

HPAI outbreaks reported in this publication refer to officially confirmed cases only. The information is compiled from the following sources: World Organisation for Animal Health (OIE), national governments and their ministries, and the European Commission (EC) – these sources are responsible for any errors or omissions.

Avian influenza: A global outlook

Absolute transparency about disease outbreaks, involving farmers directly in surveillance and reporting, and compensation are key to making the global fight against avian influenza successful, according to FAO.

Countries in which some or all of these requirements are in place "have managed to progressively control the virus and the global situation has improved tremendously," says Juan Lubroth, the senior FAO officer in charge of the infectious disease unit. "Unfortunately, at the global level, many outbreaks remain under reported or unreported, and national or international bodies are often unable to immediately verify rumours or reports about unconfirmed outbreaks."

The number of outbreaks in the first weeks of 2007 has been significantly lower than the epidemic waves of last year despite new flare-ups of the virus so far in 14 countries – Egypt, China (Hong Kong SAR), Hungary, Indonesia, Japan, Lao PDR, Nigeria, Pakistan, Republic of Korea, Russian Federation, Thailand, Turkey, United Kingdom and Viet Nam.



Avian influenza restricted zone sign at a road junction close to an infected turkey farm in the United Kingdom (Keith Evans)

This, says FAO, is partly due to the fact that the spread of the virus by migrating wild birds from Asia to Europe and Africa did not take place during the autumn/winter season at the same level as it had in 2005-06. However, the poultry trade and the transport of live birds could still spread the virus and strong vigilance is needed. *cont'd on Page 2*

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SHIPMENT OF SAMPLES

FAO can assist in the shipment of samples for poultry diagnostic testing – contact empres-shipping-service@fao.org

"Recent outbreaks are following a seasonal pattern and do not come as a great surprise," notes Lubroth. "But we should remain alert as the recent outbreaks show. It is crucial that countries themselves set up their surveillance, detection and rapid response measures. Only immediate reporting of any suspected bird flu outbreak makes possible rapid intervention by farmers and veterinarians."

Concern about lack of funds and political will

"Circulation of the H5N1 virus can be reduced in poultry if decisive action is taken at the highest political level, applying appropriate surveillance and virus detection, as well as control tools, including vaccination, and providing necessary material and financial support," says FAO's Chief Veterinary Officer Joseph Domenech.

"Globally, the situation is better than it was three years ago, but the recent revival of outbreaks in some countries shows that there is no cause for complacency," he points out, adding that "the virus is still circulating in parts of the world and so national veterinary services have to remain on constant alert because of the risk of reintroduction of the virus."

A major concern for the veterinary scientists engaged in the fight against highly pathogenic avian influenza (HPAI) is that a lack of funding and political will in a few countries is jeopardising the worldwide effort to combat the disease. FAO, and its partner organisations the World Organisation for Animal Health (OIE) and the World Health Organisation (WHO) are concerned that the substantial progress made in many parts of the world against HPAI is being jeopardised by insufficiently determined and inadequately funded action in a few countries where the virus continues to circulate."

Picture not entirely bleak in Africa

Despite serious problems in Nigeria, Indonesia and Egypt's Nile delta, Domenech believes the prospects for controlling spread of HPAI in birds are "a lot better than three years ago or even one year ago." According to FAO animal health experts, weather patterns and improved vaccination of poultry in northern China may have played a role in ensuring that the number of migrating swans and geese carrying virus up to Siberia, across Western Europe and down into Africa is lower this winter than last winter.

At the same time, explains Domenech, more poor countries have become alert to outbreaks, identify them more easily, and either deal with them or ask for outside help. For example, he said, the virus was found last year in spots from the Cote d'Ivoire and Burkina Faso to Niger and Cameroon, a 1,600-km stretch of West Africa, in countries with "very weak animal health prevention". Nigeria, for example, exports poultry throughout the region despite nominal customs bans. "But we did not have any explosive outbreak," Domenech says. "If it is explosive, you cannot miss it."

He admits that surveillance is not as good as it should be in Africa, but "if there are more outbreaks being declared, it is also because programmes are working: there is better transparency, communications and reporting."

Nigerian death not unexpected

One event that caused concern in early February was the death of a young woman in Lagos, Nigeria. FAO immediately sent a team from its Crisis Management Centre to work alongside the World Health Organization (WHO) in Nigeria following confirmation that the woman had been the victim of influenza H5N1 of avian origin.

The team met with agriculture, health and information officials to evaluate the situation and ensure that appropriate food safety messages are disseminated to educate the public and to avoid panic. The objective was to provide realistic recommendations for those at highest risk of exposure to potentially infected birds, including those involved in the slaughter and processing of poultry.



Traders at Onipanu poultry market in Lagos, February 2007 (AFP)

Both FAO and WHO agreed that the incident had been predictable and that, in a sense, the surprise lay in the fact that it had taken so long to happen given the poor sanitary conditions in many parts of the country – and they also agreed that it was unlikely that the woman's death was the precursor of a wave of similar deaths in other countries.

Asia better prepared to deal with outbreaks

The Asia region is better prepared to deal with outbreaks of the virus than in the past, says Laurence Gleeson, regional manager of FAO's transboundary animal disease centre in Bangkok. "Where the virus is occurring in mainland Southeast Asia, the outbreaks are under control in the sense that if they do occur the resources are there to deal with them."

He agrees that HPAI is now endemic in Indonesia because of past delays in responding to crises and that the virus is now well established and a major concern throughout the Southeast Asian region. But, comparing the situation now with what existed in 2004, "there was a galloping epidemic then but that's not the situation today."

Lubroth says another positive factor has been the stability of the H5N1 virus since 2004. After more than three years of fear that the virus could mutate into a form easily transmittable from human to human and thereby trigger a global influenza, that doomsday scenario has not happened.

Poultry bans could be counter-productive

January saw a spate of outbreaks of avian influenza in Viet Nam's Mekong delta region to the south, and much of the blame has been put on the country's 40 million ducks, which can spread the virus without showing clinical signs. A moratorium on duck hatchings was ineffective as were orders to keep ducks out of rice paddies, where they are traditionally used to fertilize the rice and clean up leftover grain after harvests.

"Rice production and duck raising have gone hand-in-hand for hundreds of years," says Lubroth, and these ancient practices are hard to change, especially when they run counter to farmers' economic interests. He is convinced that the country's ban on duck roaming made some farmers cover up the fact that their flocks were on the loose, and because the ducks were not registered, they were not vaccinated against avian influenza.

In Indonesia, the authorities have banned the raising of backyard poultry in the capital, Jakarta, and eight provinces, but Lubroth predicts the country will not be able to stop people from keeping backyard poultry. "It will still continue to occur, even though there is a ban," he says. "So, in some ways, it is better for it to be out in the open and have positive measures, such as improving hygiene, awareness, veterinary inspection at the markets, vaccines delivered to the villages or urban areas where these backyard poultry are being raised."

FAO warns that the banning of backyard poultry or duck raising could lead to illegal poultry production. "Implementing and controlling these bans will be very difficult to achieve," adds Lubroth. "For economic reasons, farmers will tend to hide their animals and will not participate in vaccination or movement controls. Instead of banning production, farmers should be encouraged to participate in virus control and vaccination campaigns."

United Kingdom and Hungary incidents under control

H5N1 specimens from affected birds in Hungary (January 2007) and the United Kingdom (January 2007) were sent to the EU Community Reference Laboratory for testing and genetic sequencing, where the viruses in both countries were found to be 99.96 percent similar. The governments of both countries are taking all steps to identify the cause of the outbreaks. While recognising that both countries are adequately equipped to deal with HPAI, FAO has indicated its readiness to offer technical support over marketing issues and clarification of the possible role of wild birds in introducing the virus. Meanwhile, it continues to monitor closely the situation in both countries, and is in contact with national veterinary authorities and the European Commission's Health and Consumer Protection Directorate.

For more information, see <http://www.defra.gov.uk/corporate/ministers/statements/dm070219.htm>.

Avian Influenza – Terminology and Use

by
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Take great care – don't refer to HPAI when you mean AI, and vice versa

Avian influenza and avian influenza virus

"Avian influenza" (AI) is a disease of birds caused by an "influenza A" virus – it is **not** a virus.

"Avian influenza virus" (AIV) is the aetiological (causative) agent of AI.

Note: Infection does not necessarily produce disease.

Highly Pathogenic Avian Influenza (HPAI)

"HPAI" is an infection with severe disease in poultry and some other birds.

"HPAI" has been associated with some H5 or H7 viruses.

Note: Not all H5 or H7 viruses are highly virulent.

"HPAI" used to be known as "fowl plague" – it is now old-fashioned and it is better not to use it.

"HPAI" is a poultry term and should **not** be used to refer to other species, including humans or wildlife.

H5N1

H5N1 virus detected in wildlife should **not** be referred to as "HPAI H5N1 in x species".

H5N1 virus detected in wildlife should be referred to as "AI virus H5N1 in x species"

Never refer to cases of H5N1 in humans as "human HPAI H5N1" – use the phrase "influenza H5N1 of animal/avian origin" (and only when this has been ascertained).

Only use the term "avian influenza" to refer to the **disease** in poultry or other bird species – and remember that "avian influenza" can refer to either low pathogenic or highly pathogenic forms of the disease (LPAI or HPAI).

Bird flu

"Bird flu" and "avian flu" are used colloquially and by the media, and often used wrongly, to refer to "HPAI" in poultry and/or humans – because their use can cause great confusion, it is better to avoid them, even when referring to poultry or other species of birds.

Never use the terms "bird flu", "avian flu" or "avian influenza" to refer to human disease, even when it is a question of influenza in humans caused by infection from "HPAI" – the correct term to use, even though it is lengthy, is "influenza in humans caused by a virus of avian origin".

Notifiable avian influenza

“Notifiable avian influenza” refers to all forms of “influenza A” caused by either H5 or H7 viruses regardless of their virulence [and **any** AI virus fulfilling the OIE criteria for “HPAI”].

Vaccination

One vaccinates against “AI” ... not necessarily against “HPAI”.

Sometimes one refers to “vaccination for AI” rather than “vaccination against AI” – although “for” and “against” are opposites, they are commonly used synonymously in the context of vaccination and both are commonly understood to mean the same.

Detection and characterisation

One detects and characterises “AI” viruses with varying degrees of precision:

- As “influenza A”
- By “haemagglutinin” types such as H5: there are 16 different types
- By “neuraminidase” types such as N1: there are 9 different types
- By combining techniques (HA, HI, neuraminidase neutralisation, PCR or sequencing), it is possible to achieve better characterisation on a sample/isolate – the “HP” part of “HPAI” comes later or through different methodologies (through chicken inoculation, egg inoculation [IVP index], or through H gene sequencing).

Rapid tests

Rapid tests – which are very popular today – can detect “influenza A” viruses.

Typically, rapid tests are highly specific (they detect an influenza A virus and not another pathogen) but only moderately sensitive (a real positive case may come up as negative on the test) and some are more sensitive than others – this means that great care must be taken when interpreting the results.

Not all commercially available rapid test systems are made for veterinary medical use. If you use these rapid tests in clinically healthy animals that are infected, the results are likely to be negative.

The test is still very useful, particularly when combined with clinical signs, a step which is often missing in the diagnosis of HPAI.

Contingency and compensation plans

Contingency plans and compensation plans should generally refer to “HPAI” and not “AI” [some of the more developed/financially healthy countries have embarked on NAI or LPAI control/eradication campaigns].

Avian and Human Influenza (AHI)

AHI, the acronym for “avian and human influenza”, is being used more and more – often by international organisations – to refer to the complexity of issues surrounding disease, contingency planning and their integration, and pandemic preparedness.

Poultry Diagnostic Testing: Swabbing and Sample Submission

Summary of a presentation to a joint FAO/ADB workshop on avian influenza disease prevention and control in Central Asia, Tajikistan, December 2006

INTRODUCTION

- ▶ After a thorough epidemiological investigation, the starting point for the laboratory investigation of an animal disease is the taking of clinical or pathological samples.
- ▶ The correct preservation of samples prior to and during shipment to a laboratory are critical for good diagnosis of avian influenza.
- ▶ Because laboratory diagnosis is usually the only way of confirming infection with an avian influenza virus, valid laboratory results are essential for diagnosis, surveillance and control.
- ▶ The kinds of samples collected should be appropriate for the intended purpose, and adequate in number and amount to provide statistically valid results for the type of analysis required.
- ▶ Whenever handling biological material, from dead or live animals, the risk of zoonotic infection should be kept in mind and precautions taken to avoid human infection or contamination of the environment.

COLLECTION OF SPECIMENS

- ▶ Priority should be given to taking samples from recently dead and sick birds.
- ▶ Because different virus strains may be present in the respiratory and in the digestive tracts, samples should include both oropharyngeal/tracheal and cloacal swabs. If cloacal swabbing is difficult to perform, intestinal contents (faeces) can be collected (at least 1 gramme).
- ▶ When HPAI H5N1 is suspected, it is important not to miss taking tracheal samples whenever possible
- ▶ Samples from trachea, lungs, air sacs, intestine, spleen, kidney, brain, liver and heart may also be collected, particularly if they show lesions.
- ▶ Brain should be collected from any birds with nervous signs. It should be kept fresh and processed either separately or as a pool from different birds.
- ▶ Specimens from brain, digestive and respiratory tracts should be kept separate, using watertight containers to avoid leakage of fluids or cross-contamination.
- ▶ Blood samples can also be taken and placed in 'tubes without additives' for serology if needed; note, however, that serology is of limited value for confirmation of clinical cases, especially in chickens, quail and turkeys.
- ▶ In a suspect flock, the carcasses or internal organs of at least 5 sick/dead birds per flock should be sampled, and ideally between 20 and 30 swabs from live birds.



PRESERVATION OF SAMPLES

- ▶ Each swab (or pool of a maximum of 5 swabs) should be immediately placed in 1 ml (3 ml, if pooled) of sterile transport medium. The transport medium can be isotonic phosphate buffered saline (PBS), pH 7.0–7.4, containing antibiotics. It can be made in the laboratory or commercially prepared. The antibiotics composition can be varied according to local conditions, but could be, for example, penicillin (2000 units/ml), streptomycin (2 mg/ml), gentamycin (50 µg/ml) and mycostatin (1000 units/ml) for tissues and tracheal swabs, but at five-fold higher concentrations for faeces and cloacal swabs. It is important to readjust the pH of the solution to pH 7.0–7.4 following the addition of the antibiotics.
- ▶ All samples should be stored at between 2°C and 8°C as soon as possible after sampling. Cold boxes should be taken to the field with ice packs to store the samples as they are being collected. If samples are to be kept for several days before testing/shipment, they can be kept frozen at -80°C. Freezing any swabs or tissue samples at between 0°C and -20°C (such as in many domestic freezers) should be avoided if virus isolation is required.

PACKAGING OF SAMPLES

- ▶ If samples (serum, plasma and fresh tissue samples) can be shipped and arrive at the laboratory within 24-48 hours of sample collection, they can be packaged at 4°C on ice packs. Most frequently, samples will have to be shipped by air and kept in dry ice or liquid nitrogen. Then they will have to be consigned by a trained courier or experienced airline company (air freight). However, some companies may refuse to ship the parcel for a number of different reasons, so it is recommended that prior to preparation of sample packages, the willingness of shipping/airline companies be ascertained and agreement given that they will handle the packages.
- ▶ Fresh or frozen tissues that could contain infectious agents should be shipped within a three-layer packaging system that meets IATA regulations. The primary package (test tubes) has to be wrapped with absorbent material. A watertight secondary package has to be treated lightly with disinfectant and labelled with the specimen record. The outer package (generally filled with dry ice) will be marked with necessary information such as contents of the package, nature of the hazard, origin and destination of the samples, and packaging standards applied. It is important that the package carries the appropriate codes otherwise it will not be handled as an urgent consignment and may even be opened at the airport. IATA standard boxes normally come with the code already printed on the side.
- ▶ Dry ice should never be placed inside a watertight container as it can explode.
- ▶ A letter addressed to the laboratory in charge of the testing should accompany the parcel with as much history about the samples as possible, including species and age, area/country of sampling, date of sampling, any clinical history, relevant epidemiological information, method and temperature at which samples were stored, etc. If several samples are included, they should have clear and distinct identification numbers. If the samples are isolates, it is necessary to attach information on the origins of the isolates and other relevant information. The name of a contact person who has been involved in the sampling should also be given to the receiving laboratory, along with contact telephone numbers and an e-mail address.



SHIPMENT OF SAMPLES

- ▶ Import and export permits are necessary for shipment. An export permit is obtained from the CVO of the shipping country and the import permit is provided by the CVO of the country of destination (or through a receiving laboratory or FAO). Always ask the laboratory of destination for full information on import licences and related regulations. In some countries, special transport regulations may exist that cover the area between the sampling site and the airport.
- ▶ It is always preferable to contact an OIE/FAO reference laboratory to obtain instructions on how to proceed with sample shipment and inform it about the samples it will receive. Then, please ensure (eventually together with the receiving laboratory/FAO) that the samples arrive safely to the receiving laboratory. (See *Annex 2* for more information).
- ▶ If sending by AIR FREIGHT, the airway bill number must be given to the receiving laboratory by fax, telephone or e-mail as soon as it becomes available and always before the arrival of the materials in order to facilitate early delivery.
- ▶ If the shipping of samples to an OIE/FAO reference laboratory encounters difficulties in a country, FAO may assist in the shipment, offering IATA transport boxes and arranging the shipment with a specialized transport company. For all requests, please contact empres-shipping-service@fao.org.

Wild Bird Highly Pathogenic Avian Influenza Surveillance

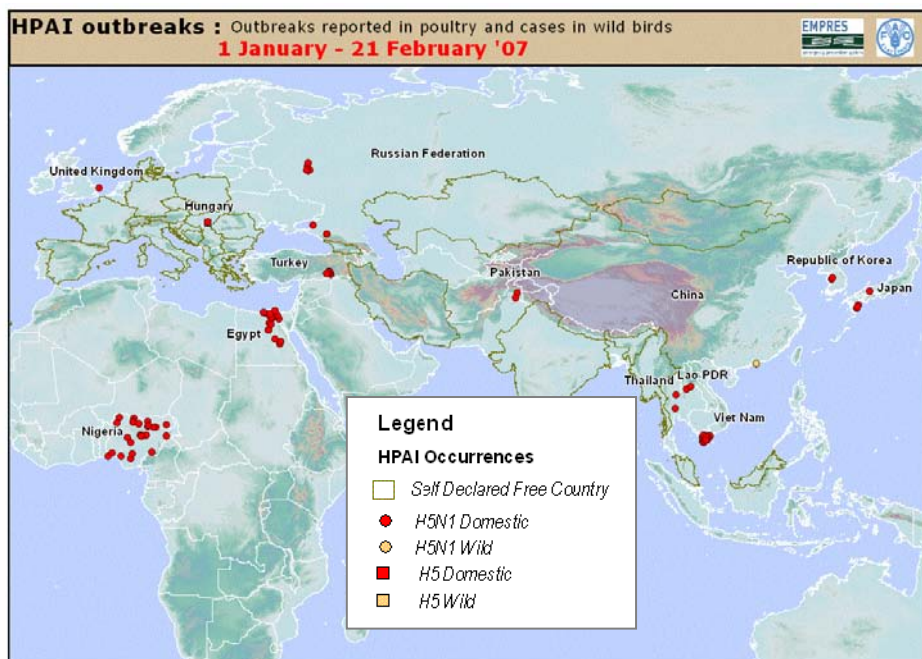
FAO publishes manual on sample collection



Waterfowl and shorebirds are considered to be the natural reservoirs for all avian influenza virus subtypes and, in general, most subtypes cause little or no disease in wildlife. However, type A influenza has undergone a combination of genetic drifts and shifts that have resulted in the H5N1 AI virus strain causing morbidity and mortality in many wildlife species. Although some surveillance has started, more research is necessary to determine the role that healthy wildlife plays in transporting and shedding virus.

This new manual provides basic guidelines for wildlife surveillance and disease investigation whatever their cause. It contains chapters on clinical signs of infectious disease, bird handling and sample collection methods, sample handling and transportation, and diagnostic techniques. It also contains important recommendations on disinfection and personal safety. For an online copy, [click here](#).

Outbreak Map (1 January – 19 February 2007)



NOTE: This map represents occurrences of H5 and H5N1 reported from 1 January 2007 to 19 February 2007. H5 cases are represented for countries where N-subtype characterization is not being performed for secondary cases or if laboratory results are still pending. Countries with H5 and H5N1 occurrences only in wild birds are not considered infected according to OIE status.

AT A GLANCE

The latest HPAI outbreaks for the period 20 November 2006 to 20 February 2007

Note

AIDEnews publishes reports of **confirmed HPAI cases only** to avoid any form of association with rumours or suspicions. AIDEnews uses the following sources, which are clearly identified for all reports: FAO, OIE, European Commission, United Nations and national governments.

AFRICA

Côte d'Ivoire

The government reported 21 November 2006 that the Central Veterinary Laboratory of Bingerville, Lanada, had confirmed HPAI H5N1 in two domestic turkeys that died on 9 November near the village of Abatta, 30 km northeast of the capital Abidjan.

Egypt

FAO reported 30 November 2006 that the country's Central Laboratory for Quality Control of Poultry Production (CLQP) had confirmed HPAI in four samples received 27 November from backyard chicken in Al Gharbayah governorate, followed by similar confirmation of 10 samples received 29 November from a mixed backyard flock of ducks and chicken.

The government reported on 8 December 2006 that a positive case of HPAI was found among domestic poultry in the district of Samallout, Al Minya governorate, to the south of Cairo. All poultry in the house concerned and in neighbouring houses were culled. HPAI had previously been reported in the district.

Another case of HPAI was reported on 8 December among domestic poultry in the Kafr el-Zayat district of Al Gharbiya governorate to the north of Cairo, close to the Nile delta.

The veterinary authorities reported to OIE on 15 December 2006 that 15 outbreaks of HPAI H5N1 had been confirmed between 30 September and 12 December in nine provinces, all involving backyard poultry.

The Directorate of Veterinary Medicine was reported on 1 January 2007 as having discovered an outbreak of HPAI H5N1 among domestic poultry in the village of Mahala Marhoum, near Tanta in the governorate of Al Gharbiya. A total of 38 birds, including 20 ducks and 15 chickens, died.

FAO reported on 4 January 2007 that reports from the CLQP had confirmed a number of outbreaks of HPAI in different parts of the country:

27 December – Two outbreaks in backyard poultry, one in the governorate of Giza, the other in the governorate of Al Gharbiya.

29 December – Three cases in backyard flocks in the governorate of Al Minufiyah in the Nile delta region, one in ducks and geese, one in ducks and the other in ducks and chickens.

1 January 2007 – Two cases in backyard birds in the Nile delta region governorates of Al Gharbiya and Al Qalyubiyah, one among chickens, the other involving ducks and chickens.

3 January 2007 – One case among backyard ducks and chickens in the governorate of Ad Daqahliyah, in the Nile delta region.

Egypt's Agricultural Research Centre (ARC) reported on 9 January 2007 that a number of cases of HPAI H5N1 had been detected among poultry in the governorates of Domyat, Alexandria and Al Qalyubiyah, all in the Nile delta region.

FAO reported 22 January 2007 that between 1 and 21 January samples from backyard poultry in 42 localities tested positive for HPAI. The last outbreak occurred on 21 January in Menya governorate, affecting ducks and chickens.

FAO reported 29 January 2007 that between 21 and 29 January four outbreaks were reported in three governorates – Beni Suef, Menya and Suez – mainly in chicken and ducks. An affected farm in Al Minufiyah governorate housed 15,000 birds in a three-storey building, 5,000 on each floor. The birds – all of which were culled – had been vaccinated with H5N2 vaccine 33 days prior to diagnosis of HPAI.

FAO reported 8 February 2007 that as of 7 February, additional cases of HPAI were confirmed by the Central Laboratory for Veterinary Quality Control of Poultry Production for 13 governorates: Menya, Alexandria, Ismailia, Suez, Al-Qalyubiyah, Al-Gharbia, Al-Qalyoubia, Al Dakahlia, Luxor, Suez, Giza, Demyat and Qena. One case in Suez concerned an unspecified "household bird".

On 15 February 2007, the government reported HPAI H5N1 in five governorates. One bird tested positive in Arme in Qwna, one bird in Mazar, Menya governorate, one bird in Ikhmeem in Sohag governorate and one bird in Montazah in Alexandria governorate, while three birds tested positive in Gharbiya governorate. All birds were backyard poultry (ducks, geese or chickens).

Nigeria

FAO reported on 5 December 2006 that outbreaks of HPAI had been confirmed by the National Veterinary Research Institute (NVRI) in Vom after testing samples from the states of Delta Borno and Kwara. Outbreaks had been reported between 6 and 9 November. Another outbreak had also been reported in Kwara state on 27 November 27 and confirmed on 2 December, bringing the number of affected states to 17 and the total number of local government areas (LGAs) affected to 47.

The health commissioner of the state of Katsina, in the north-west of the country, was reported on 11 January 2007 as having ordered the culling of 1,070 chickens after HPAI was found on two farms. Some infected birds had been found in a backyard farm in Katsina town.

On 12 January 2007, FAO reported new outbreaks of HPAI in the states of Sokoto, Kano, Ogun, Taraba, Bauchi, Bornu, Kaduna, Edo, Katsina and Plateau, and in the Federal Capital Territory (FCT), bringing the number of affected LGAs to 51 and the number of affected states to 18, plus FCT.

Ministry of Agriculture officials in the state of Sokoto reported 14 January that they had ordered the culling of 21,000 birds on a poultry farm to prevent the spread of HPAI after 10,000 chickens had died of the disease.

FAO reported 29 January 2007 outbreaks of HPAI in the Girei local government area of Adamawa state, Auyo local government area of Jigawa state and in some commercial farms in the Zaria local government area of Kaduna state. The outbreaks were confirmed by the NVRI.

EUROPE

Hungary

After the country's last outbreak of HPAI H5N1 in June 2006, a fresh outbreak occurred in a flock of geese in Csongrad, to the southeast of Budapest, on 23 January 2007. The outbreak was confirmed by the OIE/FAO reference laboratory in Webbridge, United Kingdom, on 30 January 2007. Of a total of 9,386 birds, 2,596 died and the remaining 6,790 were culled.

A second outbreak, in a goose farm in Derekegyhaza, 9 km from the site of the first outbreak, involved a flock of 9,386 birds (2,596 of which died and 6,790 culled). The outbreak was confirmed as HPAI H5N1 by the Hungarian national reference laboratory, also on 30 January 2007. The veterinary authorities reported to the OIE that the source of the infection was unknown.

The outbreaks, the first in the European Union in 2007, occurred in the same area that was affected by HPAI in June 2006 when one million birds were culled. FAO said it was confident that the Hungarian authorities had the capacity to adequately respond to the outbreak. (For information on the possibility of a link between these outbreaks and an outbreak in the United Kingdom, see *United Kingdom and Hungary incidents under control* on Page 3)

Russian Federation

FAO reported 30 January 2007 a die-off of backyard poultry between 16 and 26 January in three settlements in the province of Krasnodar: Borodinskaya, Upornaya and Luch. The outbreaks were the country's first since August 2006. The Russian Federal Agency of Veterinary and Phytosanitary Surveillance announced on 29 January that samples from the dead birds had tested positive for HPAI H5N1. The OIE confirmed HPAI H5N1 for all three outbreaks on 9 February 2007.

The first outbreak occurred in backyard chickens and guinea fowl in a village in Shihovo, Zvenigorod. Out of 21 birds, 17 died and the remaining 4 were culled.

The second outbreak was identified in backyard chickens, turkeys and pigeons in the village of Pavlovskoye, Domodedovo. Out of 32 birds, 13 died and the remaining 19 were culled.

The third outbreak occurred among backyard chickens and geese in the village of Shihovo, Zvenigorod. Out of 59 birds, 4 died and the remaining 55 were culled.

In all cases, the veterinary authorities reported to the OIE that the source of the infection was contact with wild species. In all three cases, it was suspected that the *Sadovod* live bird market in Moscow was the source of infection because farmers from all three locations had purchased birds from the market and introduced them to their existing flocks.

Russia's Emergencies Ministry said 20 February that 190 domestic fowl had died between 10 and 19 February in Moscow and six districts in the Moscow region – Domodedovo, Odintsovo, Podolsk, Naro-Fominsk, Taldom and Volokolamsk. Rosselkhoz nadzor, the country's animal and plant health watchdog, said HPAI H5N1 had been confirmed in the first five districts. The watchdog also said it expected more cases in the near future but that these would be death with in two or three days.

Veterinary officials said 20 February that HPAI was almost certainly the cause of death in a number of wild birds near the town of Anapa on the Black Sea. It was reported that around 3,000 wild ducks had been destroyed in the area.

Turkey

On 9 February 2007, the veterinary authorities reported to the OIE an outbreak of H5N1 in the village of Bogazkoy, Gercus district, Batman province, in the southeast of the country. Out of a total population of 742 backyard chickens, 37 backyard turkeys, 5 geese, 7 ducks and 2 pigeons, 200 birds were infected and 80 died.

A second outbreak occurred in backyard poultry in Esentepe mahalle (sub-village), Doluca village, Merkez district, Batman province in the southeast of the country on 9 February 2007. Out of two birds, one died.

A third outbreak occurred among backyard poultry in Yesilalan mahalle, Akcayir village, Silvan district, Diyarbakir province, in the southeast of the country, on 11 February 2007. Out of 340 birds, 3 died and the remaining birds were culled.

The provinces of Batman and Diyarbakir border each other and the cases in the two provinces are geographically and epidemiologically part of the same outbreak. Epidemiological investigations indicate wild birds as the most probable source of the introduction of infection at Bogazkoy. Subsequent outbreaks were due to poultry-to-poultry spread, with indirect routes (i.e. fomite spread) identified

United Kingdom

A commercial turkey farm in Upper Holton, Suffolk, to the southeast of the country was affected by HPAI H5N1 on 27 January 2007. Out of a total of 159,000 birds, 2,500 died and the rest were culled. The veterinary authorities reported to the OIE that the source of the infection was unknown. FAO said it was confident that the United Kingdom authorities had the capacity to adequately respond to the outbreak. The last previous occurrence of the disease was in March 2006. (For information on the possibility of a link between this outbreak and outbreaks in Hungary, see [United Kingdom and Hungary incidents under control](#) on Page 3)

ASIA

China (Hong Kong SAR)

On 7 January 2007, one dead wild bird (a crested goshawk - *Accipiter trivirgatus*) was found on Mission Hill in the Shek Kip Mei area and HPAI H5N1 was identified. The veterinary authorities reported to the OIE that the source of the infection was unknown.

Ten days later, on 17 January 2007, six wild birds (scaly-breasted munia - *Lonchura punctulata*) were found dead as a result of HPAI H5N1 on Leighton Road in the Causeway Bay area. Again, the OIE reported the source of the infection as unknown.

The Hong Kong Agriculture, Fisheries and Conservation Department (AFCD) reported 22 January 2007 that a Japanese white-eye (*Zosterops japonicus*) found in San Po Kong on 15 January, a house crow (*Corvus splendens*) found in Sham Shui Po, and a white-backed munia (*Lonchura striata*) found in Mong Kok had all been confirmed as HPAI H5N1 positive.

The last previous outbreak of HPAI in the territory was in February 2006.

Indonesia

Local authorities in Aceh on the tip of the northern island of Sumatra were reported 20 January 2007 as having found HPAI in poultry in a number of villages. HPAI has been diagnosed in 10 districts of Aceh's 21 regencies since the disease was first recognised and officially declared there in November 2005. The current status in 2007 is that HPAI has been diagnosed in two districts.

On 22 January 2007, the livestock husbandry office in Garut district, West Java, culled 167 birds (145 chickens, 8 geese, 14 muscovy ducks) in the village of Cihuni, Pangatican sub-district, after three chickens in the area were found to have been infected with the HPAI H5N1 virus.

Japan

After a period of almost three years (the last previous occurrence of the disease was in March 2004), the country reported four outbreaks of HPAI in January 2007. Three took place in Miyazaki prefecture on the island of Kyushu, and one in Okayama prefecture to the south of the country's main island.

The first, of HPAI H5N1, occurred on 10 January 2007 on a chicken broiler breeding farm in the town of Kiyotake, Miyazaki prefecture, on the island of Kyushu. Of a total of 12,000 birds, 3,800 died and the remaining 8,200 were culled. The second, another outbreak of HPAI H5N1, occurred on 22 January 2007 on a broiler chicken farm in Hyuga City, Miyazaki prefecture. Of a total of 52,500 birds, 3,169 died and the remaining 49,331 were culled. The third, again of HPAI H5N1, occurred on 26 January 2007 on a layer chicken farm in the town of Takahashi, Okayama prefecture, in the south-western part of the country's main island. Of a total of 12,000 birds, 63 died and the remaining 11,937 were culled. The fourth, an outbreak of HPAI H5N1, took place on 30 January on a layer chicken farm of 93,000 chickens in Shintomi-town, Miyazaki prefecture, on the island of Kyushu. A total of 300 birds and the remaining 92,700 were culled. The CVO reported to the OIE that the source of the infection was unknown.

Lao, People's Democratic Republic

The government confirmed 20 February 2007 that HPAI H5N1 had been found on a chicken farm in the village of Dong Savath, 5 km from the capital, Vientiane. Following the unusual deaths of seven chickens and one duck the week before, more than 500 birds were culled to stop the virus spreading. Disease confirmation came from laboratories in both Lao PDR and Viet Nam. The most recent case of H5N1 in the country was in mid-July 2006.

Pakistan

An outbreak of HPAI H5N1 occurred on a farm in Lohar Banda, Manshera, northern Pakistan, on 1 February 2007, slightly more than six months after the previous outbreak in July 2006. The outbreak affected a variety of backyard poultry and also included peacocks, pheasants, ducks and parakeets. Out of 187 birds, 100 died and the remaining birds were culled.

The following day, an outbreak of HPAI H5N1 occurred on a farm in the city of Rawalpindi, Punjab province, to the south of the country. Of a total of 40 backyard native hens, 18 died and the remaining birds were culled. According to the OIE, the infection was due to the introduction of new live animals in both the cases.

On 6 February 2007, the OIE confirmed two outbreaks of HPAI in backyard poultry in Manshera, North West Frontier province, and Rawalpindi, Punjab. In Manshera, a total of 100 birds died on 1 February and 87 were destroyed, including peacocks, pheasants, ducks and parakeet. In Rawalpindi, 18 desi hens died on 2nd February and 22 were destroyed.

The Food, Agriculture and Livestock Ministry said on 20th February that HPAI H5N1 had been found in peacocks and geese at a zoo in the country's capital, Islamabad. Affected birds were being destroyed and the zoo closed to permit vaccination of other birds and disinfection of the compound.

Republic of Korea

On 26 November 2006, the government confirmed an outbreak of HPAI H5N1 on a chicken parent stock farm in Iksan City, province of Jeollabukdo, about 170 km south of Seoul. Of a total of over 13,000 chickens, 6,500 died and 6,800 were culled. To prevent further spread of the disease, the agriculture ministry was reported as having ordered the slaughter of 236,000 animals within a 500-metre radius of the infected farm. The outbreak was the country's first since the last outbreak in March 2004.

Two days later, the government confirmed a second outbreak of HPAI H5N1, when around 600 birds died on a chicken farm 3 km from the first outbreak.

A third case of HPAI was discovered on 11 December on a quail farm in Kimje City, 18 km from the first outbreak. About 3,000 of the farm's 290,000 birds were reported as having died and the remainder culled.

The government reported a fourth outbreak of HPAI on 20 December on a duck farm in Asan in the province of South ChungCheong, 100 km to the north of the first three outbreaks. All 9,146 birds were culled.

A fifth outbreak of HPAI H5N1 was confirmed 21 January 2007 on a poultry farm in Cheon-An in the central province of South Chungch'ong. The outbreak concerned 32-week-old laying chickens. Of the 30,000 birds, 157 died and the rest were culled.

Officials were reported as saying 10 February 2007 that HPAI had spread to a sixth farm containing some 133,000 chickens in Iljuk village, 90 km southeast of the capital, Seoul. A total of 1,188 birds died and the remaining 131,812 were culled.

A few days later on 12 February, the country's CVO reported an outbreak of HPAI H5N1 to the OIE in a layer and pullet farm in the village of Ansong, in the province of Kyonggi-Do, in the north-west of the country. A total of 1,188 birds died on 9 February and 131,812 were culled.

In agreement with the authorities, a FAO mission organised by the Crisis Management Centre (CMC) of the Emergency Centre for Transboundary Animal Diseases (ECTAD) travelled to the Republic of Korea in mid-December to collect data on possible wild bird movements in the infected areas and to assess risk factors for areas surrounding infected farms and for other countries in the region. The mission's multidisciplinary team, comprising epidemiologists, ornithologists and wildlife specialists, found no wild bird mortalities in the affected area and concluded that wild birds were an unlikely source of HPAI infection through direct contact, feed or water. The report of the mission will be shared with the government.

Thailand

Slightly less than six months after the country's last outbreak of HPAI H5N1 in July 2006, a flock of 2,100 ducks was infected with the disease in Village No. 5, PlaiChumPol, Muang, Phitsanulok in central northern Thailand on 9 January 2007. A total of 100 birds died and the rest were culled. The veterinary authorities reported to the OIE that the source of the infection was unknown; they noted that the ducks were free ranged for feeding in a nearby rice field during the day and housed by night. Many wild birds shared the same area for feeding.

Ten days later, on 19 January 2007, an outbreak occurred in a chicken flock in Village No 8, PanPraow, SriChiangMai, Nong Khai in northeastern Thailand. Out of 2,000 birds, 236 died and the remaining birds were culled. Again, the veterinary authorities reported to the OIE that the source of the infection was unknown.

On 31 January 2007, the OIE also confirmed HPAI H5N1 in the Mongkolnam sub-district of Ang Thong province, where 6 out of 16 fighting cocks that free-ranged with native chickens died.

Viet Nam

Following an absence of reported outbreaks of HPAI since August 2006, the country has since experienced a spate of outbreaks of HPAI H5N1, all of unknown origin according to the OIE, and all in the south of the country, in the area around the Mekong Delta.

According to the OIE, there were over 30 outbreaks in December 2006, affecting more than 4,000 birds (almost entirely unvaccinated ducks), almost all of which either died as a result of the disease or were culled to avoid spread. In January 2007, 20 outbreaks of HPAI H5N1 were recorded, affecting almost 12,000 birds, all of which either died as a result of the disease or were culled to avoid spread.

For information on the relationship between duck production bans and vaccination, see [Poultry bans could be counter-productive](#) on Page 3.

MOST RECENT OUTBREAKS 2006-07

Egypt, Korea (Republic of), Lao PDR, Pakistan, Russian Federation, Turkey (February 2007)
China (Hong Kong SAR), Hungary, Indonesia, Japan, Nigeria, Thailand, United Kingdom, Viet Nam (January 2007)
Cote d'Ivoire (November 2006)
China (October 2006)
Cambodia, Germany, Sudan (August 2006)
Spain (July 2006)
Mongolia, Niger, Romania, Ukraine (June 2006)
Burkina Faso, Czech Republic, Denmark (H5), Poland (May 2006)
Afghanistan, Djibouti, France, India, Myanmar, Sweden (H5), West Bank & Gaza Strip (April 2006)
Albania, Austria, Azerbaijan (H5), Cameroon, Croatia, Greece, Israel, Jordan, Kazakhstan, Malaysia, Serbia, Slovenia, Switzerland (March 2006)
Bosnia-Herzegovina, Bulgaria, Georgia, Iran, Iraq (H5), Italy, Slovakia (February 2006)

Green: wild birds only

Sources: FAO, World Organisation for Animal Health (OIE), European Commission (EC), United Nations and national governments

SUMMARY OF CONFIRMED HPAI OUTBREAKS IN AFFECTED COUNTRIES (as of 20 February 2007)

Sources: FAO, World Organisation for Animal Health (OIE), European Commission (EC), United Nations and national governments – World Health Organisation (WHO) for human cases/deaths

Note: Highlighted countries indicate those in which there has been only one officially confirmed outbreak or occurrence

| EUROPE | | | | |
|--------------------|------------------|--------------------|---|------------------------------|
| Country | First outbreak | Latest outbreak | Animals affected to date | Human cases / deaths to date |
| Albania | 16 February 2006 | 9 March 2006 | Domestic poultry | - |
| Austria | 10 February 2006 | 22 March 2006 | Wild birds – cats | - |
| Azerbaijan | 2 February 2006 | 18 March 2006 (H5) | Wild birds – domestic poultry – dogs | 8 / 5 |
| Bosnia-Herzegovina | 16 February 2006 | 16 February 2006 | Wild birds | - |
| Bulgaria | 31 January 2006 | 9 February 2006 | Wild birds | - |
| Croatia | 21 October 2005 | 24 March 2006 | Wild birds | - |
| Czech Republic | 27 March 2006 | 19 May 2006 | Wild birds | - |
| Denmark | 12 March 2006 | 26 May 2006 | Wild birds – domestic poultry | - |
| France | 17 February 2006 | 26 April 2006 | Wild birds – domestic poultry | - |
| Georgia | 23 February 2006 | 23 February 2006 | Wild birds | - |
| Germany | 8 February 2006 | 2 August 2006 | Wild birds – domestic poultry – cats – stone marten | - |
| Greece | 30 January 2006 | 27 March 2006 | Wild birds | - |
| Hungary | 4 February 2006 | 23 January 2007 | Wild birds | - |
| Italy | 1 February 2006 | 19 February 2006 | Wild birds | - |
| Poland | 2 March 2006 | 7 May 2006 | Wild birds | - |
| Romania | 7 October 2005 | 6 June 2006 | Wild birds – domestic poultry – cat | - |
| Russian Federation | 15 July 2005 | 16 February 2007 | Domestic poultry – wild birds | - |
| Serbia | 28 February 2006 | 16 March 2006 | Wild birds – domestic poultry | - |
| Slovakia | 17 February 2006 | 18 February 2006 | Wild birds | - |
| Slovenia | 9 February 2006 | 25 March 2006 | Wild birds | - |
| Spain | 7 July 2006 | 7 July 2006 | Wild birds | - |
| Sweden | 28 February 2006 | 26 April 2006 (H5) | Wild birds – domestic poultry - game birds - mink | - |
| Switzerland | 26 February 2006 | 30 March 2006 (H5) | Wild birds | - |
| Turkey | 5 October 2005 | 15 February 2007 | Domestic poultry – wild birds | 12 / 4 |
| United Kingdom | 30 March 2006 | 27 January 2007 | Wild birds – domestic poultry | - |
| Ukraine | 2 December 2005 | 11 June 2006 | Wild birds – domestic poultry – zoo birds | - |

| AFRICA | | | | |
|---------------|------------------|------------------|---|------------------------------|
| Country | First outbreak | Latest outbreak | Animals affected to date | Human cases / deaths to date |
| Burkina Faso | 1 March 2006 | 20 May 2006 | Domestic poultry - wild birds | - |
| Cameroon | 21 February 2006 | 28 March 2006 | Domestic poultry – wild birds | - |
| Côte d'Ivoire | 31 March 2006 | 9 November 2006 | Domestic poultry – wild birds | - |
| Djibouti | 6 April 2006 | 9 April 2006 | Domestic poultry | 1 / 0 |
| Egypt | 17 February 2006 | 15 February 2007 | Domestic poultry – wild birds – zoo birds | 22 / 13 |
| Niger | 6 February 2006 | 1 June 2006 | Domestic poultry | - |
| Nigeria | 16 January 2006 | 14 February 2007 | Domestic poultry – wild birds | 1 / 1 |
| Sudan | 25 March 2006 | 4 August 2006 | Domestic poultry | - |

| NEAR EAST | | | | |
|------------------------|-----------------|-----------------|-------------------------------|------------------------------|
| Country | First outbreak | Latest outbreak | Animals affected to date | Human cases / deaths to date |
| Iran | 2 February 2006 | 2 February 2006 | Wild birds | - |
| Iraq (H5) | 18 January 2006 | 1 February 2006 | Domestic poultry – wild birds | 3 / 2 |
| Israel | 16 March 2006 | 30 March 2006 | Domestic poultry | - |
| Jordan | 23 March 2006 | 23 March 2006 | Domestic poultry | - |
| West Bank & Gaza Strip | 21 March 2006 | 2 April 2006 | Domestic poultry | - |

| ASIA | | | | |
|-----------------------|------------------|------------------|--|------------------------------|
| Country | First outbreak | Latest outbreak | Animals affected to date | Human cases / deaths to date |
| Afghanistan | 2 March 2006 | 4 April 2006 | Domestic poultry – wild birds | - |
| Cambodia | 12 January 2004 | 24 August 2006 | Domestic poultry – wild birds | 6 / 6 |
| China | 20 January 2004 | 5 October 2006 | Domestic poultry – wild birds | 22 / 14 |
| China (Hong Kong SAR) | 19 January 2004 | 9 February 2007 | Wild birds | - |
| India | 27 February 2006 | 18 April 2006 | Domestic poultry | - |
| Indonesia | 2 February 2004 | 28 August 2006 | Domestic poultry – pigs (with no clinical signs) | 81 / 63 |
| Japan | 28 December 2003 | 30 January 2007 | Domestic poultry – wild birds | - |
| Kazakhstan | 22 July 2005 | 10 March 2006 | Domestic poultry – wild birds | - |
| Korea, Rep. of | 10 December 2003 | 9 February 2007 | Domestic poultry – wild birds | - |
| Lao, PDR | 15 January 2004 | 3 February 2007 | Domestic poultry | - |
| Malaysia | 19 August 2004 | 21 March 2006 | Domestic poultry – wild birds | - |
| Mongolia | 10 August 2005 | June 2006 | Wild birds | - |
| Myanmar | 8 March 2006 | 25 April 2006 | Domestic poultry | - |
| Pakistan | 23 February 2006 | 16 February 2007 | Domestic poultry | - |
| Thailand | 23 January 2004 | 23 January 2007 | Domestic poultry – wild birds – tiger | 25 / 17 |
| Viet Nam | 9 January 2004 | 22 January 2007 | Domestic poultry | 93 / 42 |

ANNEX 1

CONTACT POINTS

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ANNEX 2 LABORATORIES AND SAMPLE SHIPPING INFORMATION

ITALY

OIE/FAO and National Reference Laboratory, Istituto Zooprofilattico Sperimentale (IZS) delle Venezie, Padova

Types of specimen

Specimens for analysis may be virus isolates prepared in a submitting country or clinical specimens, such as tissues or swabs, collected from diseased birds.

Note:

Venice Marco Polo Airport only accepts material classified as "diagnostic samples" (code UN3373).

Packaging requirements

All materials should be in leak-proof containers. Packaging should be made up of three layers: (1) primary container, (2) secondary packaging and (3) rigid outer packaging.

Packaging of "diagnostic samples" (code UN3373) should comply with IATA PI650 standard. Packaging of "virus isolates" (code UN2814 for avian influenza virus and UN2900 for Newcastle virus) should comply with IATA PI602 standard.

Contact couriers to confirm the provision of boxes complying with these requirements.

Accompanying documents for clearance

Import permissions of the Italian Ministry of Health (formerly provided by the IZS).

A signed pro forma invoice (original with signature, no photocopy accepted) should be attached firmly to the box.

Shipping

Air freight or couriers via Milan Malpensa Airport (recommended, airport code: MXP), Rome Fiumicino Airport (couriers only, airport code: FCO) or Venice Marco Polo Airport (airport code: VCE, for diagnostic samples only, no isolates – code UN3373).

Arrange for shipments to arrive in Italian airports from Monday to Thursday only.

Shipping address

Istituto Zooprofilattico Sperimentale delle Venezie
Virology Department
Viale dell'Universita' 10
35020 Legnaro, Padova
Italy

Notification of shipment

Before shipping, please supply the IZS contact person with the following information:

- Date of embarkation
- Airline name and flight number
- Date of arrival in Italy
- Name of destination airport
- Airway bill number (fax as soon as possible to: [+39] 049 808 4360)
- Person to contact with the results of analysis (supply name, fax number and e-mail address)

Contact people at IZS

For diagnostic samples and viral isolates
Micaela Mandelli (mmandelli@izsvenezie.it)
Maria Serena Beato (msbeato@izsvenezie.it)
Phone: [+39] 049 8084371
Fax: [+39] 049 8084360

For reagents

Micaela Mandelli (mmandelli@izsvenezie.it)
William Dundon (wdundon@izsvenezie.it)

Other contact persons

Giovanni Cattoli (gcattoli@izsvenezie.it)
Alessandro Cristalli (acristalli@izsvenezie.it)

Important: Contact the IZS to discuss testing and testing materials before shipping. Provide details of the contact person with whom IZS should keep in touch.

UNITED STATES OF AMERICA

National Veterinary Services Laboratories (NVSL), Ames, Iowa

Import permit

Packages containing diagnostic specimens or organisms (infectious materials) imported from foreign locations into the United States of America must be accompanied by a permit issued by the U.S. Department of Agriculture. This permit, together with proper packaging and labelling, will expedite clearance of the package through U.S. Customs. One copy of the permit should be attached to the outside of the shipping container and a second copy placed just inside the lid of the outer shipping container. The permit can be obtained from NVSL.

Packaging requirements

All materials should be in leak-proof containers and packaged to withstand breakage. All materials should be properly labelled.

Shipping address

National Veterinary Services Laboratories
Diagnostic Virology Laboratory
1800 Dayton Avenue, Ames, Iowa 50010
United States of America

Notification of shipment

Please provide the Diagnostic Virology Laboratory with shipping information (date of arrival, airline/courier, weigh bill number, etc.) as soon as it is available. Fax information to (+1) 515 663-7348 or telephone (+1) 515 663-7551.

Contact

Dr. Beverly J Schmitt
Tel (+1) 515 663 7532
Fax (+1) 515 663-7348
Beverly.J.Schmitt@usda.gov

AUSTRALIA

Australian Animal Health Laboratory (AAHL), Geelong

Type of specimen

Specimens submitted to AAHL for disease diagnosis may be either virus isolates prepared in the submitting country or clinical specimens, such as tissues or swabs, collected from diseased birds.

Import permit and packing

Copies of Australian import permits, suitable transport containers and packing instructions are available from AAHL by contacting aahl-accessions@csiro.au.

All specimens must be packed in leak-proof containers in accordance with appropriate IATA regulations and appropriately labelled. Copies of the import permit and other consignment details should be attached to the outside of the package to expedite clearance through Australian customs.

Notification of shipment

When submitting specimens, please contact the accessions clerk at accessions@csiro.au, the Duty Veterinarian at dutyvet@csiro.au or Dr. Peter Daniels on (+61) 3 5227 5000 and provide consignment details (including consignment note/air weigh bill number, courier/airline and expected arrival date) so that the specimens can be collected upon arrival in Australia. Alternatively send the information by fax to (+61) 3 5227 5555.

Shipping address

The Director
Australian Animal Health Laboratory
5 Portarlington Road, Geelong, 3220
Australia

Telephone (+61) 3 5227 5000

Fax (+61) 3 5227 5555

<http://www.csiro.au/aahl>

Contact

You may also wish to discuss the testing required with Peter Daniels (peter.daniels@csiro.au) or Paul Selleck (paul.selleck@csiro.au) on (+61) 3 5227 5000 prior to submitting the specimens.

UNITED KINGDOM

(from outside the European Union)

Avian Virology Laboratory, Veterinary Laboratories Agency, Weybridge

Packaging requirements

All materials should be in leak-proof containers, packed to IATA regulations by a registered IATA packer. At least two layers of packaging should be used and the inner layer treated lightly with disinfectant.

The outer packaging must be marked as follows:

ANIMAL PATHOGEN - PACKAGE ONLY TO BE OPENED AT THE AVIAN VIROLOGY SECTION, VETERINARY LABORATORIES AGENCY, WEYBRIDGE, SURREY

The packaging must also be marked with one of the following IMPORT LICENCE NUMBERS:

For Newcastle disease: AHZ/2232/2002/5

For avian influenza, other viruses, avian tissue, serum, faeces and eggs: AHZ/2074C/2004/3

Shipping address

Ruth Manvell

Avian Virology Laboratory

Veterinary Laboratories Agency (VLA)

Weybridge, New Haw, Addlestone, Surrey KT15 3NB

United Kingdom

Shipment instructions

A letter should accompany parcels with as much history about the isolates as possible (including species and age, area/country of isolation, clinical history if any, etc.).

If sending by air freight, it is essential that the airway bill number is given to the Avian Virology Laboratory, VLA-Weybridge by fax, telephone or e-mail before the arrival of the materials in order to facilitate early delivery.

Notification of shipment

Before dispatch, notify the Avian Virology Laboratory, VLA-Weybridge of the shipment details and the person to contact with information on results (name, fax number, e-mail address).

Tel : (+44) 01932 357736

Fax: (+44) 01932 357856

e-mail: r.manvell@vla.defra.gsi.gov.uk

Contact

If you wish to discuss a submission and options for support from the International Reference Laboratory for Avian Influenza and Newcastle Disease, please contact:

Dr. I. H. Brown

Tel: (+44) 01932 357 339

Fax: (+44) 01932 357 239

e-mail: i.h.brown@vla.defra.gsi.gov.uk