U.S. Customs and Border Protection
Agriculture Programs and Trade Liaison

CBP’s Role in Protecting American Agriculture and Public Health

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Director
Ag/Bio-Terror Countermeasures (ABTC)

Importation of Biologicals Workshop
November 30, 2016
Mission Perspective

- U.S. is agriculture-based economy
  - $1 trillion business
  - Employs 9.2% American workers
  - (2012) Livestock and poultry production alone generated 1.8M job, $346B economic output, and $60B household income

- U.S. crops, livestock, and poultry industries are vulnerable to destructive pests and diseases through foreign trade and travel.

- CBP is the first line of defense.
Pathways of Disease Entry into the USA

Ports of Entry (POE)

- Land - 110
- Air - 241
- Sea - 126
- Pre-Clearance – 16

- POE staffed by Agriculture Specialists - 182
- Total CBPAS ~ 2,417
Prohibited Biological Interceptions

Significant Agriculture Incident Report (SAIR)
Oct. 01, 2015 – Sep 30, 2016

<table>
<thead>
<tr>
<th>ABTC</th>
<th>FY 2016</th>
<th>SAIR</th>
<th>% ABTC SAIR</th>
<th>% SAIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biologic</td>
<td>14</td>
<td>8.3%</td>
<td>0.6%</td>
<td></td>
</tr>
<tr>
<td>Bio/Vect</td>
<td>28</td>
<td>16.7%</td>
<td>1.2%</td>
<td></td>
</tr>
<tr>
<td>Bird</td>
<td>87</td>
<td>51.8%</td>
<td>3.6%</td>
<td></td>
</tr>
<tr>
<td>Bushmeat</td>
<td>26</td>
<td>15.5%</td>
<td>1.1%</td>
<td></td>
</tr>
<tr>
<td>Toxin</td>
<td>1</td>
<td>0.6%</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>168</td>
<td>100.0%</td>
<td>7.0%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ABTC Total</th>
<th>Non Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>2417</td>
<td>2249</td>
</tr>
</tbody>
</table>
Critical need for government (Federal, State, Local) – public partnership to protect American agriculture and public health.
Scope -

- Awareness on emerging and imminent biothreats
- CBP agriculture mission
- Key requirements in the importation of biologicals
- Challenges and public responsibilities

*Photos shown with permission*
What are the biothreats?

- Select agents and toxins

- Bioterrorism agents/diseases
  [https://emergency.cdc.gov/agent/agentlist.asp](https://emergency.cdc.gov/agent/agentlist.asp)

- Quarantine plant pests and diseases

- Vectors of diseases

- Antibiotic-resistant diseases

- Genetically-manipulated biological agents

Photos shown with permission
Emergence and Outbreak Patterns of Diseases

Source -
- Natural
- Introduced

Bioagents with high host plasticity

Animal-animal spillover of pathogens

Animal-human spillover of pathogens

Amplification by human-to-human transmission

Photos shown with permission
Global Ongoing Outbreaks, AFHSB, (Nov 9 -Nov 15, 2016)

- H5N8: Iran - 2, Israel - 1
- H5N8: Germany - 1, Austria - 1, Denmark - 22, Switzerland - 1

Red print – current number
+XX – changed from previous report

Shown with permission
Agriculture Programs & Trade Liaison (APTL) Organization

Provides guidance on agriculture-related regulations and inspection procedures on exotic animal and plant pests and diseases

Ensures consistent application of agriculture inspection policy across all CBP ports of entry

Facilitates entry of clean and compliant agricultural cargo

Prevents deliberate entry of ag/bio-threats to American agriculture

Safeguard American Agriculture

Field Operations
Ag/Bio-Terror Countermeasures (ABTC) Mission

Build capacity at POE

- Guidance
- Technology enhancement of non-intrusive baggage screening
Ag/Bio-Terror Countermeasures (ABTC) Mission

Build capacity at POE

Advanced screening

- Targeting rules
- Risk Analysis
- Threat visualization
Ag/Bio-Terror Countermeasures (ABTC) Mission

- Build capacity at POE
- Advanced screening
- Training
- Outreach
Key Import Requirements

- Know exactly what you’re bringing into the USA

  - Farm animals or wildlife
    - Types, purpose, country of origin, health conditions
  - CITES
  - Vectors of animal and human diseases
  - Semen and embryo
  - Animal and human blood, tissue, & DNA
  - Bacterial and viral culture

- Customs entry and other government agencies’ regulatory requirements depend on the above factors
## Customs entry requirements

<table>
<thead>
<tr>
<th>Entry</th>
<th>Value ($)</th>
<th>Advanced Filing Requirement*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal</td>
<td>&lt; $2,500</td>
<td>None</td>
</tr>
<tr>
<td>Formal</td>
<td>≥ $2,500</td>
<td>Air: ≥ 4 hrs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sea: ≥ 24 hrs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Land Border:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C-TPAT: ≥ 30 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non C-TPAT: ≥ 2 hrs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rail: ≥ 2 hrs</td>
</tr>
</tbody>
</table>

*Bioterrorism Act 2002
# Contact Information

<table>
<thead>
<tr>
<th><strong>DHS/CBP</strong></th>
<th><strong>DoI/FWS</strong></th>
<th><strong>HHS/FDA</strong></th>
</tr>
</thead>
</table>
| 1300 Pennsylvania Ave. NW  
Washington, DC 20229  
1-877 227-5511  
202 325-8000 (International Callers) | 1849 C Street, NW  
Washington, DC 20240  
1-800-344-WILD | Consumer Affairs Branch  
10903 New Hampshire Avenue Building 71 Room 3103  
Silver Spring, MD 20993-0002  
Vcod@fda.hhs.gov  
1-800-835-4709 |

<table>
<thead>
<tr>
<th><strong>USDA/APHIS</strong></th>
<th><strong>USDA/APHIS</strong></th>
<th><strong>HHS/FDA</strong></th>
</tr>
</thead>
</table>
| National Center for Import Export  
4700 River Rd. Unit 39  
Riverdale, MD 20737  
VS.Live.Animals.Import.Permits@aphis.usda.gov  
301-734-3277 / 8364 | Agricultural Select Agent Services  
4700 River Road Unit 2, Mailstop 22, Cubicle 1A07  
Riverdale, MD 20737  
AgSAS@aphis.usda.gov  
301-851-3300, Option 3 | Center for Veterinary Medicine  
Food and Drug Administration  
7519 Standish Place, HFV-1  
Rockville, MD 20855  
AskCVM@fda.hhs.gov  
1-240-402-7002 |

<table>
<thead>
<tr>
<th><strong>HHS/CDC</strong></th>
<th><strong>HHS/CDC</strong></th>
<th><strong>IATA</strong></th>
</tr>
</thead>
</table>
| Division of Global Migration and Quarantine, Mailstop E-03  
1600 Clifton Rd, Atlanta,  
1-800-232-4636 | Division of Select Agents and Toxins, Mailstop A-46  
1600 Clifton Road, Atlanta, GA  
LRSAT@cdc.gov  
404-718-2000  
After Hours: 404-809-1519 | IATA USA, 1201 F Street, N.W.  
Suite 650, Washington DC – 20004  
[http://www.iata.org/whatwedo/cargo/dgr/Pages/faq.aspx](http://www.iata.org/whatwedo/cargo/dgr/Pages/faq.aspx) |
Agroterrorism and Bioterrorism Awareness

❄ Real and growing! [Blue Ribbon Panel on Biodefense Report, August, 2015]

<table>
<thead>
<tr>
<th>Country</th>
<th>Deaths</th>
<th>HUS cases</th>
<th>Non-HUS cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Denmark</td>
<td>0</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>France</td>
<td>0</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Germany</td>
<td>48</td>
<td>857</td>
<td>3078</td>
</tr>
<tr>
<td>Greece</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Norway</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Poland</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Spain</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sweden</td>
<td>1</td>
<td>18</td>
<td>35</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>U.K.</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>U.S.</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>908</strong></td>
<td><strong>3,167</strong></td>
</tr>
</tbody>
</table>

*Escherichia coli* O104:H4 outbreak in Germany—clarification of the origin of the epidemic

Vladan Radosavljevic, Emst-Jürgen Finke, Goran Belejovic

DOI: http://dx.doi.org/10.1093/eurpub/cku048 125-120

**Abstract**

**Background:** In 2011, Germany was hit by one of its largest outbreaks of acute gastroenteritis and haemolytic uraemic syndrome caused by a new emerging enterohaemorrhagic *Escherichia coli* O104:H4 strain. The German Haemolytic Uraemic Syndrome/Enterohaemorrhagic *E. coli* (GHUSEC) outbreak had unusual microbiological, infectiological and epidemiological features and its origin is still only partially solved. The aim of this article is to contribute to the clarification of the origin of the epidemic. **Methods:** To retrospectively assess whether the GHUSEC outbreak was natural, accidental or a deliberate one, we analysed it according to three published scoring and differentiation models. Data for application of these models were obtained by literature review in the database Medline for the period 2011–13. **Results:** The analysis of the unusual GHUSEC outbreak shows that the present official assumption of its natural origin is questionable and pointed out to a probability that the pathogen could have also been introduced accidentally or intentionally in the food chain. **Conclusion:** The possibility of an accidental or deliberate epidemic should not be discarded. Further epidemiological, microbiological and forensic analyses are needed to clarify the GHUSEC outbreak.
Foreign News ...

- Researcher in pathogen probe travelled to China
- “Dr. Klaus Nielsen, former CFIA researcher charged with smuggling 17 vials live Brucella bacteria” (CBC News, Apr 4, 2013)

- “ISIS already has smuggled chemical and biological weapons into the EU; recruited experts with chemistry, physics and computer science degrees to wage war with weapons of mass destruction against the West” (DailyMail.UK, Dec. 2, 2015)

- “ISIS executes Head of Physics Department for refusing to develop bioweapons in Mosul” (Iraqi News, Nov 12, 2015)

“Seized ISIS Laptop in Syria Contains Plans for 'Bubonic Plague' Weapons” (International Business Times, Aug. 29, 2014)
Biosafety complacency

“Smallpox Virus Found In Unsecured NIH Lab” *(Nature, Jul 9, 2014)*

“Pentagon: Live anthrax inadvertently distributed by Army laboratory” *(Washington Post, May 27, 2015)*

“Pasteur Institutes Acknowledge Unauthorized Import of MERS Samples on a Flight from Seoul to Paris” *(Nature, Oct 24, 2016)*

“Deadly bacteria *(Burkholderia pseudomallei)* release sparks concern at Louisiana lab” *(USA Today, Mar 5, 2015)*
Challenges and Need for Public Partnership

- Biological threats are growing, multifaceted, and can come in a variety of forms, pathways, and mode of transmission.
- Synthetic biology allows creation of a chimera of biological agents with enormity of threat that is difficult to understand.
- Volumes of agricultural trade imports and travel into the USA are projected to increase.
- **Public partnership is critical** to:
  - Facilitate legitimate imports; and,
  - Allow CBP to focus its manpower and resources to inspecting high risk, illegal agricultural and biological entries.
U.S. Customs and Border Protection
Agriculture Programs and Trade Liaison