

Avian Influenza and pigeons

Veterinary and Science commission of the FCI

(Fédération Colombophile Internationale)

27.10.2020

We think it is time for the EU to re-evaluate the pigeon in the context of avian influenza.

We ask for a sympathetic consideration of the points explained.

Racing pigeons are dead-end hosts of avian influenza viruses (AIV) and play a negligible epidemiological role in the spread. There is extensive and conclusive scientific evidence about this subject.

In more than 150 years of active organized pigeon racing and pigeon breeding, there has never been a documented AIV transmission within pigeon populations in Europe, nor have pigeons spread AIV to commercial poultry.

As a consequence of these available data, Germany and French already issued a new legislation, following advice of their veterinary board.

We have compiled very comprehensive overviews to explain this:

- Current situation in Europe
- Current legislation
 - German law (German) , annex 1
 - France law (French) , annex 2
- Risk Assessment
 - IVPA statement (English) , annex 3
 - 3.1. BDRG statement (German)
 - 3.2. AVIS 2017 France (French)
 - 3.3. UK 2017 H5N8 (English)
 - 3.4. Pigeon AI article Abolnik 2020 (English)
- Current situation for the import to the USA
- Research
- Citation from experts in AI
- Effect on the economy

Current situation in Europe

https://ec.europa.eu/food/animals/animal-diseases/control-measures/avian-influenza_en

Highly pathogenic avian influenza (HPAI) outbreaks

21.10.2020

Scientific report, EFSA, Avian influenza overview May – August 2020

Between 16 May and 15 August 2020, seven highly pathogenic avian influenza (HPAI) A(H5N8) virus outbreaks were reported in Europe in poultry, with one outbreak reported in Bulgaria (n=1) and six in Hungary (n=6) and one low pathogenic avian influenza (LPAI) A(H5N3) virus outbreak was reported in poultry in Italy. All six outbreaks detected in Hungary were secondary outbreaks and seem to be the tail end of the HPAI A(H5N8) epidemic that was observed in poultry over the winter and spring in central Europe from December 2019 (n=334). Genetic analysis of the HPAI A(H5N8) viruses isolated during this reporting period from Bulgaria and Hungary did not identify any major changes compared to the viruses collected in the respective countries during the first months of 2020. This suggests a persistence of the virus in the two countries rather than new introductions via infected wild birds. HPAI A(H5N8) virus has been detected in poultry and wild birds in western Russia within the reporting period, and as of the middle of September also in Kazakhstan. The presence of HPAI virus in western Russia and in north Kazakhstan, spatially associated with autumn migration routes of wild waterbirds, is of concern due to the possible spread of the virus via wild birds migrating to the EU. It is highly recommended that Member States take appropriate measures to promptly detect suspected cases of HPAI, including increasing biosecurity measures. According to past experiences (2005-2006 and 2016-2017 epidemic waves), the northern and eastern European areas might be at higher risk of virus introduction in the coming autumn-winter season and should be the key regions where prompt response measures to early detect the virus should be set up.

2019

During 2019 HPAI H5N6 subtype was confirmed in wild birds which is closely related to other viruses detected during 2017/2018 in wild birds. There were few HPAI outbreaks in poultry during the course of the year. The outbreaks were confirmed in Bulgaria in March-April.

2018

HPAI of subtype H5N6 re-appeared in a captive bird holding in Germany on 1 September. After two months of absence of infection, two new outbreaks of HPAI H5N8 have been confirmed in Bulgaria on 19 September and on 3 October.

All HPAI detections in wild birds during 2018 in Finland, Sweden, the Netherlands, Germany, Ireland, Slovak Republic, the United Kingdom and Denmark are attributed to HPAI H5N6 with the last confirmation in three wild pheasants (*Phasianus colchicus*) found dead in Denmark on 19 September 2018. During the second half of 2018, outbreaks of HPAI of subtype H5N8 continued to be confirmed in poultry in Bulgaria, last in mid-December.

2016/2017

In October 2016, HPAI of subtype H5N8 virus was first detected in a wild mute swan found dead at a lake in Hungary. The virus was then identified in wild birds, poultry farms and/or

captive bird holdings (e.g. in zoos) in 19 EU countries: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, France, Germany, Greece, Hungary, Italy, Luxembourg, the Netherlands, Poland, Slovakia, Spain, Sweden, Romania and the United Kingdom. Member States with a high density of duck and geese holdings were most affected. In addition, Finland, Ireland, Lithuania, Portugal, Slovenia and Cyprus identified HPAI virus only in wild birds. Outbreaks in poultry and cases in wild birds sharply declined by end April 2017, but from July to December 2017 HPAI outbreaks of subtype H5N8 were again confirmed in poultry farms in Northern Italy and Bulgaria.

In mid-December 2017 the Netherlands detected HPAI of subtype H5N6 in a poultry holding and in captive bird holdings. Based on the genetic analysis of HPAI H5N6 viruses recently detected in Europe and Asia, the EU Reference Laboratory for avian influenza concluded that the European strains can be differentiated from those strains associated with zoonotic infection in Asia. Furthermore, they do not carry any virulence markers strongly associated with human infection risk. There have been no reported human infections with this particular genetic sub-lineage of H5N6.

The veterinary authorities of affected EU countries immediately took EU control measures (Council Directive 2005/94/EC) to possibly prevent virus spread to other poultry holdings and established protection and surveillance zones around the infected holdings. The Commission continues to call for maintaining extreme vigilance and strict biosecurity on farms to prevent contacts between wild birds and poultry. It has adopted **urgent protective measures** in relation to these outbreaks. The disease situation and the measures adopted by the Commission are regularly reviewed during the periodical meetings of EU countries experts at the Standing Committee on Plants, Animals, Food and Feed.

The Commission has published updated **rules on biosecurity** and risk mitigation measures on poultry farms which obtained unanimous support by EU countries. These measures follow EFSA's advice and are in particular directed at preventing contact with wild birds, as well as early detection systems. The implementation of these measures by the farmers is crucial to prevent future HPAI outbreaks on farms.

Current legislation

Europe

COUNCIL DIRECTIVE 2005/94/EC of 20 December 2005 on Community measures for the control of avian influenza and repealing Directive 92/40/EEC

<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32005L0094>

SECTION 6

Derogations and additional biosecurity measures

Article 33

Derogations

4. By way of derogation from Sections 3 and 4, in cases of outbreaks of HPAI Member States may, based on a risk assessment, introduce specific measures on movements of racing pigeons into, from and within the protection and surveillance zones.

SECTION 3

Measures to be applied in protection zones

SECTION 4

Measures to be applied in the surveillance zones

Germany

Bundesrat Drucksache 352/18 31.07.18 AV

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Verordnung des Bundesministeriums für Ernährung und Landwirtschaft

Dritte Verordnung zur Änderung der Geflügelpest-Verordnung

- 29 -

Drucksache 352/18

B. Besonderer Teil

Zu Artikel 1

Nummer 1 (Inhaltsübersicht)

Redaktionelle Anpassung

Nummer 2 (§ 1):

Die Änderung der Definition der niedrigpathogenen aviären Influenza dient der Klarstellung, dass es sich um die Serotypen H5 und H7 handelt (und nicht um alle Serotypen) (Buchstabe a). Da Tauben epidemiologisch keine Bedeutung zukommt, werden sie aus der Definition der gehaltenen Vögel anderer Arten ausgenommen (Buchstabe b). Dies führt dann auch dazu, dass Tauben nicht mehr z.B. § 7 unterfallen.

Rechtsgrundlage: § 6 Absatz 1 Nummer 10 Buchstabe a und Nummer 12 TierGesG

France

<https://alineabyluxia.fr/fr/lr/arrete/2017/3/30/AGRG1709857A>

Article 2

Les points 2 et 3 de l'article 9 de l'arrêté du 16 mars 2016 susvisé sont remplacés par les dispositions suivantes :

« 2. Dans les parties du territoire où le niveau de risque est " modéré ", les compétitions suivantes sont interdites :

«-les compétitions de pigeons voyageurs avec participation de pigeons dont le lieu de détention est situé en zone réglementée en application des arrêtés du 15 février 2007 ou du 18 janvier 2008 susvisés, du fait d'un ou plusieurs foyers en élevage ou d'un ou plusieurs cas dans la faune sauvage ;

«-les compétitions de pigeons voyageurs avec départ, survol ou arrivée d'une zone réglementée en application des arrêtés du 15 février 2007 ou du 18 janvier 2008 susvisés, du fait d'un ou plusieurs foyers en élevage ou d'un ou plusieurs cas dans la faune sauvage sont interdites.

« 3. Dans les parties du territoire où le niveau de risque est " élevé ", les compétitions suivantes sont interdites :

«-les compétitions de pigeons voyageurs se déroulant entre le 1er septembre et le 31 mars ;

« Lorsque la compétition se déroule entre le 1er avril et le 31 août, le détenteur des pigeons voyageurs participant à une compétition ne détient pas de volailles à titre commercial ou non commercial et il s'assure que ses pigeons sont déplacés en vue de la compétition dans des paniers de transport qui ont été nettoyés et désinfectés au préalable. »

Article 3

Au point 2 de l'article 10 de l'arrêté du 16 mars 2016 susvisé, après les mots : « Par dérogation, le transport et le lâcher de gibiers à plumes galliformes », sont insérés les mots : « , et le transport de gibiers à plumes palmipèdes d'un élevage à un autre élevage de gibier à plumes, ».

Le point 2 de l'article 10 de l'arrêté du 16 mars 2016 susvisé est complété par les mots : « Les détenteurs d'origine et de destination du mouvement en zone à risque élevé s'engagent à subvenir aux besoins de leurs animaux quelles que soient les dispositions réglementaires en vigueur relatives au lâcher, et au respect de mesures de biosécurité renforcées lors du transport. »

Risk Assessment

France

Avis de l'Anses

Saisine n° 2017-SA-0057

Saisines liées n° 2016-SA-0240, n° 2008-SA-0082, n° 2007-SA-0218.

V. Conclusion

Considérant :

- les doses élevées de virus nécessaires pour infecter les pigeons ;
- la difficile transmission de l'infection entre pigeons (voire son impossibilité) ;
- l'excrétion de virus IAHP de courte durée par les pigeons infectés
- le mode d'élevage particulier des pigeons voyageurs et des mesures de biosécurité associées ;
- le comportement particulier du pigeon voyageur lors des vols de course ;
- la période printanière et estivale des courses de pigeons voyageurs ;
- la capacité non nulle mais sans doute limitée des pigeons à transmettre les virus IAHP, combinée à une probabilité particulièrement faible d'exposition des volailles à des pigeons voyageurs ;

le Groupe de travail IAHP estime que le risque d'influenza aviaire HP lié à l'autorisation de l'organisation de compétitions est particulièrement faible, si :

- les compétitions (lâcher, survol et arrivée) ne sont pas organisées dans des zones réglementées suite à l'apparition de foyers domestiques ou de cas dans la faune sauvage, tant que ces zones sont réglementées ;
- les pigeons, dont le lieu de détention est situé dans ces zones réglementées, ne participent pas à des compétitions en raison du risque lié aux transports dans ces zones, tant qu'elles sont réglementées.

Ce risque peut légèrement varier en fonction des types de compétition (course *versus* fond) mais l'estimation des probabilités aboutit dans tous les cas à des probabilités extrêmement basses.

Ces estimations concernent à la fois les courses organisées sur le territoire national et les compétitions internationales.

Pour diminuer encore le risque jugé particulièrement faible, le GT préconise que les propriétaires de pigeons ne détiennent pas de volailles (élevages et basses-cours). Par ailleurs le renforcement de certaines mesures de biosécurité pourrait être recommandé, comme la protection des stocks d'aliment/litière, à l'abri de la faune sauvage libre, la protection des pigeonniers contre l'entrée de faune sauvage de petite taille (passereaux, petits rongeurs) et le nettoyage-désinfection des paniers après chaque transport.

4. CONCLUSIONS ET RECOMMANDATIONS DE L'AGENCE

L'Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail endosse les conclusions du Groupe de Travail Influenza Aviaire Hautement Pathogène, émises en urgence sur le risque influenza aviaire hautement pathogène lié aux compétitions de pigeons voyageurs.

United Kingdom

Risk assessment on the likelihood of spread of H5N8 Highly Pathogenic Avian Influenza associated with racing pigeons

Qualitative Risk Assessment March 2017

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/599998/qra-avian-flu-racing-pigeons.pdf

a) What is the risk of further spread of highly pathogenic avian influenza (HPAI) in GB by domestic pigeon racing?

Medium risk of exposure depending on the area; **very low risk** of pigeon becoming infected and infectious.

b) What would be the additional risk of introducing highly pathogenic avian influenza (HPAI) to GB by GB-origin pigeons returning (released to fly back) from other EU Member States?

Low to medium risk of exposure depending on the area; **low risk** of pigeon becoming infected and infectious.

c) what would be the additional risk of introducing highly pathogenic avian influenza (HPAI) to poultry or captive birds through the contact with racing pigeons?

Very low risk of an infectious racing pigeon returning from a race and having direct contact with a poultry farm in GB.

Current situation for the import to the USA

Since 2012 USA does not include columbiforms in the importation restrictions due to avian influenza. The probable reason is that, after risk-assessment, the US has also come to the conclusion that pigeons play a negligible role in the transmission of avian influenza.

Import Alert: HPAI restrictions for avian commodities originating from or transiting Australia

Issuance Date: August 4, 2020

Effective date: July 24, 2020

Effective July 24, 2020, and until further notice, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) Veterinary Services (VS) is restricting the importation of poultry, commercial birds, ratites, avian hatching eggs, unprocessed avian products and byproducts, and certain fresh poultry products from Australia. Any of these commodities originating from or transiting through Australia are prohibited, based on the diagnosis of highly pathogenic avian influenza in domestic birds.

Under these restrictions, processed avian products and byproducts originating from or transiting Australia imported as cargo must be accompanied by an APHIS import permit and/or government certification confirming that the products were treated according to APHIS requirements.

Processed avian products and byproducts for personal use from or transiting through Australia which may enter in passenger baggage and does not have a thoroughly cooked appearance, or is not shelf-stable as a result of APHIS approved packaging and cooking (i.e. packaged in hermetically sealed containers and cooked by a commercial method after such packing to produce articles that are shelf stable without refrigeration), must also be accompanied by a APHIS import permit and/or government certification confirming that the products/byproducts were treated according to APHIS requirements.

Unprocessed avian products and byproducts originating from or transiting through Australia will not be permitted to enter the United States. This includes hunter harvested, non-fully finished avian trophies and meat.

Importation of poultry, commercial birds, ratites, and hatching eggs will be prohibited. However pet and zoo birds, pigeons and doves, may be imported under an APHIS import permit, and will be subject to a 30-day quarantine at the New York Animal Import Center in Newburgh, NY or the Miami Animal Import Center in Miami, FL.

These restrictions will be updated as additional epidemiological information is obtained. Current information can be found on the APHIS website:

<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-and-animal-product-import-information/animal-and-animal-products-imports>

Research – Scientific articles

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Influenza A virus infection of pigeons

Lecture given at the 1st World Congress of the IVPA, 6-7 March 2020, Warsaw, Poland

living pigeons during clade 2.3.4.4 HPAI H5Nx outbreaks were probably due to their exposure to excessive virus levels in the heavily contaminated environments of infected poultry farms, once again highlighting the importance of on-farm biosecurity and preventing access of wild birds into houses, as any wild bird can act as mechanical vectors for spread. Biologically, the longstanding status of columbids as ineffective propagators and disseminators of HPAI and LPAI viruses prevails: the pigeon has no epidemiological significance in the maintenance and spread of avian influenza.

References:

Abolnik C. A current review of avian influenza in pigeons and doves (*Columbidae*). *Vet Microbiol.* 2014; 170(3-4): 181-196.

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Hemida MG, Chu D, Abdelaziz A, Alnaeem A, Chan SMS, Peiris M. Molecular characterisation of an avian influenza (H5N8) outbreak in backyard flocks in Al Ahsa, Eastern Saudi Arabia, 2017-2018. *Vet Rec Open.* 2019; 6(1):e000362. doi: 10.1136/vetreco-2019-000362.

Citation from experts in AI

Prof. Krzysztof Śmietanka during 1st European Colombopathological Consultations in June 2018 in Krakow, Poland

Krzysztof Śmietanka

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THE ROLE OF PIGEONS IN THE EPIDEMIOLOGY OF AVIAN INFLUENZA

To summarize, pigeons show a high level of resistance to infection with HPAIV and they play a negligible role in the epidemiology of avian influenza. It does not mean they cannot be infected with AIV but clinical disease can be induced only with high inoculation doses (very rare in nature) and minute virus excretions are below the threshold necessary for successful transmission to naïve individuals. Pigeons most likely act as 'dead-end' hosts without meaningful involvement in the maintenance and spread of the virus. Nonetheless, in the areas of endemic HPAI occurrence, especially in face of the prophylactic vaccination against avian influenza, circulating AIV strains are subject to the selective pressure that results in the emergence of new variants with potential novel adaptive features (see the example of Egypt). Moreover, a recent detection of H9N2 subtype strains in pigeons carrying genes derived from the AI viruses circulating in poultry and wild birds (so called 'reassortant' strains) (Kandeil et al., 2017) warrants a continuous monitoring of the situation.

Dr. Ir. Mieke Steensels, Scientist, Head of the National Reference Laboratory AI/ND, Avian Virology and Immunology Service, Sciensano (formerly known as Coda - Cerva), Belgium

– a personal e-mail 11.03.2019 –

She will give a lecture on 15.03.2019 in Gelsenkirchen, Germany (FCI pigeoncongress for vets) on the mentioned studies.

Hieronder een korte samenvatting van de studies

De finale conclusie is erg belangrijk voor ons. De bekomen data zijn erg bemoedigend maar een veralgemening zou op dit moment nog erg gevaarlijk zijn.

Scientific literature describing the sensitivity of pigeon for HPAI viruses contains quite some contradictory information.

Not only the type, age and general condition of the pigeon play an important role in the disease outcome, even more determinant is the strain under evaluation.

In a recent study, the sensitivity of 2 to 4 year old racing pigeon, in good health condition, for 3 HP H5 viruses was evaluated under experimental conditions by oculonasal infection.

One clade 2.2.1.c H5N1 (Indonesia 2014) virus and two clade 2.3.4.4.b H5N8 (Belgium 2017) viruses were evaluated in parallel. The clade 2.2.1.c is a strain that emerged before the other two, named ancestor H5N1 hereafter. The clade 2.3.4.4.b H5N8 viruses were both isolated in Belgium during two consecutive waves of H5N8 introduction, named early and late H5N8.

A clear difference in sensitivity was demonstrated in clinical outcome, viral excretion and viral tropism towards the organs for the three strains. Only in the group infected with the ancestor_H5N1, 4 out of 12 pigeon demonstrated severe neurological symptoms before dying. In the two other groups clinical symptoms and mortality remained undetected. At the level of viral excretion and viral presence in the organs a gradual difference became apparent: with the ancestor leading, followed by the early clade 2.3.4.4.b H5N8 virus and only thereafter the late H5N8 isolate followed with no viral excretion nor viral presence in the organs. Possibly a prolonged circulation results in reduced pathogenesis.

An *in vivo* transmission study, again under experimental conditions, from racing pigeon towards highly susceptible specific pathogen free white leghorn chicken was performed. None of the three viruses under evaluation was able to be transmitted towards the Galliformes sentinels, supported by the absence of seroconversion.

These data demonstrate that pigeon are sensitive to HPAI-H5, with or without demonstration of clinical symptoms, resulting in a risk for silent circulation. For these 3 HP-H5 viruses under evaluation viral transmission to *Galliformes* species was absent, although re-assuring, this transmission data is to be interpreted with care. Extrapolation or generalization of these data is dangerous as this seems to be highly strain-dependent; a larger panel of viruses should be investigated to make this observation more scientifically sound.

Effect on the economy

Economical aspects in Belgium

(Masterproef A. Blancke, 2015)

How big is the economical impact of the pigeon sport in Belgium?

During this study there was an obvious link between the sport and the economy.

In 2015 there were 22.970 pigeon fanciers in Belgium, (number 6 in the world, number 1 is China, 2 is Poland) on quantitative level, but number 1 if you calculate the number of pigeon fanciers regarding to the full population, number 2 is Taiwan, number 3 is the Netherlands.

Belgium is at this moment worldwide the cradle of the pigeon sport, mostly due to the organization of national races. This is a very great advantage to select quality pigeons.

In 2015 there were 489.519 pigeons that raced on a national discipline. The winners of those races are wanted on the national and international market.

Other very important components in the eco system of the Belgian pigeon sport: Food, (electronic) clocking systems, pigeon fancier / breeder, brokers, medical supervising of the pigeons, organization and media. Also loft building, transport and one loft races are important in Europe.

Belgium alone has around 60 companies which are linked to the pigeon sport, among them some world players. This means also plenty employment opportunities, there is an estimation of about 1000 people in Belgium alone, pub owners and vets not included.

40 of these companies realized in 2015 a turnover from 94.251.394 euro. 58.127.404 euro was for food and additives. The value added taxes that are created by those companies are an average of 29.25 % of the turn over.

Approximately 1/3 of the turn over is from the national (Belgian) market, which means that export is a very important aspect in such companies. Especially in the food, additives, clocking and brokers is this export number very high (60-80 %)

The export for Belgium (next to the traditional countries like The Netherlands, France, Germany and United Kingdom), also East Europe (Poland, Romania), Asiatic countries (Taiwan, China), and the Middle East (Iraq, Qatar).

Countries that are growing in pigeon sport give Belgian companies the opportunity to grow. But, it is not that easy to grow over there, e.g. in Poland, the products from here are too expensive, for China there are very strict import rights and high taxes.

The Chinese market is especially for the Belgian pigeon itself. There is a great potential (more than 300.000 fanciers). The trade in pigeons is nowadays only 15 % of the Chinese market. For the other related companies the potential is not that high because the price is very important.

In 2015 there were officially about 70.000 pigeons that were sold, with an average of 112.60 euro, but... the pigeons that were sold individual is not counted in, so these numbers will be in reality much higher. For the future they expect that the trade of pigeons will be much higher, but therefor they have to race so the buyers can judge on their quality.

In Belgium +/- 4 % of the fanciers are (semi-) professional, but also hobby fanciers are willing to give more money for extra tools, additives, etc...

The cost for 1 pigeon per year is +/- 30 euro, this means that all Belgian pigeon fanciers alone spend already 58.290.000 euro for their pigeons, = 2538 euro per fancier a year. This without all the costs to race and the additives.

When there are no races, there will be no winners, no as pigeons that are very valuable, also the need for additives, medical supervising, etc is not that high at that moment.

So it is very clear that the economic aspect for everything that is related with the pigeon sport is not negligible at all, in contrary.

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