Foreign Animal Disease and Emerging Animal Disease Response

Plans and Planning

PNWER July 25, 2018

Gary Brickler
Director, District 6

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Veterinary Services
Foreign Animal Disease (FAD)

A FAD is a disease or pest not known to exist in the United States or its territories, that has the potential to result in a significant animal or public health impact.

- virulent Newcastle disease
- highly pathogenic avian influenza
- foot-and-mouth disease
- classical swine fever
- African swine fever
Emerging Animal Disease

A disease, infection, or infestation that is a threat to terrestrial animals, aquatic animals, or humans, and meets one of the following criteria:

- An unknown agent that has the potential to result in a significant animal or public health impact
- A newly identified agent that has the potential to cause significant animal or public health impact, or is occurring in multiple herds/flocks/premises
- A previously identified pathogenic agent that has a change in epidemiology
Emerging Animal Disease

- porcine reproductive and respiratory syndrome
- infectious salmon anemia
- West Nile virus
- monkeypox virus
- Schmallenberg virus in Europe
- porcine epidemic diarrhea
FAD Investigations from 1997 to 2014

![Bar chart showing the number of FAD investigations from 1997 to 2014. The chart indicates a peak in 2005 and 2007 with over 1,000 and 995 investigations respectively. There is a noticeable decline after 2007, with 2014 showing the highest number of investigations.]
Proportion of FAD Investigations due to Vesicular Conditions, by Species 2014

- **Vesicular Disease Conditions (92%)**
- **Other Disease Conditions (8%)**

- **Equids (742)**
- **Bovids (100)**
- **Goats (29)**
- **Ovine (14)**
- **Pigs (13)**
- **Camelidae (4)**
- **Deer (3)**
Foreign Animal Disease Preparedness and Response Plan (FAD PReP)

- Detect, control, and contain FAD outbreaks as quickly as possible
- Eradicate the FAD using strategies that stabilize animal agriculture
- Provide for continuity of business
FAD Specific Plans

- FMD
- HPAI
- CSF
- vND
- New World Screwworm
- Generic FAD Response
Emerging Animal Disease Preparedness and Response Plan

Purpose:

- Provide the strategic direction for the Veterinary Services (VS) of the U.S. Department of Agriculture detect and respond to emerging animal diseases

- Define monitoring, assessment, communication activities and possible response measures for an emerging animal disease
Emerging Animal Disease Preparedness and Response Plan

Plan defines roles and responsibilities:

- **Risk Identification (RI) Team:** maintain global awareness and provide preliminary assignments of diseases to risk levels
- **VS Centers:** work with RI Team to identify risks and determine risk level assignment of disease
- **VS leadership:** determine communications and response options
- **States:**
  - Communicate disease information to VS Assistant Directors
  - Discuss and participate in response
- **Industry:**
  - Communicate disease information
  - Address questions concerning potential disease risks and concerns
  - Discuss and participate in response
## Threat Definitions

<table>
<thead>
<tr>
<th>Threat Definitions</th>
<th>Host Range</th>
<th>Pathogenicity</th>
<th>Current Geographic Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimal</strong></td>
<td>Restricted to a single, non-livestock species and/or wildlife species with no public health concerns</td>
<td>Low morbidity/mortality in animals</td>
<td>Local presence in a foreign country with no transboundary spread</td>
</tr>
<tr>
<td><strong>Moderate</strong></td>
<td>Single sector of an agricultural commodity (e.g., layer hens, dairy cattle), and/or a new host species recognized, or potential to affect public health</td>
<td>Moderate morbidity/mortality in animals, minimal effect on human health</td>
<td>Present in a foreign country with minor to moderate spread to neighboring countries or regions</td>
</tr>
<tr>
<td><strong>Significant</strong></td>
<td>One or more agricultural commodity sectors and/or moderate risk to public health</td>
<td>High morbidity/mortality in animals or moderate or significant effect on human health</td>
<td>Present in a foreign country bordering the US, or trading partner with a recognized transmission pathway</td>
</tr>
</tbody>
</table>
Emerging Animal Disease Preparedness and Response Plan

Threat definitions are used to assign diseases to one of 4 risk levels.

1. Nominal risk to U.S. animal or public health
2. Potential risk to U.S. animal or public health
3. Impending risk to U.S. animal or public health
4. Current risk to U.S. animal or public health
Emerging Animal Disease Preparedness and Response Plan

4 Goals

- Undertake global awareness, assessment, and preparedness
- Detect, identify, and characterize disease events
- Communicate findings and inform stakeholders
- Respond quickly to minimize the impact of disease events
Beware: The Danger of Plans

No campaign plan survives the first contact with the enemy.
“Plans are worthless, but planning is everything.”

“There is a very great distinction because when you are planning for an emergency you must start with this one thing: the very definition of “emergency” is that it is unexpected, therefore it is not going to happen the way you have planned.”