

## Summary of Selected Disease Events January—March 2007

### I. OIE Listed Diseases

#### Foot and Mouth Disease (FMD)

##### **North Korea (Democratic People's Republic)**

North Korea reported an outbreak of foot and mouth disease serotype O to the OIE on March 2. The diagnosis was confirmed on February 5; it is estimated that the outbreak began on January 10. This is the first report of an FMD outbreak in North Korea since 1960. It is believed the disease was introduced by a shipment of live calves imported from Liaoning province, China.

Of the 461 susceptible cattle, 431 were cases (an attack rate of nearly 93%). All 461 susceptible cattle were destroyed. No cases were exhibited in swine, but 2,630 susceptible swine were destroyed.

After a one-week mission organized by the FAO/OIE Crisis Management Center to North Korea, Joseph Domenech, FAO's Chief Veterinary Officer reported that there is a low risk of new outbreaks occurring in North Korea, based on observance of disease control measures put in place.

##### Sources:

- 1) March 7, 2007. Report to OIE. Foot and mouth disease, Korea (Dem. People's Rep.). (Immediate notification).  
<[http://www.oie.int/wahid-prod/public.php?page=single\\_report&pop=1&reportid=5003](http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=5003)>.
- 2) ProMED. #20070404. Foot & mouth disease, bovine—North Korea.

##### **Bolivia**

On January 26, Bolivia reported its first occurrence of FMD since 2003. The outbreak of FMD serotype O was detected in cattle in Santa Cruz, an area considered by OIE to be FMD-free with vaccination. Twenty-three bulls with a shipment certificate from an auction were introduced to a farm that originally contained 11 cattle. The owner suspected the disease and notified officials. The attack rate for the initial outbreak was 14.7%. Four subsequent outbreaks were reported through February 23. Cattle morbidity for the 5 outbreaks was less than 1.5%, with a case fatality rate of approximately 3%. Swine morbidity was 100%, with no associated fatalities.

##### Source:

- 1) OIE event summary, foot and mouth disease, Bolivia.  
<[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&this\\_country\\_code=BOL&reportid=4645](http://www.oie.int/wahid-prod/public.php?page=event_summary&this_country_code=BOL&reportid=4645)>.

##### **Ecuador**

Ecuador continues to have outbreaks of FMD serotype O, having reported its previous outbreak in May 2006. On January 26, 2007, officials reported an outbreak to OIE that they believe originated when 6 pigs, of undetermined origin, were introduced to the affected farm. Five of 120 pigs were diagnosed as FMD-positive (an attack rate of approximately 4%). The 26 cattle and 10 goats on this premises were not clinical. Two subsequent outbreaks, also in swine, were reported. Swine morbidity was approximately 13%, with a case fatality rate of 40%. Susceptible cattle in these two subsequent outbreaks did not develop clinical signs but were slaughtered as a precautionary measure.

##### Source:

- 1) OIE event summary: foot and mouth disease, Ecuador.  
<[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&this\\_country\\_code=ECU&reportid=4744](http://www.oie.int/wahid-prod/public.php?page=event_summary&this_country_code=ECU&reportid=4744)>.

##### **Lebanon**

Two FMD outbreaks occurred in Lebanon in February, the first reported outbreaks in the country since 2003. The serotype has not been reported. The disease is believed to have been introduced by the illegal movement of animals. One outbreak occurred in sheep and goats in Al Janoub, a region in which routine vaccination is not practiced in sheep and goats. Of 350 susceptible sheep and goats, 65 were cases (approximately 19% attack rate), with 4 deaths (approximately 6% case fatality rate). The other outbreak was in cattle in Al Biqa: 70 susceptible cattle were exposed, with 4 cases (approximately 6% attack rate), and no deaths reported. No clinical signs were observed in sheep and goats in Al Biqa, a region that vaccinates sheep and goats with a serotype O vaccine.

##### Source:

- 1) OIE event summary, foot and mouth disease, Lebanon.  
<[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&this\\_country\\_code=LBN&reportid=5250](http://www.oie.int/wahid-prod/public.php?page=event_summary&this_country_code=LBN&reportid=5250)>.

### **Palestinian Autonomous Territories**

Palestine reported outbreaks of FMD serotype O that began February 2. The initial outbreaks occurred in three villages in the West Bank in which only sheep and goats are raised. Palestinian officials had reported 17 outbreaks to OIE through April 3. Adult animals showed few clinical signs except for lameness, which lasted two days, but mortality among lambs and kids was reported to be high. A mass vaccination campaign was implemented in all districts of the West Bank and is ongoing.

Source:

1) OIE event summary, foot and mouth disease, Palestinian Auton. Territories.  
<[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&this\\_country\\_code=PSE&reportid=4851](http://www.oie.int/wahid-prod/public.php?page=event_summary&this_country_code=PSE&reportid=4851)>.

### **Rift Valley Fever (RVF)**

Outbreaks of Rift Valley Fever began in December 2006 in Kenya and in January 2007 in Tanzania. RVF is a zoonotic viral disease that mainly affects animals such as cattle, buffalo, sheep and goats. The disease is most common during years of heavy rainfall.

RVF typically is confined to Africa, and generally is found in eastern and southern Africa among livestock-keeping communities. In enzootic zones, such as central Africa or coastal forests, there may be some virus activity most years depending upon the rainfall and mosquito populations. Detections of RVF outside of Africa include a 2000 outbreak in Saudi Arabia and, subsequently, in Yemen; the source was later traced to East Africa. In 1977, RVF was detected in Egypt, but it was suspected to have been exported there through infected animals from Sudan.

Although the reappearance of RVF in the Horn of Africa was predicted as early as September 2006, there was little planning for an outbreak. The virus claimed 155 human lives in Kenya and 33 in Tanzania as well as scores of livestock and wildlife. The director of the Kenya Medical Research Institute (KEMRI) said there had been enough warning, but requirements such as animal vaccines and awareness programs were brought in long after the virus had struck.

Sources:

1) FAO Animal Health Disease Card for Rift Valley Fever.  
<<http://www.fao.org/ag/AGAinfo/subjects/en/health/diseases-cards/rvf.html>>, and  
<PRO/AH/EDR> Rift Valley fever, Eastern Africa (30): Kenya & Tanzania, #20070502>.

### **Kenya**

Kenya officials reported an outbreak of RVF to OIE on January 9, 2007. The outbreak started December 4, 2006, and was confirmed December 22. The initial outbreak was detected in Garissa among sheep, goats,

cattle, and camels from multiple herds. Reported attack rates for the Garissa outbreak were approximately 17% for sheep, 15% for goats, and 13% for both cattle and camels, with case fatality rates of approximately 7% for sheep, 6% for goats and cattle, and 1% for camels. No subsequent reports have been filed by Kenya officials to OIE so the total number of livestock affected by the outbreaks is not available.

Sources:

1) ProMED. Rift Valley fever–Eastern Africa (21): Kenya, vaccination. # 20070307.0807.  
2) ProMED. Rift Valley fever–Eastern Africa (30): Kenya & Tanzania. #20070502.1427.  
3) OIE event summary, Rift Valley fever.  
<[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&this\\_country\\_code=KEN&reportid=4487](http://www.oie.int/wahid-prod/public.php?page=event_summary&this_country_code=KEN&reportid=4487)>.

### **Tanzania**

A RVF outbreak in Tanzania affecting cattle, goats, and sheep that began January 18, and was confirmed February 7, was reported to OIE on February 12. This initial outbreak occurred in Arusha, an area that borders Kenya. Subsequent outbreaks occurred through March in Dodoma and Iringa, areas south of Arusha. Tanzania reported 14 outbreaks to OIE through April 10. Attack rates were approximately 33% in cattle, 42% in goats, and 30% in sheep. Case fatality rates were approximately 12% in cattle, 13 % in goats, and 14% in sheep

In spite of the proximity to Kenya, there is speculation as to the source of the outbreak. Dr. Glyn Davies asserts that RVF is enzootic in Tanzania and did not spread from Kenya. The floodwaters from the heavy rains resulted in increased RVF transmission as predicted by models as early as August–September 2006. According to Dr. Davies, the apparent increase in cases in the Dodoma region was likely due to needle transmission.

Source: ProMED. Rift Valley fever–Eastern Africa (23): Tanzania (Dodoma). #20070320.0983.

### **Somalia**

Somalia also has been affected by Rift Valley Fever outbreaks. Data is not available on livestock losses. From December 19, 2006, to February 20, 2007, a total of 114 human cases of RVF, including 51 deaths (a case fatality rate of 45%) were reported in Somalia. Three of the 114 reported cases were laboratory confirmed. During the outbreak response, the difficult security situation has continuously hampered surveillance and control activities in the affected areas.

Source:

1) WHO report. May 9. Rift Valley Fever in Kenya, Somalia and the United Republic of Tanzania.  
<[http://www.who.int/csr/don/2007\\_05\\_09/en/index.html](http://www.who.int/csr/don/2007_05_09/en/index.html)>.

## **Newcastle Disease**

### **China**

Information posted by ProMED translated from China Husbandry and Veterinary News included details of an outbreak of Newcastle disease with a concurrent diagnosis of nephropathogenic infectious bronchitis. The outbreak occurred in January among a flock of 1,000 laying hens. Onset of illness was sudden; clinical signs included breathing difficulties, outstretched necks, and coughing and sneezing with rales in the trachea when breathing. Main clinical signs in the flock were reduced appetite, increased thirst, white urea diarrhea, and respiratory distress.

Dead chickens were taken to Xingtai City Veterinary Hospital for further diagnosis, where a diagnosis of combined infection with Newcastle disease and nephropathogenic infectious bronchitis was made. Comprehensive prevention and treatment measures were implemented and the outbreak was quickly contained.

Source:

1) ProMED. Newcastle disease, poultry—China. #20070227.0709

### **Japan**

Japan reported a Newcastle disease outbreak in a flock of 8,700 birds in March. The apparent attack rate was about 1.4%, with only 120 cases, all of which died. The remaining birds were destroyed. Japan had previously reported a Newcastle disease outbreak in May 2006.

Source:

1) OIE event summary: Newcastle disease, Japan. <[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&this\\_country\\_code=JPN&reportid=4995](http://www.oie.int/wahid-prod/public.php?page=event_summary&this_country_code=JPN&reportid=4995)>.

### **Czech Republic**

A January outbreak of Newcastle disease in backyard pigeons was the first report of the disease in the Czech Republic since 1998. It is believed the pigeons contracted the disease through contact with wild birds. One pigeon died, and the remaining 35 on the premises were destroyed. No additional outbreaks have been reported.

Source:

1) OIE event summary: Newcastle disease, Czech Republic. <[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&this\\_country\\_code=CZE&reportid=4659](http://www.oie.int/wahid-prod/public.php?page=event_summary&this_country_code=CZE&reportid=4659)>.

### **Slovakia**

Imported pigeons from the Czech Republic were implicated in a Slovakian outbreak of Newcastle disease (Avian paramyxovirus type 1), pigeon variant, confirmed on January 31. Of 733 susceptible birds, 2 died and 3 were destroyed.

Source:

1) OIE Event summary: Newcastle disease, Slovakia. <[http://www.oie.int/wahid-prod/public.php?page=event\\_summary&this\\_country\\_code=SVK&reportid=4704](http://www.oie.int/wahid-prod/public.php?page=event_summary&this_country_code=SVK&reportid=4704)>.

### **Israel**

Multiple outbreaks of Newcastle disease occurred in Israel from January–March, although the disease seemed to be waning in March, as only one new outbreak was identified. Table egg and broiler chicken flocks were affected. All of the 291,350 susceptible birds either died or were culled. The attack rate was approximately 13%, with a case fatality rate of nearly 45%.

Sources:

1) ProMED. Newcastle disease, poultry—Israel (Galilee): RFI, #20070310.0855.  
2) Israel Veterinary Services and Animal Health, Month 4 2007 Report. <<http://www.vetserveg.moag.gov.il/vetserveg>>.

## **EHV-1 Neurological Form—United States**

Outbreaks of neurological EHV-1 have occurred at various equine facilities in the United States in 2007, including racetracks, horse show grounds, veterinary clinics and boarding stables. From January 1 through March 31, 2007, 11 outbreaks of EHV-1 were reported in California, Connecticut, Maryland, (related to the Virginia outbreak), Maine, Minnesota, New York, Virginia, and Wisconsin. Additional information about EHV-1 outbreaks in the United States is available at the following USDA:APHIS websites: <<http://www.aphis.usda.gov/vs/nahss/equine/ehv/index.htm>> and <[http://www.aphis.usda.gov/vs/ceah/cei/taf/emergingdiseases/notice\\_files/notices.htm](http://www.aphis.usda.gov/vs/ceah/cei/taf/emergingdiseases/notice_files/notices.htm)>.

## **African Horse Sickness (AHS)—Nigeria**

This outbreak was initially reported to be equine herpesvirus in a January 15 ProMED report. The correct diagnosis, African Horse Sickness (AHS), was reported to OIE as a possible AHS outbreak in mid-January. The AHS diagnosis was based on positive serology and PCR results by the OIE Reference Laboratories for African horse sickness virus (AHSV) and bluetongue virus (BTV), at Onderstepoort, South Africa. The laboratory confirmed AHS by virus isolation on January 31.

The polo industry was severely affected by the outbreak. According to the initial ProMED report, the disease was first noticed in Kano, and spread within weeks to Kaduna, affecting many stables. Nearly 40 horses died within a week at Lagos. Prestigious polo matches were cancelled.

S2 sequence comparisons with that of the AHSV2 reference strain and South African AHSV2 isolates from

the 2006 season revealed that the Nigerian isolate S2 sequence was identical to some of the AHSV2 isolates from South Africa. AHSV2 also was isolated previously from cases in Botswana. The genomes of these isolates will be sequenced for comparison to the Nigerian isolate.

Sources:

- 1) ProMED. Equine herpesvirus–Nigeria. #20070115.0195.
- 2) ProMED. Equine herpesvirus–Nigeria (03). #20070120.0268.
- 3) ProMED. African horse sickness–Nigeria: serotype 2. #20070131.0399.

## **Tuberculosis—United States**

### **South Dakota**

The South Dakota Animal Industry Board reported a case of bovine tuberculosis (TB) on February 8, 2007. Bovine tuberculosis was traced to a cull cow feedlot in southeastern South Dakota. This was the first TB case in the state in more than 35 years. In August, 2006, the cow was identified with lesions suspicious of TB during routine slaughter surveillance at a Wisconsin plant. At that time, samples were submitted to the National Veterinary Services Laboratories (NVSL) in Ames, IA, and were initially classified as negative for the disease, based on an early screening test. However, further testing, including culture of the *Mycobacterium bovis* bacterium, confirmed that the animal had been infected with bovine TB. The long time required to culture *M. bovis* accounts for the time from initial sampling to a positive diagnosis.

Dr. Sam Holland, South Dakota State Veterinarian, says that animal identification, including a back tag and brucellosis vaccination tag, were used to trace the animal from the slaughter plant, through a South Dakota market, to the feedlot. The premises containing the feedlot was placed under quarantine and an investigation was initiated by animal health officials.

Source:

- 1) South Dakota Animal Industry Board. February 8, 2007. Bovine Tuberculosis Traced to South Dakota Cow Feedlot. Press release. <<http://www.state.sd.us/aib/News/PDF%20Files/2007.2.8%20TB%20News%20Release.pdf>>.

### **New Mexico**

The New Mexico Livestock Board reported a confirmed case of bovine TB in Curry County on March 1, 2007. The New Mexico Livestock Board and the USDA are conducting an investigation. The infected dairy cow was discovered during slaughter surveillance, which is conducted at all State and Federally inspected plants in the United States.

The last case of TB in New Mexico was reported more than 2 years ago. The majority of New Mexico is classified as a tuberculosis-free state. There is a

relatively small zone classified as “modified accredited advanced” in the southeastern part of the state (see <<http://www.newmexicolivestockboard.com/Files/Contact%20Us/Files/NMsplitstatuscombined.jpg>>).

Source:

- 1) New Mexico Livestock Board. March 1, 2007. Bovine TB confirmed in Eddy County. Press release. <<http://www.newmexicolivestockboard.com/Files/Critical%20Notices/Files/Bovine%20TB%20confirmed%20in%20Eddy%20County%203-1-2007.doc>>.

### **Colorado**

On February 5, the Colorado Department of Agriculture reported a case of bovine TB, the first case in the state since 1974. A bull was sold from a Colorado owner in Douglas County to a meat packing facility in San Angelo, Texas. Lesions were detected during routine carcass inspection. Five Colorado herds were quarantined comprising nearly 700 cattle. Each head of livestock underwent two tests. Tests showed none had TB. Cattle were retested 60 days after initial testing, and one herd was released from quarantine. The remaining 4 herds remain under quarantine; investigations continue on these herds.

Sources:

- 1) Colorado Department of Agriculture. February 5, 2007. Colorado Department of Agriculture Investigates a Case of Bovine Tuberculosis. Press release. <<http://www.ag.state.co.us/commissioner/press/2007/tb.html>>.
- 2) Colorado Department of Agriculture. March 9, 2007. Colorado Maintains its TB Accredited Free Status. Press release. <<http://www.ag.state.co.us/commissioner/press/2007/TBbull.html>>.

### **Scrapie: Nor98-like—Wyoming**

On March 16, 2007, the USDA Animal and Plant Health Inspection Service (APHIS) notified stakeholders that an aged female sheep had tested positive for scrapie, consistent with the Nor98 type. The ewe was slaughtered in Michigan, where it was tested as part of USDA's ongoing regulatory scrapie slaughter surveillance program. The ewe was traced back to a flock in Wyoming. This is the first time this particular type of scrapie has been found in the United States. The Nor98 type of scrapie is uncommon even in Europe, with fewer than 300 similar cases diagnosed since it was identified in 1998.

## **II. Other Significant Disease Events**

### **Febrile Horses at Hong Kong Jockey Club**

From February 10 through April 9, a total of 132 horses at the Hong Kong Jockey Club developed a mild fever. Apart from the mild fever, these horses did not develop other clinical signs.

Samples were collected from all febrile horses to test for bacteria and viruses. Equine influenza and strangles tests were negative. Unremarkable white cell counts and fibrinogen were noted in over 75% of the reported febrile cases; approximately 25% of the cases showed monocytosis.

Approximately 19% of the febrile horses tested PCR-positive to EHV-1 from nasopharyngeal swabs taken on the date of pyrexia. Serology results showed marked seroconversion to EHV-1 in approximately 14% of the paired sera samples. The horses involved recovered uneventfully with no neurological signs.

Sources:

- 1) International Collating Centre, Animal Health Trust. March 2007. Interim Report and Report for the First Quarter of 2007.
- 2) ProMED. Undiagnosed disease, equine—China (Hong Kong). #20070221.0647.
- 3) ProMED. Undiagnosed disease, equine—China (Hong Kong) (02). #20070224.0679.

### Leptospirosis—Kentucky

The University of Kentucky's Livestock Disease Diagnostic Center confirmed 40 cases of equine leptospirosis in the Central Kentucky region from July 2006 through mid-March 2007, compared to only two cases in the same time period last year. Researchers will be conducting a study on the incidence of equine leptospirosis, as well as a nationwide economic impact study. Researchers at the Disease Diagnostic Center believe the jump in cases could be related to the increased rainfall experienced last year.

Source:

- 1) University of Kentucky Equine Initiative. March 7, 2007. LDDC Confirmed Equine Leptospirosis Cases Up This Year. Press release.  
<<http://www.ca.uky.edu/equine/EquineLeptospirosis.html>>.

### Equine encephalosis—South Africa

Equine encephalosis was detected in South Africa in February, but was initially reported to be African Horse Sickness. Equine encephalosis virus was isolated by the OIE Reference Laboratories for African horse sickness virus (AHSV) and bluetongue virus (BTV), at Onderstepoort, South Africa. Dr. Truuske Gerdes, with the Onderstepoort Laboratory, reported to ProMED (#20070509.1495) that the virus was typed as Bryanston strain, the proposed EE virus (EEV) serotype 1. Dr. Gerdes reported that there were unusually large *Culicoides* sp. catches in the affected area, and a positive PCR was obtained from the midges for both bluetongue and encephalosis but not for AHS virus. Equine encephalosis virus is widespread and prevalent in South Africa.

Sources:

- 1) ProMED. Equine encephalosis—South Africa (W Cape). #20070509.1495.

2) ProMED. Equine encephalosis—S. Africa (Port Elizabeth). #19990428.0708.

### Methicillin-resistant *Staphylococcus aureus* (MRSA)—The Netherlands

Methicillin-resistant *Staphylococcus aureus* (MRSA), an emerging human pathogen primarily associated with hospital-acquired infections, has been found in raw pork, pigs and in a disproportionately high number of pig farmers, according to the Dutch Food and Consumer Product Safety Authority. Dutch officials put the issue on the agenda of the European Food Safety Authority in February.

An initial survey in the Netherlands showed that a considerable number of Dutch pigs carry MRSA without being clinically ill, and the MRSA strain detected in Dutch pigs has a high prevalence in pig farmers. A preliminary study indicated that MRSA can be present in raw meat, a finding disclosed by the Dutch to EFSA and other EU member-states last March. The initial research suggested the strain was different from hospital-acquired or community-acquired MRSA.

The Dutch Ministry of Agriculture, Nature Management and Food Quality and the Ministry of Public Health, Welfare and Sport were sufficiently concerned to commission an extensive research program to look at:

- \* resistance patterns of the isolated MRSA strains
- \* genetic characterization of the strains
- \* prevalence of MRSA among pig farmers and pigs
- \* prevalence among veal calves and veal farmers
- \* occurrence of MRSA in poultry at slaughter
- \* occurrence of MRSA in dairy cattle at slaughter
- \* transmission of MRSA in the swine production chain
- \* presence or absence of MRSA on fresh meat

The study will run until March 31, 2009 with a budget of 1.3 million euros.

Dutch authorities stress the considerable health costs of MRSA. A study in the Netherlands found MRSA at a level 760 times greater in pig farmers than the rate of patients admitted to Dutch hospitals.

Source:

- 1) Food Chemical News. February 12, 2007. Hospital superbug found on raw Dutch pork. Volume 48, Issue 52.

---

For more information, contact:

USDA:APHIS:VS:CEAH  
Center for Emerging Issues  
NRRC Building B, M.S. 2E5  
2150 Centre Avenue  
Fort Collins, CO 80526-8117  
970.494.7000

Or visit CEI on the Web at  
<http://www.aphis.usda.gov/vs/ceah/cei/>

---

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.