

## Summary of Selected Disease Events October - December 2007

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### Ruminants (bovine, caprine, ovine)

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#### Foot-and-Mouth Disease (FMD), Global

##### Cyprus

On October 26, 2007, the government of Cyprus imposed restrictions surrounding a farm outside of the southern port town of Dromolaxia that housed suspected

FMD-infected sheep. Following the confirmation of initial seropositive test results at the OIE reference laboratory at Pirbright, U.K., Cyprus declared its first outbreak of FMD (type O) since 1964. Cyprus is a member of the European Union (EU) and disease mitigation measures that are prescribed by the European Commission were enacted.

According to a presentation by Cypriot authorities at the European Commission's Standing Committee on the Food Chain and Animal Health, 30,129 samples from 569 farms were tested for FMD as of December 17. No live FMD virus was isolated from these samples and no virus circulation could be demonstrated.

The costs associated with the culling of animals, and the lack of clear evidence of an active outbreak, have resulted in controversy in Cyprus regarding the declared FMD outbreak. No seropositive cattle or swine were identified within the protection and surveillance zones. The absence of widespread disease occurrences in these species as well as in sheep and goats has been noted to support an argument that there was no active FMD outbreak on the island. There is conjecture that seropositive test results may be due to the importation of previously vaccinated animals or to unauthorized vaccination on Cyprus. As per EU protocol, vaccination for FMD is not permitted in Cyprus.

##### Sources:

1. *EUBusiness.com*: 'EU Confirms Foot and Mouth on Cyprus'. Nov 5, 2007. <[http://www.eubusiness.com/news\\_live/1194282122.13](http://www.eubusiness.com/news_live/1194282122.13)>. Accessed December 27, 2007.
2. *Veterinary Services of Cyprus*: 'Serological Evidence of FMD in Cyprus'. SCoFCAH presentation. December 19, 2007. <[http://ec.europa.eu/food/committees/regulatory/scfcah/animal\\_health/presentations/fmd\\_19122007-1\\_cy.pdf](http://ec.europa.eu/food/committees/regulatory/scfcah/animal_health/presentations/fmd_19122007-1_cy.pdf)>. Accessed December 27, 2007.
3. *ProMED*: <[http://www.promedmail.org/pls/askus/www\\_flow.accept](http://www.promedmail.org/pls/askus/www_flow.accept)>. Archive numbers 20071026.3481; 20071106.3615; 20071215.4028 20071220.4097.

##### United Kingdom (U.K.)

The FMD outbreaks in the United Kingdom began on August 3, 2007 with the confirmation of a type O1 strain no longer in circulation. The outbreak resulted in a total of 8 affected premises and led to the culling of 1,578 animals. Upon investigation, it was confirmed that the series of outbreaks were due to a virus breach at the Pirbright laboratory and vaccine production site.

A second phase of outbreaks, beginning with the fourth outbreak, was believed to be due to top soil movement from the Pirbright campus and was thought to initiate a second chain of direct transmission from the facility. Upon genetic analysis of viruses isolated on the fourth

outbreak site, this theory was found to be incorrect and farm to farm transmission was determined the most likely cause of the subsequent outbreaks.

The eighth and final outbreak was reported to the OIE on October 4. On December 14, the European Commission (EC) lifted restrictions that had been placed on the trade of live ruminants and ruminant products from all areas outside of the FMD precautionary zones. EC import restrictions in the risk areas were lifted on December 31. Estimated costs of the 2007 FMD outbreaks in the United Kingdom are approximately \$1 billion.

*Sources:*

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2. ProMED: <[http://www.promedmail.org/pls/askus/www\\_flow.accept](http://www.promedmail.org/pls/askus/www_flow.accept)>. Archive numbers 20071216.4046; 20071122.3788. Accessed December 21, 2007.
3. OIE: <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=5869](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=5869)>. Accessed December 21, 2007.
4. BBC news: 'Farmers meet over disease costs', Oct 24, 2007. <[http://news.bbc.co.uk/2/hi/uk\\_news/wales/7059053.stm](http://news.bbc.co.uk/2/hi/uk_news/wales/7059053.stm)>. Accessed December 21, 2007.
5. BBC via FMD News: 'Last foot-and-mouth controls end', December 31, 2007. [http://news.bbc.co.uk/2/hi/uk\\_news/7165570.stm](http://news.bbc.co.uk/2/hi/uk_news/7165570.stm). Accessed December 31, 2007.

## Namibia

Namibia reported five FMD outbreaks to the OIE beginning November 7, 2007. The outbreaks occurred on communal cattle grazing areas in the Caprivi region. These are the first FMD outbreaks reported by Namibia since 2001, and contact with wild buffalos and cattle smuggled from neighboring Zambia are the suspected causes of the outbreaks. FMD is endemic in Zambia and the country recently experienced FMD outbreaks in an area directly across the river from Caprivi.

A vaccination campaign in Namibia using Trivalent SAT 1,2,3 vaccine was completed in December covering the estimated 45,000 cattle in the outbreak areas. The current outbreaks involve FMD type SAT 2, while Namibia's previous outbreaks were due to SAT 1 strains.

*Sources:*

1. AllAfrica.com: '12000 Cattle get foot-and-mouth jabs', Nov 29, 2007, <<http://allafrica.com/stories/200711290365.html>>. Accessed December 27, 2007.
2. OIE: <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6566](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6566)>. ProMED: <[http://www.promedmail.org/pls/askus/www\\_flow.accept](http://www.promedmail.org/pls/askus/www_flow.accept)>. Archive number 20071207.3953. Accessed December 27, 2007.

## Bluetongue Virus, Europe

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Beginning in mid-December, and based on falling temperatures and declining midge activity, several European countries have declared the start of bluetongue vector-free periods for bluetongue virus serotype 8 (BTV-8). According to European Commission (EC) regulations, this will allow movement of animals from inside of current precautionary zones to areas outside of the zones. The vector-free period is

expected to last until about March, when temperatures are again warm enough to allow for renewed *Culicoides* midge activity. There is evidence that the vector species were able to propagate at low levels through last year's winter and there is some expectation that low-level breeding through this winter season may cause expansion of the current range of BTV-8 next summer.

Currently, the BTV-8 restriction zone in Europe comprises about one million km<sup>2</sup> and more than 44,500 premises in northern Europe have experienced bluetongue disease outbreaks. During the last calendar quarter of 2007, BTV-8 was found to have infected animals for the first time in four new countries: Denmark, Switzerland and the Czech Republic.

Through December 20, France reported 12,675 laboratory-confirmed cases of bluetongue. Most were identified as the BTV-8 serotype, but France also reported serotypes 2, 4, and 16 on the island of Corsica, and serotype 1 in a southern department adjacent to the Spanish border. As BTV-8 expands its reach in northern Europe, moving south, bluetongue virus serotype 1 (BTV-1) is spreading northward from Spain and Portugal.

Although currently there are no BTV-1 or BTV-8 vaccines available, development and manufacture of vaccines are in progress by several firms and there are expectations that a suitable BTV-8 vaccine will be on the market by the summer of 2008. The United Kingdom's Department for Environment, Food, and Rural Affairs announced in December that it placed an order with the pharmaceutical company Intervet for 22.5 million doses of BTV-8 vaccine. An experimental BTV-1 vaccine was recently used in Portugal, and Spain has contracted with a vaccine manufacturer to commercially produce a BTV-1 vaccine for use at the beginning of the next bluetongue vector season.

*Sources:*

1. Hampshire County Council: 'Bluetongue update-Dec 24, 2007'. <<http://www.hants.gov.uk/regulatory/tradingstandards/footandmouth.html>>. Accessed December 31, 2007.
2. ProMED: <[http://www.promedmail.org/pls/askus/www\\_flow.accept](http://www.promedmail.org/pls/askus/www_flow.accept)>. Archive numbers 20071111.3657;20071222.4118;20071230.4185. Accessed December 31, 2007.
3. Wyeth: 'Fort Dodge Animal Health Appointed by Spanish Government to Produce Serotypes 4 and 1 Bluetongue Vaccines'. Nov 2007. [http://www.fortdodge.eu/news/Fort\\_Dodge\\_Appointed\\_by\\_SpanishGovernment\\_nov\\_2007-v1.pdf](http://www.fortdodge.eu/news/Fort_Dodge_Appointed_by_SpanishGovernment_nov_2007-v1.pdf). Accessed January 2, 2008.

## Rift Valley Fever (RVF), Sudan

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On November 2, 2007, the World Health Organization (WHO) reported that RVF had infected at least 125 people in Sudan, with 60 deaths. The diagnosis was confirmed by the U.S. Naval Medical Research Unit stationed in Cairo. Since the initial report of the RVF outbreak in humans, there have been numerous unconfirmed reports of cases in animals. Sudan last reported RVF in livestock in 1973. On December 21, the

WHO reported that the number of human cases had risen to 601, with 211 deaths. Although humans may become infected with RVF through mosquito vectors, the majority of human cases in RVF outbreaks are due to direct or indirect contact with infected animals.

Sudan reported one outbreak to the OIE on November 11, 2007 that involved clinical cases of RVF in cattle and sheep in White Nile State; however, case numbers and morbidity/mortality data were not included in the report. A followup report to the OIE on December 30 included laboratory results from samples sent to South Africa's RVF reference laboratory, but no new outbreaks in animals were reported. According to the lab report, two cows and one goat showed antibodies indicating recent exposure to RVF virus while tests on 25 other animals indicated more dated exposure. A number of blood samples were suspicious for RVF virus; however, no virus was isolated from any of the samples. Final virus isolation tests are pending. According to the report, RVF surveillance, which was conducted in six states, did not result in identification of diseased animals. Targeted vaccination for RVF is continuing.

With the culmination of the sacrificial Eid al-Adha holiday period, Sudanese were increasingly cautious regarding the ritual slaughter of sheep and rumors of RVF-associated animal deaths circulated. A large perennial exporter of sheep to neighboring Muslim countries during the Eid period, Sudan was shut out of its major export markets this year due to the suspected circulation of RVF.

*Sources:*

1. World Health Organization: 'Rift Valley Fever in Sudan', Nov 5, 2007, <[http://www.who.int/csr/don/2007\\_11\\_05/en/index.html](http://www.who.int/csr/don/2007_11_05/en/index.html)>. Accessed December 31, 2007.
2. World Health Organization: 'Rift Valley Fever in Sudan – update 4', Dec 21, 2007, <[http://www.who.int/csr/don/2007\\_12\\_21/en/index.html](http://www.who.int/csr/don/2007_12_21/en/index.html)>. Accessed December 31, 2007.
3. Reuters-Africa: 'Sudanese celebrate Eid in turmoil over slaughter', Dec19,2007. <<http://africa.reuters.com/top/news/usnBAN946779.html>>. Accessed December 31, 2007.

4. OIE: 'Rift Valley Fever, Sudan' Immediate report, Nov 11, 2007. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6461](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6461)>. Accessed December 31, 2007.
5. OIE: 'Rift Valley Fever, Sudan' Follow-up report No. 2, Dec 30, 2007. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6637](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6637)>. Accessed December 31, 2007.

### **Bovine Tuberculosis, Canada**

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More than 30 farms in British Columbia (BC) and Alberta were placed under quarantine due to an outbreak of bovine tuberculosis (TB). One bull from a beef cattle herd in central BC was confirmed to be TB-positive upon slaughter. The Canadian Food Inspection Agency is conducting traces on about 950 head of cattle. The last case of bovine TB in BC in cattle occurred in 1976, while the last case in Canada occurred in 2004 in Manitoba. Bovine TB is known to circulate in wildlife in western Canada; however, DNA analysis showed that the strain of the current outbreak has not been seen in cattle or wildlife in recent years. This single outbreak of bovine TB does not affect Canada's current TB-free status.

*Sources:*

1. Canadian Food Inspection Service: 'Bovine Tuberculosis (TB) Confirmed in a Beef Cattle Herd in British Columbia'. <[http://www.caza.ca/media/Pdf/Animal\\_Health/Bovine\\_Tuberculosis.pdf](http://www.caza.ca/media/Pdf/Animal_Health/Bovine_Tuberculosis.pdf)>. Accessed January 2, 2008.
2. ProMED: <[http://www.promedmail.org/pls/askus/www\\_flow.accept](http://www.promedmail.org/pls/askus/www_flow.accept)>. Archive numbers 20071202.3884. Accessed January 2, 2008.

### **Equids**

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#### **Equine Respiratory Disease, Russia**

Russian media reported outbreaks of an equine respiratory disease affecting horses in the Republics of Bashkortostan, Tatarstan and Khakassia, and in Moscovskaya, Udmurtia and Omskaya Oblasts throughout October and early November 2007. It is unclear from the reports whether the outbreaks were caused by equine influenza or equine herpesvirus(EHV). Most of the reports indicate equine influenza; however,



one report does state that horses at Ufa in Bashkortostan were ultimately diagnosed with EHV. According to the reports, horses in some of the affected regions are vaccinated for equine influenza twice annually.

The respiratory disease outbreak is believed to have spread from a national horseracing championship in Ufa (Bashkortostan) to hippodromes in Moscow, Kazan of Tatarstan, and Omsk of Omskaya Oblast, where races were cancelled.

A regional media source has reported appearances of a viral infection affecting horses in Udmurtiya. In response, the affected hippodrome, located in Izhevsk, has been quarantined and races postponed. As reported in multiple regions over the past several weeks, the disease is believed to have spread from a sporting event held in Ufa. The chief veterinarian of the local hippodrome notes that horses are vaccinated for equine influenza twice annually, and that this outbreak may reflect a novel strain of the virus. Clinical signs are said to be mild.

Source: Russian Media

## **Equine Influenza Outbreaks, Global**

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Equine influenza outbreaks were reported in several countries that either had never reported the disease or had been free of the disease for several years.

The introduction and spread of equine influenza in Australia demonstrates the havoc a disease agent can create in a naïve population. Australia had never reported the disease prior to the outbreak, which began in August. The disease spread widely through New South Wales and Queensland, but has not been detected in other Australian states or territories. The Wisconsin strain, A/equine/Wisconsin/1/03(H3N8), was identified, and the source of the introduction has not been determined.

As of January 4, 2008, New South Wales (NSW) reported 680 infected properties, 248 dangerous contact properties, and 136 suspect properties. On the positive side, NSW has 6,109 resolved cases; 8,735 vaccinated properties; 350 events registered; and 31,849 Travelling Horse Statements issued.

As of January 4, 2008, Queensland listed 648 infected premises in 15 shires: 392 in Beaudesert Shire, 91 in Gold Coast City, 60 in Caboolture Shire, and 53 in Pine Rivers Shire. A map showing the zones, as of December 31, is available at:

<http://www2.dpi.qld.gov.au/extra/ei/maps/Monday/CE-InternetMaps-Overview-20080102.pdf>

Sources:

1. Queensland Weekly Equine Influenza Report for December 16-22. <[http://www.dpi.qld.gov.au/cps/rde/xchg/dpi/hs.xsl/27\\_8734\\_ENA\\_HTM.L.html](http://www.dpi.qld.gov.au/cps/rde/xchg/dpi/hs.xsl/27_8734_ENA_HTM.L.html)>. Accessed January 4, 2008.
2. New South Wales Equine Influenza Daily Update for January 4, 2008. <<http://www.dpi.nsw.gov.au/agriculture/livestock/horse/influenza/information/daily-updates/4-january-2008>>. Accessed January 4, 2008.

### Japan

Japan reported equine influenza outbreaks to the OIE on August 28. This was the first detection of equine influenza in Japan since 1972. The disease proceeded to spread throughout the country in various equine populations including race horses, riding horses and feeder horses. As of December 27, a total of 2,022 out of 14,011 susceptible horses had been affected, representing an apparent morbidity rate of 14.43%. Genome sequencing of RT-PCR products revealed that equine influenza A H3N8 virus of the Florida sub-lineage was present in one sample. The source of the outbreak has not been determined.

#### *Sources:*

1. OIE: 'Equine Influenza, Japan' Immediate Notification report, August, 28, 2007. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6223](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6223)>. Accessed January 4, 2008.
2. OIE: 'Equine Influenza, Japan' Follow-up report 1-4, September 18 – December 27, 2007. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6229](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6229)>. Accessed January 4, 2008.

### Mongolia

Mongolia's Khovd and Bayan-Ulgii provinces were also hard-hit by equine influenza outbreaks beginning October 26, 2007. Mongolia's OIE report of November 14 indicated that 11,631 cases had been identified among 101,587 susceptible horses on 7 premises, resulting in an apparent morbidity rate of 11.45%. Nine of the infected horses died. The disease continued to spread, as indicated on January 6 by national media reports in which between 448 and 14,450 cases were reported in Arhangay, Bulgan, and Uvs provinces. Mongolia's equine population numbers more than 2 million head and equine influenza had last been reported in Mongolia in 2005.

On January 7, 2008, Mongolia's Emergency Situations Agency announced that since October 2007, when equine influenza appeared in the country's western provinces of Khovd and Bayan-Olgii, the disease has gradually spread, affecting a total of over 60,000 horses in 11 provinces in Mongolia.

#### *Source:*

1. OIE: 'Equine Influenza, Mongolia' Immediate Notification report. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6475](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6475)>. Accessed January 4, 2008.
2. ProMED: <[http://www.promedmail.org/pls/promed/f?p=2400:1001::NO::F2400\\_P1001\\_BACK\\_PAGE,F2400\\_P1001\\_PUB\\_MAIL\\_ID:1000%2C40805](http://www.promedmail.org/pls/promed/f?p=2400:1001::NO::F2400_P1001_BACK_PAGE,F2400_P1001_PUB_MAIL_ID:1000%2C40805)>. Accessed January 6, 2008.

## China

On November 5, China reported its first outbreak of equine influenza since 1994. The outbreak began on October 9, but wasn't confirmed until October 30. Equine influenza virus A subtype H3N8 was identified. Of 130,000 susceptible equines in the seven counties of Altay, Burqin, Fuhai, Fuyun, Habahe, Jemnay and Qinghe, 5,515 cases of equine influenza were identified, with an apparent morbidity rate of 4.24%.

### Source:

OIE: 'Equine Influenza, China' Immediate Notification report. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6429](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6429)>. Accessed January 4, 2008.

## Glanders, Iran

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On November 13, 2007, Iran reported to the OIE one case of glanders among 36 susceptible horses. The case was detected during screening and was a subclinical infection. This is the first reported case in Iran since 2001, and the source of the infection is suspected to be illegal horse movement from Iraq. According to a followup report submitted to the OIE on December 2nd, active surveillance for glanders was implemented after this event. All susceptible individuals in the district of Sanandaj were tested 21 days after detection of the case and results were all negative.

### Source:

OIE: 'Glanders, Iran' Immediate Notification report. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6455](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6455)>. Accessed January 4, 2008.

## African Horse Sickness (AHS), Senegal

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According to Senegal's initial report to the OIE on September 12, 2007, AHS serotype 2 was detected in outbreaks beginning May 21, 2007. The initial report detailed 2 outbreaks of serotype 2 with 8 cases, all resulting in death. There were 65 susceptible horses on the premises with an apparent mortality rate of 12.31%. AHS serotype 9 is endemic in Senegal.

Two followup reports submitted to the OIE included 56 additional outbreaks spread throughout the country. These outbreaks had a much higher apparent mortality rate. Of 1,500 susceptible horses on the affected premises, 502 cases were identified. Of these, 487 resulted in death, leading to an apparent mortality rate of 32.5% and a case fatality rate of 96.8%. A total of 5,241 racehorses were vaccinated in response to the outbreaks.

### Source:

1. OIE: 'African horse sickness, Senegal' Immediate Notification report. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6179](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6179)>. Accessed January 4, 2008.  
2. OIE: 'African horse sickness, Senegal' Follow-up reports 1-2. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6179](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6179)>.

prod/public.php?page=single\_report&pop=1&reportid=6547>. Accessed January 4, 2008.



Source: OIE

## Poultry

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### Newcastle Disease, Greece

On November 2, 2007, Greek animal health officials reported an outbreak of Newcastle disease on a farm of fattening broiler chickens in Crete. Control measures applied included depopulation, zoning, disinfection of infected premises, and vaccination. The last reported occurrence of Newcastle disease in Greece was in November 2005.

### Source:

OIE Report: <[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&reportid=6416](http://www.oie.int/wahid-prod/public.php?page=event_summary&reportid=6416)>. Accessed January 2, 2008.

### Low Pathogenic Avian Influenza H5N2, Dominican Republic

On December 21, 2007, Dominican Republic animal health officials reported two outbreaks of low pathogenic avian influenza (LPAI) H5N2. One outbreak occurred in a live bird market in the city of Santo Domingo, and the other occurred in the village of La Otra Banda in the east of the country. Control measures applied included depopulation, quarantine, screening, disinfection of infected premises and movement controls. This is the first reported occurrence of LPAI H5N2 in the Dominican Republic.

### Source:

OIE Report: <[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&reportid=6616](http://www.oie.int/wahid-prod/public.php?page=event_summary&reportid=6616)>. Accessed January 2, 2008.

## Highly Pathogenic Avian Influenza H5N1 (HPAI H5N1), Global

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### **2007 Summary**

Analysts at FAO reported that the global HPAI H5N1 situation in birds between January and November 2007 indicates fewer outbreaks and fewer infected countries compared to the same period in 2006. A total of 30 countries experienced outbreaks during 2007. Most of the confirmed outbreaks in 2007 occurred in domestic poultry, with only a few outbreaks reported in wild birds. Outbreaks have occurred in diverse species including chickens, turkeys, geese, ducks and quails.

FAO's latest cumulative H5N1 maps by species can be found at: <http://www.fao.org/avianflu/en/maps.html>.

### **Summary of First Occurrence of HPAI in a Country by Region, Season, and Type of Birds Affected, 2003–2007**

The panzootic strain of HPAI H5N1 first infected birds in Asia, and then moved to Europe and then on to Africa (figure 1). Most initial outbreaks in a country occurred during the Northern Hemisphere's winter months. In Asia and Africa, the first occurrence of H5N1 was more often identified in commercial birds, whereas in Europe, the first occurrence was more often identified in wild birds. In 2007 there has been a significant decrease in new countries infected with H5N1 compared to 2006.

In 2007 there were only six countries reporting their first occurrence of H5N1: three in Africa, two in the Near East and one in Asia, and all occurred in commercial poultry.

### **Fourth Quarter 2007 Summary**

Outbreaks of HPAI H5N1 continued to occur during the fourth quarter of 2007 in Africa, Asia and Europe. Benin was the only new country to report the occurrence of HPAI H5N1 during the fourth quarter of 2007. Wild bird testing in the United States and Canada has not revealed any cases of HPAI H5N1. Myanmar and Pakistan reported their first human cases of HPAI H5N1 in December 2007. Other countries reporting human cases during the fourth quarter of 2007 were China, Egypt, Indonesia, and Vietnam.

The following are country-specific HPAI H5N1 outbreak summaries for October through the end of December 2007:

### **Africa**

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**Benin:** In early December, Benin officials reported the first occurrence of HPAI H5N1 in Benin. Two outbreaks were reported. One occurred in a layer flock in Cotonou and the other affected free-ranging poultry in Adjara. Both outbreak locations are on the coast not far from the border with Nigeria. The countries that surround Benin

have all reported H5N1 outbreaks to the OIE beginning in February 2006 (light green on map below).



**Egypt:** FAO reported outbreaks in October and December in backyard poultry in multiple districts located in Giza and Mynia governorates. Affected species include chickens, geese, and ducks.

### **Asia**

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**Bangladesh:** Outbreaks have continued to occur from October into December in multiple districts located in the Rajshahi and Dhaka divisions, primarily in backyard poultry.

**China (Hong Kong SAR):** Two wild birds, an egret and a Grey Heron, tested positive for H5N1 during the fourth quarter.

**China (Peoples Republic of):** Although not officially reporting cases in birds, China reported human cases in December, indicating continued outbreaks in birds are occurring.

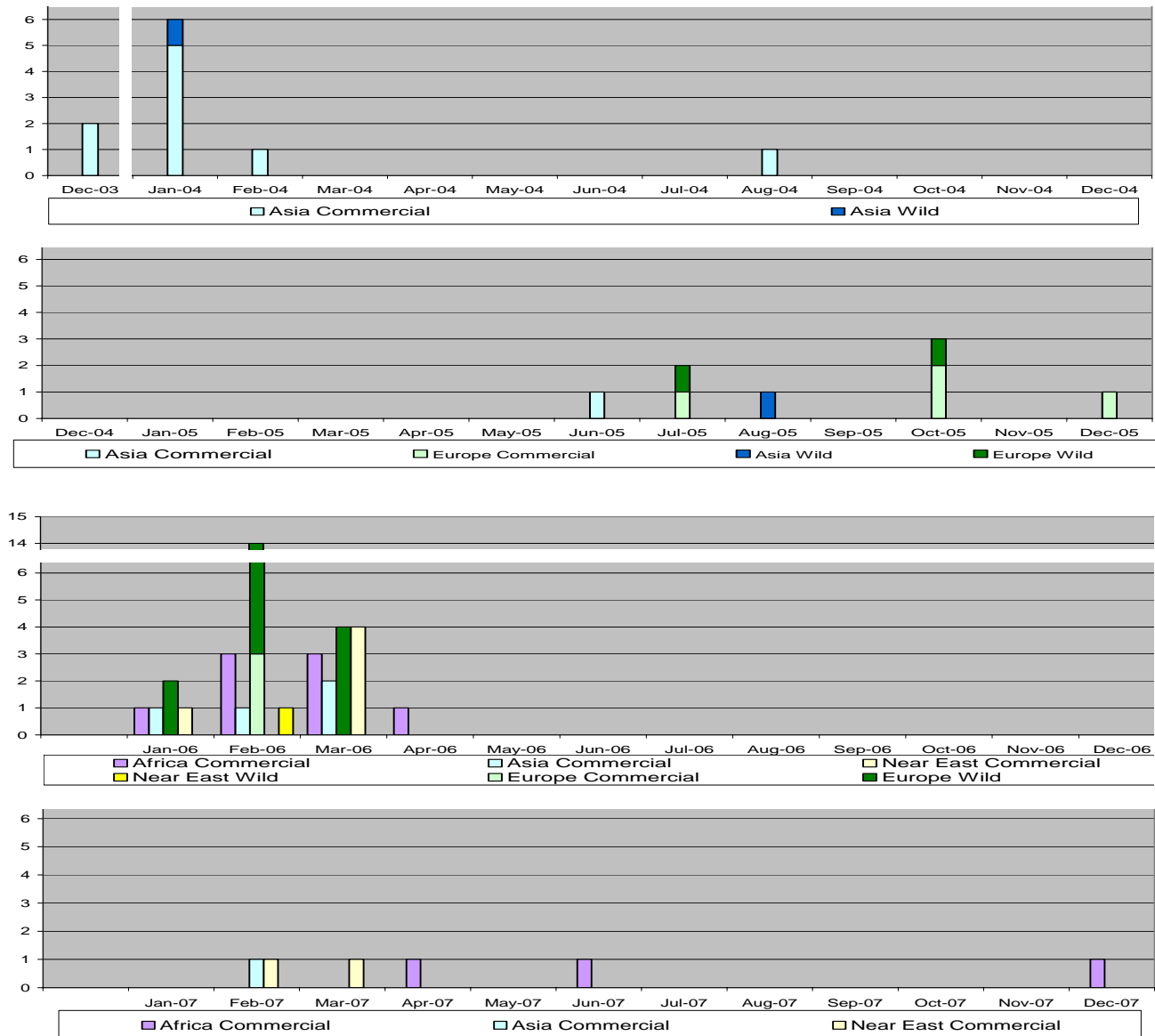
**Indonesia:** Through the FAO participatory disease surveillance (PDS) program in Indonesia, FAO reported that HPAI H5N1 continued to be endemic in four provinces (Bali, Java, Sulawesi and Sumatra).

**Myanmar:** Government officials have reported outbreaks during the fourth quarter in Eastern Shan State and Bago State. Affected species include chickens, quails, and ducks.

**Pakistan:** Government officials have reported outbreaks occurring October through December in multiple districts. Locations of outbreaks include Islamabad, North-West Frontier, Abbottabad, and Punjab. Broiler chickens were primarily affected.

**Vietnam:** Outbreaks continued in north, south, and central Vietnam occurring in five provinces, Cao Bang, Ha Nam, Nam Dinh, Quang Tri, and Tra Vinh. Ducks and chickens were affected primarily on backyard and

**Figure 1. Number of countries with a first occurrence of H5N1 HPAI by region, month and type of birds affected, December 2003 through December 2007\***



\*Dates refer to month of start of event as reported to OIE

small farms. The country's second mass avian influenza vaccination campaign for 2007 started in November in 63 provinces and cites.

**Europe**

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Germany: German officials reported to the OIE on December 17 an outbreak in a small backyard flock of laying hens in Brandenburg. Media reports on December 25 indicate outbreaks on two additional backyard properties in Brandenburg.

Poland: On December 3, Poland reported an outbreak of HPAI H5N1 virus in turkeys. The outbreak began November 30 at two commercial turkey farms near

Plock, Mazowieckie Province, about 110 km northwest of Warsaw. This was the first report of HPAI H5N1 in domestic poultry in Poland; previous reports occurred in wild swans in 2006. Since the first report, HPAI has surfaced at several other locations in Poland, including two large commercial farms of laying hens near Zuromin, three wild birds at an animal shelter near Orneta (200 km north of Warsaw), and two small flocks of mixed poultry several km from the animal shelter. As of December 23, official reports to the OIE confirmed HPAI H5N1 outbreaks at 9 sites.

Romania: On November 28, Polish officials reported to the OIE an outbreak of HPAI H5N1 among backyard poultry in the province of Tulcea, near the Black Sea.

Romania's last officially reported outbreak occurred in July 2006.

Russia: During December, Russian officials reported to the OIE four outbreaks of HPAI H5N1, all in Rostovskaya blast. Three outbreaks occurred in backyard poultry and one occurred in a layer chicken farm.

United Kingdom (U.K.): On November 13, officials reported to the OIE an outbreak of HPAI H5N1 on a turkey farm in Suffolk (southeast England). On November 19, officials confirmed HPAI on a second farm, which was one of four Dangerous Contact premises to the first affected farm. The U.K. last reported an outbreak of HPAI H5N1 in commercial poultry, also in Suffolk, in February 2007. The premises/producer in the November outbreak was not linked to the outbreak in February.

## Near East

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Iran: Iranian officials had, until mid-January 2008, denied the presence of HPAI H5N1 in the country. On January 16, an outbreak detected on December 12, 2007 as a result of routine surveillance was reported to the OIE. Media reports from December stating that culling of birds had taken place in multiple provinces due to bird flu outbreaks have not yet been confirmed.

Saudi Arabia: In November, Saudi Arabian officials reported the recurrence of HPAI H5N1. By mid-December, at least 17 outbreaks had occurred, mostly in commercial poultry operations in Riyadh province. The media reported in December an outbreak in imported falcons from Central Asia and an outbreak on an ostrich farm. The first occurrence of H5N1 in Saudi Arabia was in March 2007.

### Sources:

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2. OIE Reports:  
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3. FAO AIDE News situation updates 49:  
<[http://www.fao.org/docs/eims/upload//237459/AIDEnews\\_dec07\\_no49.pdf](http://www.fao.org/docs/eims/upload//237459/AIDEnews_dec07_no49.pdf)>. Accessed December 31, 2007.

## Porcine

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### African Swine Fever (ASF) Update

Since the 1960s, ASF had only been reported in southern Africa, in several European countries, and in the Caribbean. As of 2005 (the latest annual OIE data available), Italy was the only European country that continued to have clinical ASF in limited zones on the Island of Sardinia. In the second half of 2007, ASF has

been officially reported in countries outside of these typical locations, including Georgia, Armenia, Russia and Mauritius. Media reports have indicated that ASF may also be occurring in Azerbaijan and China, but no official confirmation has been given. ASF has never occurred in the United States.

### New Countries Affected, Fourth Quarter, 2007

Mauritius: Mauritius, a small island off the eastern coast of Africa, reported ASF for the first time to the OIE in October 2007. Three outbreaks were identified, and the source is unknown.

Russia: Russia reported an outbreak of ASF to the OIE in November 2007. This was the first report of ASF in Russia since 1977. The outbreak affected 5 wild boars along the Argun and Shatoy-Argun rivers, which run 30 to 40 km on the Georgian border. The source of the infections is believed to be transboundary migration of wild boars from Georgia.

### Sources:

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3. CEI Impact Worksheet, African Swine Fever in Georgia. <[http://www.aphis.usda.gov/vs/ceah/cei/taf/iw\\_2007\\_files/ASFGeorgia\\_2007/asf\\_georgia\\_june\\_8\\_2007.pdf](http://www.aphis.usda.gov/vs/ceah/cei/taf/iw_2007_files/ASFGeorgia_2007/asf_georgia_june_8_2007.pdf)>. Accessed January 4, 2008.

### Swine Slaughter Workers Affected by Neurologic Illness in Minnesota

In December, the Minnesota Department of Health announced an investigation of a neurological illness that occurred in a cluster of 11 workers at a pork processing plant in Austin, Minnesota. The cases occurred between December 2006 and July 2007. The neurological symptoms reported included muscular weakness and abnormal sensation. The 11 cases worked in an area where either swine heads or organs were processed with compressed air. The CDC is assisting with further investigations; in the investigation, two slaughter plants, one in Indiana and one in Nebraska were identified as using a similar compressed air technique. Two potential cases of the neurologic illness have since been found in Indiana. All three slaughter plants have discontinued the use of the suspected processing technique.

### Sources:

- ProMED:  
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## Aquaculture/Aquatic Species

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### Viral Hemorrhagic Septicemia (VHS), Norway and Bulgaria

Norway: Norway reported an outbreak of VHS to the OIE in farmed rainbow trout in November 2007. This is the



first reported VHS outbreak in Norway since 1974. The virus is thought to be a marine variety, and the source of infection is unknown. The fish are kept in a semi-open, salt-water enclosure and typical stamping out measures have been applied. Only one premises has been affected to date.

**Bulgaria:** Bulgaria reported VHS to the OIE in December 2007 for the first time since 1996. The outbreak occurred in a farm of freshwater trout that were kept in a closed system. The source of the outbreak is unknown, and stamping out measures were applied.

*Sources:*

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2. Norwegian Food Safety Authority (Mattilsynet). <[http://www.mattilsynet.no/english/animal\\_disease\\_control/vhs\\_confirmed\\_in\\_rainbow\\_trout\\_53830](http://www.mattilsynet.no/english/animal_disease_control/vhs_confirmed_in_rainbow_trout_53830)>. Accessed January 4, 2008.
3. OIE: Immediate Notification report. <[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=6466](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=6466)>. Accessed January 4, 2008.

### **Crayfish Plague, United Kingdom**

In October 2007, *Aphanomyces astaci*, a fungal disease commonly known as crayfish plague, was found in the river at the Suffolk/Norfolk border. The disease was found in the non-native species known as Turkish crayfish. The main concern surrounding this outbreak is that the disease is lethal to the native species, freshwater white-clawed crayfish. This species is the only crayfish native to the U.K. and it is classified as an endangered species. Measures are underway to prevent the spread of the infection to other rivers.

*Sources:*

1. BBC news: <[http://news.bbc.co.uk/2/hi/uk\\_news/england/7055847.stm](http://news.bbc.co.uk/2/hi/uk_news/england/7055847.stm)>. Accessed January 4, 2008.
2. Promed via East Anglian Times. <[http://www.promedmail.org/pls/askus/f?p=2400:1202:10787915862813410869::NO::F2400\\_P1202\\_CHECK\\_DISPLAY,F2400\\_P1202\\_PUB\\_MAIL\\_ID:X,39786](http://www.promedmail.org/pls/askus/f?p=2400:1202:10787915862813410869::NO::F2400_P1202_CHECK_DISPLAY,F2400_P1202_PUB_MAIL_ID:X,39786)>. Accessed January 4, 2008.

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