WIFSS DHS-Certified
National Training Program
to Enhance Food Security and Defense

presentation
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Jerry R. Gillespie, DVM, PhD.
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Director of Food Systems Disaster Training – WIFSS/UCDavis
New Realities Driving Today’s Food Systems
GLOBALIZATION

Population Growth

Travel

Immigration, Labor or Displacement

Trade

Communication

Technical Advances

Politics/Economics

Capital

TIME

NUMBER
New realities that are driving much of today’s food systems and increasing its vulnerability:

- Increasing Population
- Globalization
- Urbanization
- Specialization
- Centralization/Concentration
- Open System
- Changing and Complex
US Agricultural Trade, billion $ 

- **Exports**: $71 Billion Export 2006
- **Imports**: $65 Billion Import 2006

### Graph Details:

- **Axes:**
  - **Y-axis:** Quantity (billion $)
  - **X-axis:** Years (2000 to 2005)

- **Legend:**
  - **Exports:** Dotted line
  - **Imports:** Solid line
  - **Balance:** Dashed line

**AGRUCULTURAL PRODUCTS**

- **Key Notes:**
  - **2006:**
    - Export: $65 Billion Import: $71 Billion
  - **Balance:** Positive, indicating net exports

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*Note: The graph illustrates the trend in US agricultural trade from 2000 to 2005, highlighting the significant export surplus over imports.*
“Training to Enhance Prevention, Deterrence, Response and Recovery from WMD Incidents” 2004
$4.7 million, 2 years
DHS Training Division Competitive Grant Funding

Only DHS-certified, comprehensive, Agroterrorism Preparedness Curriculum

New Funding (2007 – 2008)
- Continuation funding from DHS ($700,000, emphasis on nationwide training)
- Subcontract with Eastern Kentucky University ($250,000, part of their $11 million)
- Contract with Food & Drug Administration ($300,000/year for three years, emphasis on training feed and food regulatory agencies to form teams with FDA to develop response teams).
  - GOHS funds to finish training in California communities
    Pending:
    - CDFA/GOHS Exploration of risks at California land, sea, and air, ports
Overall WIFSS Curriculum Goal

- Help communities prepare teams of frontline responders for agroterrorism or food systems incidents
- Prepared to prevent/mitigate, detect, respond to, and recover from terrorist attacks on the food system
- Comprehensive, All-Hazards Approach
  - Agroterrorism event
  - Food systems disaster
  - Food/water disruption in natural disasters
A new food continuum

- Farm to Table
- Environment (air, water & soil)
- Human Beings (health & well-being)
- Points of Potential Terrorism

- Farm
  - Transportation
  - Processing
  - Transportation
  - Warehousing
  - Transportation

- Borders

- Retail Markets
- International Markets
- Domestic Tables
- International Tables

- Food continuum
- Human Beings (health & well-being)
- Environment (air, water & soil)
Agroterrorism

Many different plant or animal pathogens can cause damage or loss of production.

Some pathogens cause disease (death) in both humans and animals (zoonotic diseases).

Food or water can carry diseases, poisons and toxins to people, causing illness or death.

All agroterrorism will cause:

- significant psychological impact
- economic disruption
Biological

- Prions *(mad cow disease or Bovine Spongiform Encephalopathy (BSE))*
- Bacterial pathogens
- Viral pathogens
- Fungal pathogens
- Parasitic pathogens
- Biologically produced toxins
- Genetically modified organisms
CDC Category A Agents

- Anthrax (*Bacillus anthracis*)
- Botulism (*Clostridium botulinum* toxin)
- Plague (*Yersinia pestis*)
- Smallpox (*Variola major*)
- Tularemia (*Francisella tularensis*)
- Viral hemorrhagic fevers (Ebola, Marburg, Lassa, Machupo)

*Anthrax, tularemia, plague and botulinum toxin are especially well suited for use in agroterrorism.*
The Steps to Preparedness

- Prevention
- Mitigation
- Awareness
- Preparedness
- Detection / Diagnoses
- Response / Investigation
- Recovery

- Incident
- Time
- Lag time
- Point of attack
WIFSS Agroterrorism Preparedness Curriculum for Frontline Responders

Courses:

- Understanding the Dangers
- Principles of Preparedness
- Principles of Detection and Diagnosis
- Principles of NIMS, Team Building and Risk Communication
- Principles of Frontline Response
- Principles of Recovery
WIFSS Curriculum, \textit{cont.}

- **Enrichment Courses**—a series of courses to enhance depth of knowledge and capacity in specific areas:
  - \textit{Threats of Foreign Animal and Plant Diseases}
  - \textit{Risk Assessment Tools for Communities}
  - \textit{Foot and Mouth Disease}
  - \textit{Understanding the Food Systems and How They Work}
  - \textit{Avian Influenza}
  - \textit{Building Teams Across Disciplines}
  - Others as required

\checkmark Performance testing exercises
Frontline Responders

- Includes community members:
  - Local emergency teams
  - Law enforcement
  - Fire services
  - Hazmat
  - Representatives of the food and agriculture industry
  - Community leaders (private and public)
  - Local public/environmental health groups
  - Local political leadership and designated agencies
  - Designated communication authorities/agencies
  - Education leaders
  - Health care providers (physicians, veterinarians, others)

- Everyone with a legitimate role in agroterrorism response
Emphasis on Frontline Responders Training and Connection

Training takes place locally, but emphasizes integration with state and federal emergency response systems.
California Agriculture

- Led the nation in agricultural production for more than 50 yrs
- Largest provider of milk and dairy products (22 states & 60% of cheese)
- More than 60% of fruits, nuts and vegetables
- Several fruits and vegetables are grown only in California
- Gross agriculture cash income ($29 billion/year) exceeds the income of number 2 (Texas) and number 3 (Iowa), combined
- Eight of the 10 top agriculture counties in USA are in the Central Valley of California
- Leads the nation in agricultural exports ($6.5 billion/yr)
- Sea, land and air ports lead the nation in food-imports
San Luis Obispo County Agriculture

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Value</th>
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<tbody>
<tr>
<td>Wine Grapes</td>
<td>$194,373,000</td>
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<tr>
<td>Cattle and Calves</td>
<td>53,071,000</td>
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<tr>
<td>Broccoli</td>
<td>50,062,000</td>
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<tr>
<td>Vegetable Transplants</td>
<td>30,178,000</td>
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<tr>
<td>Strawberries</td>
<td>29,367,000</td>
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<tr>
<td>Cut Flowers</td>
<td>28,240,000</td>
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<tr>
<td>Indoor Decoratives</td>
<td>25,168,000</td>
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<tr>
<td>Head Lettuce</td>
<td>23,178,000</td>
</tr>
<tr>
<td>Oriental Vegetables</td>
<td>15,741,000</td>
</tr>
<tr>
<td>Leaf Lettuce</td>
<td>14,755,000</td>
</tr>
</tbody>
</table>

GRAND TOTAL $596,753,000 (All Crops)
San Luis Obispo County Agriculture

San Luis Obispo County Employment by Industry
2005 Annual Average

- Agriculture: 4.0%
- Information: 1.5%
- Other Services: 4.1%
- Leisure & Hospitality: 14.0%
- Educational & Health Services: 10.3%
- Government: 20.8%
- Professional & Business Services: 8.4%
- Financial Activities: 4.6%
- Trade, Transportation, & Utilities: 19.0%
- Manufacturing: 5.9%
- Natural Resources, Mining, & Construction: 7.3%

2005 Industry Employment total: 104,800
WIFSS Agroterrorism Preparedness
Curriculum County/Community Training

- Alameda
- Butte
- Contra Costa
- El Dorado
- Fresno
- Glenn
- Humboldt
- Imperial
- Inyo
- Kern
- Kings
- Lake
- Lassen
- Marin
- Mendocino
- Modoc
- Mono
- Monterey
- Orange
- Sacramento
- San Benito
- San Diego
- San Joaquin
- San Luis Obispo
- San Mateo
- Santa Clara
- Shasta
- Sonoma
- Sutter
- Stanislaus
- Tehama
- Tulare
- Yolo
WIFSS Curriculum Training, cont.

Other States:
- Arizona
- Connecticut
- Illinois
- Iowa
- Michigan
- Nevada
- New Mexico
- New York
- North Carolina
- Oregon
- Washington
- Wisconsin

Supplemental lectures/exercises:
EXAMPLES:
- State emergency response teams
- Food system associations
  - Commodity groups
  - Grocery associations
  - Restaurant associations
- Specific food/agriculture companies
- Governmental agencies
- Civic organizations
- Port authorities and companies
- Educational entities/associations
In high-production states (e.g., California); the vital early response will need to be by individuals and local organizations. Coordination with state and federal agencies will follow.
DIVERSITY  
CHANGE  
COMPLEXITY  
AFFORDABILITY  
RESOURCE ADEQUACY  
SUFFICIENCY  
FOOD SAFETY & DEFENSE  
GLOBAL  
EXPOSED
Thank you!

Questions?

http://WIFSS.ucdavis.edu

e-mail

Dr. Jerry Gillespie

jrgillespie@wifss.ucdavis.edu