Self-declaration of the recovery of freedom from Highly Pathogenic Avian Influenza in poultry by France

Self-declaration submitted to the OIE on 16 May 2018 by Dr Loïc Evain, Chief Veterinary Officer, OIE Delegate for France, Ministry of Agriculture and Food, France

I. Highly Pathogenic Avian Influenza situation in France

France has identified since November 2016 cases of highly pathogenic avian influenza (HPAI) due to subtype H5N8, first in wildlife and then in commercial holdings. HPAI episodes from 2016-2017 in France, shows the circulation of three subtypes closely related within the European territory: H5N8 (predominant), H5N5 and H5N6. No human case linked to the H5N8 strain, main circulating strain in France, was reported worldwide to date. All analyses so far confirm that the virus is not zoonotic. The pathogenicity of the subtype for wild birds seems pretty severe for Anatidae, considering the high mortality rates in certain areas.

France notified to the World Animal Health Information System (WAHIS) a first case of HPAI on 28 November 2016 in captive wild birds, Département of Pas-de-Calais, that was detected by event surveillance affecting ducks used as decoys for hunting. The first case in free wild birds (seagull) was then confirmed on 2 December 2016 in the Département of Haute-Savoie. This episode was different from the one that occurred in 2015-2016 regarding the characteristics of the virus.

A first outbreak in a commercial holding was confirmed on the 01 December 2016 in a duck holding located in the Tarn Département, Almayrac town, detected by clinical suspicion (therefore also through event surveillance). The main hypothesis of the source of contamination was contact with wild birds. Secondary outbreaks were identified by epidemiological survey (spread of the virus via transport from the outbreak) in 3 other Départements (in holdings1), namely: Lot-et-Garonne, Gers and Hautes-Pyrénées. Finally, 4 other Départements confirmed cases (in holdings), through contact with wild birds or spread due to human interventions and/or movements between holdings, namely: Aveyron, Pyrénées-Atlantiques, Landes and Deux-Sèvres.

1 “In holding” refers to a commercial holding
486 HPAI outbreaks of highly pathogenic avian influenza were reported in total since 28 November 2016, among which 349 were due to H5N8, one H5N1 and 136 H5Nx (H5Nx: neuraminidase has not been identified due to lack of genetic material or in course of identification, and to 55 cases in wild birds (3 on captive birds, 52 on wild birds spread over 13 Départements). Cases in commercial holdings were concentrated in 9 Départements of the South-West of France. A review of the reported H5N8 HPAI outbreaks is presented in Annex 2. The epizootic has evolved favourably since the beginning of March 2017 involving mainly two of these 9 Départements (Landes and Pyrénées-Atlantiques); 73 outbreaks were still reported during the first half of March 2017, meanwhile only 24 were registered during the second half. No cases were reported between 28 March and 30 June 2017, date of confirmation of last outbreak in a backyard located in the town of Brillon, Département of Nord, which represented the 10th Département in which domestic poultry were infected.

Figure 1-2. Distribution of cases of H5N8 HPAI, France, 2017

Left: outbreaks till 28 March 2017
Right: 30 June outbreak at the French border and nearby outbreaks in Belgium and Luxembourg

The information has been notified to the OIE and the episode has been closed on the OIE website:


In the absence of new outbreaks, France has regained its “freedom from infection with highly pathogenic avian influenza virus in poultry” as of 27 October 2017.

II. Control of HPAI and eradication strategy

Specific biosecurity measures were adopted throughout the country by professionals who travel between livestock holdings (renderers, feed deliverers, veterinarians, etc.).

II.1. Outbreaks detected in domestic holdings

Outbreaks detected in domestic holdings were subject to the stamping out. This has represented up to date 2 million birds killed. The average time between the confirmation date and the date of slaughter was less than 2 days. Epidemiological surveys were conducted from each primary outbreak (epidemiological survey questionnaire), including the delivery routes, the movements of persons and in case of animals transferred from an outbreak, the identification of all the poultry holdings located
along the roads borrowed to the target farms. Protection (3km) and surveillance (10km) zones (PZ, SZ) were set up in accordance with European regulations (Directive 2005/94). They were defined geographically based on municipal boundaries and therefore might have gone beyond the 3km and 10km radiuses. The head counts present in the different holdings in these areas were precisely recorded. Priority was given to the prompt processing of any possible outbreak which would be located in the periphery or outside the restricted areas. Immediate poultry preventive slaughter and control measures (as cleaning, disinfection and falling) were then implemented within a 1 km radius around the outbreaks, and for outdoor palmipeds within a radius of 1 to 3 km if there was only one outbreak, with an extension of the slaughter of these outdoor palmipeds to a radius of 10 km, if there was more than one outbreak.

Veterinary visits were conducted in all the poultry holdings located in these areas, and samples were taken for virological screening in waterfowl holdings. All movements of poultry were banned as long as the situation was not stabilized. These visits were a precondition to the subsequent lifting of the PZ and SZ. Since late November 2016, each suspicion was handled with the utmost rigor, in particular by allowing the local State authorities to establish a temporary control zone (TCZ) from the suspicion stage in a holding or in the wild birds. TCZs were also implemented in free areas as buffer zones alongside non-stabilized zones (areas where there is a risk of new outbreaks when a new outbreaks in the protection and surveillance zone did not stop during 3 weeks), in order to prevent the progression of the virus. Two types of TCZs have been set up, the first as part of a suspicion and the second as a buffer zone around the protection and surveillance zones. Measures implemented according to each specific area are listed in Table 1 below.

Table 1. Measures in the temporary control zones (TCZ), protection zones (PZ) and surveillance zones (SZ) during HPAI events, 2017, France

| Measures implemented in the protection zones and surveillance zones (PZ,SZ) | ▪ Census of all commercial holdings.  
▪ Establishment of protection and biosecurity measures in holdings (limited access to livestock buildings, specific management of manure, elimination of animal by-products at the slaughterhouse, etc.).  
▪ Implementation of measures for cleaning, disinfection and falling (period during which the livestock buildings must be empty) to reduce the risk of spreading the virus.  
▪ Prohibition of gatherings of birds and releases of game birds.  
▪ Priority implementation of epidemiological surveys to detect any new cases, and understand the spread and cause of the disease.  
▪ Prohibition of movements of poultry as long as the situation has not stabilized. |
|-----------------------------|----------------------------------------------------------------------------------|
| Additional measures in protection zones (PZ) | ▪ Census of the farmyards and health visits to all commercial holdings and all farmyards.  
▪ Prohibition to place on the market un-plucked poultry from holdings located in a PZ, to deliver them to consumers "as they are". |
| Measures implemented in the temporary control zones (TCZ) | ▪ Census of all commercial and non-commercial poultry and captive bird holdings.  
▪ Implementation of an epidemiological survey at the holding.  
▪ Prohibition of entry and exit from the holdings of poultry and other captive birds.  
▪ Implementation of biosecurity measures (prevention of the risk of spread).  
▪ Confinement of the birds to limit contact with wildlife.  
▪ Restrictions on the movement of people, vehicles and equipment  
▪ Prohibition of gatherings of birds and releases of game birds. |

To date, all the TCZ, PZ and SZ throughout the national territory have been lifted.

II.2. Eradication strategy according to zone stability

II.2.1. Preventive slaughter

This epizootic has been characterised by the high spread potential of the main H5N8 strain involved and a high mortality rate in the contaminated farms. To prevent its progression, especially in the non-stabilized zones, and to protect free areas with a high density of holdings, French authorities decided, following an opinion from the National Agency for Risk Assessment (ANSES), to depopulate all the free range farming palmipeds holdings (being the most exposed to the virus). This preventive slaughter strategy has been implemented around the most contaminated areas, within the 3 and 10 km radius around outbreaks, within the large zone of the South-west of France covering the following 5 Départements: Haute-Garonne (31), Gers (32), Landes (40), Pyrénées-Atlantiques (64) and Hautes-Pyrénées (65). 2.5 millions ducks have thus been slaughtered in this frame of disease control on top of the 2 million slaughtered within outbreaks.

II.2.2. Synchronized fallowing

To take into account the risk of a resurgence or a recontamination due to the resumption of activity of palmipeds farms on one side, and the risk due to the migratory birds in certain areas in the South-west on the other side, the French authorities have imposed through Decree a synchronized fallowing of all farms from 17 April till 28 May 2017, within the large zone where preventive slaughters took place. Introduction of birds was forbidden from 2 April (date of publication of the Decree) till 28 May. From 29 May onwards, restocking was again permitted, but conditioned to biosecurity inspection carried out by the official veterinary services and analytical surveillance of the farms concerned (serological and virological tests). These conditions contributed to consolidate the global biosecurity and surveillance. Such conditions have been applied at least till 31 March 2018, without prejudice to other actions which could be adopted. Official controls were settled down and targeted according to a risk analysis to ensure compliance of these rules. Violators faced significant penalties, and possible administrative sanctions that could evolve to the complete prohibition of introducing birds, as long as regulatory conditions were not achieved.

Moreover, an in-depth thinking is ongoing on how to restructure poultry farming sector, especially palmipeds farms, so to increase globally the biosecurity level for all holdings.

The 10 infected Départements recovered their free status according to the provisions of the OIE Terrestrial Animal Health Code (recovery of disease freedom 3 months after the last one cleaning-disinfection of an outbreak has been done). The last one was the Département of Landes and it determined France's recovery of freedom on 27 October 2017.

III. Surveillance and preventive measures

III.1. National measures to protect the holdings and local wildlife

Enhanced protection measures have been taken throughout metropolitan France with the aim of avoiding contamination of domestic holdings and local wildlife by migratory wild fauna.

These measures are:

- compulsory confinement or laying of nets in order to prevent any contact of domestic birds with the avifauna, with possible exemptions only for commercial holdings if this is justified by issues of animal welfare or maintenance of the signs of quality. These exemptions are granted after a veterinary visit on biosecurity;
- reinforced biosecurity measures in commercial holdings;
- banning of all gatherings of live poultry, with exemptions under controlled conditions of biosecurity;
- prohibition of releases of waterfowl and pigeons; restrictions on releases of pheasant and partridge game and on the use of decoys for waterfowl hunting.

Considering the favourable evolution of the sanitary situation, the French Agriculture Minister levelled down the **national risk of contamination** from “high”, decreed on the 6 December 2016, to “moderate” on the 13 April 2017, and then to “negligible” on the 4 May 2017. This latest change in the level of risk removed the constraints that had persisted since the transition to moderate risk in ecological zones classified as "at risk" in 2016 (zones considered particularly susceptible to propagation of avian influenza (AI) virus due to their humid areas and high density of wild birds) defined by the Decree of 16 March 2016.

The ministerial order of 14 November 2017, defines additional biosecurity measures to existing ones:

- Compliance with biosecurity measures in breeding flocks (all poultry species) to be controlled by a compulsory annual visit by a veterinarian (before 31 March 2018 for the first visit unless a check has already been carried out for less than a year).
- Breeding and future breeding flocks to go through the annual serological screening and, in the absence of the mandatory annual visit, virological screening prior to the transfer of breeding stock.
- Mandatory virological screening prior to displacement of waterfowl mandatory less than 10 days before transfer between two farm sites occurring between 15 November and 15 January of each year. Outside this period, testing is also mandatory if farms are located in areas where the risk of avian influenza is "moderate" or "high".
- All poultry farmers and hatcheries must declare the establishment of a poultry batch, as well as its exit with the origin or destination of the one-day-old chicks.
- The fate of slurry, droppings and manure is also more detailed with, for example, burial at 10-15 cm depth in the absence of sanitation.
- The setup of an annual inspection program to ensure compliance with biosecurity measures.

The Ministerial Act related to biosecurity in Transport was implemented on 14 March 2018.

**III.2. Enhanced event (passive) surveillance**

The results of a passive surveillance are given in Annex 3.

**In domestic holdings**

Event (passive) surveillance has been reinforced on domestic poultry production, with a call to vigilance from all players in the sector: any abnormal mortality, drop in the laying of eggs or the consumption of water or food must be considered a potential clinical suspicion of avian influenza.

**In wild birds**

Since the end of October 2016, event surveillance of wild birds’ mortality (collection of dead birds considered to be of concern to avian influenza) has also been intensified throughout the territory. The vigilance of the players involved in the national surveillance network in the hunting sector (public-private partnership) has been strengthened.

Instructions were given to intensify the collection of corpses with the following criteria:

- systematic sampling of corpses of waterfowl from the first one found for swans, ducks, geese (*Anatidae*), seagulls, gulls (*Laridae*), water hens, coots, rails (*Rallidae*);
✓ sampling on the basis of local appreciation for the other species, with an incentive to conduct tests from 3 birds of the same species found dead at the same location within a short period of time (less than one week).
✓ the usual collection territory has been extended to environmental nature reserves, whose agents who find corpses return them to the "hunting" network referred to above. The species selection criteria are identical to the general protocol;

Finally, the bird care centres that collect ill or injured birds, as well as veterinary surgeries, are also integrated into the event surveillance, with an additional targeting criterion on the family of Accipitridae (bird-eating raptors that are potentially contaminated, as already observed in Europe). Additional information on passive surveillance is presented in Annex 3.

III.3. Scheduled (active) surveillance

The active surveillance detailed results and previews are given for year 2017 in Annex 4.

In domestic holdings

The annual scheduled surveillance system (mandatory European Union (EU) annual regulatory survey) adds to the reinforced event surveillance measures described in the previous paragraph. The criteria for the selection of sampled holdings were strengthened following the HPAI episode in 2015-2016, including an increase in sampling in waterfowl farms (breeding palmipeds).

The annual surveillance is implemented throughout the year (from January till 20 October latest). Holdings with non-negative results in 2016 (serology or virology) were automatically selected for the 2017 sampling. Other holdings were chosen by each local veterinary services according to the national minimum requirement for each category of production and their own risk analysis. Approved laboratories chosen for analysis of the samples use European antigens so to be able to compare results between Member States. Swabs were realised simultaneously with blood samples so that in case of a non-negative result in serology, they can be used for virology (in that case by the national reference laboratory).

The limited prevalence detection rate used for ducks' holdings (breeding and fattening) has been moved from 2% in 2016 to 1% in 2017 (far beyond the 5% minimum rate imposed by EU regulations).

Out of 852 holdings sampled in 2017, 826 were found negative, 9 were found H5 seropositive, and 17 were uninterpretable because of an insufficient number of interpretable serums (survey relating to avian influenza, report of the NRL avian influenza, the National Agency for Risk Assessment (ANSES)).

Measures taken for poultry lots showing H5 or H7 seropositive cases (but otherwise virologically negative) were decided after a local risk analysis in consultation with the central services of the Ministry of Agriculture (DGAL). The preferred option for those seropositive poultry lots to be kept in holding for more than one week was always preventive slaughter, especially in the case of outdoor breeding. However, when preventive slaughter was not the solution decided, following measures had to be implemented:

- prohibition of movements from the seropositive lot to other holdings; palmipeds for force-feeding ("prêt à gaver"), had to be fed on the spot, otherwise, they had to be slaughtered;
- reinforced monitoring of the implementation of the biosecurity measures provided by the Ministerial Act of 8 February 2016\(^3\), taking into account the risk analysis conducted by local veterinary services (DDeePP). For breeding flocks, the risk represented by movements of hatching eggs from farms to hatcheries has been particularly taken into account, as well as the risk of a contamination of the hatchery which could have resulted with a downstream contamination, via deliveries of chicks;

\(^3\) https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000032000273
- mandatory virological screening was implemented, the National Agency for Risk Assessment (ANSES) recommending a rhythm of every 15 days on 40 animals, depending on the situation and according to a local risk analysis in relation with the central services of the Ministry of agriculture (DGAL).

In any case, all the seropositive flocks were slaughtered and following measures applied:

- cleaning and disinfection of premises and outdoors, disposal streams and manure storage (same management as for outbreaks);
- prohibition of placing birds before carrying out the cleaning and disinfection;
- virological and serological screening for other flocks located in the exploitation;
- conducting an epidemiological survey (upstream-downstream links, what happened to lots that were in contact) and serological and virological samples taken from lots that were in contact.

In wild birds

A new scheduled surveillance system was also introduced since this influenza episode in wild birds, based on the search for clinical signs and deaths during scheduled visits to 10 migratory bird concentration sites. These sites have been selected in Metropolitan France, where field observers are asked to regularly monitor and report on the health status of observed migratory bird populations. In case of detection of a dead animal, the wildlife event surveillance system described in paragraph III.2 is triggered.

IV. Measures for maintenance of status

Mandatory auto controls are carried out on batches of “ready-to-feed” palmipeds before any transfer to feeding farms. This plan of auto controls, which is mandatory before any movement of palmipeds between farms, aims at monitoring the circulation of LPAI viruses in the palmipeds (fat and lean) or other poultry sectors and at responding in a timely and harmonised manner to any detection. It would also allow early detection of HPAI.

Consequently to the regular detection of cases of HPAI in wild birds and breeding farms in some European countries, it has been decided to maintain these mandatory screenings.

The ministerial order of 14 November 2017 defines additional biosecurity measures to existing ones:

- Compliance with biosecurity measures in breeding flocks (all poultry species) to be controlled by a compulsory annual visit by a veterinarian (before 31 March 2018 for the first visit unless a check has already been carried out for less than a year);
- Breeding and future breeding flocks should go through the annual serological screening and, in the absence of the mandatory annual visit, virological screening prior to the transfer of breeding stock.
- Mandatory virological screening prior to displacement of waterfowl less than 10 days before transfer between two farm sites occurring between 15 November and 15 January of each year. Outside this period, testing is also mandatory if farms are located in areas where the risk of avian influenza is "moderate" or "high".
- All poultry farmers and hatcheries must declare the establishment of a poultry batch, as well as its movement with the origin and destination of the one-day-old chicks.
- The fate of slurry, droppings and manure is also more detailed with, for example, burial at 10-15 cm depth in the absence of sanitation.
- The setup of an annual inspection programme to ensure compliance with biosecurity measures.

The Ministerial Act related to biosecurity in Transport 4 was implemented on 14 March 2018.

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V. Conclusion

In accordance with the provided information in this report, the Delegate of France to the OIE declares that, as of 27 October 2017, the country fulfils the conditions required to be considered free from HPAI infection in poultry, in accordance with Article 10.4.4. of the OIE Terrestrial Animal Health Code.
ANNEX 1. Reminder of the situation\(^5\) of HPAI in Europe

The detection of the virus in Russia in spring 2016 on wild birds showed evidence of local circulation of the virus in Asia. This episode occurred in midst winter migration of wild birds. It is likely that due to the arrival of migratory birds infected on their nesting site in Europe, the virus spread over short to medium distances from Asia to North Europe and then to Western Europe, affecting commercial holdings through contact on the way.

Europe experienced a first wave of HPAI H5 clade 2.3.4.4. between October 2016\(^6\) and May 2017.

From June to October 2017, sporadic cases were reported in avifauna in Europe, while outbreaks were observed sporadically in poultry holdings in several European countries.

From 1 October \(^7\) to 3 December 2017, a total of 52 outbreaks and HPAI H5 cases belonging to clade 2.3.4.4 were reported in European countries\(^7\).

ANNEX 2. Review of H5N8 HPAI, France, as of 27 October, 2017

Outbreaks in domestic holdings

The majority of the 486 outbreaks reported concerns holdings of palmipeds (407 outbreaks). Of these 486 outbreaks, 349 are H5N8, 1 H5N1 and 136 H5Nx. Of these 486 outbreaks, more than half were from active surveillance (54%), mostly detected by screening animals before preventive slaughter (29%) and before movement of animals within regulated areas (18,5%). The share of passive surveillance in the detection of outbreaks, which was dominating in the first months, continuously decreased afterwards. The active surveillance, reinforced and in addition to the passive surveillance (clinical suspicions), made it possible to follow very closely the situation and to adapt the management measures as well as possible.

Number of outbreaks detected in each Département

Of these outbreaks, 59% (286) are located in the Département of the Landes (out of which 66% H5N8), 19% (93) in Gers (out of which 83% H5N8), 11% (52) in the Pyrénées-Atlantiques (out of which 29% H5N8), 5% (23) in the Hautes-Pyrénées, and for the 6% remaining: 12 outbreaks in the Lot-et-Garonne, 8 in the Tarn, 3 in the Deux-Sèvres, 2 in the Aveyron, 1 in the Département of Haute-Garonne and 1 in the Département of Nord.

Cases in wild birds

55 cases had been detected in wild birds. First, they concerned 3 cases in captive wild birds, corresponding to the first detected case of this episode on decoy ducks in the Département of Pas-de-Calais and to 1 case in the Département of Rhône, and 1 case in the Département of Haut-Rhin. They

\(^{5}\) Data from this part is extracted from the French animal health platform https://plateform-esa.fr


\(^{7}\) Reference : Veille sanitaire internationale (VSI) Plateforme ESA – France ; point de situation depuis le 1er octobre (au 03/12/2017 inclus) https://www.plateforme-esa.fr/article/situation-epidemiologique-des-virus-iahp-issus-du-clade-2344-en-europe-point-de-situation
concerned secondly 52 cases in free wild birds (last one in the Bas-Rhin, for which it was the first case detected). They were all identified by event surveillance.

ANNEX 3. Event (passive) surveillance of HPAI, France, 2016-2017

Passive surveillance in domestic holdings

Between 26 November 2016 and 16 October 2017, 357 clinical suspicions were identified in domestic poultry, with more than 2/3 of them involving palmipeds breeding holdings (215). These clinical suspicions were issued from 44 Départements. Out of the 357 suspected cases, 223 were confirmed (204 H5N8 and 19 H5Nx) meaning a confirmation rate of 77% for palmipeds, and 53% in galliform holdings.

Passive surveillance of free wildlife

Between the 1 November 2016 and the 6 March 2017, 806 dead birds were collected. The breakdown shows that the outbreaks targeted by the event surveillance are well represented. A total of 55 positive HPAI cases (individual or clustered) were reported in 15 Départements. Figure 3: Breakdown of 806 birds collected, by bird family classification, France, since 1 November 2016 to 6 March 2017

* families especially covered by the protocol
ANNEX 4. Active surveillance of HPAI, France, 2017

Active surveillance in domestic holdings

Table 2. Results of avian influenza serological survey in holdings, France, 2017 (Source: ANSES)

<table>
<thead>
<tr>
<th>Production type</th>
<th>Number of holdings</th>
<th>Nb of H5 sero + holdings</th>
<th>Percentage of sero + sites * [CI of 95%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duck to roast</td>
<td>50</td>
<td>0</td>
<td>0 % [0.0-7.1]</td>
</tr>
<tr>
<td>Mallard duck (game)</td>
<td>13 (with 1 uninterpretable flock)</td>
<td>2</td>
<td>15.4 % [1.9-45.5]</td>
</tr>
<tr>
<td>Duck breeders and future breeders</td>
<td>157 (with 2 uninterpretable flocks)</td>
<td>6</td>
<td>3.8 % [1.8-8.0]</td>
</tr>
<tr>
<td>Ducks (fattening)</td>
<td>185 (with 2 uninterpretable flocks)</td>
<td>0</td>
<td>0 % [0.0-3.6]</td>
</tr>
<tr>
<td>Turkeys</td>
<td>51 (with 1 uninterpretable flock)</td>
<td>0</td>
<td>0 % [0.0-7.1]</td>
</tr>
<tr>
<td>Turkey breeders</td>
<td>39</td>
<td>0</td>
<td>0 % [0.0-9.0]</td>
</tr>
<tr>
<td>Pheasant</td>
<td>59</td>
<td>0</td>
<td>0 % [0.0-6.1]</td>
</tr>
<tr>
<td>Geese breeders and future breeders</td>
<td>26 (with 4 uninterpretable flocks)</td>
<td>1</td>
<td>4.6 % [0.1-22.8]</td>
</tr>
<tr>
<td>Geese (fattening)</td>
<td>49 (with 3 uninterpretable flocks)</td>
<td>0</td>
<td>0 % [0.0-7.6]</td>
</tr>
<tr>
<td>Geese</td>
<td>6</td>
<td>0</td>
<td>0 % [0.0-45.9]</td>
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<tr>
<td>Partridge</td>
<td>30</td>
<td>0</td>
<td>0%[0.0-11.6]</td>
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<tr>
<td>Hens (indoors)</td>
<td>33 (with 1 uninterpretable flock)</td>
<td>0</td>
<td>0 % [0.0-5.8]</td>
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<tr>
<td>Hens (outdoors)</td>
<td>62</td>
<td>0</td>
<td>0 % [0.0-5.4]</td>
</tr>
<tr>
<td>Chicken breeders</td>
<td>67</td>
<td>0</td>
<td>0 % [0.0-5.4]</td>
</tr>
<tr>
<td>Undefined</td>
<td>24 (with 3 uninterpretable flocks)</td>
<td>0</td>
<td>0 % [0.0-16.1]</td>
</tr>
<tr>
<td>TOTAL</td>
<td>852</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

* percentage calculated in relation to the number of farms or workshops whose results are interpretable, the 95% confidence intervals (CI) were obtained by following the binomial law

Active surveillance of free wildlife

Shooting campaigns have been carried out since the 22 December 2016 in the Départements of Tarn, Hautes- Pyrénées and Gers near HPAI outbreaks. Analyses did not detect the presence of influenza viruses on the 324 birds collected. From October 2016, 10 sites with strong occurrence of migratory birds were under enhanced surveillance. Of more than 400,000 birds observed, only 20 dead birds were detected since the establishment of the surveillance. The results of the analyses performed were negative regarding avian influenza.