TADs Update – continued global threats and some strategies

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Chief Veterinary Officer, Animal Health Service
Rome, ITALY

Foreign and Emerging Diseases Committee - USAHA October 2019, Providence, Rhode Island, USA
AGAH - Animal Health Service 2013-2019

Risk based surveillance, syndromic surveillance, Information systems, Foot-and-mouth Disease, Classical Swine Fever, African Swine Fever, vaccine production, diagnostic equipment, health and production legislation and legislative reviews, workshops, study tours, strategy development, contingency planning, risk analysis, ...
Veterinarians in the international landscape
GLOCAL
GF-TADs
GLOBAL FRAMEWORK FOR THE PROGRESSIVE CONTROL OF TRANSBORDINARY ANIMAL DISEASES

Food and Agriculture Organization of the United Nations

World Organisation for Animal Health
Food and Agriculture Organization of the United Nations

ANIMAL HEALTH THREATS UPDATE

PREPARED BY FAO AGAH

There is information contained in this FAQ report which is HIGHLY SENSITIVE and CONFIDENTIAL, therefore, this Update is NOT FOR CIRCULATION OUTSIDE OF THE DISTRIBUTION LIST

23 October, 2019

Sudan, Rift Valley Fever (RVF), goats and humans suspected, additional information;

Event summary

Animals - suspected. Local media reported additional RVF cases occurring in the already affected Red Sea state (RSS) and in the new involved River Nile state (see orange circle on Map 1); events estimated of 15-16 heads of goats; reporting that all these cases have been dealt with in collaboration with World Health Organization-Animal (OIE).

Local media reported also that, on 18 October 2019, the Ministry of Animal Resources banned export of livestock until newly emerged cases of RVF are handled. Sudan is a major exporter of live animals, mainly sheep and goats. In 2017, this export’s value was more than USD 476 million; most of the export is destined for Saudi Arabia and the Gulf States. There is also export of camels, most of them going in Egypt and Libya.
2016–2018 Spread of H5N8 highly pathogenic avian influenza (HPAI) in sub-Saharan Africa: epidemiological and ecological observations

Background

During the northern hemisphere’s influenza season, the World Health Organization (WHO) and the Food and Agriculture Organization of the United Nations (FAO) have been tracking the spread of highly pathogenic avian influenza (HPAI) virus. HPAI 2003/2004 first emerged in China in 2003 and spread to many countries in Asia, Europe, and Africa. In 2014, a new strain, HPAI H5N8, emerged in Europe and the Middle East and caused sporadic outbreaks in domestic birds and wild birds in France.

Recent outbreaks of HPAI H5N8 in sub-Saharan Africa have been reported in Burkina Faso, Chad, Ghana, Mauritania, The Gambia, Guinea, Guinea-Bissau, Mali, and Sierra Leone. In the last three countries, HPAI H5N8 was confirmed.

In particular, there is high concern because small ruminants (e.g., sheep and goats) are commonly affected and it is known that animal health programs are difficult to implement.

Assessment:

Almost identical strains of HPAI (serotype C, subtype 81A) were detected in the cases of African and Eurasian epidemics. This similarity suggests that the two epidemics are connected and this has led to the hypothesis that the two outbreaks are linked and may have a common origin in East Africa.

The latest case reports of HPAI H5N8 in Guinea-Bissau are of concern for the country and other Western African countries, especially those that are not currently affected by the strain. The region is characterized by substantial transboundary movements of domestic animals.

Animal movement, particularly meat and meat products, is a major risk factor for the spread of HPAI. The risk of virus spread is enhanced by movements of infected animals and infected material, such as animal products and feed, across international borders.

03 October, 2010

Western African Foot and mouth disease (FMD), serotype O, cattle update;

- In Western Africa, since April 2018, several FMD outbreaks have been reported in Burkina Faso, Chad, Ghana, Mauritania, The Gambia, Guinea, Guinea-Bissau, Mali, and Sierra Leone. In the last three countries, serotype O was confirmed.

- In particular, there is high concern because small ruminants (e.g., sheep and goats) are becoming affected and it is known that animal health programs are difficult to implement and control.

The latest case reports of FMD O in Guinea-Bissau are of concern for the country and other Western African countries, especially those that are not currently affected by the strain. The region is characterized by substantial transboundary movements of domestic animals.

Animal movement, particularly meat and meat products, is a major risk factor for the spread of FMD. The risk of virus spread is enhanced by movements of infected animals and infected material, such as animal products and feed, across international borders.
Rinderpest
Status in 2012 - 36 countries storing RVCM
Status in 2019 - 9 countries storing RVCM (plus RHFs)
1. Rinderpest Virus Containing Materials (RVCM) status
2. Rinderpest holding facility (RHF)
3. Rinderpest vaccine & research
4. FAO communication and awareness raising
5. Global Rinderpest Action Plan (GRAP) - RINDERPEST IS ERADICATED BUT NOT FORGOTTEN
Sequence and destroy: the quest to eliminate the last stocks of deadly rinderpest virus

Labs are being encouraged to sequence their remaining samples of the devastating livestock virus — and then get rid of them for good.

Declan Butler
E-learning

- **Module 1:** Rinderpest recognition and reporting
- **Module 2:** Field Investigation
ASF
ASF outbreaks (since 2007) by species (wild boar vs. domestic pig and TOTAL)

Credit: Claudia Pittiglio, FAO, Disease Ecologist and Modeller
As of 27 Oct 2019, 10 countries in Asia officially reported ASF:

- China (Aug 2018)
- Mongolia (Jan 2019)
- Vietnam (Feb 2019)
- Cambodia (Apr 2019)
- DPRK (May 2019)
- Lao PDR (Jun 2019)
- Myanmar (Aug 2019)
- Philippines (Jul/Sep 2019)
- ROK (Sep 2019)
- Timor-Leste (Sep 2019)

Source: China: MARA, Viet Nam: WAHIS & media information, the Philippines: WAHIS and government websites, Other: WAHIS

Risk profiling

• Swine husbandry
• Transport systems
• Market chains
• Live pigs
• Pork products
• Wild pigs
• Contaminated (inanimate) objects
• Competent vectors
• Behaviour
Asia
Priority diseases (reviewed and revised):

TADs:
African Swine Fever (ASF)
Foot and mouth disease (FMD)
*Peste des petits ruminants* (PPR)
Hemorrhagic septicemia

Zoonotic diseases:
Highly pathogenic avian influenza (HPAI)
Rabies
TB
Brucellosis
Anthrax
Leptospirosis

Potential emerging zoonotic diseases with wildlife as the reservoirs:
Nipah
Avian Influenza
Avian influenza in Eastern, Southern and South-Eastern Asia
2005 - 2019

(Data source: EMPRESi)
Main H5 and H7 subtypes – Since October 2018

Geographical distribution of main AI viruses
1 October 2018 – 19 August 2019
**H5N8 HPAI Global situation update**

23 October 2019, 17:00 hours; Rome

**Overview**

**Situation:** H5N8 highly pathogenic avian influenza (HPAI) 2016 virus in Africa, Asia, Europe and Middle East with pandemic potential.


**Countries reporting new events since the last update:** No new events.

* Reports of H5N8 HPAI events in Taiwan, Province of China, are not included in this update since the virus belongs to a genetically different strain.

**Map 1:** H5N8 HPAI events officially reported in Asia, Europe and Africa by onset date

Note: The large map shows confirmed H5N8 HPAI events observed since 01 October 2018; the small map in the insert shows confirmed events observed between 01 October 2017 and 30 September 2018.
Equine Diseases – Africa
Sub-Saharan Africa, equids diseases, additional information;

MAP 5. African horse sickness, Equine Influenza and Strangles confirmed and suspected events reported in equids in Western, Central and Northern Africa, from Oct. 2018 to 24 Jul. 2019 (by onset date)
CSF
PRESUMEN SITUACIÓN SANITARIA ACTUAL PPC EN LA REGIÓN
### Resumen Situación Sanitaria de PPC

<table>
<thead>
<tr>
<th>PAÍS</th>
<th>POBLACIÓN CERDOS</th>
<th>PESTE PORCINA CLÁSICA</th>
</tr>
</thead>
</table>
| **ARGENTINA** | 5.400.000 | Ocurre última foco: 1999  
Se auto-declara libre de PPC: 2005  
Reconocimiento Oficial OIE: 2018 |
| **BRASIL** | 41.099.460 | Se encuentra zonificado para PPC  
Reconocimiento Oficial OIE Zona Libre  
2014: 2 Estados  
2015: 13 Estados y 4 municipios.  
(Aprox: 53% del territorio nacional) (Sur, Sureste y Centro Oeste)  
Ocurrencia último foco: 2019 (Noroeste) |
| **CHILE** | 2.505.503 | Ocurre última foco: 1996  
Reconocimiento Oficial OIE: 2015 |
Resumen Situación Sanitaria de PPC

<table>
<thead>
<tr>
<th>PAÍS</th>
<th>URUGUAY</th>
<th>1999</th>
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<td>POBLACIÓN CERDOS</td>
<td>175.000</td>
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<td>Se auto-declaró libre de PPC en 1996</td>
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<td></td>
<td>Reconocimiento Oficial OIE: 2019</td>
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<table>
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<tr>
<th>PAÍS</th>
<th>PARAGUAY</th>
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<td>POBLACIÓN CERDOS</td>
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<td></td>
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<tr>
<td>PESTE PORCINA CLÁSICA</td>
<td>Último foco: 1995</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reconocimiento Oficial OIE: 2017</td>
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</tbody>
</table>
## Resumen Situación Sanitaria de PPC

<table>
<thead>
<tr>
<th>PAÍS</th>
<th>POBLACIÓN CERDOS</th>
<th>PESTE PORCINA CLÁSICA</th>
</tr>
</thead>
</table>
| BOLIVIA | 2.951.000 | País se encuentra endémico  
No existe zonificación  
Último foco: 2018  
Meta: erradicación: 2020 |

<table>
<thead>
<tr>
<th>PAÍS</th>
<th>POBLACIÓN CERDOS</th>
<th>PESTE PORCINA CLÁSICA</th>
</tr>
</thead>
</table>
| COLOMBIA | 5.200.000 | Último foco: 2018 (zona control)  
Reconocimiento Oficial OIE  Zona Libre: 2016  
6 departamentos fronteros con Panamá.  
Zonificación:  
Zona de control fronterizo (Venezuela, Ecuador,)  
Zona en fase de erradicación (centro del país)  
Zona libre (sur del país) |
## Resumen Situación Sanitaria de PPC

### PAÍS: ECUADOR

**POBLACIÓN CERDOS**: 1.115.473

**PESTE PORCINA CLÁSICA**
- Reconocimiento Oficial OIE Zona Libre 2019: Territorio insular de Galápagos
- País se encuentra endémico
- No existe zonificación
- Meta erradicación: 2021
- Ocurrencia último foco: 2019*

*Contacto jefe programa nacional

### PAÍS: PERÚ

**POBLACIÓN CERDOS**: 3.187.254

**PESTE PORCINA CLÁSICA**
- El país se encuentra endémico
- No cuenta con zonificación
- Último foco: septiembre 2019
- Meta: erradicación 2023*

* Contacto jefe SVO

### PAÍS: VENEZUELA

**POBLACIÓN CERDOS**: ???

**PESTE PORCINA CLÁSICA**
- Silencio epidemiológico desde 2005
## Resumen Situación Sanitaria de PPC

<table>
<thead>
<tr>
<th>PAÍS</th>
<th>BÉLICE</th>
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<tbody>
<tr>
<td>POBLACIÓN CERDOS</td>
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<tr>
<td>PESTE PORCINA CLÁSICA</td>
<td>1988&lt;br&gt;Se auto - declaró libre de PPC en 2007&lt;br&gt;A futuro preparará Dossier a OIE.</td>
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<table>
<thead>
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<tbody>
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<td>POBLACIÓN CERDOS</td>
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<tr>
<td>PESTE PORCINA CLÁSICA</td>
<td>1997&lt;br&gt;Se auto - declaró país libre en 2009&lt;br&gt;Reconocimiento Oficial OIE: 2018</td>
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</table>
### Resumen Situación Sanitaria de PPC

<table>
<thead>
<tr>
<th>PAÍS</th>
<th>POBLACIÓN CERDOS</th>
<th>PESTE PORCINA CLÁSICA</th>
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<tbody>
<tr>
<td><strong>EL SALVADOR</strong></td>
<td>281.965</td>
<td>Ocurrencia último foco: 2008 2 focos</td>
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<tr>
<td></td>
<td></td>
<td>e Auto declaró país libre en 2009.</td>
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<tr>
<td></td>
<td></td>
<td>En proceso de preparación de Dossier a OIE</td>
</tr>
<tr>
<td><strong>GUATEMALA</strong></td>
<td>2.862.429</td>
<td>Se auto declaró país libre en 2009 (foco en 2011)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Se auto – declaró país libre en 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>En proceso de envío de Dossier a OIE</td>
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<tr>
<td><strong>HONDURAS</strong></td>
<td>456.007</td>
<td>Ocurrencia último foco: 2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e Auto declaró libre de PPC en 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Requiere apoyo para Dossier a OIE</td>
</tr>
<tr>
<td>PAÍS</td>
<td>NÚMERO DE CERDOS</td>
<td>PESTE PORCINA CLÁSICA</td>
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<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>NICARAGUA</td>
<td>516.213</td>
<td>Ocurrencia último foco: 2008</td>
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<td></td>
<td></td>
<td>Se auto-declaró libre de PPC en 2010</td>
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<tr>
<td></td>
<td></td>
<td>En proceso de envío de Dossier a OIE</td>
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<td>PANAMÁ</td>
<td>398.900</td>
<td>Ocurrencia último foco: 1961</td>
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<tr>
<td></td>
<td></td>
<td>Se auto-declaró libre de PPC en 2007</td>
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<td>En proceso de preparación de Dossier a OIE</td>
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<tr>
<td>MÉXICO</td>
<td>17.210.269</td>
<td>Ocurrencia último foco: 2005</td>
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<td></td>
<td>Se auto-declaró libre de PPC en 2009</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reconocimiento Oficial OIE: 2015</td>
</tr>
</tbody>
</table>

**Resumen Situación Sanitaria de PPC**
# Resumen Situación Sanitaria de PPC

## PAÍS

### CUBA

<table>
<thead>
<tr>
<th>POBLACIÓN CERDOS</th>
<th>2.069.400</th>
</tr>
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</table>
| **PESTE PORCINA CLÁSICA** | **Población total de cerdos: 2.069.400**  
El país se encuentra endémico  
No existe zonificación epidemiológica. El 100% del territorio se encuentra en fase de control (vacuna).  
Ocurrencia último foco: xxxxxx | |

## PAÍS

### REPÚBLICA DOMINICANA

<table>
<thead>
<tr>
<th>POBLACIÓN CERDOS</th>
<th>670.000</th>
</tr>
</thead>
</table>
| **PESTE PORCINA CLÁSICA** | **Población Total de cerdos: 670.000**  
El país se encuentra endémico  
No existe zonificación epidemiológica. El 100% del territorio se encuentra en fase de control (vacuna).  
Ocurrencia último foco: 2019  
Meta erradicación: 2022* | |

* contacto jefe SVO

## PAÍS

### HAITÍ

<table>
<thead>
<tr>
<th>POBLACIÓN CERDOS</th>
<th>1.032.802</th>
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</table>
| **PESTE PORCINA CLÁSICA** | **El país se encuentra endémico.**  
No existe zonificación epidemiológica. El 100% del territorio se encuentra en fase de control vacuna.  
Ocurrencia último foco: XXXX | |
“There are 193 Rift Valley Fever (RVF) cases—including four deaths—reported in Red Sea, River Nile and Khartoum states since the onset of the disease on 28 September until 22 October 2019. The majority of cases (100) are in Red Sea. Of all cases reported, 94.8 per cent have affected people over five years of age and 83 per cent are male.....”
“Hundreds of thousands of people in East Africa are affected by heavy rains and floods linked to record-breaking temperature changes in the Indian Ocean. The western Indian Ocean has been about two degrees warmer this month than the eastern Indian Ocean. As a result, higher evaporation off the African coastline is being dumped inland as rainfall ...”
Horn of Africa at risk of Rift Valley Fever (RVF)

Rift Valley Fever (RVF) continues to pose a threat to humans and livestock in the Horn of Africa.

On 26 October, RVF was officially reported to be present in the country, in East Africa. This is a following of a period of prolonged abnormal, heavy rainfall and floods in the Eastern African region.

In mid-September 2019, media also reported human cases of hemorrhagic fever in other regions of Sudan (Bahr al Jazir and North Darfur).

All these are crucial warnings that are currently being flagged as a warning of a high risk of RVF occurrence as an RVF-FAO risk assessment, following earlier predictions and regional weather forecasts for October-December 2019.

Additionally, according to the World Health Organization (WHO), there has been an increase in RVF-related human cases in Sudan, Ethiopia, Kenya, Eritrea, and Uganda, as well as in the Democratic Republic of Congo and South Sudan. There has been an increase in RVF-related human cases in the region, in addition to increased vigilance in livestock populations, due to temperatures and rainfall patterns in the region. RVF in human and animal populations can pose a threat to humans and livestock in the region.

In order to prevent and mitigate any occurrence of RVF in the region, FAO ADVISES COUNTRIES AT RISK TO:

- Increase awareness of RVF clinical signs among veterinarians, farmers, and workers in abattoirs and animal markets. Through social media, newspapers, radio, mobile phones or other channels of communication effective in the region.

From: Lubroth, Juan (AGAH) <juan.lubroth@fao.org>
Sent: 16 October 2019 09:17
To: Juan.Etienne@agah.org
Subject: RE: Alert: Horn of Africa at risk of Rift Valley Fever (RVF)

You forwarded this message on 15/10/2019 11:07.

This message was sent with high importance.

Dear Chief Veterinary Officers,

In October 2019, Rift Valley fever was reported in goats in Arbaa, Red Sea State, Sudan. Movement of animals possibly infected with RVF and predicted suitable environmental conditions for the RVF vector amplification may increase the risk of occurrence and spread of the disease in the Horn of Africa (south Sudan, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, South Sudan, and Uganda).
EMC-AH Emergency Missions to Date
October 2006 – June 2019

103 missions
53 countries
(approx. 46% HPAI, 20% Zoonoses and 34% other TADs)
## EMC-AH African swine fever missions in 2019

<table>
<thead>
<tr>
<th>Country</th>
<th>When</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papau New Guinea</td>
<td>October 2019</td>
<td>Alert</td>
</tr>
<tr>
<td>Cambodia</td>
<td>May 201</td>
<td>Response</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>March 2019</td>
<td>Response</td>
</tr>
<tr>
<td>Mongolia</td>
<td>February 2019</td>
<td>Response</td>
</tr>
<tr>
<td>Lao People’s Democratic Republic</td>
<td>June 2019</td>
<td>Alert</td>
</tr>
<tr>
<td>Myanmar</td>
<td>February 2019</td>
<td>Alert</td>
</tr>
</tbody>
</table>
2016–2018 Spread of H5N8 highly pathogenic avian influenza (HPAI) in sub-Saharan Africa: epidemiological and ecological observations

Western Africa, Foot and mouth disease (FMD), serotype O, cattle update:

- In Western Africa, since April 2018, several FMD outbreaks have been reported in Burkina Faso, Côte d'Ivoire, Ghana, Mauritania, Senegal, Guinea, Guinea-Bissau, Mali and Sierra Leone. In the last three countries, serotype O was typical.

- In particular, there is high concern because small ruminants (e.g. sheep and goats) are becoming affected and it is known that animal movement is difficult to register and control.

Assessment:

Almost identical strains of FMD (serotype O, genotype B1) were found to be the cause of Angolan and Guinean epidemics. This finding led to the hypothesis that the two epidemics are linked and that they have a common origin in West Africa.

These new outbreaks of the same strain in Guinean Bissau are of concern for the countries and of other Western African countries, which are not immunized against this strain. The region is characterized by substantial transboundary and transboundary movements of domestic animals and disease vectors which are driven by seasonal availability of pasture and water as well as by economic trade and tourism. Given the high ecological suitability for FMD circulation in this region and the high livestock mobility, the risk of FMD spread is of...
Progressive Control Pathway

Information for Action

Risk Management ...
Thank you

Protecting people, animals, and the environment everyday

Drawings: FAO/Chiara Caproni