 1.9%	728 0.05%
BG	14 (26)	134 (145)	25 (140)	0 (3)	1247 (621297)	173 (110)		6 (17)		6 (8)	1605 4.6%	621746 45.3%
CY	18 (18)	45 (35)		6 (6)	20 (3850)			4 (10)	1 (4)		94 0.27%	3927 0.23%
CZ		53 (126)		56 (72)		15 (15)	7 (7)	14 (14)			145 0.41%	234 0.02%
DE	2 (2)	53 (38165)	3 (3)	44 (1405)	84 (55264)	81 (5552)	32 (560)	2 (32)		72 (7914)	373 1.1%	108897 8.0%
DK	574 (472)	348 (144)	2 (18)	59 (117)		16 (66)	9 (32)	296 (230)			1304 3.7%	1079 0.08%
EE		11 (12)								1 (1)	12 0.03%	13 0.00%
EL	42 (96)	43 (371)	3 (5)	29 (48)	77 (130208)			8 (12)	3 (5)		205 0.59%	130745 9.6%
ES	162 (380)	284 (978)	151 (2572)	94 (442)	3336 (25334)	48 (77)	4 (24)	204 (9302)	36 (108)	751 (13078)	5070 14.5%	52295 3.3%
FI	51 (58)	63 (615)		88 (55)		8 (10)		12 (18)	3 (2)		225 0.64%	758 0.06%
FR		53 (1030)	135 (6000)	243 (4300)	94 (3000)	256 (7620)	13 (133)	99 (3500)			893 2.6%	25583 1.3%
HU	50 (150)	91 (521)		90 (393)	359 (NK)	41 (252)	149 (432)	40 (44)	6 (6)		826 2.4%	1798 0.13%
IE	85 (86)	147 (180)	28 (13)	45 (119)		2 (4)	1 (1)				308 0.88%	403 0.03%
IT	756 (451)	2479 (1710)		2169 (1023)	2118 (121024)	231 (211)	87 (87)	939 (861)	114 (220)	1361 (1709)	10254 29.3%	127296 9.4%
LT			1 (1)				1 (1)				2 0.01%	2 0.00%
LU		11 (16)	3 (6)		8 (500)				4 (1)	1 (3)	27 0.08%	526 0.04%
LV	2 (2)	20 (20)			204 (NK)						226 0.65%	22 0.00%
MT		41 (79)									41 0.12%	79 0.01%
NL	3225 (483)	3563 (1225)	1165 (837)	270 (63)		104 (87)					8327 23.8%	2695 0.20%
PL	66 (546)	66 (1103)		62 (794)		11 (206)	85 (2177)	36 (50)	52 (178)		378 1.1%	5054 0.37%
PT	66 (117)	80 (184)	109 (2215)	127 (155)	398 (236735)	13 (14)		92 (195)	10 (13)	63 (88)	958 2.7%	239716 17.7%
RO	8 (4)	194 (117)	338 (181)		1338 (1570)	2 (2)		22 (9)	2 (1)		1904 5.4%	1884 0.14%
SE	33 (34)	61 (374)	27 (27)	21 (21)	6 (6)	3 (3)	13 (13)	26 (26)	6 (6)		196 0.56%	510 0.04%
SI	9 (10)	52 (138)		45 (46)	70 / 60 (21901)			7 (7)	9 (11)		192 0.55%	22113 1.6%
SK	13 (48)	28 (50)	3 (148)	13 (14)		3 (6)	5 (5)	27 (35)	17 (17)		109 0.31%	323 0.02%
UK	48 (361)	68 (1720)		96 (642)		92 (724)	85 (347)	64 (1720)			453 1.3%	5514 0.41%
EU Total (%)	5433 (3553)	5434 (51206)	1993 (12166)	3659 (9360)	9359 (1220689)	1136 (14999)	548 (3679)	1929 (16119)	270 (63)	2255 (22801)	35016	1351647
CH		66 (3660)			38 (1949)						104	5609
NO	107 (109)	51 (844)		54 (100)	4 (NK)	4 (5)	1 (1)	1 (1)			222	1060

NK = Not known (Total holdings)

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

3.2 Results

A total of 109 holdings tested positive by serology and/ or PCR/ VI for LPAIV (H5, H7 and other subtypes) in ten MS. Of these, 91 holdings were positive by serology.

Of the total number of poultry holdings which tested positive, a total of 96 holdings were serologically and/ or virologically positive for H5 or H7 subtypes, i.e. LPAI that is notifiable according to Directive 2005/94/EC. Of these, a total of 90 were positive by serological testing. This compares to 72 holdings found positive for H5 or H7 in 2008 and 138 holdings in 2007. One holding tested positive for both H5 and H7, and one holding tested positive for H5 in the Breeder Duck and Breeder Geese categories. In addition, non-EU MS Switzerland, detected one H5 and one H7 positive holding during 2009.

Table 5 shows the number of holdings that tested positive by serology and/ or PCR/ VI for H5 or H7 subtypes, by Member State for 2009. In this year's survey, all ten MS that found positive holdings had done so in previous annual surveys. Three MS (BE, BG and FI) that found positive holdings in 2008 did not do so in 2009.

Tables 6a and 6b in the Results section show the total number of holdings sampled and found positive by poultry category in the years 2007 to 2009 for H5 and H7 respectively.

Table 5 Number of serological and virological H5 and H7 positive holdings by Member State in 2009							
MS	Total positive holdings (by sero and/ or VI)	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	225	1907
BE	0	0	0	0	0	664	728
BG	10	0	0	0	0	1605	621746
CY	0	0	0	0	0	94	3927
CZ	6	3	1	0	1	145	234
DE	0	0	0	0	0	373	108897
DK*	4	4	0	1	0	1304	1079
EE	0	0	0	0	0	12	13
EL	0	0	0	0	0	205	130745
ES	5	2	1	0	1	5070	52295
FI	0	0	0	0	0	225	758
FR	32	32	1	0	0	893	25583
HU	0	0	0	0	0	826	1798
IE	1	1	0	0	0	308	403
IT	45	5	1	36	14	10254	127296
LT	0	0	0	0	0	2	2
LU	0	0	0	0	0	27	526
LV	0	0	0	0	0	226	22
MT	0	0	0	0	0	41	79
NL	0	0	0	0	0	8327	2695
PL	1	1	0	0	0	378	5054
PT	0	0	0	0	0	958	239716
RO	1	1	1	0	0	1904	1884
SE	2	2	0	0	0	196	510
SI	0	0	0	0	0	192	22113
SK	0	0	0	0	0	109	323
UK	2	1	0	1	0	453	5514
EU Total	109	52	5	38	16	35016	1355847
CH	2	1	0	1	0	104	5609

NO	0	0	0	0	0	0	222	1060
*One holding positive for both H5 and H7, and one holding positive for H5 in the breeder duck and breeder geese category.								

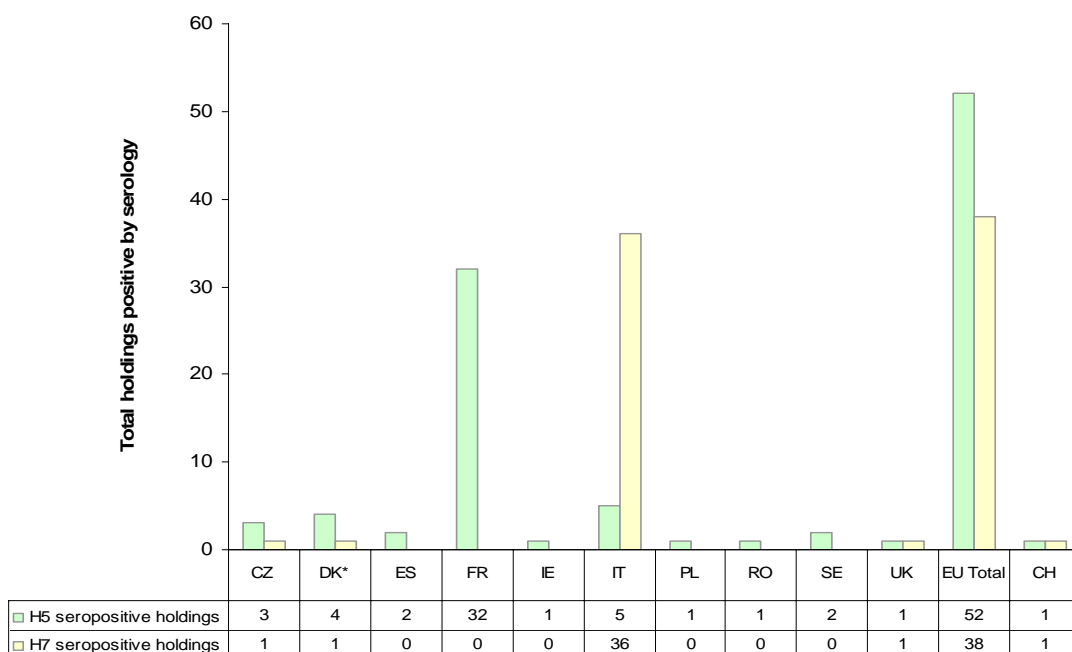


Figure 3. Total H5 and H7 serologically positive holdings according to MS in 2009.

*One holding positive for both H5 and H7, and one holding positive for H5 in the Breeder Duck and Breeder Geese category.

3.2.1 LPAI H5

In 2009, 55 holdings (in ten MS) were found positive for LPAI H5 subtypes, 52 of which were positive by serology. The majority (32) of the total H5 positive holdings were found in FR. Five holdings in EU MS were positive for H5 by PCR or virology indicating active infection of the birds on the holding. In total, 0.16% of EU holdings sampled were positive for subtype H5. In addition, Switzerland reported one H5 positive holding from a Backyard Flock.

One more holding tested positive in 2009 compared to the total H5 positive in 2008 (54). Most (32.7%) of the H5 positive holdings were Breeding Ducks, followed by Game Birds (18.2%) and Fattening Ducks (16.4%).

3.2.2 LPAI H7

In 2009, a total of 42 holdings (in five MS) were found to be positive for subtype H7, 38 of which were positive by serology. The majority (38) of the total H7 positive holdings were found in IT. In 2008, IT also had the highest number of H7 positive holdings; however, in 2009 this figure has more than trebled from 12 to 38 holdings. Sixteen holdings were positive for subtype H7 by PCR or virology, indicating active infection of the birds on those holdings (compared with 2 holdings in 2008). In total, 0.12% of EU holdings sampled were positive for subtype H7. In addition, Switzerland reported one H7 positive holding from Backyard Flocks.

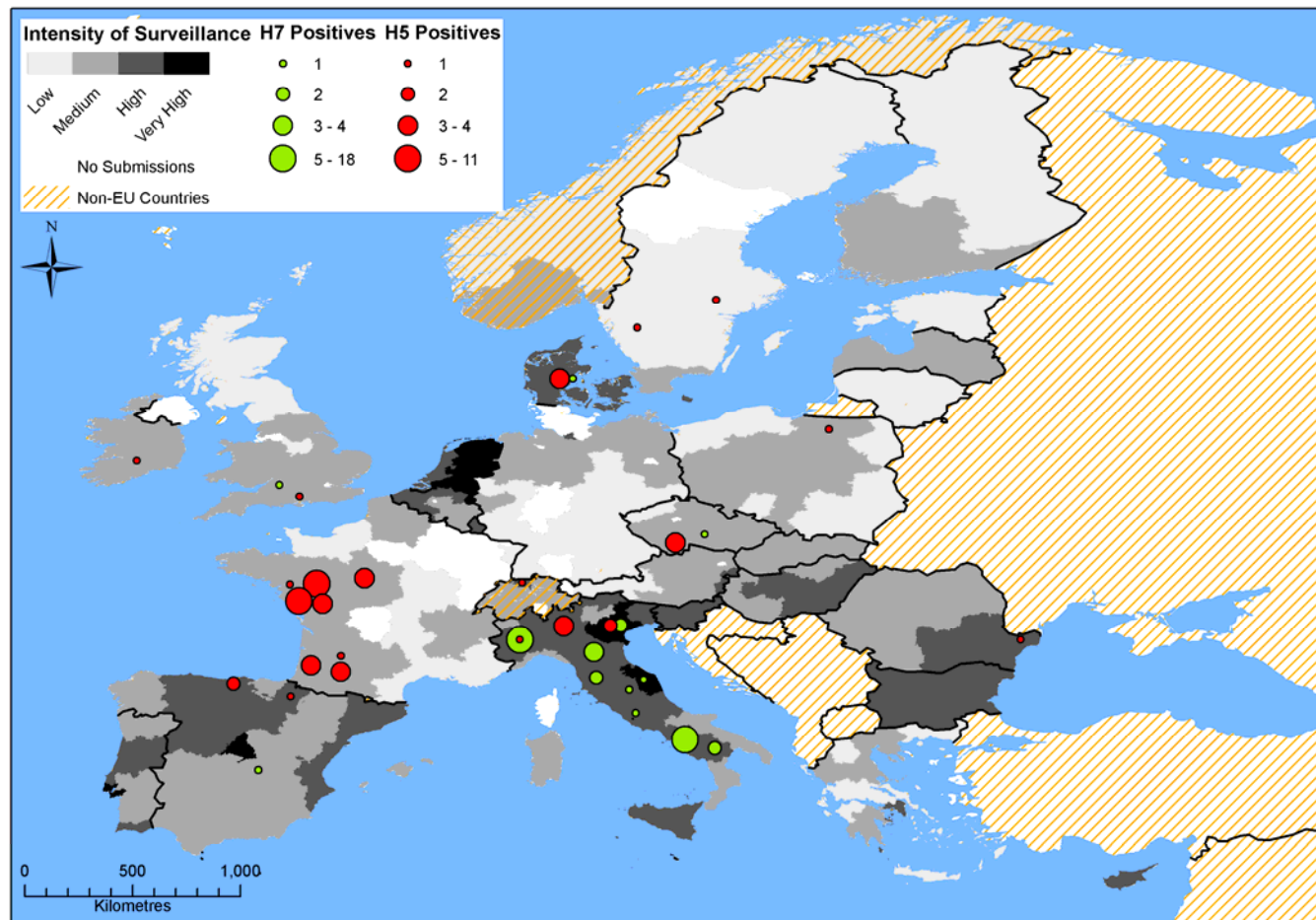
Twice as many H7 positive holdings were found in 2009 compared with 2008 (42, compared with 21). The majority (59.5%) of H7 positive holdings were found in Backyard Flocks, from IT (24) and CH (1). A total of 9 holdings from the 'Other' category (21.4%) also tested positive for subtype H7 from IT.

Although the number of H7 subtypes detected had increased in 2009 compared to previous years, a greater number of H5 subtypes were detected as in previous years.

Figure 4 displays the intensity of sampling randomized by NUTS 2/NUTS 1/NUTS 0 codes, depending on data availability, as well as the holdings found positive in this survey for subtype H5 (characterized by red dot) and subtype H7 (characterized by green dot).

Figure 4: A map of the intensity of sampling in the EU AI poultry survey and holdings testing positive for H5 and H7 in 2009.

The classification of sampling Intensity is grouped by sampled holdings per 1000 square Kilometres
 Low: <1, Medium: 1-10, High: 10-100, Very high: >100



3.2.3 Other LPAI subtypes

In 2009, 13 holdings tested positive for avian influenza subtypes other than H5 or H7 by serology and/ or PCR/ virology in four MS. Twelve of the 13 holdings tested positive by PCR/ virology only. The majority of these (ten) were found in BG in Fattening Duck holdings. The subtypes detected by BG in 2009 were H6 (seven), H4 (three) and H3 (one). One holding detected both H6 and H4 but is only included once in the total.

Other MS reporting influenza of other LPAI subtypes detected were: IT (H2, from one Fattening Duck holding) and ES (Influenza A, from one Fattening Turkey and one Fattening Duck holding – reported as the same holding, no subtype described).

In addition, CZ reported one serologically positive holding for subtype H6 in a Breeding Duck holding.

The total reported by MS is less than in 2008 (20 holdings from six MS). Of the total number of holdings testing positive for Influenza A (n=109), 11.9% were of subtypes other than LPAI H5 and H7.

3.2.4 Poultry categories

Overall, in 2009, there was an increase in the number of holdings sampled in each poultry category when compared with 2008, with the exception of Backyard Flocks, which showed a decrease of 25.3% from 2008 to 2009 (following a much larger percentage decrease of 87.5% from 2007 to 2008).

The highest number of holdings positive for H5 subtypes by serology and/ or PCR/ VI was found in Ducks and Geese (n=36), the majority (50%) of which were found in Breeder Ducks, followed by Fattening Ducks and Breeder Geese. There were no H5 subtypes detected in Fattening Geese. Of the 36 holdings positive in Duck and Goose categories, 35 were serologically positive; only one Fattening Duck holding was PCR/ VI positive with serology negative or not performed.

Most (57%) LP H7 subtypes were detected in Backyard Flocks, followed by Others, which equated to 26% of the total H7 positive holdings. There was a 50% increase in the number of H7 subtypes detected in poultry in 2009 compared to 2008. Of the 42 holdings testing positive for H7 subtypes, 38 holdings were positive by serological testing, a further four holdings tested positive by PCR/ VI, with serology negative or not performed.

The most holdings positive for a subtype other than H5 or H7, all virologically positive, was from Fattening Ducks (n=12). The only holding serologically positive for a subtype other than H5 and H7 was in a Breeding Duck holding.

3.3 Conclusions

- In 2009, 35,016 poultry holdings were sampled by 27 EU MS. This was a small increase compared to 2008, but still many fewer than was sampled in 2007. In addition, two non-EU MS provided data on poultry holdings sampled, CH (104) and NO (222).
- As in 2008, Backyard Flocks were the most sampled poultry category in 2009 (26.7% of EU total), followed by Laying Hens (24.1%). There was a large variation in the total holdings sampled by each MS.
- A total of 96 holdings tested positive for H5 and H7 subtypes by serological testing, 52 of H5 subtypes and 38 of H7 subtypes.

- The majority of H5 positive holdings were from Breeder Ducks (18), Fattening Ducks (nine) and Breeder Geese (eight).
- Most H7 seropositive holdings were from Backyard Flocks (24) and Others (nine). Switzerland reported two positive holdings, one H5 and one H7, both from Backyard Flocks.
- As in 2008, LPAI H5 was detected more often than LPAI H7; however, the number of H7 positive holdings doubled in 2009, from 21 holdings positive in 2008 to 42 in 2009 (total by serology and/ or PCR/ VI).

4 RESULTS

4.1 Poultry Categories

Tables 6a and 6b show the H5 and H7 serological detections by poultry category in the years 2007, 2008 and 2009.

Descriptive results of the 2009 poultry survey by poultry category

Detailed tables displaying the number of holdings, holdings sampled and holdings testing positive by Member States and category are shown in [Annex I](#).

Ducks and Geese

- Duck and Goose holdings made up 4.81% of total holdings sampled in the EU in 2009, with the majority (55.22%) of these being tested in the Fattening Ducks category.
- Fattening Ducks were sampled in 17 MS, plus NO, and the sample sizes varied from two (IE and PL) to 204 (IT).
- Breeder Ducks were sampled in 11 MS with sample sizes per MS varying from one (ES) to 87 (FR).
- Fattening Geese were sampled in 12 MS, plus NO, with total holdings sampled per MS between one (IE and LT) and 141 (HU).
- Breeder Geese were sampled in nine MS with total holdings sampled per MS varying from two (DK) to 40 (PL)
- Nine MS increased the number of Duck and Geese holdings in their surveillance programmes from 2008 (these were BG, DE, ES (by two), FI (by five), FR, IE (by two), NL, PL (by three), and UK (by 12)).
- All MS apart from SE, which found any positive holdings overall, also found positive holdings in Ducks and Geese. In four MS (BG, PL, RO and UK) this was the only category of poultry where positives were found.
- More than half (65.45%) of the total number of LP H5 positive holdings were Duck and Geese holdings (36/55).

Chicken Breeders

- Chicken Breeder holdings made up 15.5% of total holdings sampled in the EU in 2009, which is an increase on the percentage sampled in 2008 (12.75%).
- Chicken Breeder holdings were sampled in 20 MS, plus NO, with sample sizes varying from two holdings (DE and LV) to 3225 (NL). Over 900 more holdings were sampled in 2008 compared to 2009.
- Italy reported one H7 positive holding in 2009, constituting 0.13% of the 756 holdings IT sampled. H7 subtypes were not detected in this poultry category in 2008 or 2007. No holdings tested positive for H5 subtypes in 2009, as in 2008 and 2007.

Laying Hens and Free Range Laying Hens

- Laying Hen holdings made up 18.6% of the total holdings sampled in the EU in 2009, which is an increase on the percentage sampled in 2008 (16.4%). A greater number of Free Range Laying Hen holdings were sampled in 2009 than in 2008, accounting for 5.46% of the total holdings sampled in the EU.
- As in 2007 and 2008, the Laying Hens category was split into Laying Hens and Free Range Laying Hens. Conventional Laying Hens made up 77% of the total holdings sampled in these poultry categories.
- Laying Hen holdings were sampled in 25 MS, plus NO (excluding FR and LT) with sample sizes ranging from six (LU) to 2572 (NL). A total of 14 MS sampled Free Range Laying Hens, plus CH. Sample sizes varied from five (LU) to 991 (NL).
- A total of three Laying Hen, and one Free Range Laying Hen holdings were positive for H5 or H7 subtypes in 2009, which is fewer than in 2008, although the percentage positive was the same (0.1% of total holdings sampled).
- Three MS detected positive holdings in 2009 (ES and IT in conventional laying hens and IE detected one positive free range holding), as in 2008.

Broilers and Free Range Broilers

- Broiler holdings made up 4.79% of total holdings sampled in the EU in 2009, and Free Range Broilers made up just 0.9% of holdings sampled.
- As in 2007 and 2008, the Broiler poultry category was split into Conventional and Free Range Broilers. Conventional Broilers made up 84% of the total holdings sampled in these poultry categories.
- Broiler holdings were sampled in 10 MS with sample sizes ranging from one (LT) to 1140 (NL). A total of 9 MS sampled Free Range Broilers in their surveillance programmes, with sample sizes ranging from one (DE and LU) to 135 (FR).
- No positive holdings were detected in 2009, as in 2008.

Turkey Fatteners

- Turkey Fattener holdings made up 9.6% of total holdings sampled in the EU in 2009.
- Turkey Fattener holdings were sampled in 20 MS, plus NO. Sample sizes ranged from six (CY) to 2043 (IT).

- A total of six positive holdings were detected in 2009, four H5 and one H7 positive holdings in IT and ES detected one holding positive for other subtypes, unlike in 2008 when no positive holdings were detected.

Turkey Breeders

- Turkey Breeder holdings made up 0.9% of the total holdings sampled in the EU in 2009.
- A total of 11 MS sampled holdings from this category, with sample sizes ranging from one (EL) to 126 (IT).
- No positive holdings were found in this category in 2009, as in 2007 and 2008.

Backyard Flocks

- Backyard Flocks accounted for 26.7% of the total holdings sampled in the EU during 2009. In 2008 more Backyard Flocks were sampled, accounting for 35.76% of the EU total.
- A total of 14 MS sampled holdings in 2009, plus CH and NO. Sample sizes varied from six (SE) to 2118 (IT).
- Four MS provided the majority of Backyard Flocks sampled in 2009; ES (3336, 35.64%), IT (2118, 22.63%) and RO (1338, 14.30%) and BG (1247, 13.32%). This is similar to 2008, when these MS sampled a large proportion of the Backyard Flocks.
- Three MS detected positive holdings in 2009; two H5 (FR and SE) and 24 H7 (IT). Fourteen more positive holdings were found in 2009 compared with 2008 (Two H5 and 10 H7 (BE and IT). In addition, Switzerland detected one H5 and one H7 positive holding in Backyard Flocks sampled in 2009.

Game Birds

- Game Birds accounted for 5.51% of the total holdings sampled in the EU in 2009. Slightly more Game Bird holdings were sampled in 2009 compared with 2008 (an increase of 46 holdings).
- A total of 19 MS sampled holdings in 2009, plus NO. Sample sizes varied from 6 (BG) to 939 (IT). NO only sampled one Game Bird holding during 2009.
- The majority of Game Bird holdings were sampled by IT (939, 48.68%) and DK (296, 15.34%).
- Five MS detected positive holdings in 2009; ten H5 (CZ, DK, FR, IT and SE) and one H7 (DK). One of the holdings in DK positive for H5 was also positive for H7 so is only counted once in the total positive holdings.
- There was an increase in the number of positive detections compared with 2008, from eight game bird holdings testing positive for avian influenza in 2008, to ten positive holdings in 2009.

Ratites

- Ratite holdings accounted for 0.77% of total holdings sampled in 2009 across the EU.

- A total of 14 MS sampled Ratite holdings in 2009 with sample sizes ranging from one (CY) to 114 (IT). Of these, nine MS sampled fewer than ten holdings.
- Two MS sampled the majority of Ratite holdings; IT (114, 42.2%) and PL (52, 19.26%).
- No positive holdings were detected in Ratites in 2009, as in 2008 and 2007.

Others

- This category accounted for 6.44% of the total sampled in the EU in 2009.
- The types of poultry reported in this category included: ducks (could not be categorised further), exotic birds, birds from rescue centres, pet shops and zoos and racing pigeons. (see [p.46](#) 6.2.1 Data Processing for further information)
- A total of seven MS sampled Other holdings in 2009, with sample sizes ranging from one (EE) to 1361 (IT).
- Two MS sampled the majority of Other holdings; IT (1361, 60.35%) and ES (751, 33.3%).
- More holdings were sampled in this poultry category in 2009 (2255) compared with 2008 (1761) and 2007 (1414).
- Two MS detected positive holdings in 2009; one H5 (ES) and 11 H7 (IT). This is an increase of the number of positive holdings detected in 2008 (n=4).

	Table 6a Total number of LP H5 positive (serology and/ or PCR/ VI) and sampled holdings between 2007 and 2009 by Poultry Category		
	2009	2008	2007
Poultry Category	Positive/ sampled	Positive/ sampled	Positive/ sampled
Chicken Breeders	0/5433	0/4462	0/2646
Laying Hens and Free-range laying hens	2/8434	2/7389	1/9554
Broilers and Free-range Broilers	0/1993	0/1897	2/2875
Fattening Turkeys	4/3361	0/3022	1/3765
Breeder Turkey	0/298	0/275	0/409
Backyard Flocks	2/9359	2/12536	3/99901
Ducks and Geese	36/1684	40/1532	89/4096
Game Bird	10/1929	8/1832	9/1927
Ratite	0/270	0/329	0/325
Other	1/2255	2/1760	3/1414
EU Total (excluding CH and NO)	55/35016	54/35034	107/126912
<p>In 2009: One Duck and Geese holding positive for both H5 and Influenza A; One Game Bird holding positive for both H5 and H7. In 2008: Two Duck and Geese holdings positive for both H5 and H7; One Game Bird holding positive for both H5 and H7. In 2007: One Duck and Geese holding positive for both H5 and H7; Three Game Bird holdings positive for both H5 and H7; One Other holding positive for both H5 and H7.</p>			

	Table 6b Total number of LP H7 positive (serology and/ or PCR/ VI) and sampled holdings between 2007 and 2009 by Poultry Category		
	2009	2008	2007
Poultry Category	Positive/ sampled	Positive/ sampled	Positive/ sampled
Chicken Breeders	1/5433	0/4462	0/2646
Laying Hens and Free-range laying hens	2/8434	5/7389	8/9554
Broilers and Free-range Broilers	0/1993	0/1897	0/2875
Fattening Turkeys	1/3361	0/3022	6/3765
Breeder Turkey	0/298	0/275	0/409
Backyard Flocks	24/9359	10/12536	4/99901
Ducks and Geese	2/1684	4/1532	3/4096
Game Bird	1/1929	1/1832	4/1927
Ratite	0/270	0/329	0/325
Other	11/2255	1/1760	11/1414
EU Total (excluding CH and NO)	42/35016	21/35034	36/126912
<p>In 2009: One Game Bird holding positive for both H5 and H7. In 2008: Two Duck and Geese holdings positive for both H5 and H7; One Game Bird holding positive for both H5 and H7. In 2007: One Duck and Geese holding positive for both H5 and H7; Three Game Bird holdings positive for both H5 and H7; One Other holding positive for both H5 and H7.</p>			

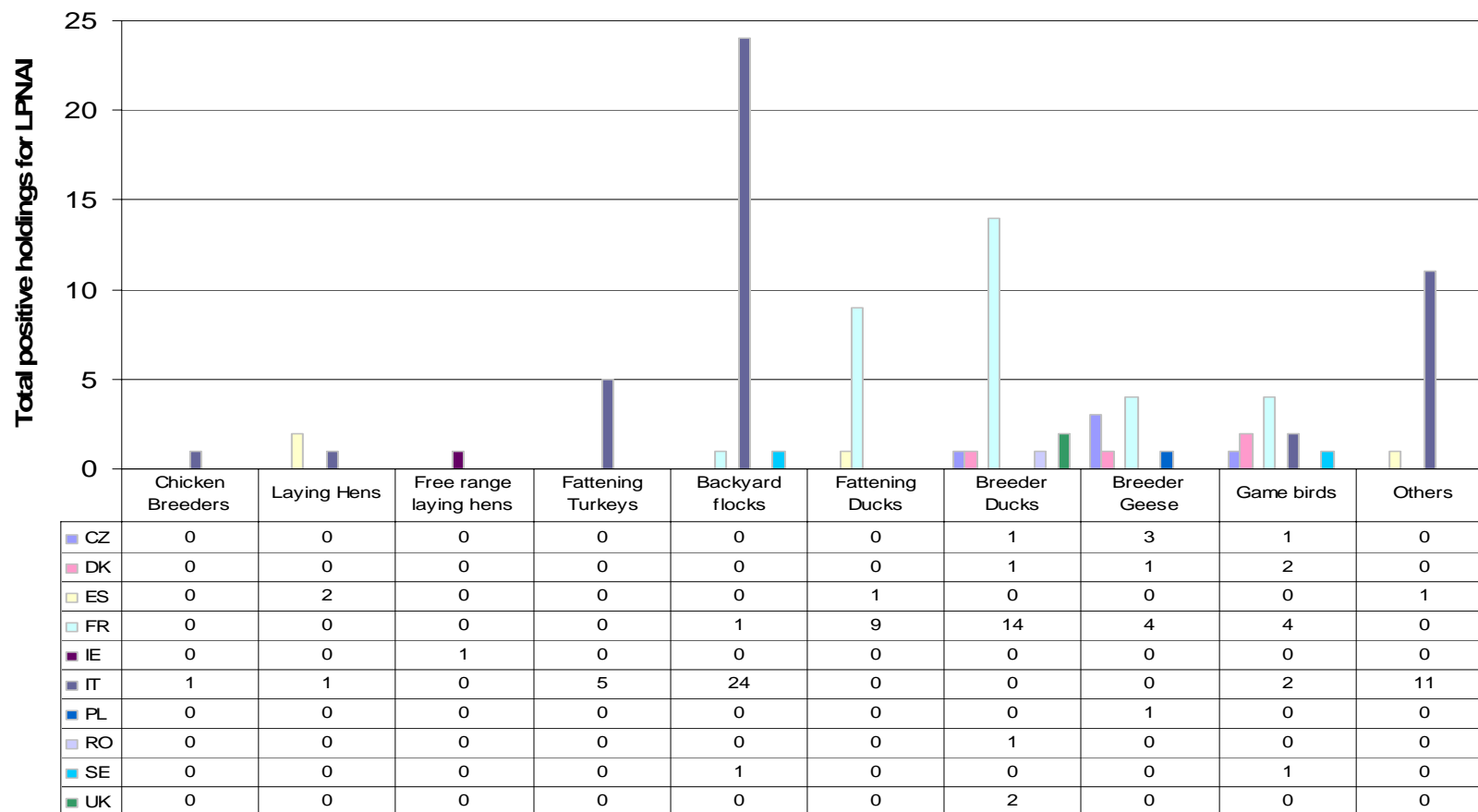


Figure 5. Total number of H5/H7 AI detections in 2009, by MS and poultry category (only EU MS with positive holdings – by serology and/ or PCR/ VI)

Table 7 also displays the number of positive holdings (by serology and/ or PCR/ VI) according to MS and poultry category, however, the subtypes are split into H5 and H7 subtypes and subtypes other than H5 and H7.

Member States	Table 7 Total number of sampled and positive (by serology and/ or PCR/ VI) holdings by Member States and poultry category in 2009															
	Chicken Breeders	Laying Hens	Free Range Laying Hens	Broilers	Free Range Broilers	Turkey Fatteners	Turkey breeders	Backyard Flocks	Fattening Ducks	Breeder Ducks	Fattening Geese	Breeder Geese	Game Birds	Rallies	Others	Total
AT		65				82			17		54			7		225
BE	209	297	84			20			20			3	31			664
BG	14	134		25				1247	10/173				6		6	1605
CY	18	34	11			6		20					4	1		94
CZ		53				56				1/15		2/7	1/14			145
DE	2	47	6	2	1	44		84	81		24	8	2		72	373
DK*	574	49	299		2	59			12	1/4	7	1/2	2/296	1/296		1304
EE		11													1	12
EL	42	43			3	28	1	77					8	3		205
ES**	162	1/245	39	138	13	1/86	8	3336	1/47	1	4		204	36	1/751	5070
FI	51	49	14			88			8				12	3		225
FR			53		135	156	87	1/94	9/169	14/87		4/13	4/99			893
HU	50	83	8			65	25	359	36	5	141	8	40	6		826
IE	85	74	1/73		28	41	4		2		1					308
IT	1/756	1/2179	300			4/2043	126	24/2118	1/204	27	70	17	2/939	114	11/1361	10254
LT				1							1					2
LU		6	5	2	1			8						4	1	27
LV	2	20						204								226
MT		41														41
NL	3225	2572	991	1140	25	252	18		76	28						8327
PL	66	66				52	10		2	9	45	1/40	36	52		378
PT	66	80		2	107	127		398	11	2			92	10	63	958
RO	8	194		338				1338		1/2			22	2		1904
SE	33	41	20	27		17	4	1/6	3		13		1/26	6		196
SI	9	52				45		70					7	9		192
SK	13	28		3		8	5		3		5		27	17		109
UK	48	59	9			86	10		62	1/30	75	10	64			453
EU Total	5433	6522	1912	1678	315	3361	298	9359	926	210	440	108	1929	270	2255	35016
Total H5/H7 positive	1	3	1	0	0	5	0	26	10	19	0	9	10	0	12	96
% positive	0.02%	0.05%	0.05%	0.00%	0.00%	0.15%	0.00%	0.28%	1.19%	9.05%	0.00%	8.33%	0.52%	0.00%	0.53%	0.27%
CH			66					1/38								104
NO	107	51				54		4	4		1		1			222

* One holding positive for both H5 and H7

**One holding positive for Influenza A (not H5 or H7) but two poultry categories positive (Turkey Fatteners and Fattening Ducks)

4.2 Member States

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

- Testing results from holdings sampled were reported from Laying Hens, Fattening Turkeys, Fattening Ducks, Fattening Geese and Ratites.
- 65 Laying Hen holdings were sampled (1,714 total).
- 82 Fattening Turkey holdings were sampled (111 total).
- 71 Duck and Goose holdings were sampled (71 total), submitted and reported as;
 - 17 Fattening Duck holdings (17 total).
 - 54 Fattening Geese holdings (54 total).
- Seven Ratite holdings were sampled (11 total).
- Austria sampled the number of holdings according to the submitted programme for the following poultry categories: Laying Hens, Fattening Turkeys, Fattening Ducks and Fattening Geese; however, fewer holdings were sampled in the Ratites category.
- Austria reported from seven regions overall. The number of regions sampled varied across poultry categories.
- **No positive holdings were reported in 2009, as in previous survey years 2004-2008.**

Belgium

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Fattening Turkeys, Fattening Ducks, Breeder Geese and Game Birds.
- 209 Chicken Breeder holdings were sampled (209 total).
- 297 Laying Hen holdings were sampled (344 total).
- 84 Free Range Laying Hen holdings were sampled (86 total).
- 20 Fattening Turkey holdings were sampled (31 total).
- 23 Duck and Geese holdings were sampled (25 total) and reported as;
 - 20 Fattening Duck holdings were sampled (23 total).
 - Three Breeder Geese holdings were sampled (Two total).
- 31 Game Bird holdings were sampled (33 total).

- Belgium sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens/Free Range Laying Hens, and Breeder Geese; however, fewer holdings were sampled in Fattening Turkeys, Fattening Ducks and Game Birds.
- Belgium reported from ten regions overall. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, unlike in 2008 and 2007.**
- *This differs from what was detected in 2008, when 11 holdings were positive overall; two Laying Hen holdings were serologically positive for H7 influenza A virus and one Free Range Laying Hen holding was serologically positive for H5 influenza A virus. Two Backyard Flock holdings were serologically positive, one for H5 influenza A virus and one for H7 influenza A virus. Two Fattening Duck holdings were serologically positive, with one holding positive for H5 influenza A virus, and one holding positive for H5 subtype, H7 subtype and virologically positive for influenza A virus. Two Breeder Geese holdings tested positive for influenza A virus, one serologically positive for subtype H5, and one serologically positive for H5 and H7. In addition, two 'Others' holdings were reported positive for influenza A virus subtype H5, one serologically and one virologically.*

Bulgaria

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Broilers, Backyard Flocks, Fattening Ducks, Game Birds and Others.
- 14 Chicken Breeder holdings were sampled (26 total).
- 134 Laying Hen holdings were sampled (145 total).
- 25 Broiler holdings were sampled (140 total).
- 1,247 Backyard Flock holdings were sampled (621, 297 total).
- 173 Fattening Duck holdings were sampled (110 total).
- Six Game Bird holdings were sampled (17 total).
- Six Other holdings were sampled (Eight total).
- Bulgaria sampled the number of holdings according to the submitted programme for the following poultry categories: Laying Hens, Backyard Flocks and Fattening Ducks; however, fewer holdings were sampled in Chicken Breeders, Broilers, Game Birds, and Others.
- Bulgaria reported from 28 regions overall. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2009, as in 2008 and 2007.**
- **Ten Fattening Duck holdings were reported virologically positive for influenza A virus subtypes H3, H4 and H6.**
- *In 2008, two Fattening Duck holdings were reported virologically positive for influenza A virus subtype H6.*

Cyprus

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Fattening Turkeys, Backyard Flocks, Game Birds and Ratites.
- 18 Chicken Breeder holdings were sampled (18 total).
- 34 Laying Hen holdings were sampled (30 total).
- 11 Free Range Laying Hen holdings were sampled (Nine total).
- Six Fattening Turkey holdings were sampled (Six total).
- 20 Backyard Flock holdings were sampled (3,850 total).
- Four Game Bird holdings were sampled (Ten total).
- One Ratite holding was sampled (4 total).
- Cyprus sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens and Fattening Turkeys; however, fewer holdings were sampled in Backyard Flocks, Game Birds, and Ratites.
- Cyprus reported as one region.
- **No positive holdings were reported in 2009, as in previous survey years 2005-2008.**

Czech Republic

- Testing results from holdings sampled were reported from Laying Hens, Turkey Fatteners, Breeder Ducks, Breeder Geese, and Game Birds.
- 53 Laying Hen holdings were sampled (126 total).
- 56 Turkey Fattener holdings were sampled (72 total).
- 15 Breeder Duck holdings were sampled (15 total).
- Seven Breeder Geese holdings were sampled (Seven total).
- 14 Game Bird holdings were sampled (14 total).
- The Czech Republic sampled the number of holdings according to the submitted programme for the following poultry categories: Laying Hens, Breeder Ducks, Breeder Geese and Game Birds; however, fewer holdings were sampled in Fattening Turkeys.
- The Czech Republic reported from 13 regions overall. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, as in 2008 and 2007.**
- **Six holdings were reported as positive 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.**

- *In 2008 two Breeder Duck holdings were serologically positive for influenza A virus, one for subtype H5 and one for other subtype H6. In addition, six Game Bird (Mallard) holdings were virologically (PCR) positive for influenza A virus - other subtype, neither H5 nor H7.*

Denmark

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Free Range Broilers, Fattening Turkeys, Fattening Ducks, Breeder Ducks, Fattening Geese, Breeder Geese, and Game Birds.
- 574 Chicken Breeder holdings were sampled (472 total).
- 49 Laying Hen holdings were sampled (35 total).
- 299 Free Range Laying Hen holdings were sampled (109 total).
- Two Free Range Broiler holdings were sampled (18 total).
- 59 Fattening Turkey holdings were sampled (117 total).
- 15 Duck and Geese holdings were sampled (98 total), submitted and reported as;
 - 12 Fattening Duck holdings were sampled (54 total).
 - Four Breeder Duck holdings were sampled (12 total).
 - Seven Fattening Geese holdings were sampled (23 total).
 - Two Breeder Geese holdings were sampled (Nine total).
- 296 Game Bird holdings were sampled (230 total).
- Denmark sampled the number of holdings according to the submitted programme for the following poultry categories; Chicken Breeders, Laying Hens/Free Range Laying Hens, and Game Birds: however, fewer holdings were sampled in Free Range Broilers, Fattening Turkeys and Ducks and Geese.
- Denmark reported as one region.
- **No positive holdings were reported in 2009, as in previous survey years 2006-2008.**
- **Four holdings were reported as positive in 2009. 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.**
- *In 2008, Two Free Range Laying Hen holdings were serologically positive for influenza A virus, one for subtype H5 and one for subtype H7. A further two holdings were positive for influenza A virus in the Breeder Duck category, one was serologically positive for H5 subtype and the other was virologically positive for H7 subtype. The same holdings were also serologically positive in the Breeder Duck category for influenza A virus subtype H5. In addition, three Game Bird holdings (Mallards) were serologically positive for influenza A virus subtype H5, and one of these was also serologically positive for subtype H7.*

Estonia

- Testing results from holdings sampled were reported from Laying Hens and Others.
- 11 Laying Hen holdings were sampled (12 total).
- One Other holding was sampled (One total).
- Estonia sampled the number of holdings according to the submitted programme for the Other poultry category; however, fewer holdings were sampled in Laying Hens.
- Estonia reported from one region.
- **No positive holdings were reported in 2009, as in 2008. This differs from 2007.**
- *In 2007, five Laying Hen holdings were serologically positive for influenza A virus for a subtype other than H5 or H7 (subtype H9).*

Finland

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Fattening Turkeys, Fattening Ducks, Game Birds and Ratites.
- 51 Chicken Breeder holdings were sampled (58 total).
- 49 Laying Hen holdings were sampled (588 total).
- 14 Free-Range Laying Hen holdings were sampled (27 total).
- 88 Fattening Turkey holdings were sampled (55 total).
- Eight Fattening Duck holdings were sampled (Ten total).
- 12 Game Bird holdings were sampled (18 total).
- Three Ratite holdings were sampled (Two total).
- Finland sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens/Free Range Laying Hens, Fattening Turkeys and Ratites; however, fewer holdings were sampled in Fattening Ducks and Game Birds.
- Finland reported from four regions overall. The number of regions sampled varied by poultry category.
- **There were no positive holdings reported in 2009, unlike in 2008.**
- *In 2008, one Fattening Geese holding was serologically positive for influenza A virus subtype H5. The holding was virologically negative.*

France

- Testing results from holdings sampled were reported from Free Range Laying Hens, Free Range Broilers, Fattening Turkeys, Breeder Turkeys, Backyard Flocks, Fattening Ducks, Breeder Ducks, Breeder Geese and Game Birds.
- 53 Free Range Laying Hen holdings were sampled (1,030 total).
- 135 Free Range Broiler holdings were sampled (6,000 total).
- 156 Fattening Turkey holdings were sampled (4,070 total).
- 87 Turkey Breeder holdings were sampled (230 total)
- 94 Backyard Flock holdings were sampled (3,000 total)
- 169 Fattening Ducks holdings were sampled (7,370 total).
- 87 Breeder Duck holdings were sampled (250 total).
- 13 Breeder Geese holdings were sampled (133 total).
- 99 Game Bird holdings were sampled (3,500 total).
- France sampled the number of holdings according to the submitted programme for the following poultry categories: Free Range Broilers, Fattening Turkeys, Turkey Breeders, Backyard Flocks, Fattening and Breeder Ducks and Game Birds; however, fewer holdings were sampled in Free Range Laying Hens and Breeder Geese.
- France reported from 42 regions overall. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2009, as in 2008 and 2007.**
- **Thirty-two holdings were reported as positive in 2009. 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.**
- *In 2008, one Fattening Duck holding and 17 Breeder Duck holdings were serologically positive for influenza A virus H5 subtype. In addition, four Breeder Geese holdings and one Game Bird holding were all serologically positive for influenza A virus H5 subtype.*

Germany

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Broilers, Free Range Broilers, Fattening Turkeys, Backyard Flocks, Fattening Ducks, Fattening Geese, Breeder Geese, Game Birds and Others.
- Two Chicken Breeder holdings were sampled (Two total).
- 47 Laying Hen holdings were sampled (38, 159 total).
- Six Free Range Laying Hen holdings were sampled (Six total).
- Two Broiler holdings were sampled (Two total).
- One Free Range Broiler holding was sampled (One total).

- 44 Fattening Turkey holdings were sampled (1,405 total).
- 84 Backyard Flock holdings were sampled (55,264 total).
- 81 Fattening Duck were sampled (5,552 total).
- 24 Fattening Geese holdings were sampled (495 total).
- 8 Breeder Geese holdings were sampled (65 total).
- Two Game Bird holdings were sampled (32 total).
- 72 Other holdings were sampled (7914 total).
- Germany sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Free Range Laying Hens, Broilers, Free Range Broilers, Backyard Flocks, Fattening Ducks and Others; however, fewer holdings were sampled in Laying Hens, Fattening Turkeys, Fattening Geese, Breeder Geese and Game Birds.
- Germany reported from 27 regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, as in 2008. This differs from 2007.**
- *In 2007, one Free Range Laying Hen holding was serologically and virologically/PCR positive for influenza A virus for a subtype other than H5 or H7 (subtype H6). Eight Backyard Flock holdings were also serologically positive for influenza A virus for a subtype other than H5 or H7. Two Fattening Duck holdings and one Fattening Geese holding were all serologically positive for influenza A virus H5 subtype.*

Greece

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Broilers, Fattening Turkeys, Turkey Breeders, Backyard Flocks, Game Birds and Ratites.
- 42 Chicken Breeder holdings were sampled (96 total).
- 43 Laying Hen holdings were sampled (371 total).
- Three Free Range Broilers were sampled (Five total).
- 28 Fattening Turkey holdings were sampled (47 total).
- One Turkey Breeder holdings were sampled (One total).
- 77 Backyard Flock holdings were sampled (130,208 total).
- Eight Game Bird holdings were sampled (12 total).
- Three Ratite holdings were sampled (Five total).
- Greece sampled the number of holdings according to the submitted programme for the following poultry categories: Backyard Flocks and Turkey Breeders; however, fewer holdings were sampled in Chicken Breeders, Laying Hens, Free Range Broilers, Fattening Turkeys, Game Birds, and Ratites.

- Greece reported from 12 regions overall. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, as in previous survey years.**

Hungary

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Fattening Turkeys, Turkey Breeders, Backyard Flocks, Fattening and Breeder Ducks, Fattening and Breeder Geese, Game Birds and Ratites.
- 50 Chicken Breeder holdings were sampled (150 total).
- 83 Laying Hen holdings were sampled (512 total).
- Eight Free Range Laying Hen holdings were sampled (Nine total).
- 65 Fattening Turkey holdings were sampled (361 total).
- 25 Breeder Turkey holdings were sampled (32 total).
- 359 Backyard Flock holdings were sampled (total not known).
- 36 Fattening Duck holdings were sampled (247 total).
- Five Breeder Duck holdings were sampled (Five total).
- 141 Fattening Geese holdings were sampled (413 total).
- Eight Breeder Geese holdings were sampled (19 total).
- 40 Game Bird holdings were sampled (44 total).
- Six Ratite holdings were sampled (Six total).
- Hungary sampled the number of holdings according to the submitted programme for the following poultry categories: Laying Hens, Fattening Turkeys, Breeder Ducks, Fattening Geese, Game Birds and Ratites; however, fewer holdings were sampled for the Chicken Breeders, Free Range Laying Hens, Breeder Turkeys, Fattening Ducks and Breeder Geese. It is not known whether the total holdings sampled for Backyard Flocks was according to Hungary's submitted programme, as the total holdings was unknown.
- Hungary reported from 20 regions, but the number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, as in previous survey years 2005-2008.**

Ireland

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Free Range Broilers, Fattening Turkeys, Breeder Turkeys, Fattening Ducks and Fattening Geese.
- 85 Chicken Breeder holdings were sampled (86 total).
- 74 Laying Hen holdings were sampled (83 total).

- 73 Free Range Laying Hen holdings were sampled (97 total).
- 28 Free Range Broiler holdings were sampled (13 total).
- 41 Fattening Turkey holdings were sampled (105 total).
- Four Breeder Turkey holdings were sampled (14 total).
- Two Fattening Duck holdings were sampled (Four total).
- One Fattening Geese holding was sampled (One total).
- Ireland sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens, Free Range Laying Hens, Free Range Broilers and Fattening Geese; however, fewer holdings were sampled in Fattening Turkeys, Breeder Turkeys and Fattening Ducks.
- Ireland reported from two regions. The number of regions sampled varied by poultry category.
- **One positive holding was reported in 2009, unlike in 2008 when no positive holdings were reported.**
- **One Free Range Laying Hen holding was serologically positive for influenza A virus of subtype H5.**
- *In 2007, one Free-Range Laying Hen holding was serologically and virologically/PCR positive for influenza A virus for a subtype other than H5 or H7 (subtype H6). In addition, one Game Bird holding (Mallard) was virologically/PCR positive for influenza A virus for a subtype other than H5 or H7 (subtype H11). This was serologically negative.*
- *No positive holdings were reported in 2008, 2006, 2005 and 2004.*

Italy

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Fattening Turkeys, Breeder Turkeys, Backyard Flocks, Fattening and Breeder Ducks, Fattening and Breeder Geese, Game Birds, Ratites and Others. Birds which were submitted in the Others category as quail and pheasants were reassigned to Game Birds.
- 756 Chicken Breeder holdings were sampled (451 total).
- 2,179 Laying Hen holdings were sampled (1,501 total).
- 300 Free Range Laying Hen holdings were sampled (209 total).
- 2,043 Fattening Turkey holdings were sampled (963 total).
- 126 Breeder Turkey holdings were sampled (60 total).
- 2,118 Backyard Flock holdings were sampled (121,024 total).
- 204 Fattening Duck holdings were sampled (195 total).
- 27 Breeder Duck holdings were sampled (16 total).
- 70 Fattening Geese holdings were sampled (73 total).

- 17 Breeder Geese holdings were sampled (14 total).
- 939 Game Bird holdings were sampled (861 total)
- 114 Ratite holdings were sampled (220 total).
- 1,361 Other holdings were sampled (1,709 total).
- Italy sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens/Free Range Laying Hens, Fattening Turkeys, Breeder Turkeys, Backyard Flocks, Ducks and Geese, Game Birds, Ratites and Others.
- Italy reported from 21 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2009, as in 2008.**
- **A total of 45 holdings tested positive in 2009. One Chicken Breeder holding was serologically positive for influenza A virus for subtype H7. One 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.**
- *In 2008 a total of 18 positive holdings were reported. Two Laying Hen holdings were serologically positive for influenza A virus for subtype H7. Ten Backyard Flock holdings were found to be positive for influenza A viruses, one was serologically and virologically positive for subtype H5, whilst the other nine were serologically positive for subtype H7. In addition, four Fattening Duck holdings were virologically positive for influenza A virus - other subtype, neither H5 nor H7. One Breeder Duck holding was virologically positive for influenza A virus - other subtype (H3), neither H5 nor H7. In addition, one 'Other' poultry holding was virologically positive for influenza A virus H7 subtype.*

Latvia

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens and Backyard Flocks.
- Two Chicken Breeder holdings were sampled (Two total).
- 20 Laying Hen holdings were sampled (20 total).
- 204 Backyard Flock holdings were sampled (total not known).
- Latvia sampled the required numbers of holdings for Chicken Breeders, Laying Hens and Backyard Flocks, although the total number of Backyard Flocks is not known.
- Latvia reported from five regions, but the number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, as in previous survey years 2005-2008.**

Lithuania

- Testing results from holdings sampled were reported from Broilers and Fattening Geese.
- One Broiler holding was sampled (One total).
- One Fattening Goose holding was sampled (One total).
- Lithuania sampled the number of holdings according to the submitted programme for Broilers and Fattening Geese.
- Lithuania reported as two regions, but the number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, as in previous survey years 2004-2008.**

Luxembourg

- Testing results from holdings sampled were reported from Laying Hens, Free Range Laying Hens, Broilers, Free Range Broilers, Backyard Flocks, Ratites, and Others
- Six Laying Hen holdings were sampled (Five total).
- Five Free Range Laying Hen holdings were sampled (11 total).
- Two Broiler holdings were sampled (Two total).
- One Free Range Broiler holding was sampled (Four total).
- Eight Backyard Flock holdings were sampled (500 total).
- Four Ratite holdings were sampled (One total).
- One Other holding was sampled (Three total).
- Luxembourg sampled the number of holdings according to the submitted programme for the following poultry categories: Laying Hens, Broilers and Ratites; however, fewer holdings were sampled in Free Range Laying Hens, Free Range Broilers, Backyard Flocks and Others.
- Luxembourg reported from one region.
- **No positive holdings were reported in 2009, as in previous survey years 2004-2008.**

Malta

- Testing results from holdings sampled were reported from Laying Hens.
- 41 Laying Hen holdings were sampled (79 total).
- Fewer holdings were sampled from Laying Hens than according to the submitted programme.
- Malta reported from one region.
- **No positive holdings were reported in 2009, as in previous survey years 2004-2007. In 2008, Malta did not submit any data for the annual poultry surveillance.**

The Netherlands

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Broilers, Free Range Broilers, Fattening Turkeys, Breeder Turkeys, Fattening Ducks, and Breeder Ducks.
- 3,225 Chicken Breeder holdings were sampled (483 total).
- 2,572 Laying Hen holdings were sampled (965 total).
- 991 Free Range Laying Hen holdings were sampled (260 total).
- 1,140 Broiler holdings were sampled (802 total).
- 25 Free Range Broiler holdings were sampled (35 total).
- 252 Fattening Turkey holdings were sampled (59 total).
- 18 Breeder Turkey holdings were sampled (Four total).
- 76 Fattening Duck holdings were sampled (75 total).
- 28 Breeder Duck holdings were sampled (12 total).
- In all but one poultry category (Free Range Broilers) the number of holdings sampled exceeded the total number of holdings given.
- The Netherlands sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens/Free Range Laying Hens, Broilers/ Free Range Broilers, Fattening Turkeys, Breeder Turkeys, Fattening Ducks and Breeder Ducks; however, fewer holdings were sampled in Free Range Broilers.
- The Netherlands reported from 12 regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, as in 2008 and 2007.**

Poland

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Fattening Turkeys, Breeder Turkeys, Fattening and Breeder Ducks, Fattening and Breeder Geese, Game Birds and Ratites.
- 66 Chicken Breeder holdings were sampled (546 total).
- 66 Laying Hen holdings were sampled (1,103 total).
- 52 Turkey Fattener holdings were sampled (749 total).
- Ten Turkey Breeder holdings were sampled (45 total).
- Two Fattening Duck holdings were sampled (37 total).
- Nine Breeder Duck holdings were sampled (169 total).
- 45 Fattening Geese holdings were sampled (1,124 total).

- 40 Breeder Geese holdings were sampled (1,053 total).
- 36 Game Bird holdings were sampled (50 total).
- 52 Ratite holdings were sampled (178 total).
- Poland sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens and Game Birds; however, fewer holdings were sampled in Fattening Turkeys, Turkey Breeders, Ducks and Geese and Ratites.
- Poland reported from 16 regions. The number of regions sampled varied by poultry category.
- **One positive holding was reported in 2009, unlike in 2008 where no positive holdings were reported.**
- **One Breeding Geese holding tested positive by serology for H5 influenza A virus.**
- *In 2007, two Breeder Geese holdings were serologically positive for H5 influenza A virus.*

Portugal

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Broilers, Free Range Broilers, Fattening Turkeys, Backyard Flocks, Fattening and Breeder Ducks, Game Birds, Ratites and Others. Quail reported in the Others category were reassigned to Game Birds.
- 66 Chicken Breeder holdings were sampled (117 total).
- 80 Laying Hen holdings were sampled (184 total).
- Two Broiler holdings were sampled (1,973 total).
- 107 Free Range Broiler holdings were sampled (242 total).
- 127 Fattening Turkey holdings were sampled (155 total).
- 398 Backyard Flock holdings were sampled (236,735 total).
- 11 Fattening Duck holdings were sampled (12 total).
- Two Breeder Duck holdings were sampled (Two total).
- 92 Game Bird holdings were sampled (195 total).
- Ten Ratite holdings were sampled (13 total).
- 63 Other holdings were sampled (88 total).
- Portugal sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens, Free Range Broilers, Fattening Turkeys, Backyard Flocks, Breeder Ducks, Game Birds and Others; however, insufficient numbers of holdings were sampled in Broilers, Fattening Ducks, and Ratites.
- Portugal reported from nine regions. The number of regions sampled varied by poultry category.
- **No positive holdings were reported in 2009, as in 2008.**

- *In 2007, one Broiler holding was virologically and PCR positive for H5 influenza A virus. This holding was located in a restriction zone of an outbreak and it was not a random sample. In addition, three Game Bird holdings were virologically and PCR positive for H5 influenza A virus, serology was not performed. Two were holdings of Red-legged Partridges (Alectoris rufa), and one was a Mallard (Anas platyrhynchos) holding.*

Romania

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Broilers, Backyard Flocks, Breeder Ducks, Game Birds and Ratites.
- Eight Chicken Breeder holdings were sampled (Four total).
- 194 Laying Hen holdings were sampled (117 total).
- 338 Broiler holdings were sampled (181 total).
- 1,338 Backyard Flock holdings were sampled (1,570 total).
- Two Breeder Duck holdings were sampled (Two total).
- 22 Game Bird holdings were sampled (Nine total).
- Two Ratite holdings were sampled (One total).
- Romania sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens, Broilers, Backyard Flocks, Breeder Ducks, Game Birds and Ratites.
- Romania reported from 42 regions (both NUTS 2 and NUTS 3), although the number of regions sampled varied by poultry category.
- **One positive holding was reported in 2009, unlike in 2008 when no positive holdings were reported.**
- **One Breeder Duck holding was found serologically and virologically (PCR) positive for H5 influenza A virus.**
- *In 2007 positive holdings were reported, with one Backyard Flock holding serologically (and virologically / PCR) positive for H5 influenza A virus.*

Slovak Republic

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Broilers, Fattening Turkeys, Breeder Turkeys, Fattening Ducks, Fattening Geese, Game Birds, and Ratites.
- 13 Chicken Breeder holdings were sampled (48 total).
- 28 Laying Hen holdings were sampled (50 total)
- Three Broiler holdings were sampled (148 total).
- Eight Fattening Turkey holdings were sampled (Ten total).
- Five Breeder Turkey holdings were sampled (Four total).

- Three Fattening Duck holdings were sampled (Six total).
- Five Fattening Geese holding were sampled (Five total).
- 27 Game Bird holdings were sampled (35 total).
- 17 Ratite holdings were sampled (17 total).
- The Slovak Republic sampled the number of holdings according to the submitted programme for the following poultry categories: Breeder Turkeys, Fattening Geese, and Ratites; however, fewer holdings were sampled in Chicken Breeders, Laying Hens, Broilers, Fattening Turkeys, Fattening Ducks and Game Birds.
- Slovak Republic reported from four individual regions.
- **No positive holdings were reported in 2009, as in 2008.**
- *In 2007, one Fattening Duck holding was serologically (and virologically/PCR) positive for influenza A virus for a subtype other than H5 or H7 (subtype H4).*

Slovenia

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Fattening Turkeys, Backyard Flocks, Game Birds, and Ratites.
- Nine Chicken Breeder holdings were sampled (Ten total).
- 52 Laying Hen holdings were sampled (138 total).
- 45 Fattening Turkey holdings were sampled (46 total).
- 70 Backyard Flock holdings were sampled (21,901 total).
- Seven Game Bird holdings were sampled (Seven total).
- Nine Ratite holdings were sampled (11 total).
- Slovenia sampled the number of holdings according to the submitted programme for the following poultry categories: Backyard Flocks and Game Birds; however, fewer holdings were sampled in Chicken Breeders, Laying Hens, Fattening Turkeys and Ratites.
- Slovenia reported from one region.
- **No positive holdings were reported in 2009, as in previous survey years 2005-2008.**

Spain

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Broilers, Free Range Broilers, Fattening Turkeys, Breeder Turkeys, Backyard Flocks, Fattening and Breeder Ducks, Fattening Geese, Game Birds, Ratites and Others.
- 162 Chicken Breeder holdings were sampled (380 total).
- 245 Laying Hen holdings were sampled (916 total).
- 39 Free Range Laying Hen holdings were sampled (62 total).

- 138 Broiler holdings were sampled (2,555 total).
- 13 Free Range Broiler holding were sampled (17 total).
- 86 Fattening Turkey holdings were sampled (434 total).
- Eight Breeder Turkey holdings were sampled (Eight total).
- 3,336 Backyard Flock holdings were sampled (25,334 total).
- 47 Fattening Duck holdings were sampled (69 total).
- One Breeder Duck holding was sampled (Eight total).
- Four Fattening Geese holdings were sampled (24 total).
- 204 Game Bird holdings were sampled (9,302 total).
- 36 Ratite holdings were sampled (108 total).
- 751 Other holdings were sampled (13,078 total).
- Spain sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Laying Hens, Broilers, Breeder Turkeys, Backyard Flocks, Game Birds, and Others; however, fewer holdings were sampled in Free Range Laying Hens, Free Range Broilers, Fattening Turkeys, Ducks and Geese, and Ratites.
- Spain reported from 17 regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2009, as in 2008 and previous year's surveys.**
- **A total of five holdings were reported positive in 2009. Two 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.**
- *In 2008, three Fattening Duck holdings were virologically positive (but serologically negative) for influenza A viruses. Two were positive for a subtype other than H5 or H7 (H16), and one was positive for both subtype H5 and a subtype other than H5/H7 (H16). Two Game Bird holdings were serologically positive for influenza A viruses of H5 subtype. One Others holding was virologically positive for influenza A viruses, no subtype was given.*

Sweden

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens/Free Range Laying Hens, Broilers, Fattening Turkeys, Breeder Turkeys, Backyard Flocks, Fattening Ducks, Fattening Geese, Game Birds and Ratites.
- 33 Chicken Breeder holdings were sampled (34 total).
- 41 Laying Hen holdings were sampled (292 total).

- 20 Free Range Laying Hen holdings were sampled (82 total).
- 27 Broiler holdings were sampled (27 total).
- 17 Fattening Turkey holdings were sampled (17 total).
- Four Turkey Breeder holdings were sampled (Four total).
- Six Backyard Flock holdings were sampled (Six total).
- Three Fattening Duck holdings were sampled (Three total).
- 13 Fattening Geese holdings were sampled (13 total).
- 26 Game Bird holdings were sampled (26 total).
- Six Ratite holdings were sampled (Six total).
- Sweden sampled the number of holdings according to the submitted programme for the following poultry categories: Broilers, Fattening Turkeys, Turkey Breeders, Backyard Flocks, Fattening Ducks, Fattening Geese, Game Birds and Ratites; however, fewer holdings were sampled in Chicken Breeders, Laying Hens and Free Range Laying Hens.
- Sweden reported from seven regions. The number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2009, as in 2008.**
- **Two holdings tested positive in 2009. 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.**
- *In 2008, one Breeder Geese holding was serologically positive for influenza A virus of subtype H5. In addition, two Game Bird holdings were serologically positive for influenza A viruses, one for subtype H5, and one for both subtype H5 (serologically) and H4 (virologically).*

United Kingdom

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Free Range Laying Hens, Fattening Turkeys, Breeder Turkeys, Fattening and Breeder Ducks, Fattening and Breeder Geese, and Game Birds.
- 48 Chicken Breeder holdings were sampled (361 total).
- 59 Laying Hen holdings were sampled (1,182 total).
- Nine Free Range Laying Hen holdings were sampled (538 total).
- 86 Fattening Turkey holdings were sampled (616 total).
- Ten Breeder Turkey holdings were sampled (26 total).
- 62 Fattening Duck holdings were sampled (365 total).
- 30 Breeder Duck holdings were sampled (359 total).
- 75 Fattening Geese holdings were sampled (230 total).

- Ten Breeder Geese holdings were sampled (117 total).
- 64 Game Bird holdings were sampled (1,720 total).
- The UK sampled the number of holdings according to the submitted programme in Game Birds; however, fewer holdings were sampled in Chicken Breeders, Laying Hens/Free Range Laying Hens, Fattening Turkeys, Breeder Turkeys, Ducks and Geese.
- The UK reported from 34 regions, the number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2009, as in 2008.**
- **Two holdings tested positive in 2009. Two Breeder Duck holdings tested positive by serology for influenza A virus, 1 of subtype H5 and one H7.**
- *In 2008, three Fattening Duck holdings tested serologically positive for influenza A virus of subtype H5. In addition, five Fattening Geese holdings tested positive serologically for influenza A viruses, four for subtype H5 and one for subtype H7.*

Non-EU MS

Norway

- Testing results from holdings sampled were reported from Chicken Breeders, Laying Hens, Fattening Turkeys, Backyard Flocks, Fattening Ducks, Fattening Geese, and Game Birds.
- 107 Chicken Breeder holdings were sampled (109 total).
- 51 Laying Hen holdings were sampled (844 total).
- 54 Fattening Turkey holdings were sampled (100 total).
- Four Backyard Flock holdings were sampled (total holdings not known).
- Four Fattening Duck holdings were sampled (Five total).
- One Fattening Geese holding was sampled (One total).
- One Game Bird holding was sampled (One total).
- Norway sampled the number of holdings according to the submitted programme for the following poultry categories: Chicken Breeders, Fattening Geese and Game Birds; however, fewer holdings were sampled in Laying Hens, Fattening Turkeys, and Fattening Ducks. As the total number of Backyard Flock holdings was unknown it cannot be determined if the number sampled was according to the programme submitted.
- Norway reported from seven regions, the number of regions sampled varied by poultry category.
- **No positive holdings were reported from NO in 2009.**

Switzerland

- Testing results from holdings sampled were reported from Free Range Laying Hens and Backyard Flocks.

- 66 Free Range Laying Hen holdings were sampled (3,660 total).
- 38 Backyard Flock holdings (Ducks and/or Geese) were sampled (1,949 total).
- Switzerland sampled the number of holdings according to the submitted programme in Free Range Laying Hens; however, fewer holdings were sampled in Backyard Flocks.
- Switzerland reported from six regions, the number of regions sampled varied by poultry category.
- **Positive holdings were reported in 2009.**
- **Two holdings were positive in 2009. Two Backyard Flock holdings were serologically positive for influenza A virus, one of subtype H5 and one H7.**

5 DISCUSSION

All twenty-seven EU Member States (MS) participated in the survey in 2009. A total of 35,016 poultry holdings were sampled, which compares to 34,985 in 2008, 126,912 in 2007 and 29,005 in 2006. The most frequently sampled poultry category was Backyard Flocks (26.7% of total holdings sampled by EU MS), closely followed by Laying Hens (Free-range and conventional) (24.1%). The least sampled poultry category was Ratites (270, 0.77%) and this poultry category only makes up 0.04% of total holdings across the EU. In addition, two non-EU MS, Norway (NO) and Switzerland (CH), submitted data for this report.

The number of holdings sampled by MS varied from 2 (Lithuania) to 10,254 (Italy). Italy also sampled the most number of holdings in 2008 (n=9,025). Apart from Free Range Broilers, Back Yard Flocks and Ratites, all other poultry categories saw an increase in the number of holdings sampled in 2009 compared with 2008. Percentage increases in the number of holdings sampled compared with 2008 varied from 8.4% (Turkey Fatteners) to 28.1% (Others). 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 Denmark and France (with Italy and the Netherlands also sampling large numbers of Free-Range flocks) and for Broilers in France, Ireland and Portugal.

In the 2009 survey of EU poultry for avian influenza evidence of previous infection with low pathogenicity avian influenza according to Directive 2005/94/EC was detected in 90 holdings (0.26% of total holdings sampled). This is a similar rate of detection to 2008, when 72 of 34,985 holdings returned positive test results (0.21%). However, a direct comparison among years is of limited value as the selection process has varied from year to year. In 2009, detections of antibodies to avian influenza according to Directive 2005/94/EC (H5 and H7 subtypes) occurred in Chicken Breeders, Laying Hens, Free Range Laying Hens, Fattening Turkeys, Backyard Flocks, Fattening Ducks, Breeder Ducks, Breeder Geese, Game Birds and Other Poultry. H5 was responsible for the majority of Duck and Geese positive holdings, whereas H7 subtypes were more common in Backyard Flocks in 2009.

In 2009 there were 52 holdings found positive for H5 by serological testing. A total of five holdings tested positive for subtype H5 by PCR or virus isolation; indicating that in 9.6% of the holdings positive for subtype H5, infection was still active. One holding tested positive for both subtypes on serology or PCR/ virology. These figures are higher than in 2008 when, for H5, four holdings (7.4%) and for H7, two holdings (9.5%) tested positive by PCR or virus isolation. In many species infection with LPAI can result in only mild clinical signs and may not be detected by animal health authorities. 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 restrictions and depopulation of the flock in accordance with Council Directive 2005/94/EC.

In 2009 there were 38 holdings found positive for H7 by serological testing. This is almost double the number of H7 when compared with 2008 (n=21). In 2007, 36 holdings tested positive for H7 subtypes, but far more holdings were sampled in that survey year (126,912 compared with 35,016 in 2009). In 2009, sixteen holdings were positive for H7 subtypes by PCR or virus isolation, indicating that in 42% of the H7 positive holdings, the infection was still active.

Two MS (BE and FI) which detected AI positive holdings in 2008 did not find any positives in 2009. In comparison, there were three MS (IE, PL and RO) which detected positive holdings in 2009, but found none in 2008. In addition, non-EU MS Switzerland detected two positive holdings in 2009. Most (86.4%) of H7 positive holdings were detected in Italy, mainly in Backyard Flocks and Other holdings. The majority (58.2%) of H5 positive holdings were detected in France, particularly in Breeder Ducks and Fattening Ducks.

The detection rate in Breeder Ducks (9.1%) and Breeder Geese (8.3%) was considerably higher than other poultry categories across the EU, and Fattening Ducks had the third highest detection rate at 1.19%. 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 previously by passive surveillance, while in other species clinical

disease due to AI may lead to 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 Backyard Flocks, Game Birds and Others which had the next three highest numbers of detections.

The sampling regimens among MS are diverse with different degrees of targeting and testing frequency, varying numbers of samples collected in each flock and likely variance of within-flock seroprevalence at the time of sampling. Hence determination of between flock prevalence for poultry categories or MS needs to be interpreted with great caution. The survey was designed to detect at least one positive flock in a poultry category if the flock level prevalence is at least 5%. Therefore in MS where no positive holdings were observed the between flock prevalence is determined to be below 5% if sufficient holdings were sampled and the sample was randomly selected from the category of interest.

Future surveillance strategies could further develop the risk-based approach by targeting of the survey to focus on poultry categories where previous surveillance has indicated that the presence of LPAI H5 or H7 subtypes is more likely (e.g. more sampling of duck and goose holdings and less sampling of Broilers). Targeting could also be further developed to sample holdings with risk factors for LPAI of H5 or H7 subtype exposure within poultry categories (e.g. holdings where birds are kept outdoors, or close proximity to water bodies or areas where wild waterfowl aggregate). The validity of risk-based surveillance however, is dependent on sufficient knowledge of the relative risk associated with the selected criteria in the poultry population involved. Ongoing review of the results of avian influenza surveillance, the global picture of avian influenza and scientific research in this field, should further improve avian influenza prevention and control and appropriate allocation of resources in this area.

6 MATERIALS AND METHODS

6.1 Methods

This report is restricted to data that were collected and submitted to the EC database, in the required format, in 2009 to the Commission under Decisions 2007/268/EC and 2008/897/EC.

Data extracted from the EU 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 EU MS submitted data for the 2009 poultry survey. In addition non-EU MS Norway and Switzerland also 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 2009 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 taken.

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, and for the assessment of the collected sample size, free range and indoor categories were combined, as were the Duck and Geese (fattening and breeder) categories.

A number of MS that submitted data in the 'Others' category provided further species details. Where extra details were given in the data, the category "Others" contains the following type of holdings reported:

Member State	Category Species Detail
BG	Exotic birds, rescue centre, zoo
LU	Ducks (1 holding which could not be categorised as a Breeder or Fattening Duck)
PT	Pet shops, ornamental birds, racing pigeons and zoo

If holdings were reported as "Other", but could be identified as one of the given categories, they were re-assigned to these categories. For example, BG submitted data for two pheasant holdings in the 'Others' category which were reassigned to Farmed Game Birds.

Italy submitted data for quail and pheasants in the 'Others' category which were reassigned to Farmed Game Birds.

Portugal also submitted data for quail holdings in the 'Others' category which were reassigned to Farmed Game Birds.

Maps were produced using the ArcMap function of Arc GIS version 9.3.

Samples are displayed at NUTS 2 level and positive holdings at NUTS 2 or 3. 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.

7 REFERENCES

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.

EC (2005) Council Directive 2005/94/EC of 20 December 2005 on Community measures for the control of avian influenza and repealing Directive 92/40/EEC, *Official Journal of the European Union*, L 10, 14.1.2006, p. 16.

EC (2006) 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 (2008) Commission Decision 2008/897/EC of 28 November 2008 approving annual and multi-annual programmes and the financial contribution from the Community for the eradication, control and monitoring of certain animal diseases and zoonoses presented by the Member States for 2009 and following years. *Official Journal of the European Union*, L 322, 2.12.2008, p. 39.

8 ANNEX I DETAILS OF PREVALENCE BY POULTRY CATEGORY AND MS FOR 2008 AND 2009

Annex I Table 1 Total number of Chicken Breeder holdings, total number sampled and total number of positive holdings reported for 2008 and 2009 by Member State										
Member State	2009					2008				
	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	209	209	0	0	0	23	24	0	0	0
BG	26	14	0	0	0	22	7	0	0	0
CY	18	18	0	0	0	18	15	0	0	0
CZ										
DE	2	2	0	0	0	29777	2	0	0	0
DK	472	574	0	0	0	482	553	0	0	0
EE										
EL	96	42	0	0	0	107	67	0	0	0
ES	380	162	0	0	0	411	225	0	0	0
FI	58	51	0	0	0	8	3	0	0	0
FR										
HU	150	50	0	0	0	206	28	0	0	0
IE	86	85	0	0	0	80	85	0	0	0
IT	451	756	1	0	1	721	725	0	0	0
LT										
LU										
LV	2	2	0	0	0					
MT										
NL	483	3225	0	0	0	473	2458	0	0	0
PL	546	66	0	0	0	546	65	0	0	0
PT	117	66	0	0	0	120	86	0	0	0
RO	4	8	0	0	0	13	13	0	0	0
SE	34	33	0	0	0	46	42	0	0	0
SI	10	9	0	0	0	10	10	0	0	0
SK	48	13	0	0	0	48	11	0	0	0
UK	361	48	0	0	0	394	43	0	0	0
Total	3553	5433	1	0	1	33505	4462	0	0	0
NO	109	107	0	0	0					

Annex I Table 2 Total number of Laying hens (including free range) holdings, total number sampled, and total number of positive holdings reported for 2008 and 2009 by Member State

Member State	2009										2008									
	Laying hens					Free-range laying hens					Laying hens					Free-range laying hens				
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			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			Total	H5	H7			Total	H5	H7
AT	1714	65	0	0	0						1714	60	0	0	0					
BE	344	297	0	0	0	86	84	0	0	0	344	286	2	0	2	85	77	1	1	0
BG	145	134	0	0	0						151	109	0	0	0					
CY	30	34	0	0	0	9	11	0	0	0	31	31	0	0	0	14	11	0	0	0
CZ	126	53	0	0	0						153	57	0	0	0					
DE	38159	47	0	0	0	6	6	0	0	0	216212	35	0	0	0	34225	20	0	0	0
DK	35	49	0	0	0	109	299	0	0	0	54	77	0	0	0	120	305	2	1	1
EE	12	11	0	0	0						61	14	0	0	0					
EL	371	43	0	0	0						394	59	0	0	0					
ES	916	245	2	1	1	62	39	0	0	0	1271	409	0	0	0	636	28	0	0	0
FI	588	49	0	0	0	27	14	0	0	0	938	47	0	0	0	29	8	0	0	0
FR						1030	53	0	0	0						11988	57	0	0	0
HU	512	83	0	0	0	9	8	0	0	0	581	89	0	0	0	109	31	0	0	0
IE	83	74	0	0	0	97	73	1	1	0	87	59	0	0	0	99	53	0	0	0
IT	1501	2179	1	0	1	209	300	0	0	0	2841	2157	2	0	2	621	305	0	0	0
LT											4	4	0	0	0					
LU	5	6	0	0	0	11	5	0	0	0	5	5	0	0	0	11	3	0	0	0
LV	20	20	0	0	0						20	20	0	0	0					
MT	79	41	0	0	0															
NL	965	2572	0	0	0	260	991	0	0	0	1216	1760	0	0	0	204	693	0	0	0
PL	1103	66	0	0	0						1103	82	0	0	0					
PT	184	80	0	0	0						196	83	0	0	0					
RO	117	194	0	0	0						171	129	0	0	0	14	14	0	0	0
SE	292	41	0	0	0	82	20	0	0	0	319	43	0	0	0	82	22	0	0	0
SI	138	52	0	0	0						122	57	0	0	0					
SK	50	28	0	0	0						50	31	0	0	0					
UK	1182	59	0	0	0	538	9	0	0	0	924	44	0	0	0	515	15	0	0	0
Total	48671	6522	3	1	2	2535	1912	1	1	0	228962	5747	4	0	4	48752	1642	3	2	1
NO	844	51	0	0	0															
CH						3660	66	0	0	0										

Annex I Table 3 Total number of Broiler holdings (including free-range), total number sampled, and total number of positive holdings reported for 2008 and 2009 by Member State																				
Member State	2009										2008									
	Broilers					Free-range broilers					Broilers				Free-range broilers					
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			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			Total	H5	H7			Total	H5	H7
AT																				
BE																				
BG	481	25	0	0	0						181	20	0	0	0					
CY																				
CZ																				
DE	2	2	0	0	0	1	1	0	0	0										
DK						77	2	0	0	0					19	3	0	0	0	
EE																				
EL						10	3	0	0	0										
ES	7087	138	0	0	0	48	13	0	0	0	3568	247	0	0	0	16	8	0	0	0
FI											23	1	0	0	0					
FR						6000	135	0	0	0					13986	89	0	0	0	
HU											1420	317	0	0	0					
IE						55	28	0	0	0					35	23	0	0	0	
IT																				
LT	1	1	0	0	0						4	15	0	0	0					
LU	2	2	0	0	0	4	1	0	0	0	2	3	0	0	0	4	3	0	0	0
LV																				
MT																				
NL	3295	1140	0	0	0	35	25	0	0	0	853	725	0	0	0	18	18	0	0	0
PL																				
PT	7892	2	0	0	0	969	107	0	0	0	1973	1	0	0	0	258	191	0	0	0
RO	573	338	0	0	0						185	162	0	0	0	34	34	0	0	0

SE	101	27	0	0	0						29	28	0	0	0					
SI																				
SK	148	3	0	0	0						148	9	0	0	0					
UK																				
Total	19582	1678	0	0	0	7199	315	0	0	0	8386	1528	0	0	0	14370	369	0	0	0

Annex I Table 4 Total number of Fattening Turkey holdings, total number sampled, and total number of positive holdings reported for 2008 to 2009 by Member State										
Member State	2009					2008				
	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	111	82	0	0	0	111	71	0	0	0
BE	31	20	0	0	0	33	42	0	0	0
BG	1	0	0	0	0	1	0	0	0	0
CY	6	6	0	0	0	9	4	0	0	0
CZ	72	56	0	0	0	71	58	0	0	0
DE	1405	44	0	0	0	14138	61	0	0	0
DK	117	59	0	0	0	122	57	0	0	0
EE										
EL	47	28	0	0	0	46	27	0	0	0
ES	434	86	1	0	0	496	88	0	0	0
FI	55	88	0	0	0	69	77	0	0	0
FR	4070	156	0	0	0	18981	162	0	0	0
HU	361	65	0	0	0	1239	172	0	0	0
IE	105	41	0	0	0	105	14	0	0	0
IT	963	2043	5	4	1	1077	1638	0	0	0
LT										
LU										
LV										
MT										
NL	59	252	0	0	0	59	176	0	0	0
PL	749	52	0	0	0	808	72	0	0	0
PT	155	127	0	0	0	272	141	0	0	0
RO			0	0	0	1	1	0	0	0

SE	17	17	0	0	0	26	23	0	0	0
SI	46	45	0	0	0	55	50	0	0	0
SK	10	8	0	0	0	10	10	0	0	0
UK	616	86	0	0	0	647	78	0	0	0
Total	9430	3361	6	4	1	38376	3022	0	0	0
NO	100	54	0	0	0					

Annex I Table 5 Total number of Breeder Turkey holdings, total number sampled, and total number of positive holdings reported for 2008 and 2009 by Member State

Member State	2009					2008				
	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	2	0	0	0	0	2	0	0	0	0
CY										
CZ										
DE						1448	10	0	0	0
DK										
EE										
EL	1	1	0	0	0	4	4	0	0	0
ES	8	8	0	0	0	11	11	0	0	0
FI						5	1	0	0	0
FR	230	87	0	0	0	5994	85	0	0	0
HU	32	25	0	0	0	26	2	0	0	0
IE	14	4	0	0	0	8	2	0	0	0
IT	60	126	0	0	0	63	113	0	0	0
LT						1	5	0	0	0
LU										
LV										
MT										
NL	4	18	0	0	0	3	15	0	0	0
PL	45	10	0	0	0	431	9	0	0	0
PT										
RO						1	1	0	0	0
SE	4	4	0	0	0	4	2	0	0	0
SI										
SK	4	5	0	0	0	4	4	0	0	0
UK	26	10	0	0	0	28	11	0	0	0
Total	430	298	0	0	0	8033	275	0	0	0

Annex I Table 6 Total number of Backyard Flock holdings, total number sampled, and total number of positive holdings reported for 2008 and 2009 by Member State

Member State	2009					2008				
	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						20	12	2	1	1
BG	621297	1247	0	0	0	588333	1783	0	0	0
CY	3850	20	0	0	0	8530	23	0	0	0
CZ										
DE	55264	84	0	0	0	44901	62	0	0	0
DK										
EE										
EL	130208	77	0	0	0	256374	176	0	0	0
ES	25334	3336	0	0	0	26821	4071	0	0	0
FI						298	19	0	0	0
FR	3000	94	1	1	0	16983	88	0	0	0
HU	0	359	0	0	0	NK	181	0	0	0
IE										
IT	121024	2118	24	0	24	292868	1578	10	1	9
LT										
LU	500	8	0	0	0	750	14	0	0	0
LV	0	204	0	0	0	NK	86	0	0	0
MT										
NL										
PL										
PT	236735	398	0	0	0	236735	482	0	0	0
RO	1570	1338	0	0	0	6554	3932	0	0	0
SE	6	6	1	1	0	NK	7	0	0	0
SI	21901	70	0	0	0	25	22	0	0	0
SK										
UK										
Total	1220689	9359	26	2	24	1479192	12536	12	2	10
NO	0	4								
CH	1949	38	2	1	1					

Annex I Table 7a Total number of Duck holdings, total number sampled, and total number of positive holdings reported for 2008 and 2009 by Member State

*Virological data/results in italics in parentheses

Member State	2009										2008									
	Fattening ducks					Breeder ducks					Fattening ducks					Breeder ducks				
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			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			Total	H5	H7			Total	H5	H7
AT	17	17	0	0	0						19	19	0	0	0	-	-	-	-	-
BE	23	20	0	0	0						15	23	2 (1)	2	1	1	1	0	0	0
BG	105	173	0 (10)	0	0	5	0	0	0	0	107	73	0 (2)	0	0	-	-	-	-	-
CY											1	2	0	0	0	-	-	-	-	-
CZ						15	15	2	1	0	-	-	-	-	-	30	16	2	1	0
DE	5552	81	0	0	0						26927	56	0	0	0	7244	6	0	0	0
DK	54	12	0	0	0	12	4	1	1	0	49	14	0	0	0	13	8	2 (1)	1	1 (1)
EE											-	-	-	-	-	-	-	-	-	-
EL											-	-	-	-	-	-	-	-	-	-
ES	69	47	0 (2)	0 (1)	0	8	1	0	0	0	255	44	0 (3)	0 (1)	0 (0)	2	2	0	0	0
FI	10	8	0	0	0						3	2	0	0	0	-	-	-	-	-
FR	7370	169	9	9 (1)	0	250	87	14	14	0	13986	129	1	1	0	7992	85	17	17	0
HU	247	36	0	0	0	5	5	0	0	0	468	41	0	0	0	35	6	0	0	0
IE	4	2	0	0	0						-	-	-	-	-	-	-	-	-	-
IT	195	204	0 (1)	0	0	16	27	0	0	0	362	209	0 (4)	0	0	20	26	0 (1)	0	0
LT											1	3	0	0	0	-	-	-	-	-
LU											-	-	-	-	-	-	-	-	-	-
LV											2	2	0	0	0	-	-	-	-	-
MT											-	-	-	-	-	-	-	-	-	-
NL	75	76	0	0	0	12	28	0	0	0	77	43	0	0	0	18	27	0	0	0
PL	37	2	0	0	0	169	9	0	0	0	46	5	0	0	0	141	3	0	0	0
PT	12	11	0	0	0	2	2	0	0	0	22	19	0	0	0	2	2	0	0	0
RO			0	0	0	2	2	1 (1)	1 (1)	0	-	-	-	-	-	4	3	0	0	0

SE	3	3	0	0	0						3	3	0	0	0	-	-	-	-	-
SI			0	0	0						-	-	-	-	-	-	-	-	-	-
SK	6	3	0	0	0						5	5	0	0	0	-	-	-	-	-
UK	365	62	0	0	0	359	30	2	1	1	1137	84	3	3	0	9	2	0	0	0
Total	14144	926	9 (13)	9 (2)	0	855	210	20 (1)	17 (1)	1	43485	776	6 (10)	6 (1)	1 (0)	15511	187	21 (2)	19	1 (1)
NO	5	4	0	0	0															
CH																				

Annex I Table7b Total number of Geese holdings, total number sampled, and total number of positive holdings reported for 2008 and 2009 by Member State

*Virological data/results in italics in parentheses

Member State	2009										2008									
	Fattening geese					Breeder geese					Fattening geese					Breeder geese				
	Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			Total No. of Holdings	Total No. of Holdings Sampled	Positive Holdings			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			Total	H5	H7			Total	H5	H7
AT	54	54	0	0	0						39	39	0	0	0					
BE						2	3	0	0	0						2	5	2 (1)	2 (1)	1
BG																				
CY																				
CZ						7	7	2 (1)	2	0 (1)						18	8	0	0	0
DE	495	24	0	0	0	65	8	0	0	0	23187	60	0	0	0	5320	5	0	0	0
DK	23	7	0	0	0	9	2	1	1	0	21	8	0	0	0	12	4	2	2	0
EE																				
EL																				
ES	24	4	0	0	0						1	1	0	0	0	5	6	0	0	0
FI											2	1	0	0	0	1	1	1	1	0
FR						133	13	4	4	0						6993	21	4	4	0
HU	413	141	0	0	0	19	8	0	0	0	829	107	0	0	0	70	20	0	0	0
IE	1	1	0	0	0															
IT	73	70	0	0	0	14	17	0	0	0	307	74	0	0	0	17	15	0	0	0
LT																				
LU																				
LV																				
MT																				
NL																				
PL	1124	45	0	0	0	1053	40	1	1	0	1131	43	0	0	0	1161	42	0	0	0

PT																				
RO																				
SE	13	13	0	0	0						29	27	0	0	0	1	1	1 (1)	1	0
SI																				
SK	5	5	0	0	0						2	2	0	0	0					
UK	230	75	0	0	0	117	10	0	0	0	281	76	5	4	1	8	3	0	0	0
Total	2455	439	0	0	0	1419	108	8 (1)	8	0 (1)	25829	438	5	4	1	13608	131	10 (2)	10 (1)	1
NO	1	1	0	0	0															
CH																				

Annex I Table 8 Total number of Game Bird holdings, total number sampled, and total number of positive holdings reported for 2007 and 2008 by Member State

*Virological data/results in italics in parentheses

Member State	2009					2008				
	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	33	31	0	0	0	13	9	0	0	0
BG	17	6	0	0	0	11	9	0	0	0
CY	10	4	0	0	0	7	4	0	0	0
CZ	14	14	1	1	0	19	16	0 (<i>6</i>)	0	0
DE	32	2	0	0	0	251	1	0	0	0
DK	230	296	2	2	1	236	298	3	3	1
EE			0	0	0	1	1	0	0	0
EL	12	8	0	0	0	20	17	0	0	0
ES	9302	204	0	0	0	373	213	2	2	0
FI	18	12	0	0	0	3	2	0	0	0
FR	3500	99	4	4	0	18981	155	1	1	0
HU	44	40	0	0	0	NK	1	0	0	0
IE			0	0	0					
IT	861	939	2	2	0	916	832	0	0	0
LT			0	0	0					
LU			0	0	0					
LV			0	0	0					
MT			0	0	0					
NL			0	0	0					
PL	50	36	0	0	0	46	31	0	0	0
PT	195	92	0	0	0	373	150	0	0	0

RO	9	22	0	0	0	2	2	0	0	0
SE	26	26	1	1	0	31	29	2 (1)	2	0
SI	7	7	0	0	0	8	8	0	0	0
SK	35	27	0	0	0	35	36	0	0	0
UK	1720	64	0	0	0	63	18	0	0	0
Total	16115	1929	10	10	1	21389	1832	8 (7)	8	1
NO	1	1								
CH										

Annex I Table 9 Total number of Ratite holdings, total number sampled, and total number of positive holdings reported for 2007 and 2008 by Member State										
Member State	2009					2008				
	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	11	7	0	0	0	9	8	0	0	0
BE						33	12	0	0	0
BG										
CY	4	1	0	0	0	12	3	0	0	0
CZ										
DE						66	1	0	0	0
DK										
EE										
EL	5	3	0	0	0	33	7	0	0	0
ES	108	36	0	0	0	254	51	0	0	0
FI	2	3	0	0	0	7	3	0	0	0
FR						7992	25	0	0	0
HU	6	6	0	0	0	17	4	0	0	0
IE										
IT	220	114	0	0	0	221	116	0	0	0
LT										
LU	1	4	0	0	0	1	4	0	0	0
LV						2	2	0	0	0
MT										
NL										
PL	178	52	0	0	0	174	52	0	0	0
PT	13	10	0	0	0	18	8	0	0	0
RO	1	2	0	0	0					
SE	6	6	0	0	0	12	10	0	0	0
SI	11	9	0	0	0	22	13	0	0	0
SK	17	17	0	0	0	17	10	0	0	0
UK										
Total	583	270	0	0	0	8890	329	0	0	0
NO										
CH										

Annex I Table 10 Total number of Other holdings, total number sampled, and total number of positive holdings reported for 2007 and 2008 by Member State.

*Virological data/results in parentheses

Member State	2009					2008				
	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	28	1 (1)	1 (1)	0
BG	8	6	0	0	0	2	3	0	0	0
CY										
CZ										
DE	7914	72	0	0	0	34	1	0	0	0
DK										
EE	1	1	0	0	0					
EL										
ES	13078	751	1	1	0	2793	429	0 (1)	0	0
FI										
FR										
HU						NK	2	0	0	0
IE										
IT	1709	1361	9 (8)	0	9 (8)	1546	1237	0 (1)	0	0 (1)
LT						1	1	0	0	0
LU	3	1	0	0	0	6	2	0	0	0
LV										
MT										
NL										
PL										
PT	88	63	0	0	0	60	55	0	0	0
RO						2	2	0	0	0
SE										
SI										

SK										
UK										
Total	22801	2255	10 (8)	1 (0)	9 (8)	4462	1760	1 (3)	1 (1)	0 (1)
NO										
CH										

9 ANNEX II ADDITIONAL INFORMATION ON RESULTS OF THE 2009 SURVEY

Annex II Table 1 Prevalence of holdings positive for subtype H5						
Member State	Poultry Category	Total Holdings	Total Holdings Sampled	Number of Serological Positive Holdings	Number of PCR/Virological Positive Holdings	Comments
CZ	Breeder Ducks	15	15	1		
	Breeder Geese	7	7	2		
	Game Birds	14	14	0	1	
DK	Breeder Ducks	12	4	1		Same holding positive as tested positive in the Breeder Geese category
	Breeder Geese	9	2	1		Same holding positive as tested positive in the Breeder Duck category
	Game Birds	230	296	2		One holding tested seropositive for both H5 (twice) and H7.
ES	Fattening Ducks	69	47	0	1	Holding virologically positive only, serology negative. Also Influenza A positive.
	Laying Hens	916	245	1		Same holding positive four times
	Others	13078	751	1		
FR	Backyard Flocks	3000	94	1		
	Fattening Ducks	7370	169	9	1	One holding both serologically and pcr/virologically positive
	Breeder Ducks	250	87	14		
	Breeder Geese	133	13	4		
	Game Birds	3500	99	4		
IE	Free Range Laying Hens	97	73	1		
IT	Fattening Turkeys	963	2043	3	1	
	Game Birds	861	939	2		
PL	Breeder Geese	1053	40	1		
RO	Breeder Ducks	2	2	1	1	Same holding both serologically and pcr/virologically positive
SE	Backyard Flocks	6	6	1		
	Game Birds	26	26	1		
UK	Breeder Ducks	359	30	1		
Total		31970	5002	52	5	
CH	Backyard Flocks	1949	38	1		

Annex II Table 2 Prevalence of holdings positive for subtype H7

Member State	Poultry Category	Total Holdings	Total Holdings Sampled	Number of Serological Positive Holdings	Number of Virological Positive Holdings	Comments
CZ	Breeder Geese	7	7	0	1	
DK	Game Birds	230	296	1		Holding also positive for H5
ES	Laying Hens	916	245		1	
IT	Laying Hens	1501	2179	1		
	Chicken Breeders	451	756	1		
	Fattening Turkeys	963	2043	1	1	Same holding both serologically and pcr/virologically positive
	Backyard Flocks	121024	2118	24	5	Five holdings both serologically and pcr/virologically positive
	Others	1709	1361	9	8	11 holdings positive overall.
UK	Breeder Ducks	359	30	1		
Total		127160	9035	38	16	
CH	Backyard Flocks	1949	38	1		

Annex II Table 3 Number of holdings positive for subtype H5 by serology, serology and PCR/virology or PCR/virology only				
Member State	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
CZ	Breeder Ducks	1		
	Breeder Geese	2		
	Game Birds			1
DK	Breeder Ducks	1		
	Breeder Geese	1		
	Game Birds	2		
ES	Fattening Ducks			1
	Laying Hens	1		
	Others	1		
FR	Backyard Flocks	1		
	Fattening Ducks	8	1	
	Breeder Ducks	14		
	Breeder Geese	4		
	Game Birds	4		
IE	Free Range Laying Hens	1		
IT	Fattening Turkeys	3		1
	Game Birds	2		
PL	Breeder Geese	1		
RO	Breeder Ducks		1	
SE	Backyard Flocks	1		
	Game Birds	1		
UK	Breeder Ducks	1		
EU Total		50	2	3
CH	Backyard Flocks	1		

Annex II Table 4 Number of holdings positive for subtype H7 by serology, serology and PCR/virology or PCR/virology only				
Member State	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
CZ	Breeder Geese			1
DK	Game Birds	1		
ES	Laying Hens			1
IT	Laying Hens	1		
	Chicken Breeders	1		
	Fattening Turkeys		1	
	Backyard Flocks	19	5	
	Others	3	6	2
UK	Breeder Ducks	1		
EU Total		26	12	4
CH	Backyard Flocks	1		

